



PROFILING OF PROTECTED AND HUMAN WILDLIFE CONFLICTS ASSOCIATED WILD ANIMALS IN NEPAL

Final Report



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Acronym and Abbreviation

ASVS	Antisnake Venom Serum
BZ	Buffer Zone
BZMC	Buffer Zone Management Council
CAMC	Conservation Area Management Committee
CBD	Convention on Biological Diversity
CF	Community Forest
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CODEFUND	Conservation Development Foundation
DDC	District Development Committee
DFO	District Forest Office
DFRS	Department of Forest Research and Survey
DNPWC	Department of National Parks and Wildlife Conservation
DoF	Department of Forests
DSCO	District Soil Conservation Office
FECOFUN	Federation of Community Forestry Users Nepal
FGD	Focus Group Discussion
FY	Fiscal Year
GoN	Government of Nepal
GTF	Global Tiger Forum
HWC	Human wild animal conflict
IUCN	International Union for the conservation of Nature and Natural Resources
KII	Key Informants' Interview
NBSAP	Nepal Biodiversity Strategy and Action Plan
NTCC	National Tiger Conservation Committee
NTNC	National Trust for Nature Conservation
PAs	Protected Area (s)
QA	Quality Assurance
QC	Quality Control
RFD	Regional Forest Directorate
SAWEN	South Asia Wildlife Enforcement Network
ToR	Terms of Reference
UNFCCC	United Nations Framework Convention on Climate Change
VAT	Value Added Tax
VDC	Village Development Committee
WCCCC	Wildlife Crime Control Coordination Committee
WCCB	Wildlife Crime Control Bureau
WCPA	World Commission on Protected Areas
WWF	World Wildlife Fund
NPWCA	National Parks and Wildlife Conservation Act 2029

GLOSSARY

Crop deredation

Destruction or a loss in crop value, usefulness, or ability resulting from an action or event. Crops includes the edible species, including sugarcane and commercial banana farming, grown in the agricultural land.

Human casualty

Loss of human life from a fatal accident or attack from wild animals.

Human injury

Damage to the human body. It can be both simple and serious.

Human Wildlife Conflict

Any interaction between wildlife and humans which causes harm, whether it's to the human, the wild animal, or property.

Livestock depredation

Vicious act of wildlife in which a farm animal is killed.

Property damage

Harm to tangible property, including loss of use of that property. The property damage included smash up of house or livestock shed and ravage of stored grains.

Protected animals

Wild animals with legal protection under NPWC Act 1973.

Wild animal profiling

A brief description that provides information about wild animals.



Photo: B. K. Sharma

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EXECUTIVE SUMMARY

Conflicting situations arise when the needs and behavior of wildlife impact negatively on the goals of humans or when the goals of humans negatively impact the needs of wildlife. Wild animals, which have negative impacts on the life, property and activities of human are generally considered as conflicts associated wild animals. Problems accrue by wildlife species are predation on livestock, attacks and casualties on human, destruction of crops, traffic collisions, and transmission of diseases to animals and humans. Different wildlife species are problematic to people, imposing conflict with human resulting considerable costs involved to humans and wildlife. Problem caused by wildlife are quite diverse and far reaching. In Nepal, extent of damage from the wildlife is not clearly known as most damage is unreported, but, economic value of the wildlife damage is significant.

Nepal has firmly adopted criteria set by International Conventions and Commitments like CITES and IUCN Red List to determine wildlife categories. The Protected Area (PA) system cover about 23.39% of country and 27 species of mammals, 9 species of birds and 3 species of reptiles including many flagship and keystone species are on the priority protection list of NPWC Act. Of these, 33.3% (13 species) is endangered and 15.4% (6 species) vulnerable under IUCN Red List. Establishment and active management of PAs helped increasing population species including many fauna, the bitter challenge it pulverized is increasing human-wildlife conflict around PAs at the same time, especially by the endangered species and species protected by national legislation. Main reasons to consider the human wildlife conflict associated wild animals are: crop damage; livestock depredation; property damage; and human injury and casualties. Among the mammalian species listed in the priority protection, 10 (37%) are recognized as conflicts associated animals in Nepal.

In Nepal, animal are closely related to human and are also considered as sacred and cultural heroes linking with special occasions and deities. By connecting their cultural importance, in Hinduism and Buddhism, strategic conservation endeavor were developed and employed. Relating particular animals with specific deities and their mystic correlation to belief systems grow taboos which ultimately help for their conservation. Animal and their images are supplementary decorative arrays associated with deities and culture, which also provide their conservation value. Conflicts between people and animal, which are more amplified in biodiversity rich areas, is challenging issues for wildlife conservation. Competition between people and wildlife for sharing limited resources resulted various conflicts, which sometimes ended with killing of animals. Conflicts become amplified when the problem is created from endangered and legally protected animals. The magnitude of conflicts are even more amplified if single animal resulted multiple damages. The society can tolerate certain level of damage provided by wildlife. Wildlife attacks which threatened the life are not tolerable in the society.

Main objective of this task was to DEVELOP PROFILE OF PROTECTED AND HUMAN WILDLIFE CONFLICTS ASSOCIATED WILD ANIMALS IN NEPAL. The specific objectives were to: assess the status, distribution, mapping, conservation threats and develop profile of protected wildlife (Schedule I of NPWC Act 2029) of Nepal; assess the status of human wildlife conflicts throughout Nepal; and develop a distribution map, species wise conflict affected area map, and profile of conflicts associated wild animals throughout Nepal. Desk review, individual and institutional consultations, consultative workshop, field visit, complain compilation of damage caused by wildlife, data analysis/synthesis and mapping were the methods applied for this study. All together 14 steps were utilized to prepare this report. It broadly included formation of expert team, review of literatures, consultation works, data compilation and analysis and preparation of final report incorporating the comments of experts

The existing data resulted that 92% districts (n = 69) of Nepal have specific incidences of wildlife conflicts. The incidences were not recorded from six districts, they are Darchula, Humla, Manang, Khotang, Pyuthan and Rolpa. From the current study 26 species of animals were identified as human

wildlife conflicts associated wild animals in Nepal. Among the recorded animals 69% species (n = 18) were mammals and 31% species (n = 8) were reptiles. Among the reptiles Marsh Mugger crocodile and 7 species of snakes were found conflicts associated wild animals. Beside the identified species 60 mammals, 19 birds, 20 reptiles, 51 insects species were creating conflicts in Nepal.

The major depredated/killed animals from the wildlife were buffalo, bull, *Chyangra*, cow, pig, sheep, goat, dog, chicken, horse and young yak. Wild animals responsible for those killing were tiger, common leopard, elephant, snow leopard, jackal, wild pig and mugger crocodile. Leopard was the principal predator responsible for 78% of the incidents of livestock depredation followed by tiger (14.1%). The incidence of killing of domestic animals from the elephant happened only during the property damage incidences.

Wild animals were damaging eleven types of crops like banana, beans, buckwheat, lentil, maize, mustard, paddy, pea, potato, sugarcane and wheat. Barking deer; elephant; himalayan black bear; rhesus monkey; porcupine; rabbit; rhino; spotted deer; wild water buffalo and wild pig were the principal animals responsible for crop damage. Paddy was main crop depredated by those wild animals. Elephant was the main crop depredating animal and was reported in 87.1% of the crop raiding incidences. Other major animals responsible for crop damage were rhinoceros (4.9%) and rhesus monkey (2.9%) respectively.

Bengal fox; elephant; himalayan black bear; jackal; common leopard; rhesus monkey; mugger crocodile; rhino; sloth bear; snakes; tiger and wild pig were the main wild animals responsible for human injuries and casualties. Human injuries was the main recorded incidences (63.4%) followed by casualties (36.3%) and harassment (0.4%) due to the attack from the wild animals. In total, elephant was the major animal responsible for human injury and casualties. Elephant was also responsible for the human casualties (18.1%) and leopard for human injury (10.7%).

Reported property damaged from the wild animals were the destruction of house, television and stored grains. Almost all incidences of property damage (99.4%) was recorded from wild elephants and remaining 0.6% was from leopard. Among the damaged properties household damage was found more (98.1%) than other. Among the wildlife listed in the *wildlife damage relief guideline* conflicting situations created from clouded leopard, brown bear, wolf and wild dog were not recorded during this study. This assessment recommended to update wildlife species list of relief guideline at five years intervals; include rhesus monkey in the list of conflict creating wildlife; establish rapid response team to tackle with conflict associated wildlife; establish a rescue centre for the wildlife at least one in each federal state and create emergency fund for tackling with the conflicting animals.

1. INTRODUCTION

1.1 Background

The conflict between human and wildlife existed throughout human evolution. The World Parks Congress identified human-wildlife conflict as '*when the needs and behavior of wildlife impact negatively on the goals of humans or when the goals of humans negatively impact the needs of wildlife*' (Dickman and Hazzah 2016). Wild animals, which have negative impacts on the life, property and activities of human are generally considered as conflicts associated wild animals. Problem accrue by wildlife species are predation on livestock, attacks and casualties on human, destruction of crops, traffic collisions, and transmission of diseases to animals and humans. The problems caused by these animals to the human is a serious threat to prosperity of the people and wildlife themselves. In the world approximately 50% of mammals are in decline and 25% are facing extinction due to habitats destruction (Woodroffe and Ginsberg, 1998) and poaching (Treves and Karanth, 2003) that ultimately indicated the problems associated with human-wildlife.

Different animal species are conflict associated to people due to imposing extra costs to humans and wildlife (Barua *et al.* 2013; Marchini 2014). Damage made by wildlife species ensued serious economic and social impacts to local people which may lead to retaliatory killing (Barua *et al.* 2013). In addition to direct economic losses, the conflicts associated wild animals can also amplify indirect impacts like spend time, energy and money to protect the assets (Thirgood *et al.* 2005, Barua *et al.* 2013). Conflicts associated wild animals, particularly predation from carnivores can severely reduce the quality of life. In eastern and southern Africa, economic losses from carnivores' predation on livestock ranges from 1 to 25 percent of potential revenue (Bulte and Rondeau, 2007). Inadequate policies linking damage incurred vs benefit from wildlife is one cause of threat for conflicts associated wild animals. Most of the countries considered human wildlife conflict associated wild animals as vermin animals and managed from vermin extermination program.

In Nepal most of the damages from wildlife are unreported. So, extent of wildlife damage are not clearly known. But, economic value of the wildlife damage is significant (GGN 2013). Large predators (mainly felid, canid and ursid) and mega herbivores are main human wildlife conflicts associated species due to their necessities for wide roaming range and feeding behavior. In Nepal, three species of large cats (Tiger, Common leopard and Snow leopard) and two mega herbivores (Elephant and Rhinoceros) have been reported as notorious conflicts associated wild animals creating havoc and causing substantial financial losses to rural communities' due to killing of livestock, damage of property and human life (Gurung *et al.* 2008, Thapa 2011, Thapa 2013, GGN 2013).

Nepal is characterized by six physiographic and climatic zones, differing in climate, landscape, soil, flora and fauna. Location at the crossroad of two major zoo-geographic realms and six floristic regions of Asia (Sharma 2014), as well as diverse climate and topography favored a high diversity of *flora* and *fauna* has set Nepal as one of the incredible biodiversity hotspots the Eastern Himalaya. Nepal reciprocates relatively a small portion of 0.1% (147,181 km²) of landmass in the globe but diverse in biodiversity which accounts 3.2% and 1.1% of the world's known *flora* and *fauna* respectively (GoN 2014). Alpha diversity of *flora* and *fauna* of this Himalayan country accounts 8.2 and 8.1 individual species¹ per 100 km² respectively. Within this bio-spectrum, over 208 species of mammals many of these globally threatened and over 879 species of resident and migratory birds including endemic Spiny Babbler and so on enabled Nepal to retain special biodiversity destination in the world, Table 1 (GoN 2014; Inskipp *et al.* 2016; DNPWC 2017).

Biodiversity superlative value of Nepal has not appeared abruptly but it is intensive conservation journey it begun from the "*Rhino Sanctuary*" in 1960s in safeguarding declined population of rhino in Chitwan. Since then, wildlife management increasingly devolved at the shield of many legal provisions, and the National Parks and Wildlife Conservation Act (1973) being the landmark Act for *in situ* conservation of species (Rijal 1999; Bhatta and Karki 2008). Now, there are 20 PAs under six management categories (Figure 1).

¹ Gamma diversity (γ) of flora is 12,015 and fauna is 11,863 (GoN 2014)



Figure 1. Protected areas map of Nepal

1.2 Nepal portrays remarkable picture of protected species conservation

Nepal has firmly adopted criteria set by International Conventions and Commitments like CITES and IUCN Red List to determine wildlife categories. CITES control on the illegal trade of species whereas IUCN Red List assesses the risks to species and set status on species within the political management unit. As a result, Nepal now has very pleasing picture on status of species, for example, a total 9 species of plants; 55 mammals; 149 birds; 15 herpeto-fauna and 21 fish species in the IUCN Red list. Similarly, 474 species of plants, 52 mammals; 108 birds; 29 reptiles; 2 amphibians and 3 insects have been enlisted under CITES Appendices (DNPWC 2069, 2071).

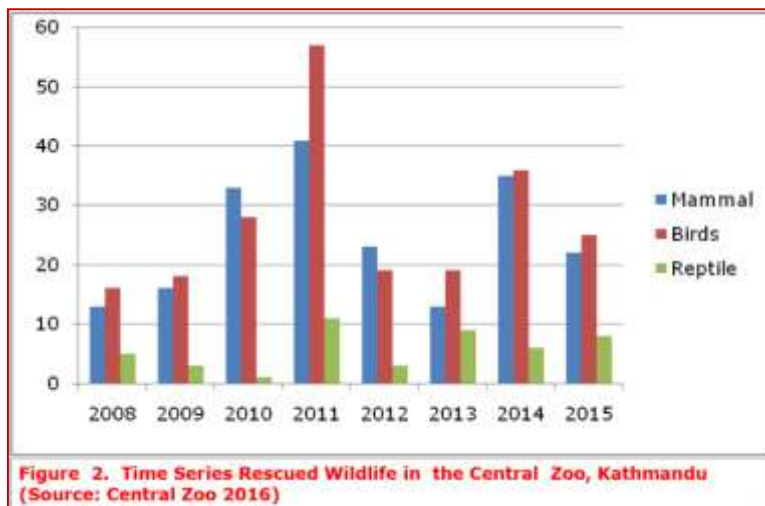
The Protected Area (PA) system cover about 23.39% of country and 27 species of mammals, 9 species of birds and 3 species of reptiles including many flagship and keystone species are on the priority protection list of NPWC Act. Of these, 33.3% (13 species) is endangered and 15.4% (6 species) vulnerable under IUCN Red List.

Table 1: Nepal's enumeration of *flora* and *fauna* with their conservation status (NBSAP 2014, modified), * = Adopted from DNPWC

Group	Species Number	GoN Protected	CITES*	IUCN Red List
Plants	11,971	10	474	9
Mammals	208	27	52	55
Birds	879	9	108	167
Herpeto-fauna	240	3	31	15
Fishes	230	--	--	21
Butterflies	651	--	3	--

Nepal offered many pioneering stories such as community managed protected/conservation areas, community patrolling for wildlife security and management of CFs as firsthand illustrations to the cross-regional/international societies. Such illustration helped Nepal having the depository of strong conservation stamina for global attentions.

Quite understandably, communities those competed and conflicted earlier with wildlife/habitat have relieved and enlarged conservation benefits to some extent from the habitats and PAs management; which also affirmed α , β and γ diversities with an increase of population of the keystone and flagship mega animals like elephant; rhino; tiger and so on. For example, an average population 121 of Royal Bengal Tiger from 1990 has gone up to 198 in 2013; similarly, population of One-horn Rhino from 409 in 2005 has increased to 645 in 2015 (GoN 2015). Incidences of wildlife while roaming out from their habitats in many cases (because of increased in their number) were not tortured and severed but also rescued safely (Figure 2).



1.3 Protected and conflicts associated wild animals

Despite the success of conservation, poaching and illegal trade of many rare and endangered fauna has emerged as very serious conservation issues (Regmi 2000, Bhatta *et al.* 2008, Kharel *et al.* 2012, Bajimaya 2012, Acharya and Kandel 2012, Karki and Dhakal 2012, BNP 2015); though Nepal recently also observed 1000 days of 'Zero Poaching Year 2017'. Establishment and active management of PAs helped increasing population species including many fauna, the bitter challenge it pulverized is increasing human- wildlife conflict around PAs at the same time, especially by the rare/endangered species and species protected by national legislation. People living around PAs confront with wild elephants; tigers; leopards; rhinos; bears; wild buffalos; wild boars; Blue-bull; deer; monkeys and so on. There are many reports on extensive damages and losses of properties, and human and livestock killing by wildlife which people consider conflicts associated wild animals.

Wild animals are in conflicts with human by causing damages (Angelici, 2016). There are four main reasons to consider human wildlife conflict associated wild animals in Nepal, such as crop damage; livestock depredation; property damage; and human injury and casualties (Bajimaya 2012, DNPWC 2073). Major wildlife creating problems to us are:

- i) Crop damage: Asian Wild Elephant; Rhinoceros; Wild Water Buffalo; Himalayan Black Bear; Spotted Deer; Blackbuck; Blue Bull; Wild Boar; Barking Deer; Himalayan Tahr; Blue Sheep; Rhesus Monkey; Langur; Gaur; Blackbuck; Jungle Crow and Parakeets, and Mugger Crocodile in the fish pond.
- ii) Livestock depredation: Tiger; Snow Leopard; Leopard and Wolf;
- iii) Property damage: Wild Elephant and

Box 1 - Wasp bite in referral hospitals

Tribhuvan University Teaching Hospital, Kathmandu

Wasp bite is an important occupational hazard in Nepal where almost 25% of the victims die. A retrospective study of medical records of patients admitted for wasp bite (January 2008 to December 2012) was made. All 18 patients came from rural areas, 13 (72%) were farmers and most bites occurred between August and November. Nine patients (50%) required blood transfusion and all developed acute renal failure and required dialysis. Sixteen patients (89%) received steroid for presumed interstitial nephritis and one patient expired. Mean hospital stay was 18.7 ± 13.4 days (range 1 to 46), those having higher number of bites had longer stay.

Source: Sigdel and Raut 2013

Manipal Teaching Hospital, Pokhara

Eleven cases (all male, age 35.5 ± 15.2 years) of wasp bites admitted from 1 February 2006 to 30 October, 2007 and mean bites number was 48.7 ± 7.1 (11-100) and mean time to reach the hospital from the bite time was 69.1 ± 149.7 hours (1.5 h-12 days). Nine patients developed acute renal failure and secondary hypertension. Eight patients underwent hemodialysis. Two patients stuck by more than 75 stings developed refractory pulmonary edema and died.

Source: Paudel and Paudel 2009

iv) Human injury and casualty: Wild Elephant; Tiger; Common Leopard; Himalayan Black Bear; Sloth Bear; Wild Water Buffalo and Wild Boar.

Among the mammalian species listed in the priority protection, 10 (37%) are recognized as conflicts associated wild animal in Nepal. Besides, other 38 species (22 mammals; 7 reptiles; 2 fishes, 3 insects and 3 birds) are also reported as conflicts associated wild animal (Rijal 1999; Chalise 2000; Sharma and Chalise 2012; Sharma *et al.* 2012; Chowdhary and KC 2015; Pandey *et al.* 2015, Shrestha 2015).

In Nepal, various conventional and innovative measures have been practiced in mitigating issues of conflicts associated wild animal. Some important measures are construction of barbed wire with fences, watch tower in the field, power fencing, predator proof coral program, etc. Among the policy measures that adopted to the issue of conflicts associated wild animal is fourth amendment of NPWC Act 1973, in 1993 that plough back of up to 30-50% of revenue generated from the PA to the community. Amendment of Forest Act (2049 BS) second time in 2016 also included relief provision for the wildlife damage. Similarly, Fifth Amendment (2017) of NPWC Act (2029 BS) incorporated provision to establish the wildlife rescue center or hospital for the conflict associated wild animals. Also, the enactment of International Trade in Endangered Wildlife and Plant Control Act (2074 BS) for implementing CITES provisions also facilitated to manage the conflict associated wild animals in Nepal. The government endorsed Wildlife Damage Relief Guidelines (2010) to provide direct support to the victims of conflicts associated wild animal. Currently, 14 species are recognized as conflicts associated wild animal namely Tiger, Rhino, Elephant, Leopard, Snow leopard, Clouded leopard, Wolf, Wild dog, Bear, Water buffalo, Mugger crocodile, Python, Gaur and Wild Pig (GoN 2074).

1.4 Making wildlife-conflict associated to wildlife-prosperity

Briefly, our national investment has changed state of conservation rapidly from low PA coverage to high PAs coverage (23.39%); from restrictive/preventive to participatory/collaborative; from species to landscape focus; and from low population species to increased population of mega fauna which now to some extent turning conflicts associated wild animal. The reasons for this (conflicts associated wild animal) may imply many consequences, which may require further exploration. However, this is the most outstanding challenge that Nepal has undergone in wildlife conservation in/outside PA systems (Thapa, 2009).

Now, it is the crux that Nepal shall not let these resources (wildlife) be wildlife-conflicts but exploring and culturing innovation to overturn this reality into wildlife-prosperity for socio-ecological integrity of Nepal. Moreover, psychological stresses wildlife generates at their homestead/cropland is more over any accounts, and communities may have no mechanism in life to release stress is next dimension of wildlife management. Nepal has to retain energy to overturn this problem context to opportunity, the paradigm shift in protected species management.

However, information to turn problem to resource (wildlife) in context of new conservation challenge as stated earlier is a gap for us. Thus, the profile on the status, distribution and conservation threats, based on qualitative/quantitative and spatial analysis, of protected and human wildlife conflicts associated wild animal in Nepal will be helpful to better translate our wildlife resources into national treasury from sustainable management.

1.5 Socio-cultural aspects of human-wildlife conflict associated wild animals

In Nepal, animal are closely related human and are considered as sacred and cultural heroes linking with special occasions and deities. Linking their cultural importance, in Hinduism and Buddhism, strategic conservation endeavor were employed. Linking the animals with specific deities and their mystic correlation to belief systems develop taboos, that ultimately help for their conservation. Animal and their images are supplementary decorative arrays linked with deities and culture reflect their importance for conservation. The symbolic animals represented in various art-forms and craftsmanship, especially on wood-work and metal-work, positioned in temple and monasteries. This practice also reflects their assemblage in traditions and cultures and ultimate connection with conservation (Majupuria, 1982).

Conflicts between people and animal is challenging issues for wildlife conservation. The conflicts are more amplified in biodiversity rich areas. Competition between people and wildlife for sharing limited resources resulted diverse sets of conflicts, which sometimes ended with killing of wildlife. Conflicts

become amplified when the problem is created due to endangered and legally protected animals. The magnitude of conflicts are even more amplified if single animal resulted different categories of damages. The society can tolerate certain level of damage provided by wildlife. Wildlife attacks which threatened the life are not tolerable in the society. Animals is considered as conflicts associated when its damage quantity exceeded the tolerable limit of the society (Hill, 1998). People's attitudes towards the wildlife; which varied upon gender, age and education, are vital for their conservation (Hill, 1998, Røskoft *et al.*, 2007). Some of them are quite positive towards the conservation of wildlife and used conventional protective measures to safeguard their properties from animals.

1.6 Objectives

Main objective of this task was *PROFILEING OF PROTECTED AND HUMAN WILDLIFE CONFLICTS ASSOCIATED WILD ANIMALS IN NEPAL*. The specific objectives were to:

- i. Assess the status, distribution, mapping, conservation threats and develop profile of protected wildlife (Schedule I of NPWC Act 2029) of Nepal.
- ii. Assess the status of human wildlife conflicts throughout Nepal.
- iii. Develop a distribution map, species wise conflict affected area map, and profile of conflicts associated wild animals throughout Nepal.

1.7 Scope and limitation

More than half centuries conservation efforts of Nepal resulted magnificent increase in forest cover to more than 44 percent of the national areas. The increased forest areas provided more shelter and space for the wildlife. So, the population of the wild animals are increased. The spill over population, in terms of food and space, of those wildlife are using those resources from nearby settlements. These actions resulted human wildlife conflicts situations.

The data about human-wildlife conflict were collected and presented based on the cases registered in the government authorities and published data in the different literatures. Data collected and information from the field were presented as case studies and box stories.

Declaration of local level election also effect information collection process, especially to conduct regional workshops. It also extended the days to collect information process and to visit specific sites.

This report was prepared on the basis of data collected from different sources.



2. METHODOLOGY

Following methods and methodological framework (Figure 3) were applied for *PROFILING OF PROTECTED AND HUMAN WILDLIFE CONFLICTS ASSOCIATED WILD ANIMALS IN NEPAL*:

2.1 Criteria used to identify human wildlife conflicts

Wild animals come in conflict with human welfares causing substantial damage were considered as *CONFLICTS ASSOCIATED WILD ANIMALS*. Four major categories of damage made by wildlife were used to identify the associated conflicts (GoN, 2074). The following criterions were used to identify the damage made by the wildlife:

- i) Crop damage: It included "destruction or a loss in crop value, usefulness, or ability resulting from an action or event". Crops includes the edible species, including sugarcane and commercial banana farming, grown in the agricultural land (GoN 2069).
- ii) Livestock depredation: It denotes "a usually vicious act in which an animal is killed".
- iii) Property damage: It incorporated "harm to tangible property, including loss of use of that property". The property damage included smash up of house or livestock shed and ravage of stored grains.
- iv) Human injury and casualty:
 - a) Human injury reflects damage to the human body. It can be both simple and serious.
 - b) Human casualty means lost of human life from afatalaccident or attack from wildlife.

BOX 2 - SNAKE BITE CASES IN NEPAL

Total adult cases were 2190 of which children were 540 (24.66%) during the year 2008. Of which 10 cases were from six mid hill districts and 530 were from 24 terai and inner terai districts of Nepal. Total morbidity was 406 (75.19%) and mortality 134 (24.81%). In Bheri zonal hospital and medical college Banke district; highest morbidity were recorded during the month of Jestha (May) to Aswin (August). Morbidity 12 (25%) and mortality 3 (20%) were recorded in the month of May/June 2008. Morbidity was highest in Mechi, Koshi, Sagarmatha, Bharatpur and Lumbini hospitals respectively. Largest numbers of snake bites were recorded from Nawalparasi. An average of 32 ASVS serum vials were consumed by each envenomed victims.

Source: Joshi 2000, Pandey 2006, Joshi 2010

2.2 Desk review

Rigorous desk review of relevant scientific literatures such as articles; research reports; inventory reports and map based wildlife inventory; relevant legislation, policies; rules and regulations on the wildlife management and wildlife profiles were conducted. Annual reports of the DNPWC and PAs; species action plans as well as gray literature were also reviewed and analyzed.

News and media reports on the *human wildlife conflicts* and their management were also considered as source of

information. News published in national newspapers (n = 4) within last five years regarding the *human wildlife conflicts associated wild animals* were reviewed. Most of the news at the village or local level not considered to broadcast or publicize at national media or newspaper were also considered as source of information.

BOX 3 – WILDLIFE ATTACK AND MIGRATION

Leopard attack

2070 Chaitra 28, Chappani-8, Palpa, Nepal: Mother Ms. Aam Kumari Saru (58) and her son Mr. Lekh Bahadur Saru (18) were collecting grass from Surabik Khola in early morning around 7:00 AM. Leopard across the Khola (stream) from the private forest suddenly attacked Mr. Lekh Bahadur Saru while he is carrying grass stuffs towards his home. Mother Ms. Aam attempted to disseminate them and call villagers for the support, but leopard also chase her. Mr. Lekh defended by using local weapons. In the meantime Ms. Janaki Saru of Chappani-8 arrived and helped them. During defending, female leopard was died and two person were seriously injured.

Official record of DFO, Palpa

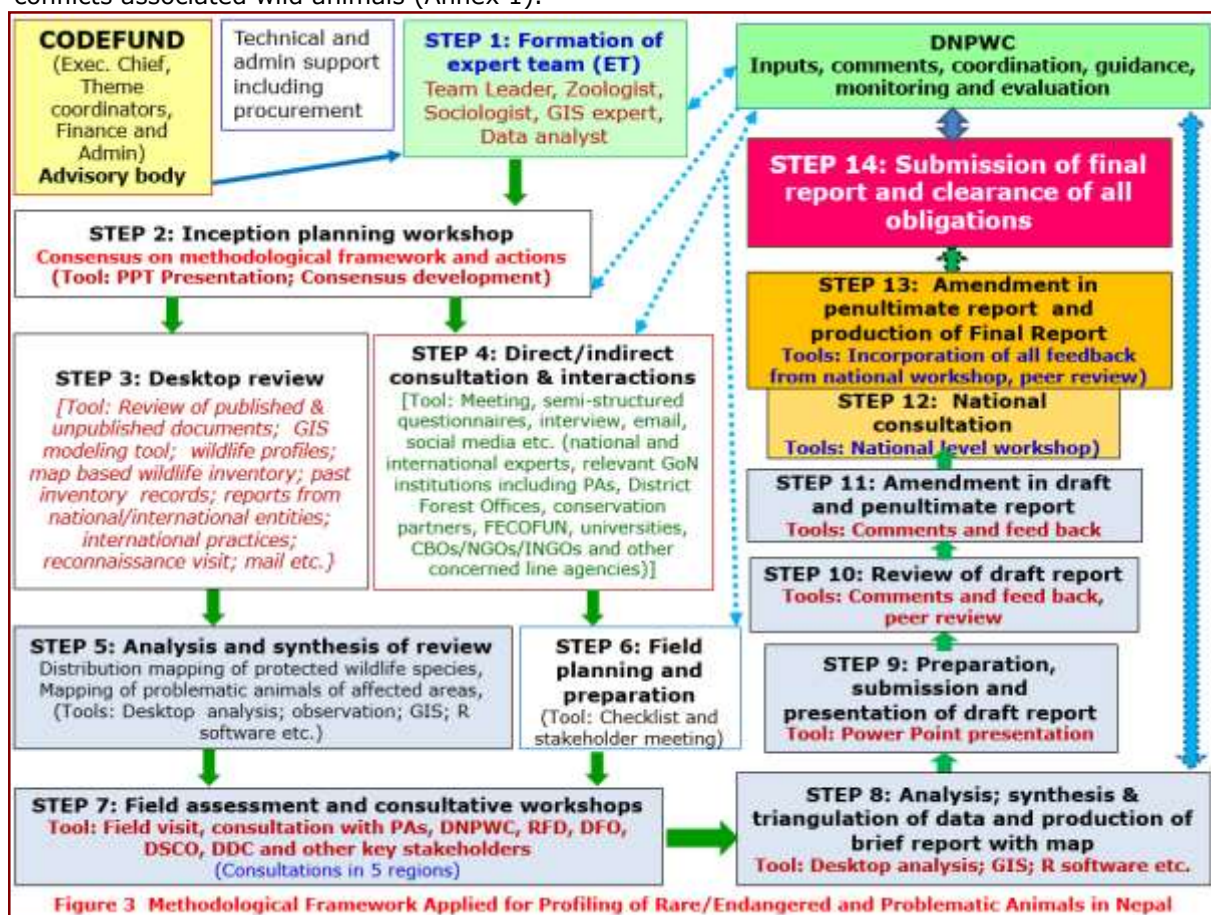
Inner migration due to wildlife

Meghauli 9, Chitwan: After 1991, around 50% HHs (n = 125) were migrated to the safe zones from wildlife. They were migrated to less problematic areas or outside the buffer zones (e.g. Chhanauli and Bharatpur) where crop riding problem from wildlife is less. Some local people are planting trees and trying to grow alternative crop like *Rajma*, cow pea and Sessame instead of rice.

Source: Field study 2074

2.3 Direct/indirect consultation and interactions

There were on-and-on parallel consultation among national and international entities engaged in similar cause and events. Semi-structured questionnaire; interview; email; social media, etc. were used as tools of communication with and among DNPWC, DoF, RDF, NTNC, DFOs, BZMCs, CAMCs, DDCs, VDCs; IUCN; WWF; FECOFUN; other non-governmental organization; conservation experts; and other key stakeholders (Annex 2 and 3). This step availed concerns, issues and so on from these partners in prior to the field assessment and observation which were instrumental to fine-tuning assessment methods/process, and to identify key issues and threats to protected and human wildlife conflicts associated wild animals (Annex 1).



2.4 Consultative workshops

Field level studies were conducted to verify *Proxy Finding* and collected ground information on protected and human wildlife conflicts associated wild animals in Nepal. A consultative workshop in each of five developmental regions (Annex 4) were organized to consolidate information on the conflicts associated wild animals and location of damage. The organized workshop, participated by the personnel from the district line agencies and other local level stakeholders, are utilized to assess their opinions; roles and responsibility; concerns including difficulties and hindrances; knots in legal instruments; foresee strategic options; and so on. Available lodged data on the protected and human wildlife conflicts associated wild animals species and their damage were collected from Regional Forest Directorate and district forest offices. At the same time, FGD, KII; formal and informal discussions were also done to gather qualitative information on this subject. Different districts (Annex 5) were also visited to consult PAs, district forest offices and local peoples for the same purpose.

2.5 Complain compilation of damage caused by wildlife

The data available in the Department of National Parks and Wildlife Conservation, different protected areas, Regional Forest Directorates and district forest offices on the complaint against wildlife were gathered from respective offices. In addition, network of Federation of Community Forest Users' Nepal (FECOFUN) was also mobilized to collect information from all districts. FECOFUN allocated a coordinator to collect information and data from all districts of Nepal. Specific format was prepared for data collection and compilation.

2.6 Data analysis/synthesis

All the raw data obtained through various sources were analyzed by qualitative and qualitative methods. Collected data from various sources were arranged in uniform format, cross checked and removed duplicated information. Besides, data were categorized into spatial and temporal patterns. Interpretation of all data were done which also fine-tuned the distribution map of protected wildlife species and map of human wildlife conflicts associated wild animals of affected areas. Specific issues were highlighted as box stories.

BOX – 4 BEAR AND LIVESTOCK DEPREDATION

Surkhet, Birendranagar MC-2 Gutipur, Jesh 27, 2074. Sloth bear are depredating goats from their shed. Bear usually visited the area at mid night from nearby Aadersa community forest anddepreded goats. Local people tried to scare the bear by shouting. They are applying in DFO office for relief money.

Source: Field survey, 2074

Human wildlife conflicts associated wild animal species were identified and categorized based on the behavioral aspects such as predation, defense behavior of the animals resulted human injuries/casualties and livestock as well as crop damage. Property demolition, like damage of house/livestock shed and store cereals, are for defense or due to shortage of food.

2.7 Mapping

Distribution and hotspots of the protected and human wildlife conflicts associated wild animal species were mapped using ARC GIS. Conflicts were categorized and mapped based on frequency of damage of crop, property, livestock and human attacks by different wildlife species. All the spatial analysis and mappings were done using ARC GIS 10.4.

All together 14 steps were utilized to prepare this report. It broadly included formation of expert team, review of literatures, consultation works, data analysis and preparation of final report incorporating the comments of experts (Figure 3).



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3. RESULTS

3.1 Conflicts distribution

The existing data resulted that 92% districts ($n = 69$) of Nepal have specific incidences of human wildlife conflicts. The incidences were not recorded from six districts, they are Darchula, Humla, Manang, Khotang, Pyuthan and Rolpa (Annex 5).

3.2 Conflicts associated wild animals

From the current study 26 species of animals were identified as human wildlife conflicts associated wild animals in Nepal. Among the recorded animals 69% species ($n = 18$) were mammals and 31% species ($n = 8$) were reptiles. Among the reptiles 7 species of snakes (Box 2) and marsh mugger were associated for human wildlife conflicts. Beside the identified species 60 mammals, 19 birds, 20 reptiles, 51 insects species were identified as potential human wildlife conflicts associated wild animals in Nepal (Annex 1).

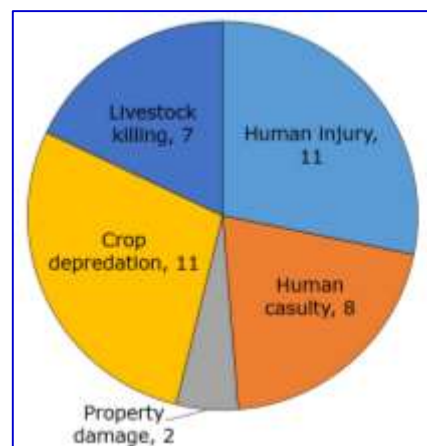
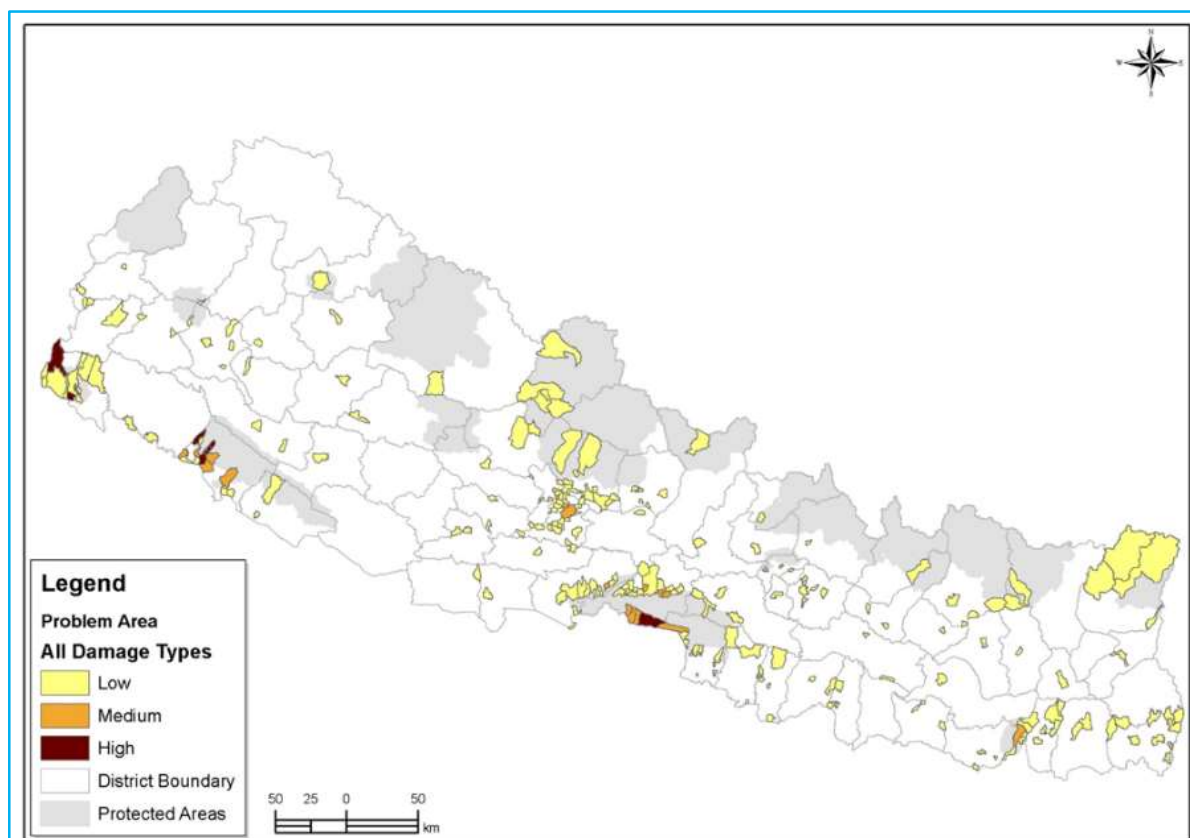


Fig. 3: Human wildlife conflicts and number of associated wild animals



Map 1. Total damage made from human wildlife conflicts associated wild animals in Nepal

3.3 Identified conflicts from wildlife

Four major categories of rebels between human and wild animals were identified. They were crop damage; livestock depredation; property damage; and human injury and casualties.

Among the reported rebel, 11 wild animal species were identified as crop invader. Similarly, 7 wild animals were responsible for livestock depredation. Only one wild animal species

was recorded for property damage. For human injury and casualties 16 and 7 wild animals were responsible (Figure 3, Table 2, Map 1).

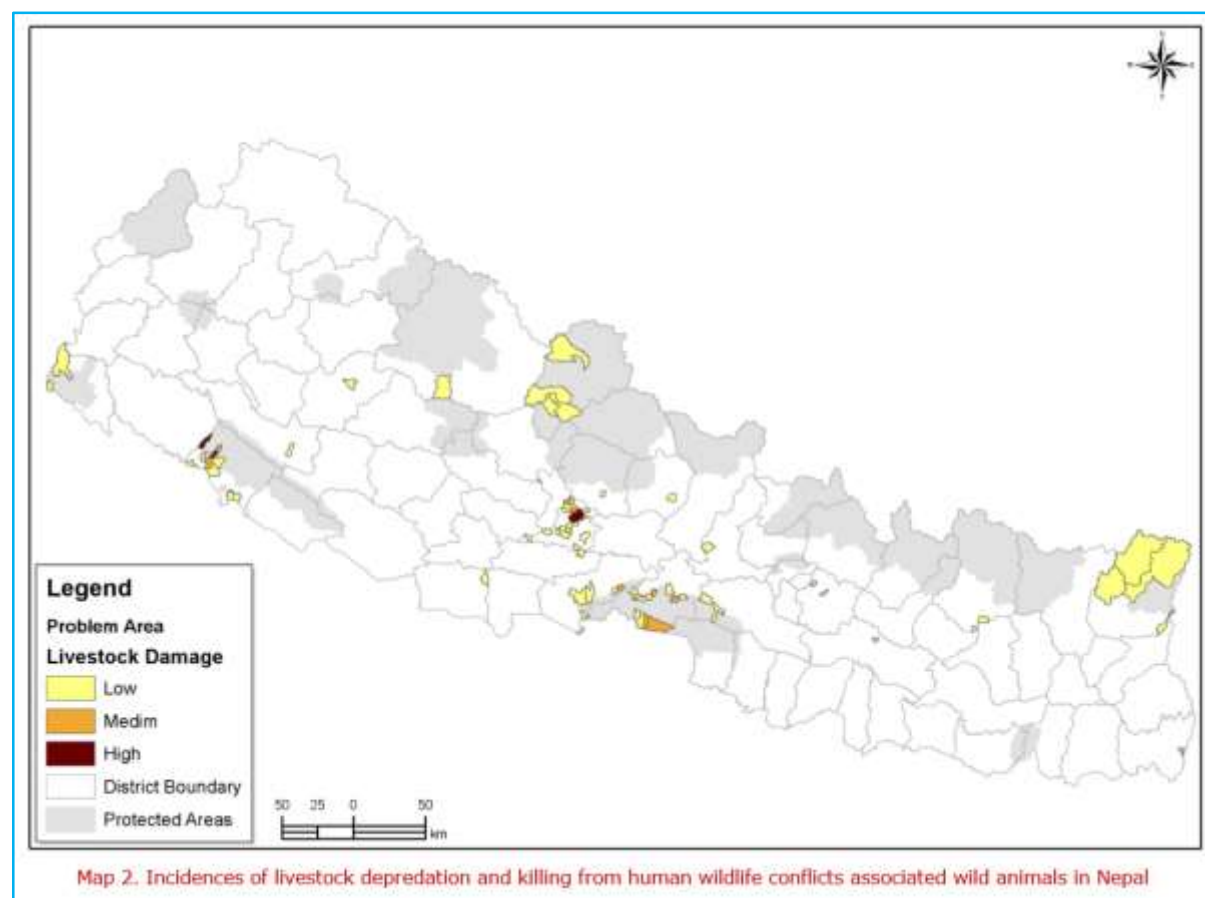
Table 2. Conflict creating wild animals with damage types					
Common name	Crop damage	Livestock depredation	Human		Property damage
			Injury	Casualty	
Asian Wild Elephant	●	●	●	●	●
Barking Deer	●				
Bengal Fox			●		
Eurasian Wild Boar	●	●	●	●	
Gaur					
Golden Jackal		●	●		
Himalayan Black Bear	●		●	●	
Indian Crested Porcupine	●				
Indian Hare (Rufous-tailed)	●				
Common Leopard		●	●	●	●
Blue Bull	●				
One-horned Rhinoceros	●		●	●	
Rhesus Monkey	●		●		
Sloth Bear			●		
Snow Leopard		●			
Spotted Deer	●				
Royal Bengal Tiger		●	●	●	
Wild Water Buffalo	●				
Mugger Crocodile		●	●	●	
Common Krait			●		
Banded Krait			●		
Biocellate Cobra			●		
King Cobra			●		
Burmese Python					
Asiatic Rock Python					
White-lipped Pit Viper			●		

3.3.1 Livestock depredation

The major depredated/killed animals from the wildlife were buffalo; bull; hairy mountain goat (*chyangra*); cow; pig; sheep; goat; dog; chicken; horse and young yak. Tiger, leopard, elephant, snow leopard, jackal, wild pig and mugger crocodile were responsible wildlife for those killing. Leopard was the principal predator responsible for 78% of the incidents of livestock depredation followed by tiger (14.1%). Killing of domestic animals from the elephant happened during the property damage incidences (Box 4, Table 3).

Table 3. Livestock killed by wildlife (2070 to 2073) figure in %

Livestock	Tiger	Leopard	Elephant	Snow leopard	Jackal	Wild pig	Mugger crocodile	Total
She-goat	2.6	34		0.3				37.0
He-goat	2.9	23.8					0.9	27.6
Pig	0.9	9.4						10.3
Cow	1.2	5.6	0.6	0.3	0.6	0.3		8.5
Bull	2.9	1.5	1.2					5.6
Sheep	0.6	2.6		0.3			1.2	4.7
She-buffalo	2.3	0.3	0.3					2.9
Other		0.6		0.3			0.3	1.2
He-buffalo	0.6		0.3					0.9
Chyangra				0.3				0.3
Dog			0.3					0.3
Chicken		0.3						0.3
Horse				0.3				0.3
Young Yak				0.3				0.3
Total	14.1	78.0	2.6	2.1	0.6	0.3	2.3	100.0



3.3.2 Crop damage

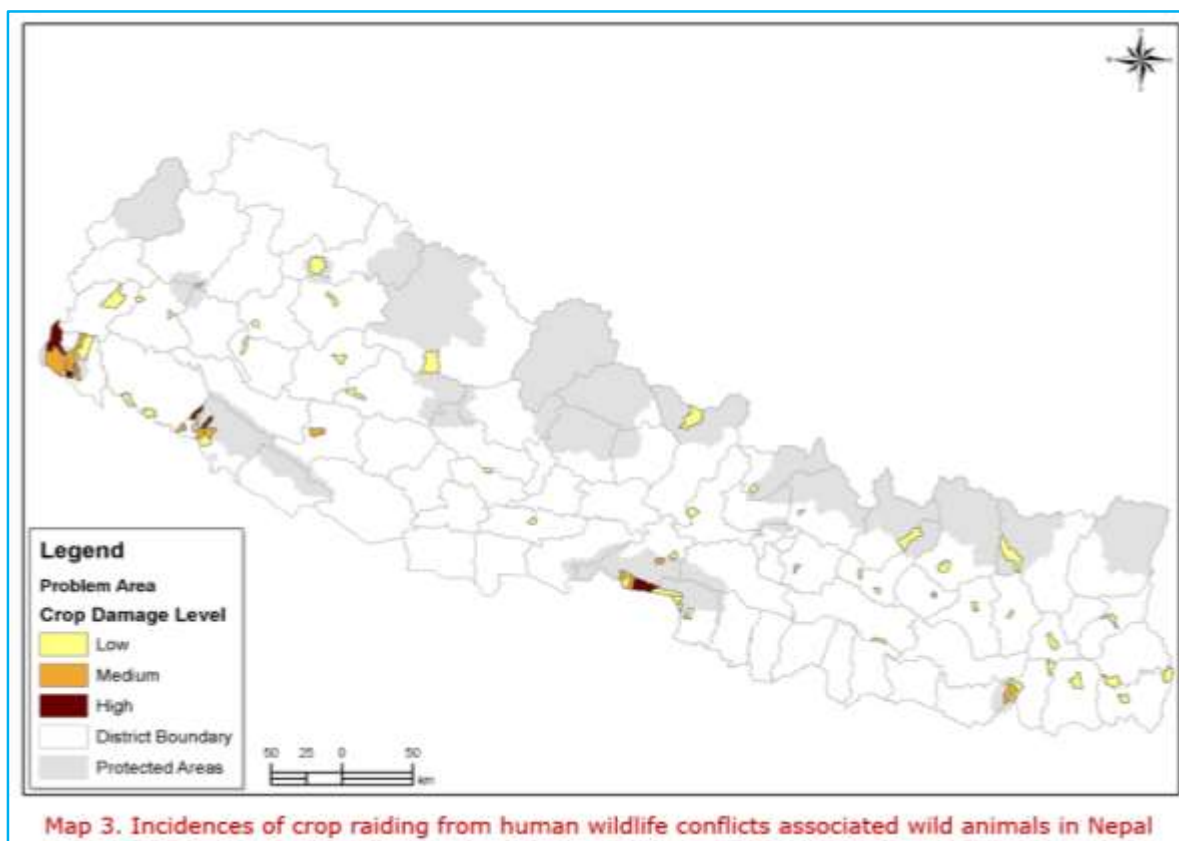
Wild animals were mainly damaging eleven types of crops. They were banana, beans, buckwheat, lentil, maize, mustard, paddy, pea, potato, sugarcane and wheat. Barking deer; elephant;

himalayan black bear; rhesus monkey; porcupine; hare; rhino; spotted deer; wild water buffalo and wild pig were the principal animals responsible for crop damage. Paddy was main crop damaged by those wild animals. Elephant was the main crop damaging animal and was reported in 87.1% of the

Table 4. Major animals for crop damage and damage made (2070 to 2073) figure in %

Name	Wheat	Banana	Sugarcane	Lentil	Maize	Mustard	Pea	Paddy	Potato	Buck-wheat	Beans	Other	Total
Barking deer												0.3	0.3
Elephant	8.4	0.4	1.9	0.8	2.9	1.3	0.8	65	1.1			4.6	87.1
Himalayan Black Bear												1.0	1.0
Rhesus Monkey					0.1					0.1	0.1	2.6	2.9
Porcupine												1.1	1.1
Hare												0.2	0.2
Rhino	3.3				0.4			0.4	0.1			0.7	4.9
Spotted deer								0.9					0.9
Wild Buffalo												0.1	0.1
Wild boar	0.1				0.3			0.5		0.1		0.7	1.6
Other												0.1	0.1
Total	11.9	0.4	1.9	0.8	3.6	1.3	0.8	66.7	1.1	0.2	0.1	11.2	100.0

crop damage incidences. Other major animals responsible for crop damage were rhinoceros (4.9%) and rhesus monkey (2.9%) respectively (Table 4).



3.3.3 Human attack

Bengal fox; elephant; himalayan black bear; jackal; leopard; rhesus monkey; muggar crocodile; rhinoceros; sloth bear; snake; tiger and wild pig were the key wild animals responsible for human injuries and casualties. Human injuries were the major cases (63.6%) followed by casualties (36.4%) due to the attack from the wild animals. In totality, elephant was major wildlife responsible for human attack. However, elephant was the main wild animal responsible for the human casualties (18.4%) and leopard was for human injury (10.7%) (Box 3, Figure 4).

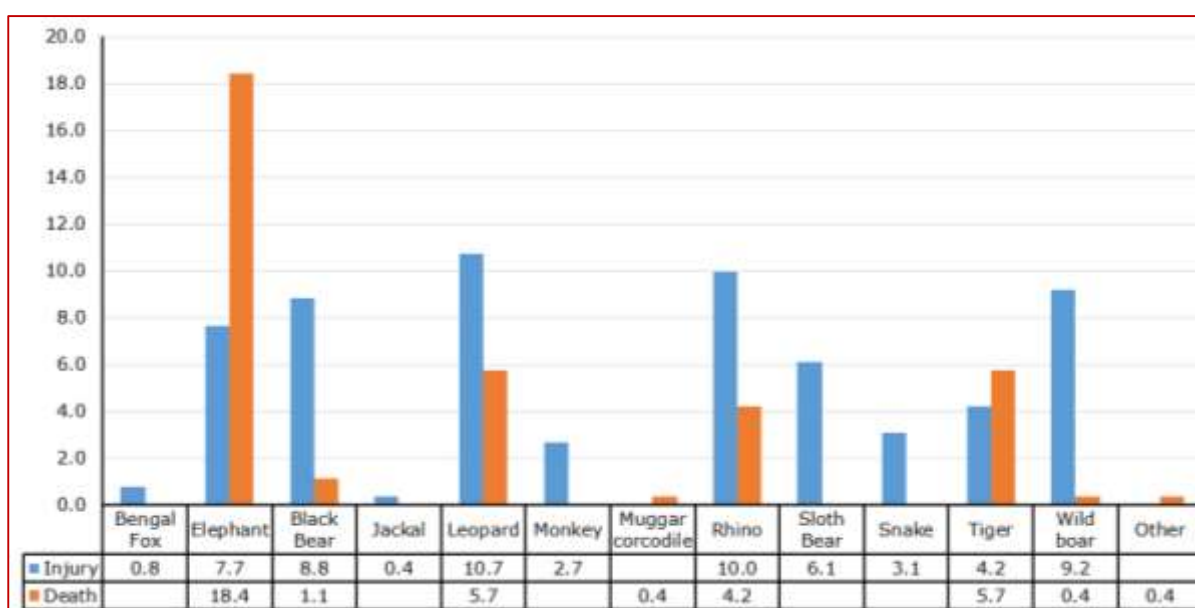
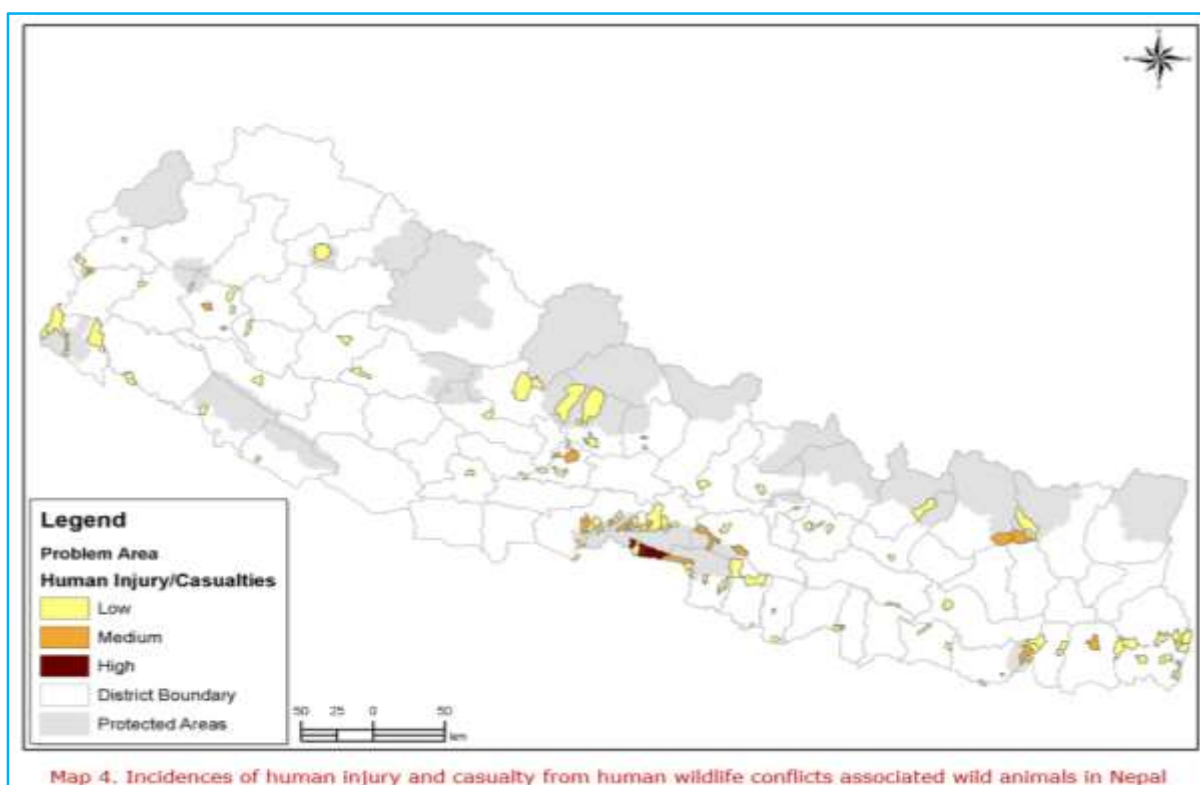


Figure 4. Human injury and casualties from wild animals (2070 to 2073; figures in %)

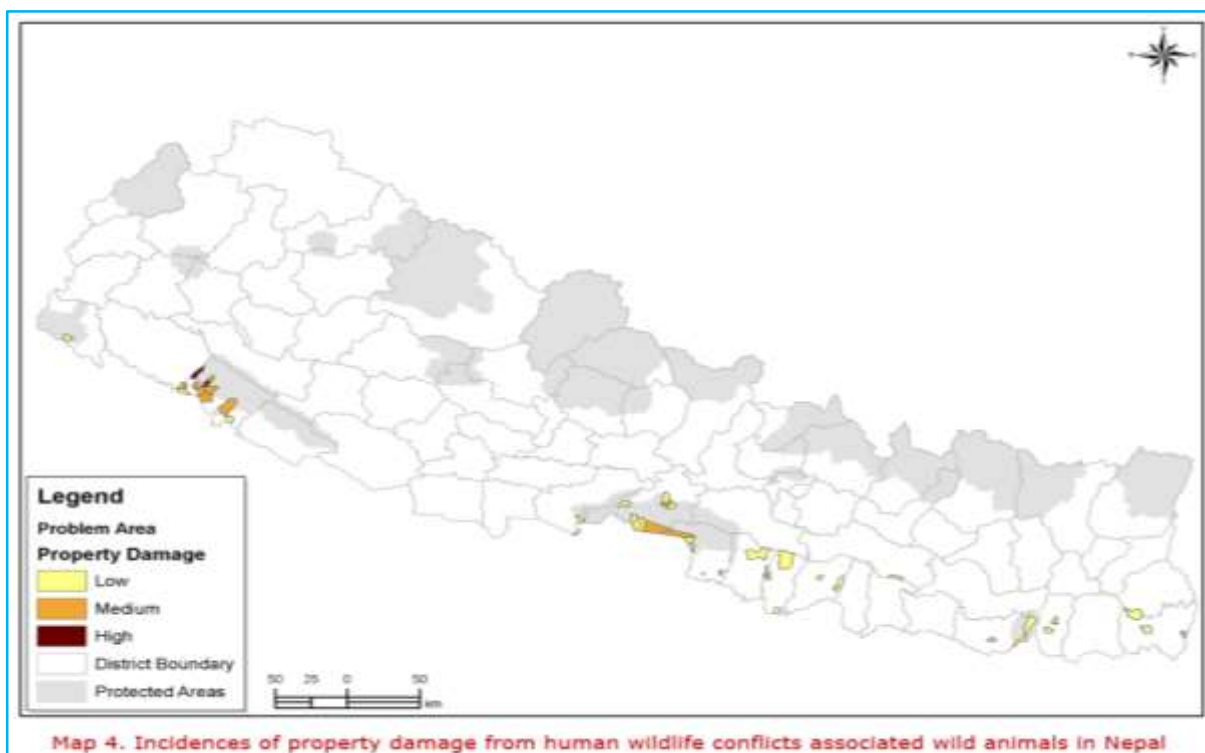


3.3.4 Property damage

Property damaged from the wild animals were the destruction of house and stored grains. Almost all incidences of property damage (99.4%) was recorded from wild. Among the damaged properties house damage was more (98.1%) than other damages (Table 5).

Table 5. Property damage from elephant between 2070 to 2073 (figure in %)

Property type	Total
House	97.5
Television	0.3
Grain	1.6



3.5 Animal Profile



3.5.1 Protected species

Scientific name	Common Name	Nepali Name
Mammals		
1. <i>Macaca assamensis</i>	Assamese Monkey	Assamis Rato Bandar
2. <i>Antelope cervicapra</i>	Blackbuck	Krisnasar
3. <i>Neofelis nebulosa</i>	Clouded Leopard	Dwanse chituwa
4. <i>Tetraceros quadricornis</i>	Four Horned Antelope	Chauka
5. <i>Platanista gangetica</i>	Gangetic Dolphin	Shons
6. <i>Ovis ammon</i>	Great Tibetan Sheep	Nayan
7. <i>Ursus arctos</i>	Brown Bear	Himali rato bhalu
8. <i>Caprolagus hispidus</i>	Hispid Hare	Laghukarna kharayo
9. <i>Manis crassicaudata</i>	Indian pangolin	Tame salak
10. <i>Manis pentadactyla</i>	Chinese Pangolin	Kalo Salak
11. <i>Prionailurus bengalensis</i>	Leopard Cat	Chari bagh
12. <i>Lynx lynx</i>	Eurasian Lynx	Pahan biralo
13. <i>Moschus chryogaster</i>	Alpine Musk Deer	Sunkanthe kasturi
13a. <i>Moschus fuscus</i>	Black Musk Deer	Kalo Kasturi
13b. <i>Moschus leucogaster</i>	Himalayan Musk Deer	Setokanthe Kasturi
14. <i>Porcula salvania</i>	Pygmy Hog	Pudke Bandel
15. <i>Ailurus fulgens</i>	Red Panda	Habre
16. <i>Prionodon pardicolor</i>	Spotted Linsang	Silu biralo
17. <i>Hyaena hyaena</i>	Striped Hyaena	Hundar
18. <i>Rucervus duvaucelli</i>	Swamp Deer	Barhasingha
19. <i>Pantholops hodgsoni</i>	Tibetan Antelope	Chiru
20. <i>Bos mutus</i>	Wild Yak	Yak
21. <i>Canis lupus</i>	Wolf	Bwanso
22. <i>Elephas maximus</i>	Asian Wild Elephant	Hatti
23. <i>Rhinoceros unicornis</i>	One-horned Rhinoceros	Gaida
24. <i>Panthera tigris</i>	Tiger	Bagh
25. <i>Panthera uncia</i>	Snow leopard	Hiun Chituwa
26. <i>Bubalus arnee</i>	Wild Water Buffalo	Arna
27. <i>Bos gaurus</i>	Gaur	Gauri Gai
Birds		
1. <i>Houbaropsis bengalensis</i>	Bengal Florican	Kharmajur
2. <i>Sypheotides indica</i>	Lesser Florican	Sano Kharmajur
3. <i>Ciconia nigra</i>	Black Stork	Kalo Garud
4. <i>Ciconia ciconia</i>	White Stork	Seto Garud
5. <i>Catreus wallichii</i>	Cheer Pheasant	Cheer
6. <i>Tragopan satyra</i>	Crimson Horned Pheasant	Munal
7. <i>Buceros bicornis</i>	Giant Hornbill	Rajdhanesh
8. <i>Lophophorus impeyanus</i>	Himalayan Monal	Danfe
9. <i>Antigone antigone</i>	Sarus Crane	Sarus
Reptiles		
1. <i>Gavialis gangeticus</i>	Ghariyal	Ghariyal Gohi
2. <i>Varanus flavescens</i>	Golden Monitor Lizard	Sun Gohoro, Bhanemungro
3. <i>Python molurus</i>	Asiatic Rock Python	Ajinger

3.5.1.1 PROTECTED MAMMALS



***Macaca assamensis* (M'Clelland, 1840)**

Order: Primates **Family:** Cercopithecidae

Common name

Assamese monkey, Assam macaque

Vernacular name

पहरे बाँदर Pahare Bandar in Nepali

Synonyms: *Macaca coolidgei* (Osgood, 1932); *Macaca macclellandii* (Gray, 1846); *Macaca problematicus* (Gray, 1870); *Macaca rhesosimilis* (Sclater, 1872); *Macaca sikimensis* (Hodgson, 1867)

Morphology

Brown-grey body coat; facial hairless, dark brownish-purplish in color; Dark fringe of hair directed backwards to the ears, cover the cheeks. The tail well-haired and short. Body length; 44-68 cm, tail; 15-30 cm and weight 4.6-12 kg.



Distribution

Global:

Bangladesh, Bhutan, southwestern China, northeastern India, Lao PDR, Myanmar, Nepal, Northwestern Thailand, and Northern Viet Nam.

National:

200-2750m elevation range; protected areas: Annapurna Conservation Area, Makalu Barun National Park, Langtang National Park, and Shivapuri Nagarjun National Park; and outside the protected areas: Dhading, Myagdi, Syanja and Palpa districts.

General habitat

Subtropical broadleaf-evergreen forest, mixed deciduous forests, temperate broadleaved forests.

Movement/home range: N/A

Behavior

Diurnal, arboreal, terrestrial and social animal living in hierarchical groups of 10-50 individuals. Mother monkey carry their young one during movement.

Diet:

Omnivorous; feed on fruits, invertebrate, cereals, maize, wheat, buckwheat, millet and potato.

Reproduction:

Life span is 10-12 years, first young one at age 5, gestation period 5.5 months, inter-birth 14-23 months.

Population

Global: N/A

National: 300-750 (estimated)

National trend: N/A

Conservation status

IUCN: Near threatened

National: Vulnerable

Legal status

CITES: Appendix-II

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

Monkeys are considered a scared animal associated with god Ram and respected as the symbol of "Hanuman". Due to belief system, older people insist not to kill them.

Human wildlife conflict associated wild animal

In this study, there is no evidences of Assamese monkey as human wildlife conflicts associated wild animal species. In few temples they are robbing pilgrims carries, specifically food materials.

Major threats

- Human-wildlife conflict
- Habitat loss, degradation and fragmentation

Conservation efforts

Efforts

Species included in protected list of the government

Awareness programs from GoN

Considered as priority species for research

Produce awareness materials for its conservation and importance

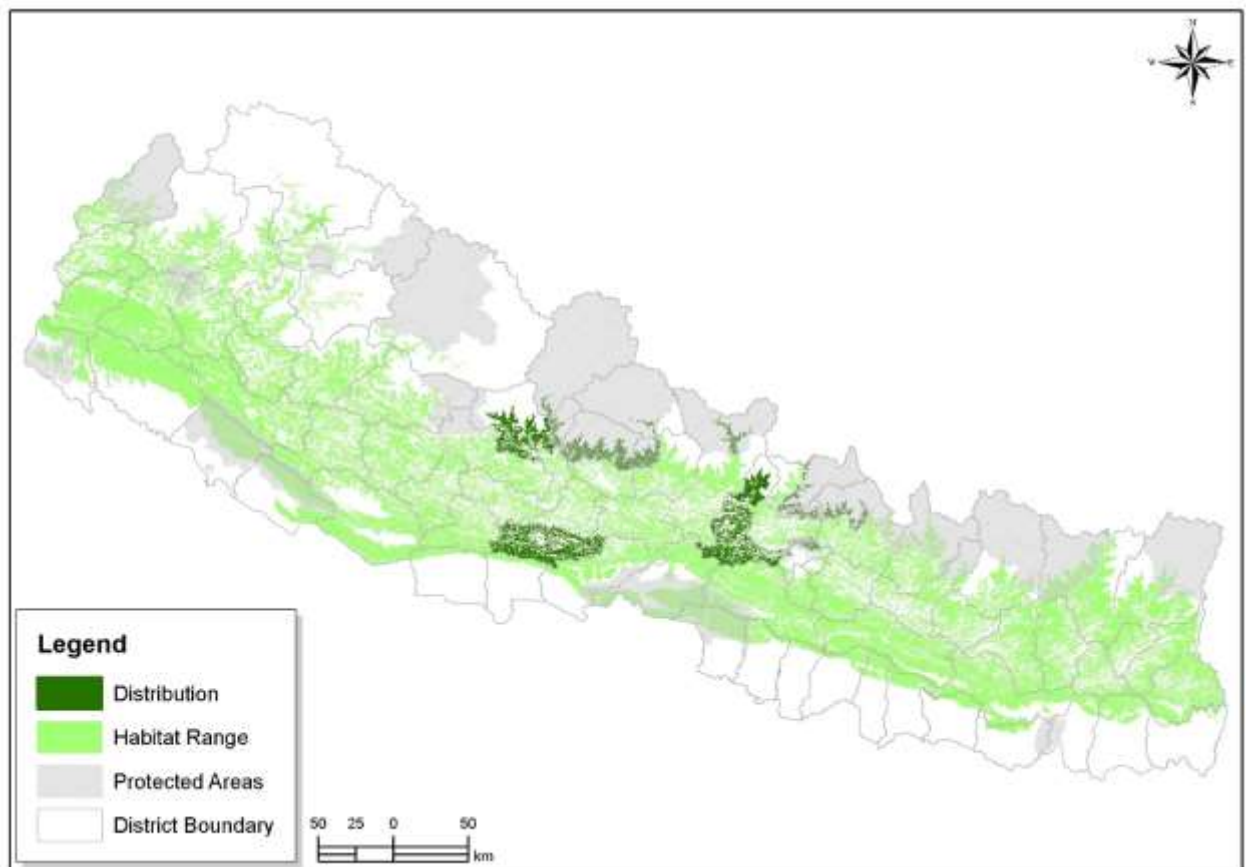
Major gaps

Population assessment

Ecology of the species

Assessment on human interaction

Distribution of the species



Citation

Brockelman 1981, Woltheim 1983, Ratajszczak 1988, Ashan 1994, Eudey 2000, Groves 2001, Srivastava and Mohnot 2001, Molur *et al.* 2003, Flannery 2004, Groves 2005, Wada 2005, Baral and Shah 2008, Boontayana *et al.* 2008, Francis 2008, Regmi and Kandel 2008, Jnawali *et al.* 2011.

***Antilope cervicapra* (Linnaeus, 1758)**

Order: Certartiodactyla

Family: Bovidae

Common name

Blackbuck

Vernacular name

कृष्णसार Krishnashar in Nepali

Synonyms: N/A

Morphology

Moderately sized, dark brown-blueblack, white underside, long twisting horn; male, brown with white under side in female and young. Brown color patch between the horns, behind the ears, upper portion of the neck remains. The body mass: 34-45kg (male), 31-39kg (female); shoulder height 70-80 cm and body length up to 120 cm.



Distribution range

Global:

Pakistan, Nepal, India and Bangladesh

National:

Occurs western Terai in Blackbuck Conservation Area at Khairapur of Bardia district within 16 km² area. At present, reintroduced to Hirapur phanta of Shuklaphanta National Park, Kanchanpur.

General habitat

Occur in grassland and lightly wooded forest where surface water are available for most part of the year.

Movement/home range:

They temporarily migrate in search of water and food.

Behavior

Diurnal, territorial and social animal; herd size of 2 dozen individuals. In summer they may move long distances in search of water and forage. Herds consist of females and young with a single dominant male. Immature males and sub-adults excluded, driven away by adult male, mature male attracted to form territories while expulsion immature male and sub-adults form pioneer colonies.

Diet:

Herbivore, primarily a grazer, feeds on short grasses. During the depletion of grasses forces to depend on leaf litter, flowers and fruits. Depends on cereal crops during severe fodder decline.

Reproduction:

Breeds March-May, can occur throughout the year, sexually matured 1.5-2.0 years of age. Single litter, except in rare case twins borne, gestation period of 5-6 months, weaning period 5-6 months, life span 10-12 years

Population

Global: 22,000-24,000 individuals

National: 300 (2013), 248 (2015) due to devastating flood in the Babai river.

National trend: Increasing.

Conservation status

IUCN: Near threatened

National: Critically Endangered

Legal Status

CITES: Appendix-III

GoN: Listed in the NPWC Act 2029 as protected priority species.

Additional information

It is considered as sacred animals and its skin have religious importance.

Human wildlife conflict associated wild animal

In this study, there is no evidences of blackbuck as human wildlife conflicts associated wild animal species.

Major threats

- Habitat degradation
- Habitat encroachment
- Retaliatory killing

Conservation efforts

Efforts

Species included in protected list of the government

Awareness programs from GoN

Periodic/annual population assessment

Declear Blackbuck Conservation Area

Site Specific Conservation Action Plan for Blackbuck in Shuklaphanta Wildlife Reserve (2016-2020)

Translocation in suitable habitats

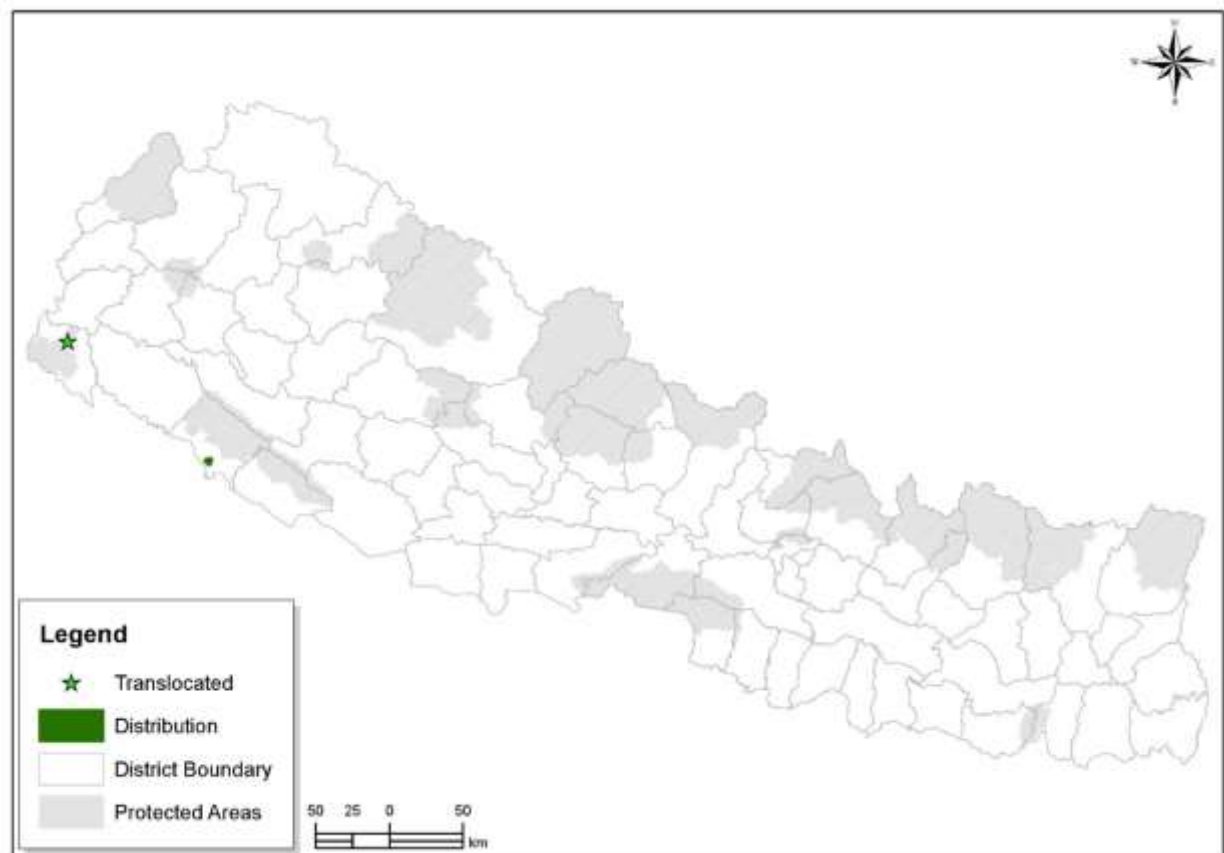
Produce awareness materials for its conservation and importance

Ex-situ conservation in national zoo and deer park

Major gaps

Ecological assessment of the species

Habitat suitability and behavioral study of the species



Citation

Nair 1967, Jarman 1974, Mungall 1978, Bauer 1989, Ranjutsinh 1989, Rice 1990, Jhala 1991, Jhala 1993, Suwan and Verheugt 1995, Pradhan *et al.* 1999, Rahmani 2001, Khanal *et al.* 2002, Khanal 2002, Wiegl 2005. Mallon 2008, Bhatta 2008, Baral and Shah 2008, Pokharel 2010, Jnawali *et al.* 2011, Khanal and Chalise 2011, Pokharel 2012, Hummel *et al.* 2015, Pokharel *et al.* 2015.

***Neofelis nebulosa* (Griffith, 1821)**

Order: Carnivora

Family: Felidae

Common name

Clouded leopard

Vernacular name

ध्वाँसे चितुवा, Dhwanse chituwa in Nepali.

Synonyms: *Felis nebulosa* Griffith, 1821

Morphology

Medium sized cat, distinctive large clouded shaped marking, head posse spot, tail with blur rings, leg black oval spots, black ear with grey spot in the middle, canines elongated, measures up to 23 kg, body length 60-110cm.



Distribution

Global:

Bangladesh, Bhutan, Cambodia, China, India, Laos, Malaysia, Myanmar, Nepal, Thailand and Viet Nam.

National:

Upto 2500m; protected areas: Annapurna Conservation Area, Chitwan National Park, Kanchanjunga Conservation Area, Langtang National Park, Makalu Barun National Park, Rara National Park, and Shivapuri Nagarjun National Park; and outside protected area: Ghodaghodi Lake Area, Ilam, Kailali and Kaski districts.

General habitat

Inhabits in evergreen forest, moist subtropical, semi-deciduous forest, selectively logged forest, degraded woodland, tall grassland and marginal scrub forest.

Movement/home range:

The home range of clouded leopard ranges between 30 km²-40 km² for both male and female with core area ranges between 3 km² -5 km².

Behavior

Primarily nocturnal with crepuscular activity peaks but may show some periods of activity during.

Diet:

Carnivore; feed on birds, squirrels, rodents, monkey, deer, and wild pigs.

Reproduction:

Breed any season, birth to 1-5 cubs, gestation period 85-93 days, Youngs sexually mature after 2 years, live up to 17 years old in captivity.

Population

Global: N/A

National: N/A

National trend: N/A

Conservation status

IUCN: Vulnerable

National: Endangered

Legal status

CITES: Appendix-I

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

Due to predation of livestock, especially by other big cats like common leopard, people have negative feelings to this species.

Human wildlife conflict associated wild animal

In this study, there is no evidences of clouded leopard as human wildlife conflicts associated wild animal species.

Major threats

- Deforestation
- Habitat degradation
- Illegal wildlife trade

Conservation efforts

Efforts

Species included in protected list of the government

Awareness programs from GoN

Considered as priority species for research

Produce awareness materials for its conservation and importance

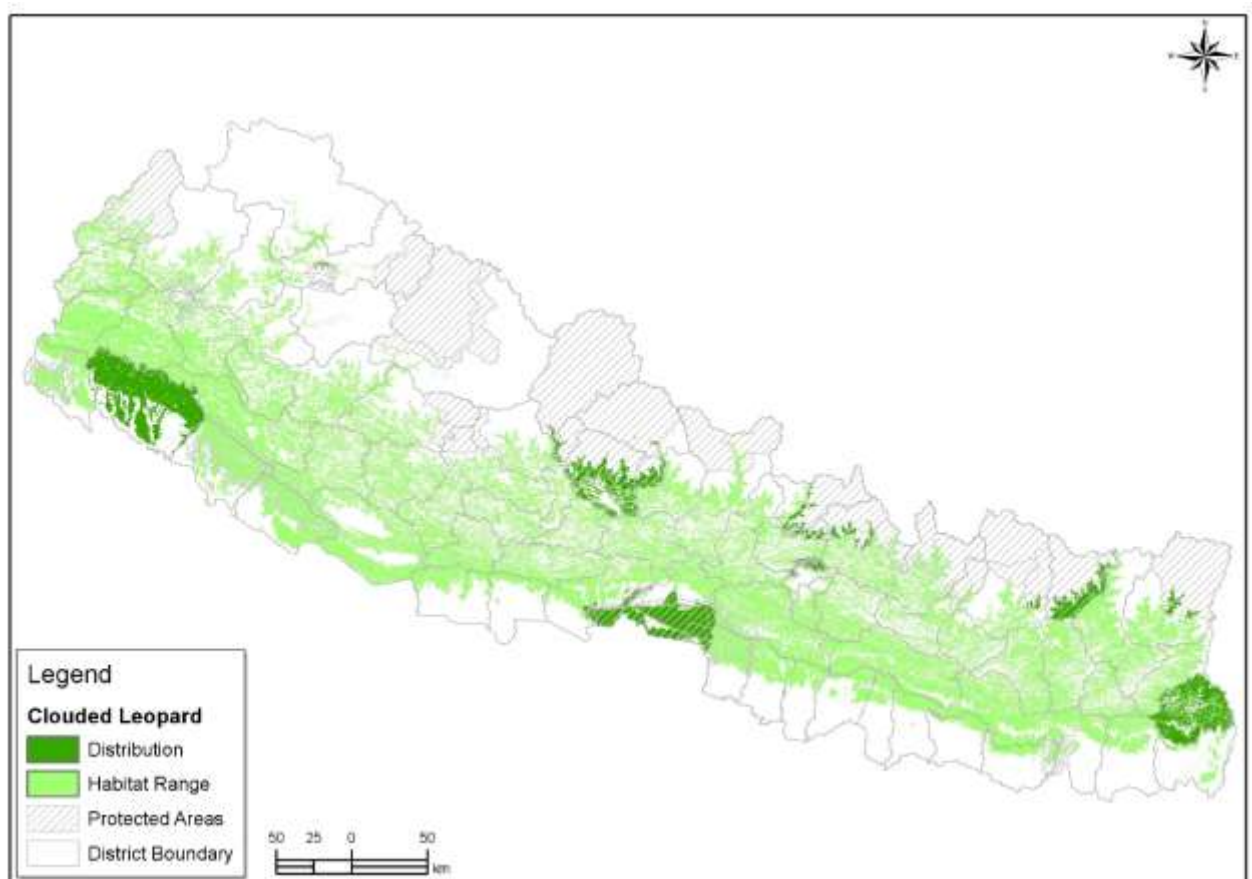
Major gaps

Population assessment

Incountry distribution

Ecological assessment

Assessment about the human-clouded leopard interaction



Citation

Dinerstein and Mehta 1989, Grassman *et al.* 2005, Azlan and Sharma 2006, Baral and Shah 2008, Cheyne and Macdonald 2011, Jnawali *et al.* 2011. Pandey 2012, Rabinowitz, Ghimire *et al.* 2012, Lynam *et al.* 2013, Hearn *et al.* 2013, Ghimire *et al.* 2014, Kalle *et al.* 2014, Lamichhane *et al.* 2014.

***Tetracerus quadricornis* (de Blainville, 1816)**

Order: Cetartiodactyla

Family: Bovidae

Common name

Four-horned Antelope

Vernacular name

चौका Chauka in Nepali

Synonyms: N/A

Morphology

Smaller Asian bovid, dark reddish-brown color with white undersides and inner surfaces of the legs, male possess two pair conical horn, nearly straight pointing upward, second shorter horn foremost part of forehead. The anterior ones measure 2–5 cm, black marking muzzle face and behind ears, body mass 16–21 kg, body length 90–110cm, tail 10–15 cm, and height 55–65 cm.



Distribution

Global:

India and Nepal

National:

<500m elevation; protected area: Bardia National Park, Banke National Park, Chitwan National Park and Parsa National Park.

General habitat

Tropical, subtropical, deciduous forest, dry Sal forest and grasslands.

Movement/home range:

Territorial animal and maintained territory with the marking in vegetation by scent. Its home range is unknown.

Behavior

Diurnal, solitary, shy, elusive and sedentary animal living in same area throughout the year.

Diet:

Herbivore; feeds on leaves, grasses, shoots, and fruit; very dependent on water source. They are grazer and browser.

Reproduction:

Breed during July–September in rainy season, mature at 21 months, birth to 1–3 litter, gestation period 7.5–8.0 months, weaning period one year, life span up to 10 years.

Population

Global: 7,000–10,000 individuals

National: N/A

National trend: N/A.

Conservation status

IUCN: Vulnerable

National: Data deficient

Legal status

CITES: Appendix-III

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

N/A

Human-wildlife conflict associated wild animals

In this study, there is no evidences of four horned antelope as human wildlife conflicts associated wild animal species.

Major threats

- Habitat destruction
- Alternation of habitat into agriculture.

Conservation efforts

Efforts

Species included in protected list of the government

Awareness programs from GoN

Potential habitats incorporated in protected areas

Considered as priority species for research

Produce awareness materials for its conservation and importance

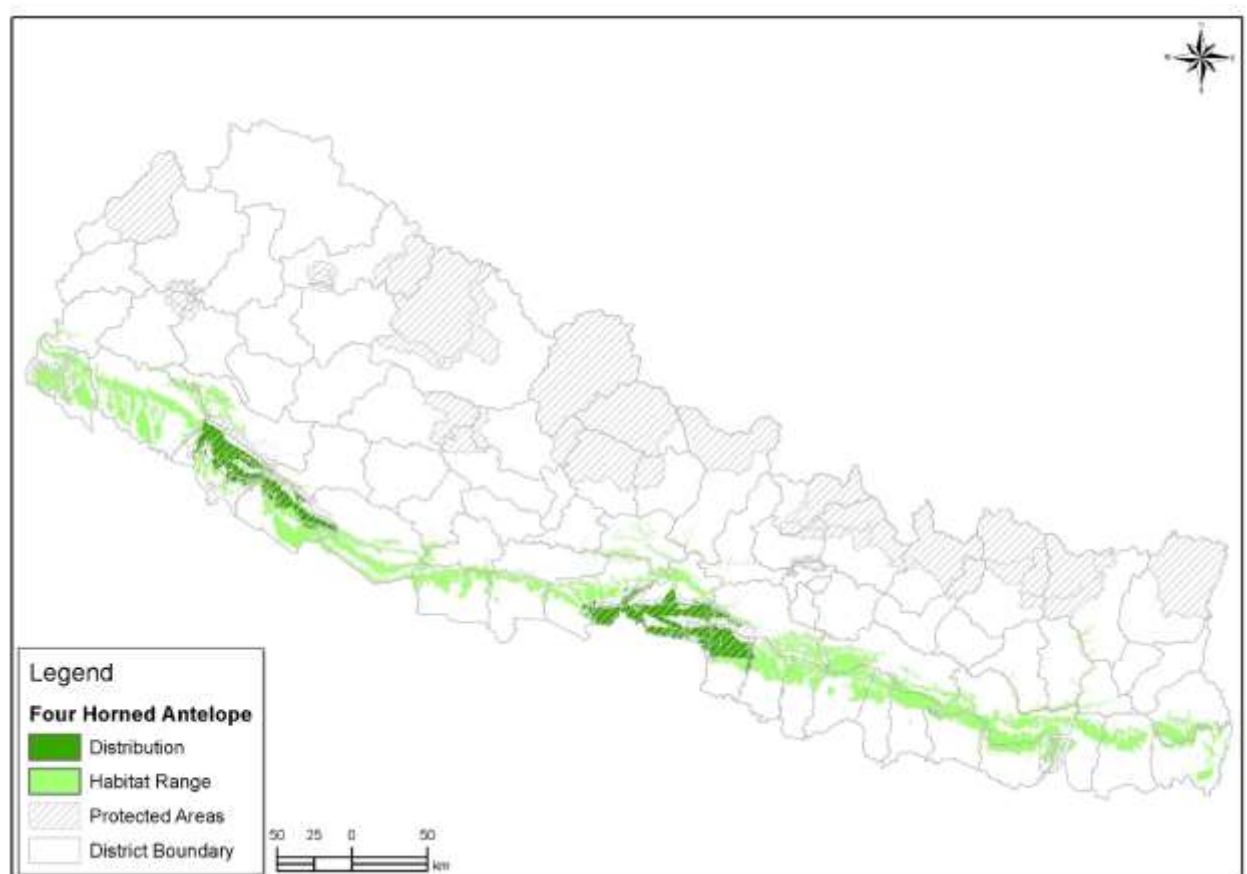
Major gaps

Population assessment

Behavior assessment

Assessment about the interaction with human

Ecological assessment



Citation

Shull 1958, Acharjyo and Misra 1975ab, Grzimek 1990, Mauget *et al.* 2000, Sharma *et al.* 2005, Baral and Shah 2008, Krishna *et al.* 2009, Jnawali *et al.* 2011, Kunwar *et al.* 2016.

***Platanista gangetica* (Roxburgh, 1801)**

Order: Cerartiodactyla

Family: Platanistidae

Common name

Ganges River Dolphin, Indus River Dolphin, Blind River Dolphin, Ganges Susu, Ganges Dolphin, South Asian River Dolphin

Vernacular name

सौंस Shons in Nepali

Synonyms: *Platanista minor* (Owen, 1853)

Morphology

Grey to brown color, dorsal part darker than ventral; snouth elongated, thin flat widest at the tip; long sharp teeth on upper and lower jaw visible even closed mouth; lower teeth typically longer than teeth upper jaw; small eyes without lens positioned below external ears; long flippers with fleshy hump on its back; female larger than male, body weigh 70-85kg, body length 2.3-2.6m.



Distribution

Global:

Bangladesh, India and Nepal

National:

75-150m elevation range; Karnali, Koshi and Narayani river systems.

General habitat

Occurs counter-current pools below channel convergences, sharp meanders, flood plains, areas of rivers with heavy currents, above and below mid-channel islands, bridge pilings, and other engineering structures that cause scouring, concentrate in locations of high prey availability (fish and crustaceans) and water to make it reduced water flow, prefer deeper waters in the rivers.

Movement/home range:

Home range 690km of river with more 700 square meter cross sectional area and more than 1m depth of water.

Behavior

Migrates on monsoon season; winter season back to large river channels, occurs in depths of 3-9m; must be on surface every few minutes for air; tolerance of temperature 8-33°C; use pulse sounds not whistles to navigate to perceive objects, specifically prey; in muddy water.

Diet:

Carnivore, feeds on fish and invertebrate animals.

Reproduction:

Sexual maturity at 10 years of age, breeds throughout the years, mostly October-March, give birth to single litter, gestation period 8-10 months, weaning periods 9 month, average life span 18-22 years.

Population

Global: 1200-1800

National: >20

National trend: Decreasing

Conservation status

IUCN: Endangered

National: Critically Endangered

Legal Status

CITES: Appendix-I

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

N/A

Human-wildlife conflict associated wild animals

In this study, there is no evidences of dolphin as human wildlife conflicts associated wild animal species.

Major threats

- Habitat degradation
- Habitat pollution
- Over harvesting of fish

Conservation efforts

Efforts

Awareness programs from GoN

Considered as priority species for research

Potential habitats incorporated in protected areas

Produce awareness materials for its conservation and importance

Species included in protected list of government

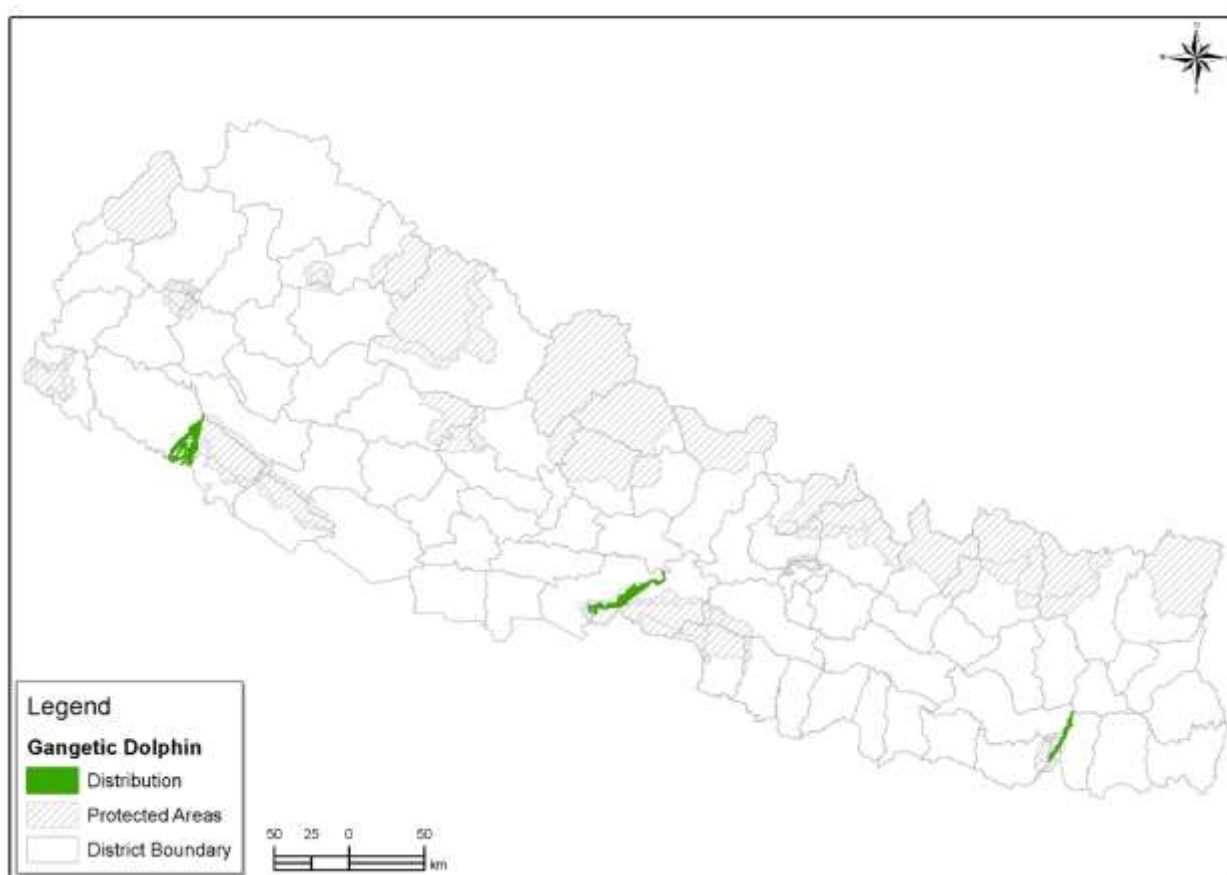
Major gaps

Population assessment

Incountry distribution

Assessment of species specific threats

Ecological assessment



Citation

Kasuya and Haque 1972, Reeves and Brownell 1989, Shrestha 1989, Kannan *et al.* 1993, Smith 1993, Reeves and Wood 1994, Smith *et al.* 1994, Shrestha 1995, Smith *et al.* 1996, Nowak 1999, Timilsina 1999, Jnawali and Bhuju 2000, MacDonald and Norris 2001, Reeves *et al.* 2002, Moreno 2003, Nilesh *et al.* 2003, Nowak 2003, Joshi 2004, Wilson and Reader 2005, WWF 2006, Jefferson *et al.* 2008, Baral and Shah 2008, Swinton and Gomez 2009, Swinton *et al.* 2009, Malla 2009, Khatri *et al.* 2010, Jnawali *et al.* 2011, Smith and Braulik 2012, Poudel 2015, Poudel *et al.* 2015a, Poudel *et al.* 2016, Khanal *et al.* 2016.

Ovis ammon (Linnaeus, 1758)

Order: Cetartiodactyla

Family: Bovidae

Common name

Argali, Wild Sheep

Vernacular name

नायन, Nayan in Nepali

Synonyms: N/A

Morphology

Largest wild sheep of Nepal, dark-brown greyish thick coat, underparts whitish separate body colour by a darker band runs along the sides, whitish rump patch. Male's horns large up to 190 cm, twist backwards on maturity, body mass 110-158kg, body height 110-120cm, body length 120-200cm and tail length up to 14cm.



Distribution

Global:

China, India and Nepal

National:

High mountains areas of Nepal between 4000m-6000m elevation in trans-himalayan region, Annapurna Conservation Area.

General habitat

Inhabit in alpine region; mountains, steppe covered valleys, open desert habitats and alpine grasslands.

Movement/home range: N/A

Behavior

Herding animals; graze in herds of 2-100 animals; descending to lower elevation in winter; avoid forested areas; calm, non-aggressive; when competing, males rear up on their hind legs and leaning forward, race towards their opponent, crashing horns in the process, lift head above the shoulder for scanning the surrounding frequently; use horn to defend themselves from predators.

Diet:

Herbivore; feeds on grasses, forbs, herbs and sedges.

Reproduction:

Sexually mature at 2 (female) and 5 (male) years, give birth of 1-2 litter, gestation period 5 months, mothers care for young for about 4 months before weaning, life span 10-13 years.

Population

Global: N/A

National: N/A

Population trend: N/A

Conservation status

IUCN: Near Threatened

National: Data deficient

Legal status

CITES: Appendix I

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species

Additional information

N/A

Human-wildlife conflict associated wild animals

In this study, there is no evidences of argali as human wildlife conflicts associated wild animal species.

Major threats

- Hunting for subsistence
- Poaching for trophy

Conservation efforts

Efforts

Awareness programs from GoN

Considered as priority species for research

Potential habitats incorporated in protected areas

Produce awareness materials for its conservation and importance

Species included in protected list of government

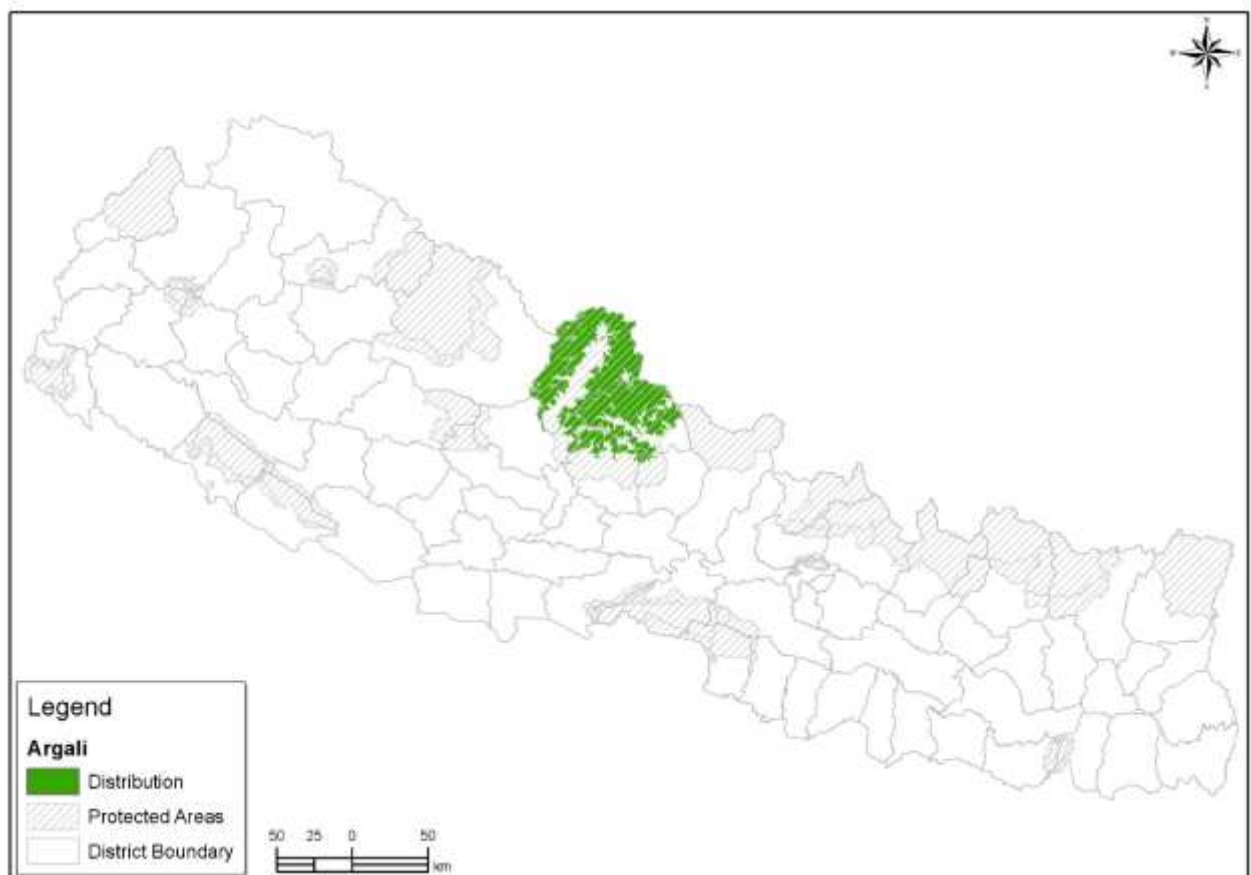
Major gaps

Population assessment

Niche sharing and competition with livestock

Interaction with human

Ecological assessment



Citation

Suwal and Verheugt 1995, Wegge and Oli 1997, Reading *et al.* 2003, Tserenbataa *et al.* 2004, Chetri and Pokhrel 2005, Fedonsenko and Blank 2005, Reading *et al.* 2005, Shrestha *et al.* 2005, Kenny *et al.* 2008, Namgail *et al.* 2008, Harrish and Reading 2008. Baral and Shah 2008.

***Ursus arctos* (Linnaeus, 1758)**

Order: Carnivora

Family: Ursidae

Common name

Brown Bear, Grizzly Bear

Vernacular name

हिमाली रातो भालु Himali Raato Bhalu in Nepali

Synonyms: N/A

Morphology

Largest bear of Nepal, body fur color dark brown, varies from cream to black with no clear chest markings, body height 90-150cm, body length 1.0-1.8m and tail 6.5-21.0cm.

Distribution

Global:

Afghanistan, Albania, Andorra, Armenia, Austria, Azerbaijan, Belarus, Bhutan, Bosnia and Herzegovina, Bulgaria, Canada, China, Croatia, Czech Republic, Estonia, Finland, France, Georgia, Greece, India, Iraq, Islamic Republic of Iran, Italy, Japan, Kazakhstan, Democratic People's Republic of Korea, Kyrgyzstan, Latvia, Former Yugoslav Republic of Macedonia, Mongolia, Montenegro, Nepal, Norway, Pakistan, Poland, Romania, Russian Federation, Serbia, Slovakia, Slovenia, Spain, Sweden, Tajikistan, Turkey, Turkmenistan, Ukraine, United States, and Uzbekistan.

National:

4000-6000m elevation range in transhimalayan regions; Annapurna Conservation Area (upper mustang, Surkhung, Chhosher and Ghemi VDCs) and Manaslu Conservation Area (Samdo and Chhekampar VDCs).

General habitat

Brown bear occupy areas in above the tree line; in barren, grassy and rocky uplands and subalpine and temperate forests.

Movement/home range:

Home range – Male: 833-1005 km²; Female: 217-280 km².

Behavior

Diurnal; denning for adaptation during lack of food in winter, perhaps for birth of tiny young; incapable of thermo-regulation.

Diet:

Omnivorous; feeds on grasses, leaves, roots, herbs, birds, eggs, insects, some mammals, wild ungulates, domestic animals and livestocklike sheep, goat, yak and horses.

Reproduction:

Breed April-July; polygamous species, give birth to 1-4 cubs; gestation period 6-8 weeks; sexually mature at 1.4-2.4 years; relatively short inter-birth interval; lifespan is 20-30 years in wild, upto 50 years captivity.

Population

Global: >200,000 individuals

National: >20 individuals

National trend: Decreasing

Conservation status

IUCN: Least Concern

National: Critically Endangered

Legal Status

CITES: Appendix-I

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.



Additional information

In its roaming areas peoples are found scared.

Human-wildlife conflict associated wild animals

In this study, there is no evidences of brown bear as human wildlife conflicts associated wild animal species. It is locally called as “*Chhukte*” in its roaming areas. Local people considered this wildlife as conflicts associated because it will attack when people are travelling lonely.

Major threats

- Habitat degradation, loss and encroachment.
- Human wildlife conflict.
- Reduction of prey base.

Conservation efforts

Efforts

Awareness programs from GoN

Potential habitats incorporated in protected areas

Considered as priority species for research

Produce awareness materials for its conservation and importance

Species included in protected list of government

Major gaps

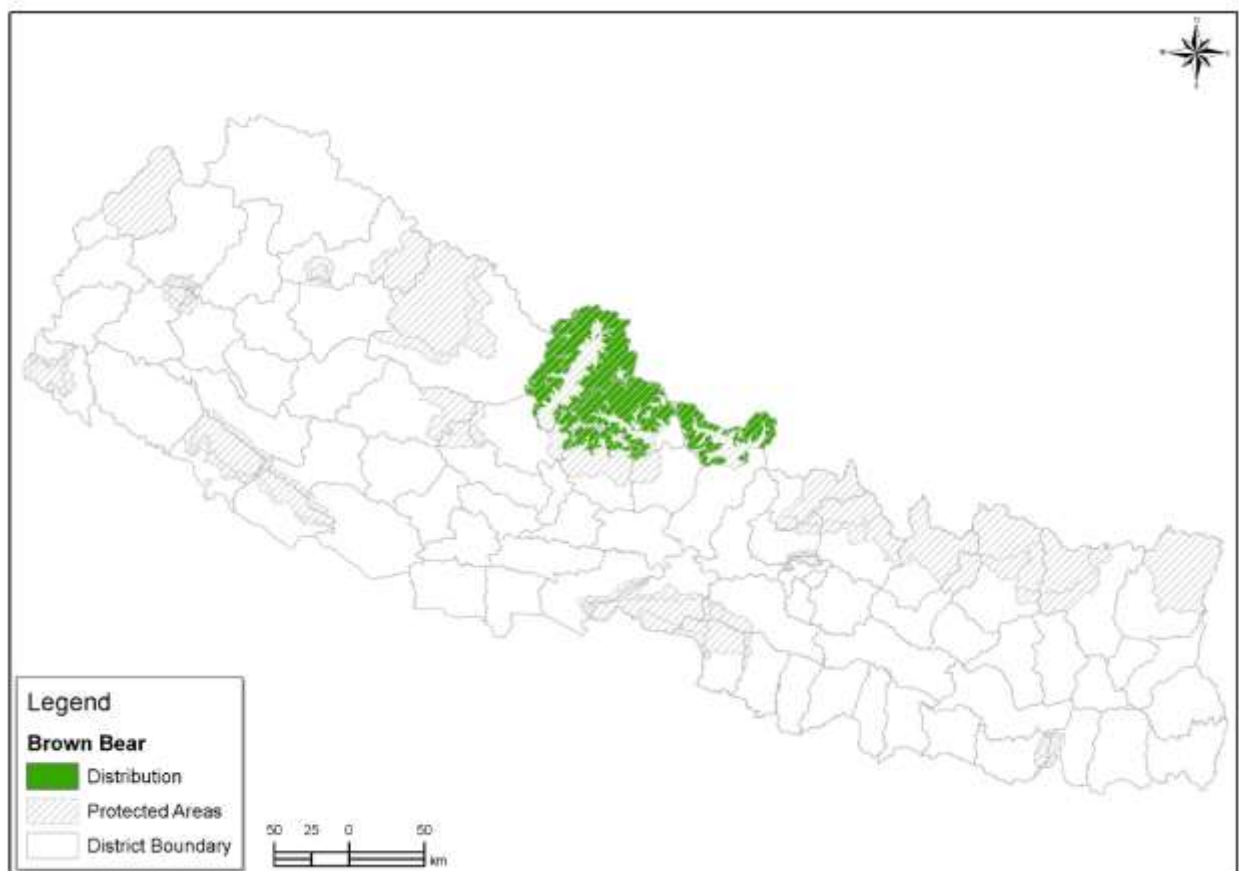
Population assessment

Incountry distribution

Behavior of the species

Assessment on brown bear-human interaction

Ecological assessment



Citation

Wiegand *et al.* 1998, Hildebrand *et al.* 1999, Dahle and Swenson 2003, Frkovic *et al.* 2004, Gurung 2004, Wakinen and Kasworm 2004, Waller and Seryheen 2005, Kasworm *et al.* 2007, Baral and Shah 2008, Aryal *et al.* 2010, Aryal *et al.* 2012, Manen *et al.* 2012, Seryheen 2013, Burgess *et al.* 2014, Seryodkin and *et al.* 2014, Aryal *et al.* 2015, Mclellan *et al.* 2016.

Caprolagus hispidus (Pearson, 1839)

Order: Logomorpha **Family:** Leporidae

Common name

Hispid Hare, Assam Rabbit, Bristly Rabbit

Vernacular name

लघुकर्ण खरायो Laghukarna Kharayo in Nepali.

Synonyms: *Lepus hispidus* (Pearson, 1839)

Morphology

Brown coat with black hairs, rufous chest, and white belly. Short, rounded ears, do not project beyond the fur. Brown tail, 3cm long, body mass 2.2-3.0kg and body length of 40-50cm.



Distribution

Global:

Bangladesh, India and Nepal.

National:

Terai physiographic region between 100-250m elevation; Bardia National Park, Chitwan National Park and Shukla Phanta Wildlife Reserve.

General habitat

It inhabits in early successional tall grassland, riverine grassland and marshy grassland.

Movement/home range: N/A

Behavior

During monsoon season move to foothills forest area, active at dawn and dusk, exhibits crepuscular behavior.

Diet:

Herbivore, feed on grass shoots, roots and cultivated crops.

Reproduction:

Breeding occurs January-February, give birth of 2-4 liters, four nipples instead of the usual six seen in most rabbits and hares.

Population

Global: N/A

National: N/A

National trend: N/A

Conservation status

IUCN: Endangered

National: Endangered

Legal status

CITES: Appendix-I

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

It has interesting story in Buddhism (Majupuria, 1991).

Human-wildlife conflict associated wild animals

In this study, there is no evidence of hispid hare as human wildlife conflicts associated wild animal species. It is crop depredator but there are no complaints regarding its problem. It may be due to its small population and dispersal in very specific sites.

Major threats

- Habitat loss and fragmentation.
- Encroachment for agriculture production.
- Over grazing.
- Uncontrollable burning of the grassland.

Conservation efforts

Efforts

Species included in protected list of the government

Awareness programs from GoN

Potential habitats incorporated in protected areas

Considered as priority species for research

Produce awareness materials for its conservation and importance

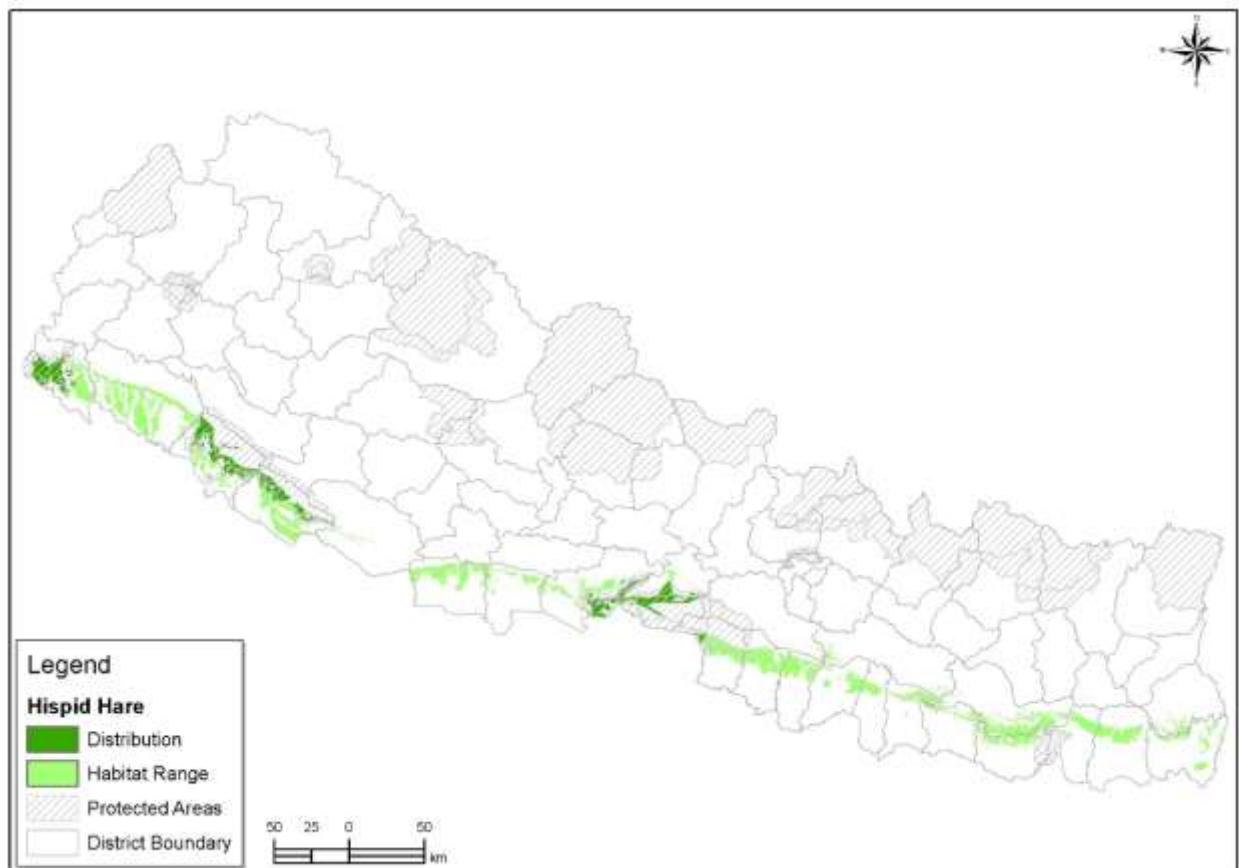
Major gaps

Population assessment

Incountry distribution of the species

Interaction with humans

Ecological assessment



Citation

Bell 1986, Bell 1987, Maheswaran 2002, Yadav 2005, Maheswaran 2006, Maheswaran 2008, Baral and Shah 2008, Aryal and Yadhav 2010, Nath *et al.* 2010, Jnawali *et al.* 2011, Aryal *et al.* 2012, Tandan *et al.* 2013.

***Manis crassicaudata* (E. Geoffroy, 1803)**

Order: Pholidota

Family: Manidae

Common name

Indian pangolin, Thick-tailed Pangolin

Vernacular name

तामे सालक Tame Salak in Nepali

Synonyms: N/A

Morphology

Cone-shaped head with small, dark eyes, and a long muzzle with a nose pad similar in color, or darker than, pinkish-brown skin, powerful limbs, tipped with sharp, clawed digits, large overlapping scales which protect the body, brown in color, lighter. The skin and scales make up about one-fourth to one-third of the total body mass of this species, body length: 84-122cm head to tail, weight: 10-16kg.

Distribution

Global:

Bangladesh, India, Nepal, Pakistan and Sri Lanka.

National:

Occurs in Bardia National Park, Chitwan National Park, and Shuklaphanta National Park. Distributed in Bara, Chitwan and Parsa districts.

General habitat

Open grasslands, lightly wooded forests, scrub lands, recorded near to human settlements.

Movement/home range: N/A

Behavior

Solitary, terrestrial, nocturnal, shy, non-aggressive and burrowing strange mammals; tail used to carry infants; poor defense mechanism; arboreal; use their claws and prehensile tails as supports to readjust fore legs as they climb; spends day underground in burrows or under rocks and conceals the entrance of the burrow with loose earth, making detection difficult.

Diet:

Insectivores, diet consists of ants, termites and various other invertebrates including bee larvae, flies, worms, earthworms and crickets.

Reproduction:

Breeds in January, July and November; reproduction rate low with one cub per litter; gestation period 65-70 days; young weigh 235-400g at birth and measure 30cm in average; newborn animals have open eyes and soft scales with protruding hairs between them; mother pangolin carries her young on her tail.

Population

Global: N/A

National: N/A

National trend: N/A

Conservation status

IUCN: Near Threatened

National: Endangered

Legal Status

CITES: Appendix-I

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.



Additional information

N/A

Human-wildlife conflict associated wild animals

In this study, there is no evidences of Indian pangolin as human wildlife conflicts associated wild animal species.

Major threats

- Killed for medicinal purposes and subsistence.
- Persecution.
- Habitat loss and degradation due to conversion of land for agriculture, livestock grazing, clearing of woodlands.
- Habitat fragmentation due to loss of connectivity of suitable habitat between protected areas.

Conservation efforts

Efforts

Awareness programs from GoN

Potential habitats incorporated in protected areas

Considered as priority species for research

Produce awareness materials for its conservation and importance

Species included in protected list of government

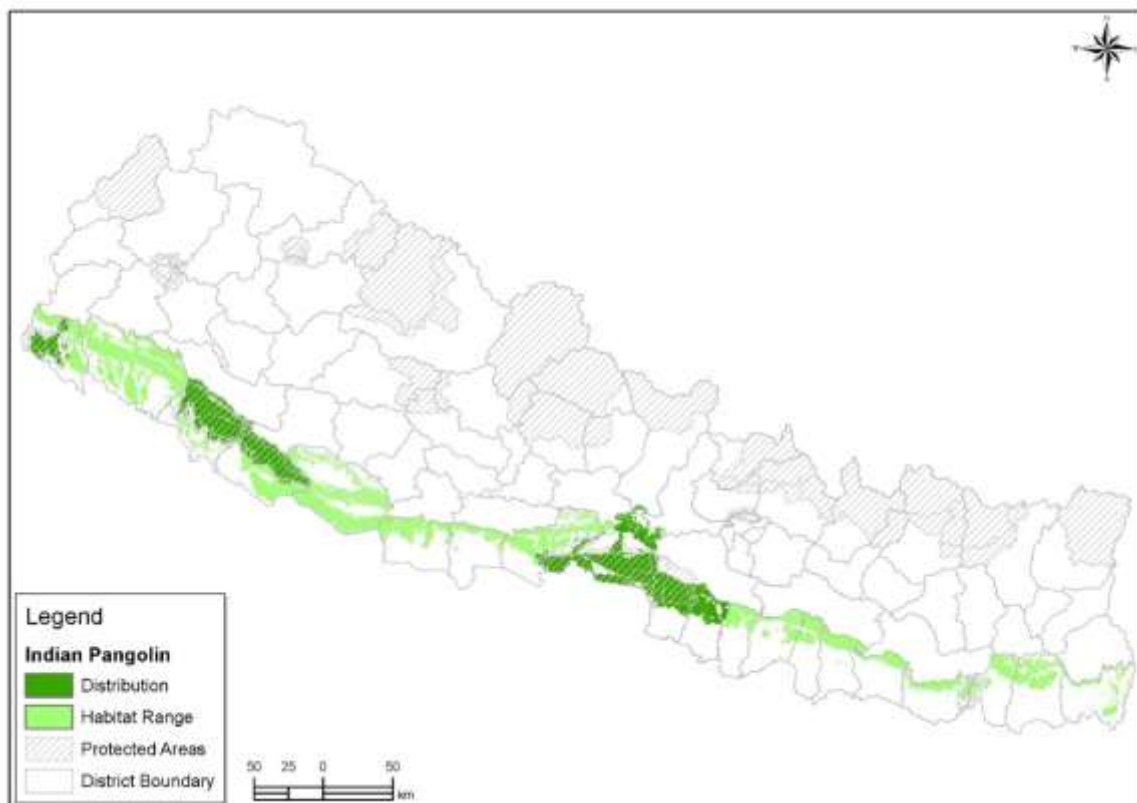
Major gaps

Population assessment

Incountry distribution

Behaviour of the species

Ecological assessment



Citation

Acharjyo and Misra 1972, Acharjyo 2000, Anwar and Chapman 2000, CITES 2000, Baral and Shah 2008, Mishra and Panda 2010, Katuwal *et al.* 2013, Baillie *et al.* 2014, IUCN 2014, Irshad *et al.* 2015, Mahmood *et al.* 2015, Mahmood *et al.* 2015, Akrfim *et al.* 2017

***Manis pentadactyla* (Linnaeus, 1758)**

Order: Pholidota

Family: Manidae

Common name

Chinese Pangolin

Vernacular name

कालो सालक Kalo Salak in Nepali

Synonyms: *Manis auritus* (Hodgson, 1836); *Phateges bengalensis*, *Pholidotus assamensis* (Fitzinger, 1872)

Morphology

Smaller than the Indian pangolin with smaller scales (15 to 18 scales over the body). Scales tend to be darker in color than the Indian pangolin with a pink-beige face and feet. Shorter tail with a naked tip. Protective ear flaps.



Distribution

Global:

Bangladesh, Bhutan, China, Hong Kong, India, Lao People's Democratic Republic, Myanmar, Nepal, Taiwan province of China, Thailand and Viet Nam.

National:

Below 2000m elevation; protected area: Annapurna Conservation Area, Makalu Barun National Park, Shivapuri Nagarjun National Park; outside the protected area: Taplejung, Illam, Panchthar, Ramechhap, Sindhuli, Kabhrepalanchok (Pannauti-Beber area), Bhaktapur, Gorkha, Bardia, Kathmandu (Sundarjal), Dolkha (Barabise) and Baglung districts.

General habitat

Tropical, subtropical and limestone forests, bamboo forests, grasslands and agricultural fields.

Movement/home range: N/A

Behavior

Dig their own burrows by moving their body side to side and excavating both sides and the roof of the passage and also enlarges passage made by termites. Nocturnal, shy, non-aggressive, solitary and burrowing strange mammals; prehensile tail used to carry infants and hanging in the tree branches.

Diet:

Its diet consists of ants and termites and other invertebrates like bee larvae, flies, worms, earthworms, and crickets.

Reproduction:

Very low reproductive rate (usually one cub per litter, one litter per year), strict requirement for habitat and very poor defense.

Population

Global: N/A

National: ≈5000

National trend: Declining

Conservation status

IUCN: Endangered

National: Endangered

Legal status

CITES: Appendix-I

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

N/A

Human-wildlife conflict associated wild animals

In this study, there is no evidences of Chinese pangolin as human wildlife conflicts associated wild animal species.

Major threats

- Hunting for subsistence
- Poaching for trophy
- Conservation efforts

Conservation efforts

Efforts

Awareness programs from GoN

Potential habitats incorporated in protected areas

Considered as priority species for research

Produce awareness materials for its conservation and importance

Species included in protected list of government

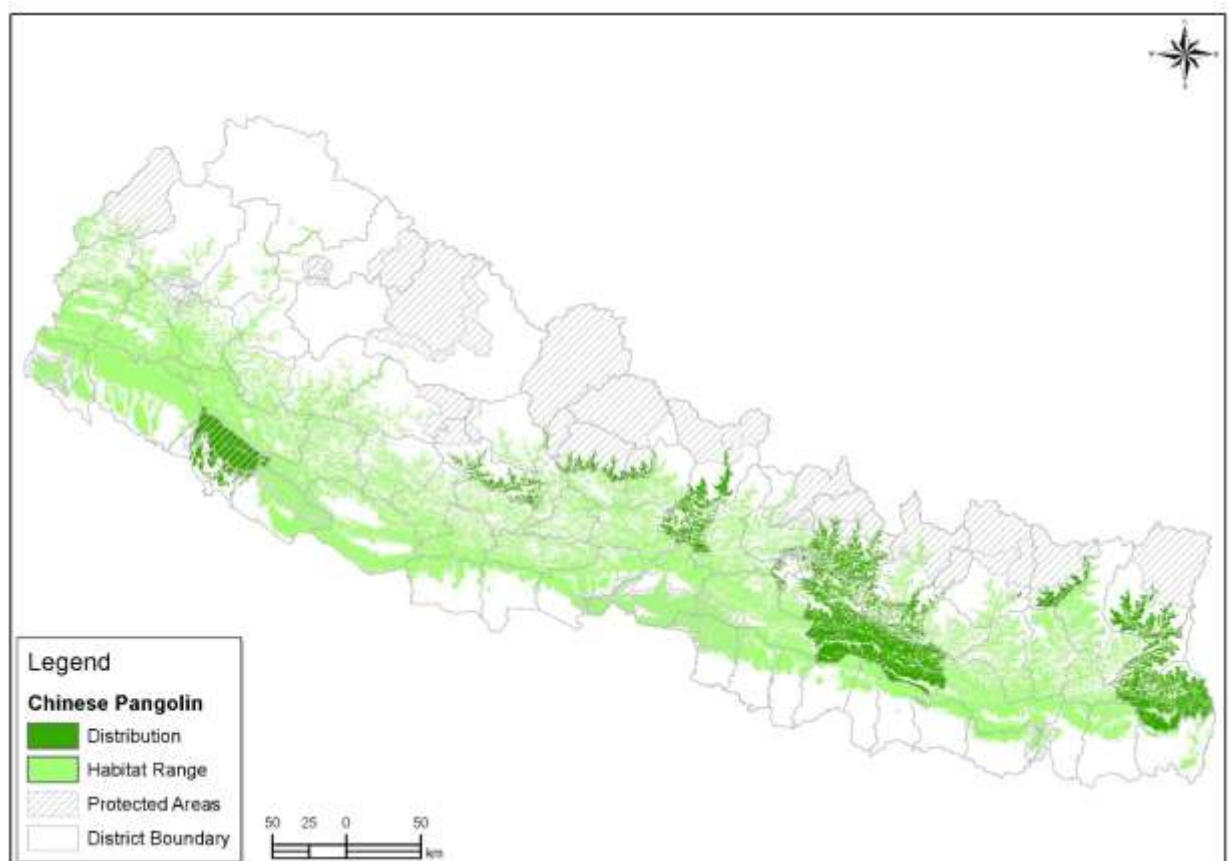
Major gaps

Population assessment

Behaviour of the species

Incountry distribution

Ecological assessment



Citation

Zobel *et al.* 1987, Heath 1992, Gurung, 1996, Wu *et al.* 2003 , Baral and Shah 2008, Kaspal 2008, Jnawali *et al.* 2011, Suwal 2011, Bhandari 2013, Challender *et al.* 2014, Bhandari and Chalise 2014, Thapa *et al.* 2014, Sapkota 2016,

***Prionailurus bengalensis* (Kerr, 1792)**

Order: Carnivora

Family: Felidae

Common name

Leopard Cat

Vernacular name

चरी बाघ Chari Bagh in Nepali

Synonyms: N/A

Morphology

Body coat greyish brown with thick fur; rounded head; short narrow muzzle with big rounded ears. Presence of black markings covering the body and limbs with spots form lines along the neck and back. The ears have black backs with a white central spot and the face is marked with two dark stripes on the forehead. Weight 1.6-8.0kg, body length 45-65 cm with tail length 20-30 cm.



Distribution

Global:

Afghanistan, Bangladesh, Bhutan, Brunei Darussalam, Cambodia, China, Hong Kong, India, Indonesia, Japan, Republic of Korea, Democratic People's Republic of Korea, Lao PDR, Malaysia, Myanmar, Nepal, Pakistan, Philippines, Russian Federation, Singapore, Taiwan Province of China, Thailand and Viet Nam.

National:

Distributed between 200-3000m elevation range; within protected areas: Annapurna Conservation Area, Bardia National Park, Chitwan National Park, Dhorpatan Hunting Reserve, Kanchenjunga Conservation Area, Khaptad National Park, Langtang National Park, Manaslu Conservation Area, Parsa National Park and Shuklaphanta National Park; outside protected areas: Bajhang, Doti, Ilam, Kanchanpur, Panchthar and Ramechhap districts.

General habitat

Occurs in variety of habitats; tropical rainforests, temperate broadleaf, dry coniferous forests, shrub forests and successional grasslands and hilly and mountainous regions.

Movement/home range:

Home range size varies from 3 to 14 km² depending on the region.

Behavior

Nocturnal, crepuscular and solitary species.

Diet:

Carnivore; feed on chickens, jungle fowl, young ungulates, hares, birds, reptiles, amphibians, insects, other birds and rodents.

Reproduction:

Breeds in February-March, give birth 2-3 litter, gestation period of 2 months, young become sexually mature in 18 months, average life span upto 13 years.

Population

Global: N/A

National: <2500

National trend: Decreasing

Conservation status

IUCN: Least concern

National: Vulnerable

Legal status

CITES: Appendix-II

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

N/A

Human-wildlife conflict associated wild animals

In this study, there is no evidences of leopard cat as human wildlife conflicts associated wild animal species.

Major threats

- Poaching.
- Persecution as a pest species/retaliatory killing in response to livestock damage.
- Habitat loss due human disturbances and settlements, clearing for agriculture and livestock grazing.

Conservation efforts

Efforts

Awareness programs from GoN

Potential habitats incorporated in protected areas

Considered as priority species for research

Produce awareness materials for its conservation and importance

Species included in protected list of government

Major gaps

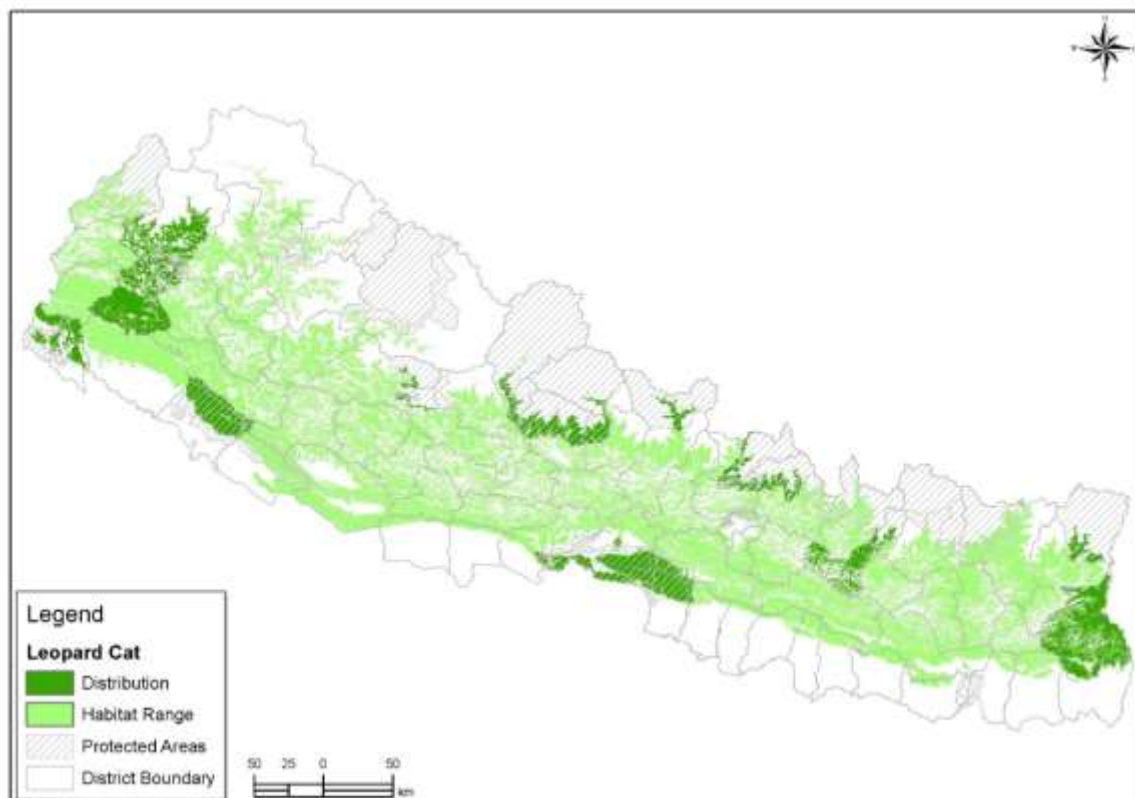
Population assessment

Behaviour of the species

Incountry distribution

Assessment about the interaction with human

Ecological assessment



Citation

Rabinowitz 1990, Suwal and Verheught 1995, Lim 1999, Grassman 2000, Ernst 2003, Austin *et al.* 2007, Rajaratnam *et al.* 2007, Baral and Shah 2008, Ghimire and Ghimire 2010, Yu 2010, Jnawali *et al.* 2011, Appel *et al.* 2013, Ross *et al.* 2015, Lee 2015, Chua *et al.* 2016.

Lynx lynx (Linnaeus, 1758)

Order: Carnivora

Family: Felidae

Common name

Eurasian Lynx

Vernacular name

पाहन बिरालो/फ्याकु बिरालो, Pahan/Phyaku biralo in Nepali

Synonyms: N/A

Morphology

It is largest lynx among four lynx; coat color varied grey, rusty, or yellow fur. Belly, front of the neck, inside of the limbs, ears are whitish in color. Black tufts at the tips of the ears and a prominently flared facial ruff are the characteristic feature. Body weigh 18-36kg, body length 70-130cm and body height 60-65cm.



Distribution

Global:

Afghanistan, Albania, Armenia, Austria, Azerbaijan, Belarus, Bhutan, Bosnia and Herzegovina, Bulgaria, China, Croatia, Czech Republic, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, India, Islamic Republic of Iran, Iraq, Italy, Kazakhstan, Democratic People's Republic of Korea, Kyrgyzstan, Latvia, Lithuania, the former Yugoslav Republic Macedonia, Moldova, Mongolia, Montenegro, Nepal, Norway, Pakistan, Poland, Romania, Russian Federation, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Tajikistan, Turkey, Turkmenistan, Ukraine and Uzbekistan.

National:

Distributed between 2745-5200m elevation; in protected areas: Annapurna Conservation Area (Upper Mustang), Dhorpatan Hunting Reserve, Rara National Park and Shey Phoksundo National Park.

General habitat

Inhabits in a wide variety of environmental and climatic conditions; open scrubby lands, dense forest cover.

Movement/home range:

Home range size varies widely and range between 100-1000 km². Male home ranges generally enclose 1-2 female territories.

Behavior

Typically crepuscular; active at dawn and dusk often sleeping out day and night in dense thickets and other safe hiding places; good climbers; use trees and high rocks as places to lay up; watch for prey and even launch ambush hunts from.

Diet:

Carnivore, feeds ungulate prey and predate on livestock too.

Reproduction:

Breeds in January-April, give birth to 1-4 litter, gestation period of 67-74 days, Females become sexually mature on two years.

Population

Global: 9000-10000

National: N/A

Natinoal trend: N/A

Conservation status

IUCN: Least Concern

National: Vulnerable

Legal status

CITES: Appendix II

GoN: Listed in the NPWC Act 2029 (1973) as protected Priority species.

Additional information

Eurasian Lynx kill livestock and chicken. People have negative feelings towards this species.

Human-wildlife conflict associated wild animals

In this study, there is no evidences of Eurasian Lynx as human wildlife conflicts associated wild animal species. It may depredated livestock within its distribution ranges, mainly in trans-Himalayan areas.

Major threats

- Habitat loss and fragmentation
- Retaliatory killing.

Conservation efforts

Efforts

Species included in protected list of the government

Awareness programs from GoN

Potential habitats incorporated in protected areas

Considered as priority species for research

Produce awareness materials for its conservation and importance

Local people construct Lynx proof sheds

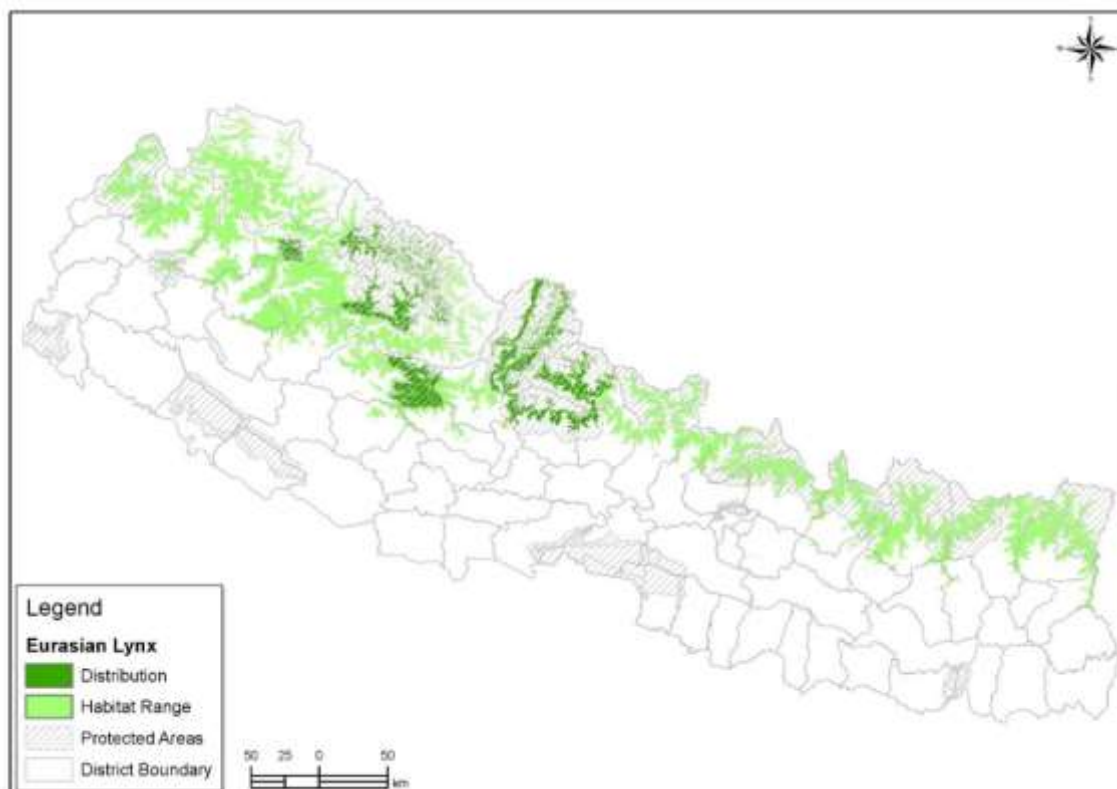
Major gaps

Population assessment

Behavior of the species

Incountry dirtribution

Ecological assessment



Citation

Suwal and Verheught 1995, Okarma *et al.* 1997, Ernst 2003, Jobin *et al.* 2007, Baral and Shah 2008, Ghimirey and Ghimire 2010, Samelius *et al.* 2011, Jnawali *et al.* 2011. Elisa *et al.* 2013, Kachamakova and Zlatanova 2014.

***Moschus chrysogaster* (Hodgson, 1839)**

Order: Cetariodactyla

Family: Moschidae

Common name

Alpine Musk Deer, Himalayan Musk Deer

Vernacular name

सुनकण्ठे कस्तुरी Sunkanthe Kasturi in Nepali

Synonyms: *Moschus sifanicus* (Büchner, 1891)

Morphology

Body coat color dark brown, presence of coarse brittle hair. Antlers absent, possess elongated upper canine teeth project far below lower lip, length of male canines 6-8 cm, hind legs longer than the fore legs, musk gland called pod present in male, body height 40-50cm, body length 86-100cm, weight 13-18kg. The rear part of the body is more powerfully built than the forequarters.



Distribution

Global:

Bhutan, China, India, and Nepal.

National:

>2500m elevation; protected areas: Khaptad National Park, Makalu-Barun National Park, Rara National Park, Sagarmatha National Park, Langtang National Park, Shey Phoksundo National Parks, Annapurna Conservation Area, Api-nampa Conservation Area, Gaurishankar Conservation Area, Kanchanjunga Conservation Area, Manaslu Conservation Area and Dhorpatan Hunting Reserve; outside protected areas: Achham, Baitadi, Bajhang, Darchula, Dolpa, Humla, Jumla and Rolpa districts.

General habitat

Inhabits in alpine forest, scrubland, barren plateaus and fir forests.

Movement/home range:

Home range of female is 0.5 km² in average. Male also maintain its territory but the detail home range information is not available.

Behavior

Diurnal, solitary, territorial in case of male, tolerating only female musk deer within their home ranges and defending their home range against other males, while female territories may overlap. Musk deer movement appears jumping than running. Toes are large for their body size and can be spread to find secure footing in mountains and on snow.

Diet:

Herbivore; feeding on grasses, shrubs, leaves, moss, lichens, shoots and twigs. Feeds on arboreal lichens and evergreen rhododendrons during heavy snow.

Reproduction:

Breeds in November-January, single litter, gestation period 178-198 days, mature at 18 month, average life span 12-20 years.

Population

Global: N/A

National: N/A

National trend: N/A

Conservation status

IUCN: Endangered

National: Endangered

Legal status

CITES: Appendix-I

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

It has religious importance. The contents in its musk gland "*Kasturi*" is valuable for making perfumes and also used for traditional medicine. Skin is considered holy, used by ascetics to sit on or to wear for meditation. The skin is important for rituals "*Bratamanda*" of Brahman, Chettris and Newars. This deer is believed to be associated to god *Shiva* and *Vishnu*. The eyes are considered to be quite attractive and a beautiful eyed women is called as *Mriganayini* (Majupuria, 1991). It has religious importance in Hinduism and Buddhism.

Human-wildlife conflict associated wild animals

In this study, there is no evidences of alpine musk deer as human wildlife conflicts associated wild animal species.

Major threats

- Poaching
- Wildlife trade
- Habitat encroachment

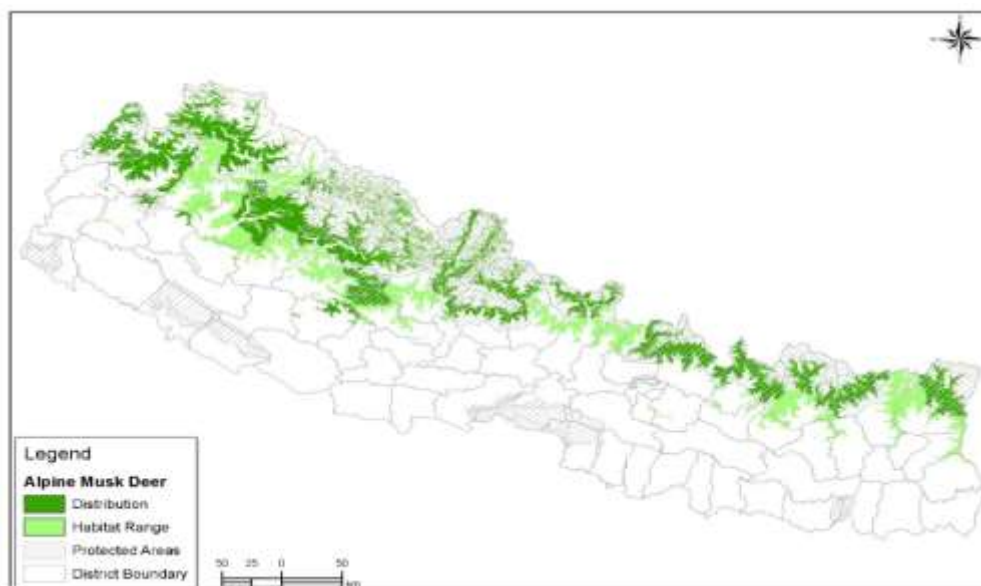
Conservation efforts

Efforts

Species included in protected list of government
Awareness programs from GoN
Potential habitats incorporated in protected areas
Considered as priority species for research
Produce awareness materials for its conservation and importance

Major gaps

Population assessment
Incountry distribution
Behaviour study
Assessment of behaviour and interation with the human
Ecological assessment



Citation

Ellerman and Morrisonscott 1951, Gao 1963, Habibi 1977, Zheng and Pin 1979, Green 1986, Green 1987a, Green, 1987b, , Deng 1989, Harrish and Cai 1993, Hayssen *et al.* 1993, Grooves *et al.* 1995, Jiang 1998, Liu and Sheng 2002, Negi 2002, Sathyakumar 2002, Meng *et al.* 2003b, Weng 2003, Yang *et al.* 2003, Aryal 2005, Grubb 2005, Green *et al.* 2007, Harrish 2007, Sheng and Liu 2007, Baral and Shah 2008, Smith and Xie 2008, Aryal *et al.* 2010, Jnawali *et al.* 2011. Syed and Ilyas 2012, Xueyou and Xuelong 2014, Ilyas 2014, IUCN 2016.

***Moschus fuscus* (Li, 1981)**

Order: Cetartiodactyla

Family: Moschidae

Common name

Black Musk Deer, Dusky Musk Deer

Vernacular name

कालो कस्तुरी Kalo Kasturi in Nepali

Synonyms: N/A

Morphology

Body coat color dark brown with coarse and brittle hair. Male and females possess clearly elongated upper canine teeth, 6-8cm, that project far below the lower lip, presence of the musk gland male, body height 70-100 cm and body weight 10-15 kg. The rear part of the body is more powerfully built than the forequarters.



Distribution

Global:

Bhutan, China, India, Nepal and Myanmar.

National:

Eastern Himalayas at 2200-4300m elevation; Makalu-Barun National Park, Sagarmatha National Park and Kanchanjunga Conservation Area.

General habitat

Occurs in alpine forest, scrubland, barren plateaus, occupying meadows, fell-fields, shrub lands or fir forests.

Movement/home range:

Males scent mark and defend territories of up to 300 hectares, and male territories generally encompass the territories of multiple females.

Behavior

Diurnal, solitary, highly territorial in case of male, tolerating only female musk deer within their home ranges and defending their home range against other males of the species, while female territories may overlap. Musk deer movement appears more like jumping than running.

Diet:

Herbivorous, feed on grass, leaves, moss and lichens.

Reproduction:

Breeds on November-December, give birth of 1-2 litter, gestation period of 6 month, sexually mature at 18 month, average life span 12-20 years.

Population

Global: N/A

National: N/A

National trend: N/A

Conservation status

IUCN: Endangered

National: Data deficient

Legal status

CITES: Appendix-I

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

It has religious importance. The contents in its musk gland "*Kasturi*" is valuable for making perfumes and also used for traditional medicine. Skin is considered holy, used by ascetics to sit on or to wear for meditation. The skin is important for rituals "*Bratamanda*" of Brahman, Chettris and Newars. This deer is believed to be associated to god *Shiva* and *Vishnu*. The eyes are considered to be quite attractive and a beautiful eyed women is called as *Mriganayini* (Majupuria, 1991). It has religious importance in Hinduism and Buddhism.

Human-wildlife conflict associated wild animals

In this study, there is no evidences of black musk deer as human wildlife conflicts associated wild animal species.

Major threats

- Subsistence hunting
- Poaching for trophy
- Habitat encroachment

Conservation efforts

Efforts

Awareness programs from GoN

Potential habitats incorporated in protected areas

Considered as priority species for research

Produce awareness materials for its conservation and importance

Population count in some protected areas

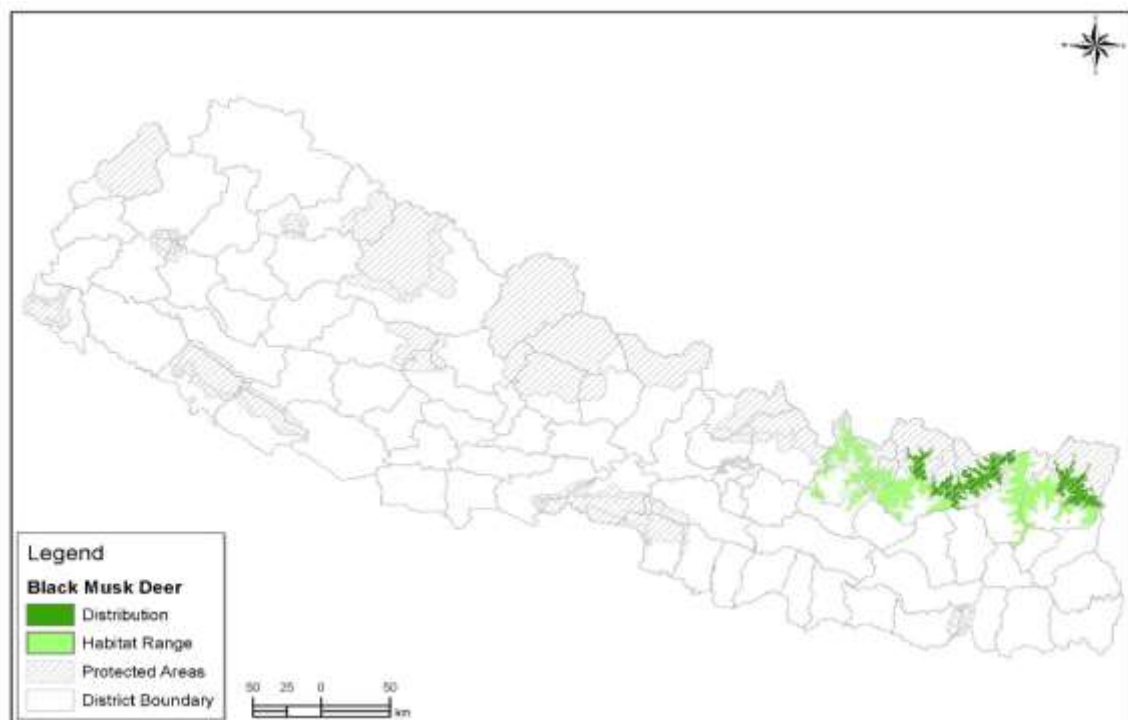
Major gaps

Population assessment

Incountry distribution

Behaviour and interaction with human

Ecological assessment



Citation

Nair 1967, Jarman 1974, Mungall 1978, Bauer 1989, Ranjutsinh 1989, Rice 1990, Jhala 1991, Jhala 1993, Suwan and Verheugt 1995, Pradhan *et al.* 1999, Rahmani 2001, Khanal 2002, Khanal *et al.* 2002, Wiegler 2005. Baral and Shah 2008, Bhatta 2008, Mallon 2008, Pokharel 2010, Jnawali *et al.* 2011, Khanal and Chalise 2011, Pokharel 2012, Pokharel *et al.* 2015, Hummel *et al.* 2015,

***Moschus leucogaster* (Hodgson, 1839)**

Order: Cetartiodactyla

Family: Moschidae

Common name

Himalayan Musk Deer

Vernacular name

सेतो कण्ठे कस्तुरी Setokanthe Kasturi in Nepali

Synonyms: *Moschus chrysogaster* (Hodgson, 1839)
ssp. leucogaster

Morphology

Color coat grizzled sandy brown with no antlers, male do possess a pair of enlarged and easily broken canines. Hind limbs longer than fore limbs. Fawns with white spots on body disappear in adult, white color throat, body length 86-100cm with 4-6cm tail, body mass 11-18kg, shoulder height of 52-53cm.



Distribution

Global:

Bhutan; China; India; Nepal

National:

2,200-4,300m elevation; protected areas: Kanchenjunga Conservation Area, Annapurna Conservation Area, Manaslu Conservation Area, Sagarmatha National Park, Langtang National Park, Shey Phoksundo National Park, Rara National Park and Khaptad National Park.

General habitat

Inhabits high alpine area with meadows, fell fields, shrub lands or fir forests.

Movement/home range:

The home range is up to 0.22 km². During heavy snow fall they temporarily migrates to lower elevation >2200m.

Behavior

Solitary, crepuscular and more active between dusk and dawn. Shy animal, have a highly acute sense of smell. Male marked their territory by rubbing their caudal gland against vegetation. A double hiss sound is made by musk deer for alarming.

Diet:

They are herbivore that feed on grasses, shrubs, leaves, moss, lichens, shoots, and twigs as major food.

Reproduction:

Breeds in November-December once a year, give birth to 2 litter, gestation period 6.0-6.5 month, nurse for 2 months, maturity occurs at the age between 1.5-2.0 years, life span 12-20 years.

Population

Global: N/A

National: N/A

National trend: N/A

Conservation status

IUCN: Endangered

National: Data deficient

Legal Status

CITES: Appendix I

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

It has religious importance. The contents in its musk gland "*Kasturi*" is valuable for making perfumes and also used for traditional medicine. Skin is considered holy, used by ascetics to sit on or to wear for meditation. The skin is important for rituals "*Bratamanda*" of Brahman, Chettris and Newars. This deer is believed to be associated to god *Shiva* and *Vishnu*. The eyes are considered to be quite attractive and a beautiful eyed women is called as *Mriganayini* (Majupuria, 1991). It has religious importance in Hinduism and Buddhism.

Human-wildlife conflict associated wild animals

In this study, there is no evidences of Himalayan musk deer as human wildlife conflicts associated wild animal species.

Major threats

- Poaching.
- Habitat degradation.

Conservation efforts

Efforts

Awareness programs from GoN

Potential habitats incorporated in protected areas

Considered as priority species for research

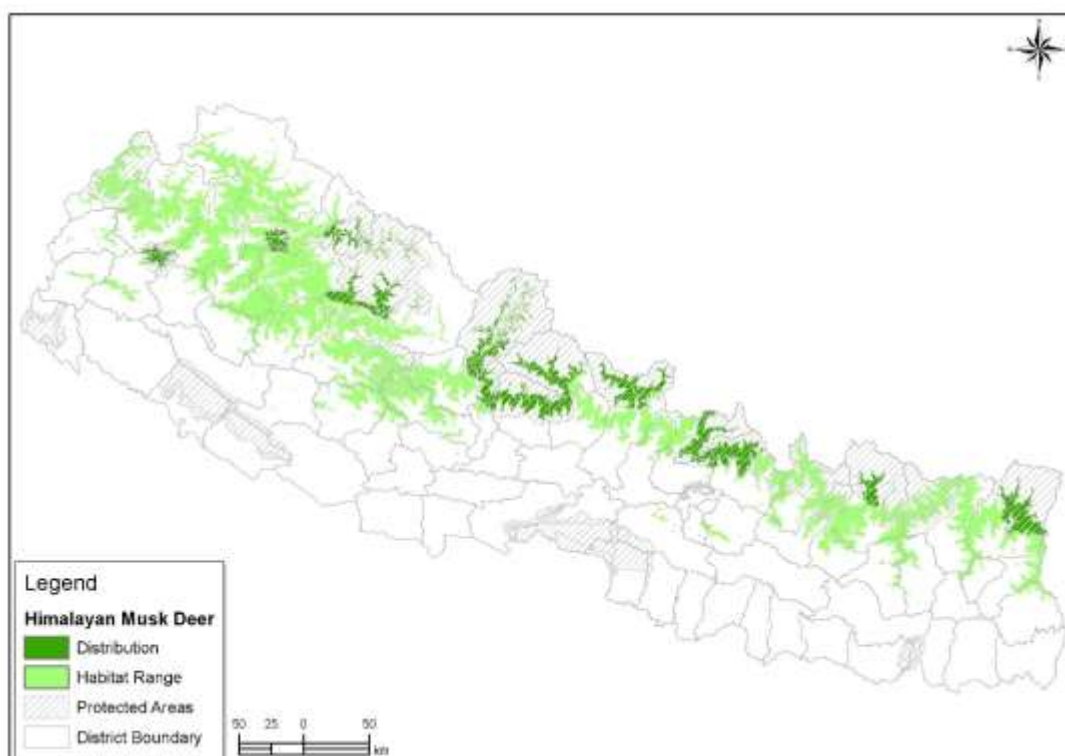
Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Incountry distribution and behavior of the species

Ecological assessment



Citation

Jameson 1967, Green 1978, Zeng and Pin 1979, Green 1986, Green 1987, Groves and Grubb 1987, Oza 1988, Deng 1989, Metz 1990, Kattel 1992, Hayssen *et al.* 1993, Harris and Cai 1993, Groves *et al.* 1995, Suwal and Verheugt 1995, Fox *et al.* 1996, Jiang 1998, Meng *et al.* 2003, Yang *et al.* 2003, Bagchi *et al.* 2004, Aryal 2005, Aryal 2006, Rajchal 2006, Baral and Shah 2008, Xie and Smith 2008, Aryal. *et al.* 2010, Wild screen 2010, Aryal and Subedi 2011, NTNC 2011, Subedi *et al.* 2012, Jnawali *et al.* 2011. IUCN 2015, Timmins and Duckworth 2015, Khadka and James 2016.

Porcula salvania (Hodgson, 1847)

Order: Cetartiodactyla

Family: Suidae

Common name

Pygmy Hog

Vernacular name

पुङ्के बढेल Pudke Badel in Nepali

Synonyms: *Sus salvanius* (Hodgson, 1847)

Morphology

Smallest and rarest in the wild, grey-brown to black bristly coats, short limbs and rounded body with extremely short tails. New born are greyish pink in color with red stripes. Adult male have visible tusks and a band of dark hair along the ridge of their nose, body weigh 6-9kg and are 55-71cm long with 2.5cm tail, body height is 25cm.



Distribution

Global:

Assam, India, with a possible presence in Bhutan.

National:

75-150m elevation in Trijuga, Koshi Tappu Wildlife Reserve, Chitwan National Park and possibly historically occurred in Bardia National Park and Shukla Phanta Wildlife Reserve. At present its distribution is unknown.

General habitat

Inhabits in early successional riverine vegetation communities, dense tall grasslands intermixed with a wide variety of herbaceous plants and early colonising shrubs and young trees.

Movement/home range:

The home range is about 0.25 Km².

Behavior

Live with family in high dome shaped nests made of grass and other vegetation stuffs. Soft murmuring calls are used to maintain contact between individuals within their dense habitat.

Diet:

They are omnivores and feed on roots, tubers, insects, and rarely feed rodents and small reptiles.

Reproduction:

Breeding season is before monsoon season, become mature in 1-2 years and give birth to 3-6 litter after a gestation of 100 days. Life span is 10-12 years in wild.

Population

Global: 200-500

National: N/A

National trend: Extinct

Conservation status

IUCN: Critically Endangered

National: Extinct

Legal status

CITES: Appendix-I

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species

Additional information

N/A

Human-wildlife conflict associated wild animals

In this study, there is no evidence of pigmy hog as human wildlife conflicts associated wild animal species.

Major threats

- Habitat fragmentation, degradation and encroachment.
- Subsistence hunting.

Conservation efforts

Efforts

Species included in protected list of the government

Awareness programs from GoN

Potential habitats incorporated in protected areas

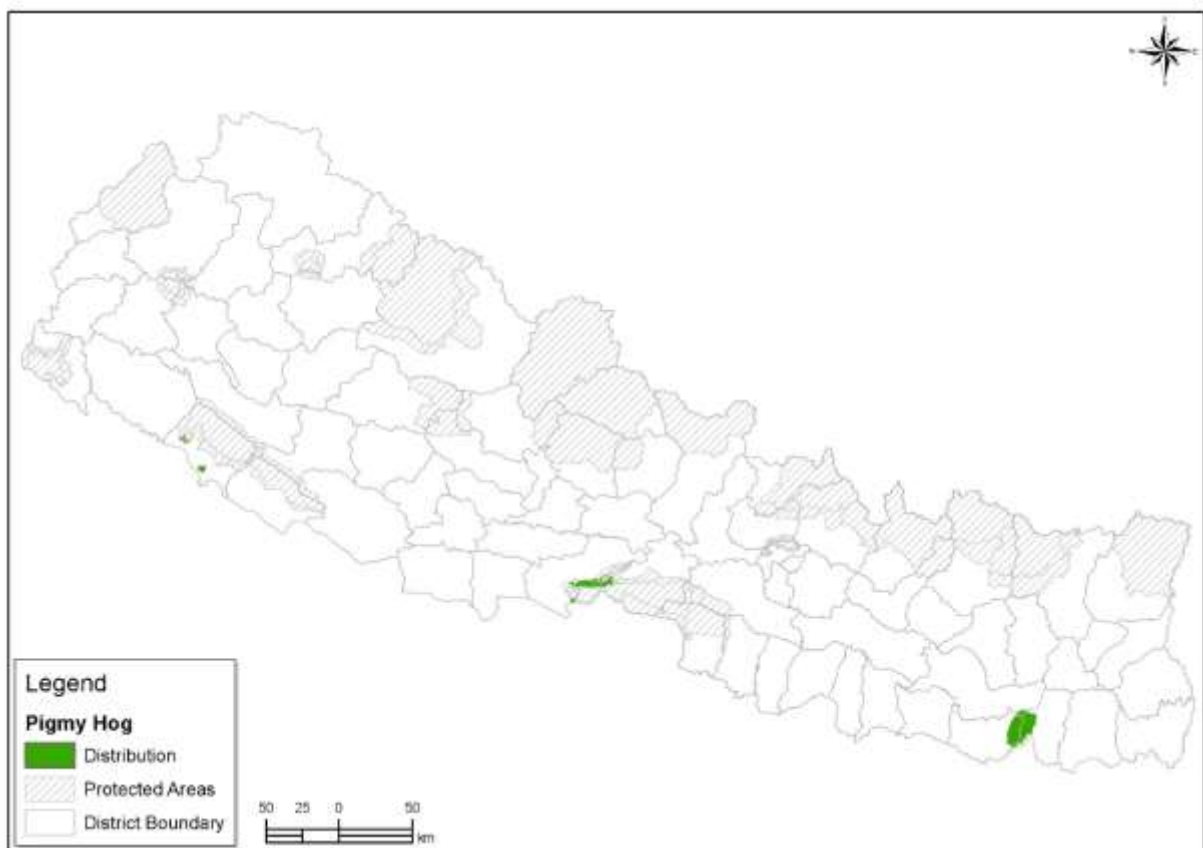
Considered as priority species for research

Produce awareness materials for its conservation and importance

Major gaps

Status update

Incountry distribution



Citation

Oliver 1980, Oliver 1981, Oliver 1989, Oliver and Deb 1993, Narayan and Deka 2002, Narayan 2006, Funk *et al.* 2007, Baral and Shah 2008, Narayan *et al.* 2008, Jnawali *et al.* 2011, Narayan and Oliver 2015.

***Ailurus fulgens* (Cuvier, 1825)**

Order: Carnivora

Family: Ailuridae

Common name

Red Panda, Lesser Panda, Red Cat-bear

Vernacular name

हाब्रे, Habre in Nepali

Synonyms: *Ailurus styani* (Thomas, 1902)

Morphology

Long, soft, reddish-brown fur on the upper parts of body, blackish fur on the lower parts, light face with tear markings. Legs paws dark brown/black. Bushy tail with six alternating transverse yellowish red other rings, body length 50-64cm, body height 28-59cm and weight 3-6 kg.



Distribution

Global:

India, China, Myanmar and Bhutan.

National:

2000-4800m elevation in 23 districts: Baglung, Bhojpur, Dhading, Dolakha, Dolpa, Ilam, Jajarkot, Jumla, Kalikot, Khotang, Lamjung, Mugu, Myagdi, Nuwakot, Panchthar, Ramechhap, Rasuwa, Rolpa, Rukum, Sankhuwasaba, Sindhupalchok, Solukhumbu and Taplejung. Nepal holds the western most distribution from Kalikot district. Protected areas: Rara National Park, Langtang National Park, Dhorpatan Hunting Reserve, Gaurishankar Conservation Area, Makalu Barun National Park, Sararmatha National Park and Kanchanjunga Conservation Area. 75.46% Red Panda presence has been documented outside PAs and remaining 24.54% is within PAs.

General habitat

Closely associated with montane forests with dense bamboo thicket under storey.

Movement/home range:

The home range of is 0.9km² to 1.11km². Male may expand its home range during breeding season.

Behavior

Solitary, territorial, both nocturnal, crepuscular. Sleep on the branch or in hollow during day time, active in late afternoon and early evening. They constantly need to conserve energy, only cover 200-300m of their home ranges per day and about 25% of their home ranges per month.

Diet:

Herbivore, feed mostly on young leaves and shoots of bamboo; also feeds on fruits, roots, grasses, acorns, lichens, insects, grubs and small mammals in trace amount.

Reproduction:

Breeds in early winter season, breed once in a year, give birth to 1-4 litter, gestation period 134 days, sexually mature at 18 months; life span 8-10 years and 13.4 yrs in captivity.

Population

Global: Unknown

National: 317-582

National trend: Decreasing

Conservation status

IUCN: Vulnerable

National: Endangered

Legal Status

CITES: Appendix-I

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

Red pandas are culturally respected.

Human-wildlife conflict associated wild animals

In this study, there is no evidences of red panda as human wildlife conflicts associated wild animal species.

Major threats

- Habitat loss and degradation.
- Poaching.
- Injury/death caused by local dogs.
- Transmission of disease from livestock.

Conservation efforts

Efforts

Red Panda Conservation Action Plan for Langtang National Park and Buffer Zone Nepal 2010-2014

Species included in protected list of the government

Awareness programs from GoN

Potential habitats incorporated in protected areas

Considered as priority species for research

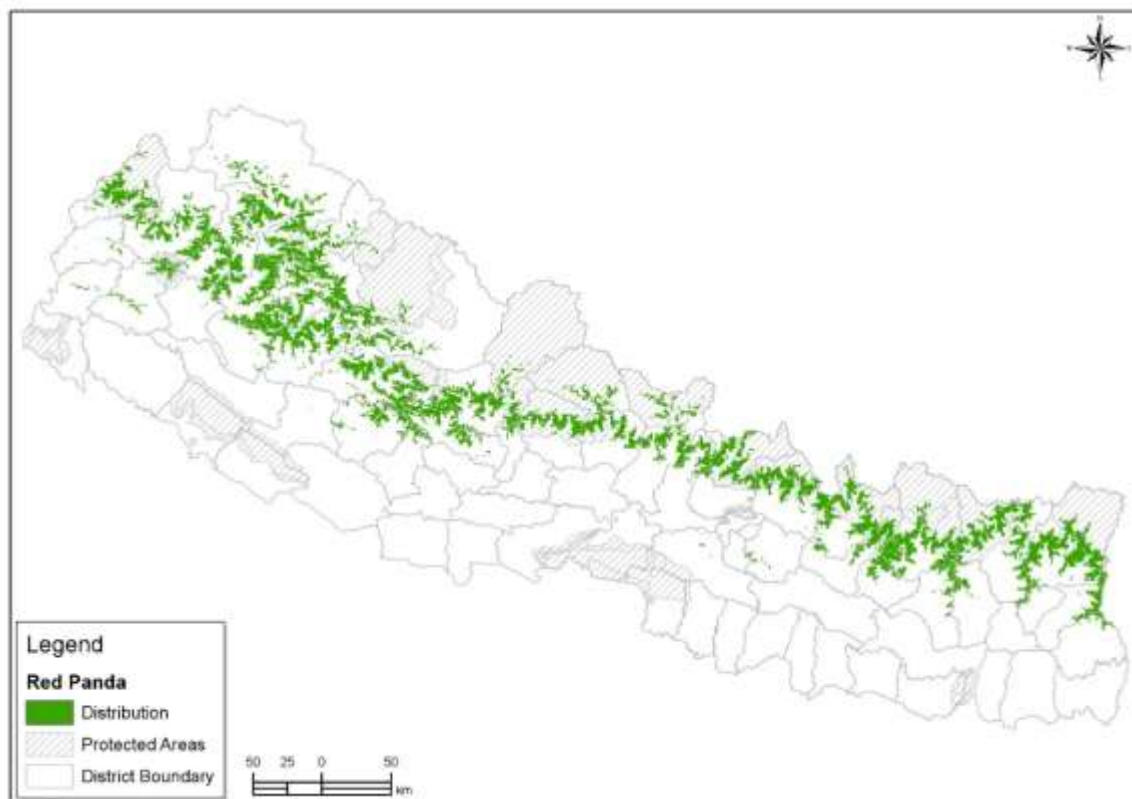
Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Behavior study

Ecological assessment



Citation

Robert and Gittleman 1984, Roberts and Gittleman 1984, Yonzon 1989, Jackson 1990, Yonzon *et al.* 1991, Yonzon and Hunter 1991, Yonzon and Hunter 1991a, Yonzon and Hunter 1991b, Karki 1999, Karki and Jendrzewski 2000, Shrestha and Ale 2001, Choudhury 2001, Mahato 2003, Mahato 2004, Williams 2004, Sharma and Kandel 2007, Sharma 2008, Baral and Shah 2008, Dharma and Belant 2009, Jnawali *et al.* 2011, Panthi *et al.* 2012, Sharma 2014, Sharma *et al.* 2014, Lama *et al.* 2015.

Prionodon pardicolor (Hodgson, 1842)

Order: Carnivora

Family: Prionodontidae

Common name

Spotted Linsang

Vernacular name

सिलु बिरालो Silu Biralo in Nepali

Synonyms: N/A

Morphology

Body color dusky brown-deep buff, black spots on its coat are set in lines off the spine, while their size decreasing towards the belly. Legs and cylindrical tail have black and white rings, low slung and weasel-like body weighing between 0.6-1.2kg, length 36-38cm, long tail 30-33cm.



Distribution

Global:

Cambodia, China, India, Lao PDR, Myanmar, Nepal, Thailand and Viet Nam.

National:

150-2000m elevation ranges; Annapurna Conservation Area to eastern Nepal, Chitwan National Park (Hetauda and Island Jungle Resort areas) and Kanchenjunga Conservation Area.

General habitat

Its habitat includes a mosaic of lowland riverine forest, tall dense grassland and deciduous Sal forest interspersed with dense grasses.

Movement/home range: N/A

Behavior

Primarily arboreal; active at night while spend day by sleeping in tree nests, hollows or under tree roots. Sharp claws, long and thin bodies help them to run along branches. The litter are hidden in the tree or root hollows lined with dried vegetation, where they may stay until weaning.

Diet:

Carnivore; prey consists of insects, lizards, frogs, birds, rats and other small rodents.

Reproduction:

Breeds twice a year: February and August; give birth of 1-2 litter; average lifespan 1.7 years in captivity.

Population

Global: N/A

National: ≈100

National trend: Decreasing

Conservation status

IUCN: Least concern

National: Endangered

Legal status

CITES: Appendix-I

GoN: Listed in the NPWC Act (1973) as protected priority species.

Additional information

N/A

Human-wildlife conflict associated wild animals

In this study, there is no evidences of spotted linsang as human wildlife conflicts associated wild animal species.

Major threats

- Habitat loss and degradation.
- Hunting and trade.

Conservation efforts

Efforts

Awareness programs from GoN

Potential habitats incorporated in protected areas

Considered as priority species for research

Produce awareness materials for its conservation and importance

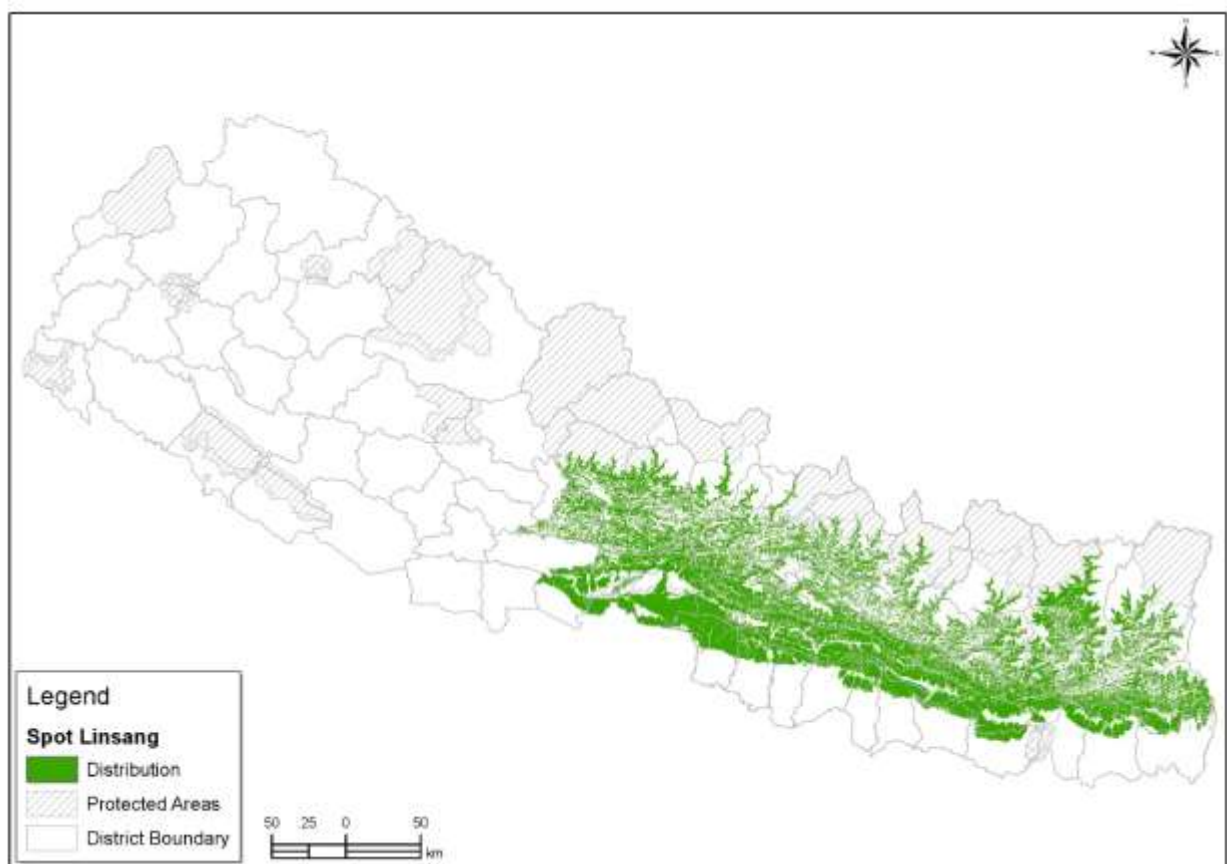
Species included in protected list of government

Major gaps

Population assessment

Incountry distribution

Ecological assessment



Citation

Baral and Shah 2008, Jnawali 2011, Jennings and Veron 2015, Duckworth *et al.* 2016.

***Hyaena hyaena* (Linnaeus, 1758)**

Order: Carnivora

Family: Hyaenidae

Common name

Striped Hyaena

Vernacular name

हुँडार Hundar in Nepali

Synonyms: N/A

Morphology

Body coat color light grey with black patch on their throat, stripes on body, downward sloping back, a pointed muzzle and pointed ear. Excluding the tail length, it measure 1.0-1.15m, height 0.66-0.75m, long tail, bushy, covered in long, coarse hair. Legs are black and white in colour and each paws has four non-retractable, sort and blunt claws.



Distribution

Global:

Algeria, Armenia, Azerbaijan, Burkina Faso, Cameroon, Chad, Djibouti, Egypt, Ethiopia, Georgia, India, Islamic Republic Iran, Iraq, Israel, Jordan, Kenya, Lebanon, Libyan Arab Jamahiriya, Mali, Mauritania, Morocco, Nepal, Niger, Nigeria, Oman, Saudi Arabia, Senegal, Tajikistan, Tanzania, United Republic of Tunisia, Turkey, Turkmenistan, Uzbekistan, Western Sahara and Yemen.

National:

Distributed in lowland of southern part of the country <1000m elevation; protected areas: Bardia National Park, Chitwan National Park, Parsa National Park and Shuklaphanta National Park. Outside the protected areas: Bara, Kailali, Kapilbastu (Niglihawa VDC), Udayapur, Sarlahi and Rautahat, west of Bagmati river to Kanchanpur districts.

General habitat

Inhabits in scrub forest, grasslands, dense forest and undulating grounds. Its dens are located in rocky hills, ravines, and crevices.

Movement/home range:

Home ranges 44-72km² overlapping with each other home range.

Behavior

They are nocturnal animal, non territorial, live in 1 or 2 or in groups, have large scent glands on their rears for marking their territory. When greeting each other, they lick the mid-back region, sniff each other's noses, extrude their anal pouch or paw each other's throat.

Diet:

Carnivore, feed on scavenges large, medium-sized ungulates, deer species and wild boar; consume bones from carcasses if the meat has been picked off; also feed on small animals like hare, rodents, reptiles, and birds.

Reproduction:

Striped hyaena's age at first reproduction is approximately 28 months. After a gestation period of 90 to 92 days, litter of one to five young is born with adult markings, closed eyes and small ears. It lives up to 24 years in captivity.

Population

Global: 5,000-4,000

National: 10-100

National trend: Decreasing

Conservation status

IUCN: Near Threatened

National: Endangered

Legal status

CITES: N/A

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

N/A

Human-wildlife conflict associated wild animals

In this study, there is no evidences of striped hyaena as human wildlife conflicts associated wild animal species. Local people considered it as Jackal. Evidence of killing this wildlife as conflicts associated was recorded from Palpa district.

Major threats

- Retaliatory killing.
- Habitat loss, degradation and fragmentation.
- Disease transmission from livestock.

Conservation efforts

Efforts

Species included in protected list of the government

Awareness programs from GoN

Potential habitats incorporated in protected areas

Considered as priority species for research

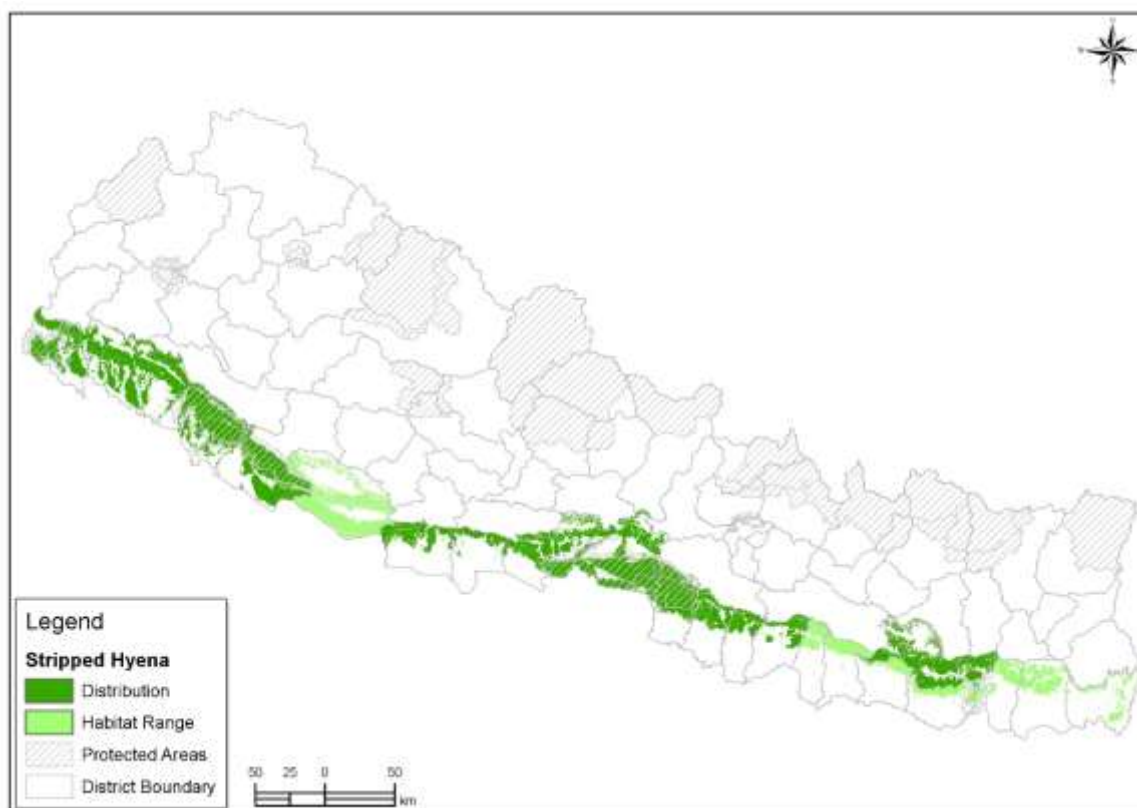
Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Incountry distribution

Ecological assessment



Citation

Kruuk 1976, Macdonald 1978, Mills 1978a, Rieger 1978, Rieger 1979, Rieger 1981, Van Aarde *et al.* 1988, Mills 1989, McGeorge 1999, YomTov 2003, Wagner 2006, Baral and Shah 2008, Singh 2008, Jnawali *et al.* 2011, Ahmed *et al.* 2012, Bhandari *et al.* 2015, AbiSaid and Dloniak 2015, Wagner *et al.* 2017.

***Rucervus duvaucelli* (Cuvier, 1823)**

Order: Cetartiodactyla

Family: Cervidae

Common name

Barasinga, Swamp Deer

Vernacular name

बाह्रसिङ्गा Barasingha in Nepali

Synonym: *Cervus duvaucelii* (G. Cuvier, 1823)

Morphology

Adult male dark brown coat during winter and light brown in summer. Adult females are lighter colour than males, fully adult male can have 10 to 15 tines. Antlers are sweeping upward for over half the length before branching repeatedly. Shoulder height measure 110-120cm and average body length is 180cm.



Distribution

Global:

India and Nepal.

National:

Bardia National Park and Shuklaphanta National Park.

General habitat

Inhabits in swampy habitats, grasslands and floodplains.

Movement/home range:

The composite home range of herds ranges from 10 to 30 km².

Behavior

Diurnal and rests in the shade during midday, feeds mainly in the morning and evenings.

Diet:

Herbivore; mainly a grazer, feed on grass, leafy aquatic vegetation.

Reproduction:

Breeds in September-November, give birth to single litter, gestation period 240-250 days, matures at 2-3 years, average lifespan 23 years.

Population

Global: 3450-4200

National: ≈2400

National trend: Increasing

Conservation status

IUCN: Vulnerable

National: Endangered

Legal Status

CITES: Appendix I

GoN: Listed in the NPWC Act 2029 (1973) Appendix I

Additional information

Skin has religious value.

Human-wildlife conflict associated wild animals

In this study, there is no evidences of swamp deer as human wildlife conflicts associated wild animal species.

Major threats

- Poaching for trophy.
- Subsistence hunting.
- Habitat encroachment.

Conservation efforts

Efforts

Species included in protected list of the government

Awareness programs from GoN

Potential habitats incorporated in protected areas

Considered as priority species for research

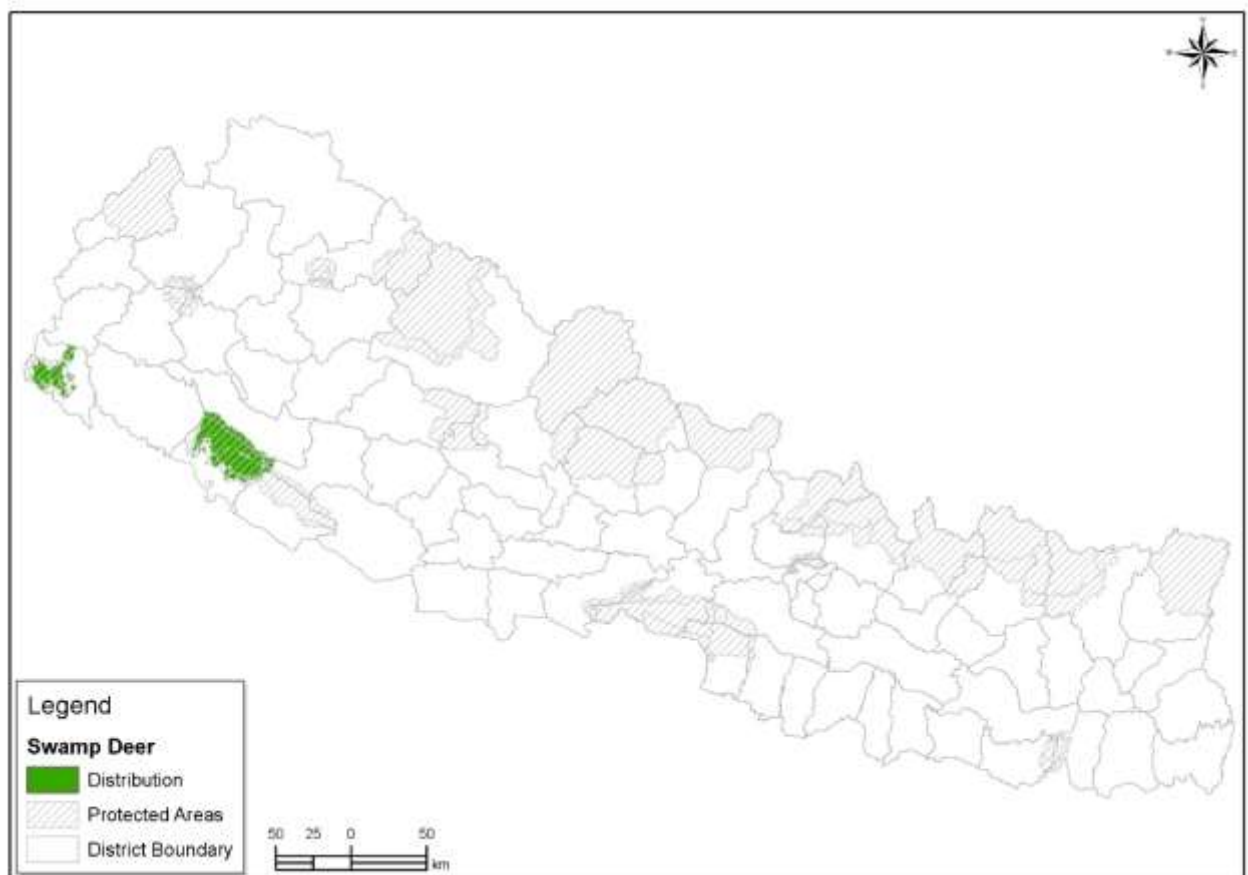
Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Behavior of the species

Ecological assessment



Citation

Schaller 1967, Holloway 1973, Martin 1977, Schaff 1978, Singh 1984, Henshaw 1993, Henshaw 1994, Suwal and Verheugt 1995, Qureshi 1995, Ghimire 1996, Pokharel 1996, WWF-Nepal 2001, Subedi 2002, Qureshi *et al.* 2004, Shrestha *et al.* 2005, Wegge 2006, Baral and Shah 2008, Duckworth *et al.* 2008c, Jnawali *et al.* 2011, Tewari and Rawat 2013, Duckworth *et al.* 2015.

***Pantholops hodgsonii* (Abel, 1826)**

Order: Cetartiodactyla

Family: Bovidae

Common name

Chiru, Tibetan Antelope

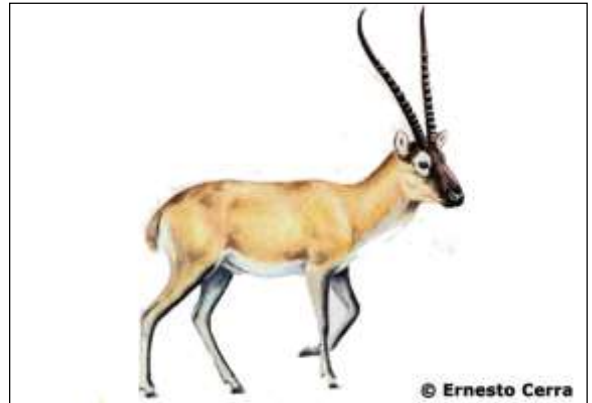
Vernacular name

चिरु Chiru in Nepali

Synonyms: *Antilope hodgsonii*

Morphology

Body covered with a pale fawn-greyish, thick, woolly coat. Belly is white in color. Face is dark brown-black with prominent nasal swellings which have paler color in male, medium sized antelope with shoulder height of 83cm in male and 74cm in female. Males are larger than



females, weighing about 39kg compared with 26kg. The males have long, curved-black horns that measure 54-60cm in length and black stripes on the legs which make them distinguish from female.

Distribution

Global:

China, India and Nepal

National:

>4000m elevation in western part of Nepal Himalaya; Annapurna Conservation Area, Shey Phoksundo National Park and districts adjoining with china boarder.

General habitat

Inhibits in terrain, high hills and mountains; grassy open slopes of steppe habitats.

Movement/home range:

Long-distance migratory species; moving hundreds of kilometers between summer and winter seasons, often as far as 200-300 km, to calving areas.

Behavior

Gregarious, diurnal, pregnant females and juvenile female offspring segregate from the males in summer and migrate.

Diet:

Herbivore, feed on grasses, forbs and shrubs. Males have relatively diverse diets, feeding on grass and forbs (mixed), whereas females and young living segregated from males relied exclusively on forbs (browsers).

Reproduction:

Breeds in June-July, give birth to single litter, gestation period 6.0-6.5 month, sexually mature 1.5-2.5 years, average lifespan 10 years.

Population

Global: 100,000-150,000 individuals

National: Data deficient

National trend: N/A

Conservation status

IUCN: Endangered

National: Data deficient (possibly regionally extinct)

Legar status

CITES: Appendix-I

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species

Additional information

N/A

Human-wildlife conflict associated wild animals

In this study, there is no evidences of chiru as human wildlife conflicts associated wild animal species.

Major threats

- Trade for highly valued wool
- Habitat degradation due to overgrazing by livestock
- Fencing on pastures

Conservation efforts

Efforts

Awareness programs from GoN

Potential habitats incorporated in protected areas

Considered as priority species for research

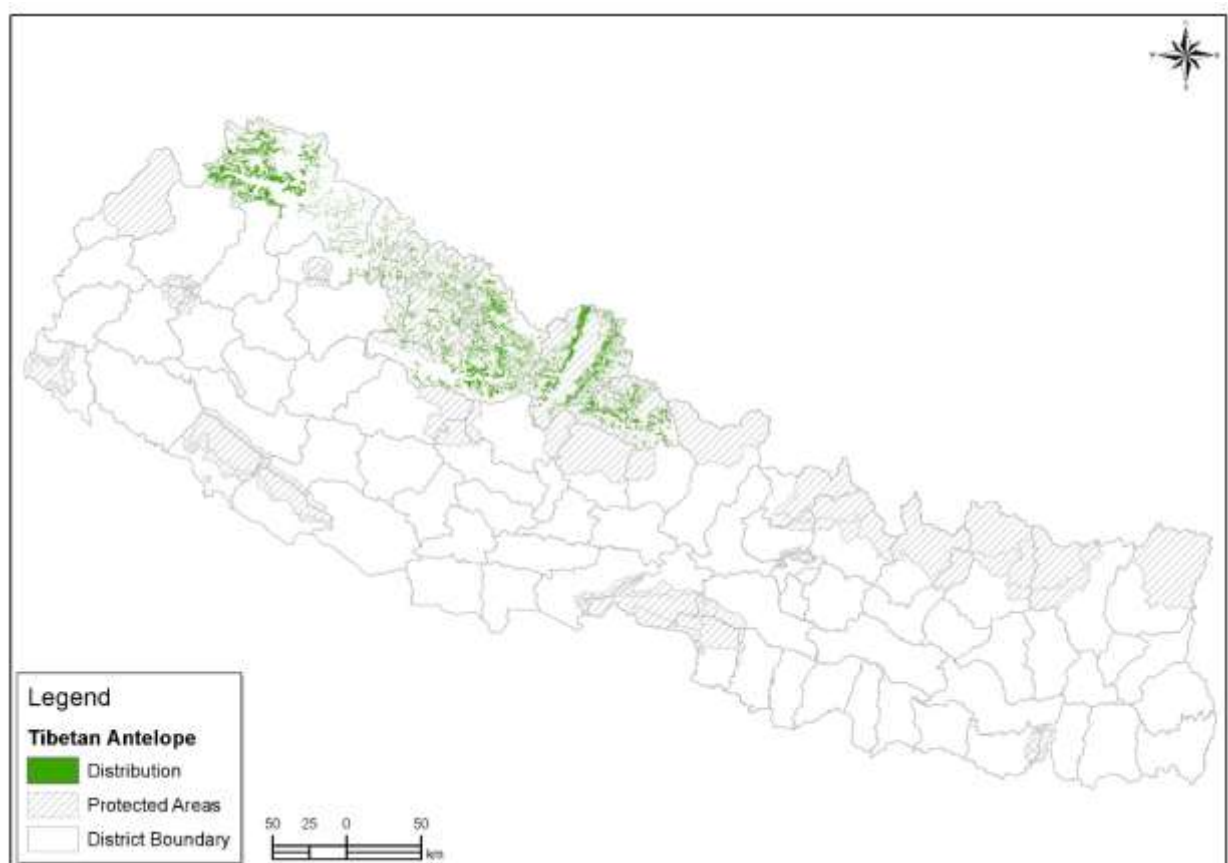
Produce awareness materials for its conservation and importance

Species included in protected list of government

Major gaps

Status update

Incountry distribution



Citation

Schaller *et al.* 1991, Harris and Miller 1995, Schaller 1998, Schaller *et al.* 2005, Lian *et al.* 2007, Baral and Shah 2008, Leslie and Schaller 2008, Jnawali *et al.* 2011, Rivalsa *et al.* 2011, Buho *et al.* 2011, Ashwini *et al.* 2012, Manayeva *et al.* 2012, Qi *et al.* 2015, IUCN SSC Antelope Specialist Group 2016, Manayeva *et al.* 2017.

Bos mutus (Przewalski, 1883)

Order: Cetartiodactyla

Family: Bovidae

Common name

Wild Yak

Vernacular name

जङ्गली चौरी गाई Jangali Chauri Gai in Nepali

Synonyms: N/A

Morphology

Largest mammal in high altitude of Asia; long shaggy black-dark brown coat, grey muzzle, thick tail, both sexes grow horns which curve upwards, horns are larger compared to domestic individual, male weigh up to 1000 kg, females are 1/3 size of male, body height can reach more than 2m.



Distribution

Global:

China, India and Nepal.

National:

Current distribution range of this species is limited to Humla and Dolpo boarder with neighbouring Tibetan plateau.

General habitat

Inhibits in treeless uplands; including plains, hills and mountains; from 3200m to the limit of vegetation at about 5400; move seasonally, descending into lower valleys in the winter.

Movement/home range: N/A

Behavior

The wild yak feeds mostly in the morning and evening. They are gregarious, often aggregating into groups of >100 individuals, although smaller groups of 10-20 are also common. Adult males often travel with females and young, although older males will often travel alone or form small groups of 25.

Diet:

Herbivore; feeds on grasses, herbs, mosses and lichens; and crunches ice or snow as water source.

Reproduction:

Seasonal breeder, breeds in summer; give birth to single litter, gestation period 258-270 days, sexually mature 4-5 years, life span upto 23 years.

Population

Global: <10000

National: N/A

National trend: N/A

Conservation status

IUCN: Vulnerable

National: Data deficient

Legal Status

CITES: Appendix-I

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

N/A

Human-wildlife conflict associated wild animals

In this study, there is no evidences of wild yak as human wildlife conflicts associated wild animal species.

Major threats

- Poaching
- Habitat encroachment

Conservation efforts

Efforts

Species included in protected list of the government

Awareness programs from GoN

Potential habitats incorporated in protected areas

Considered as priority species for research

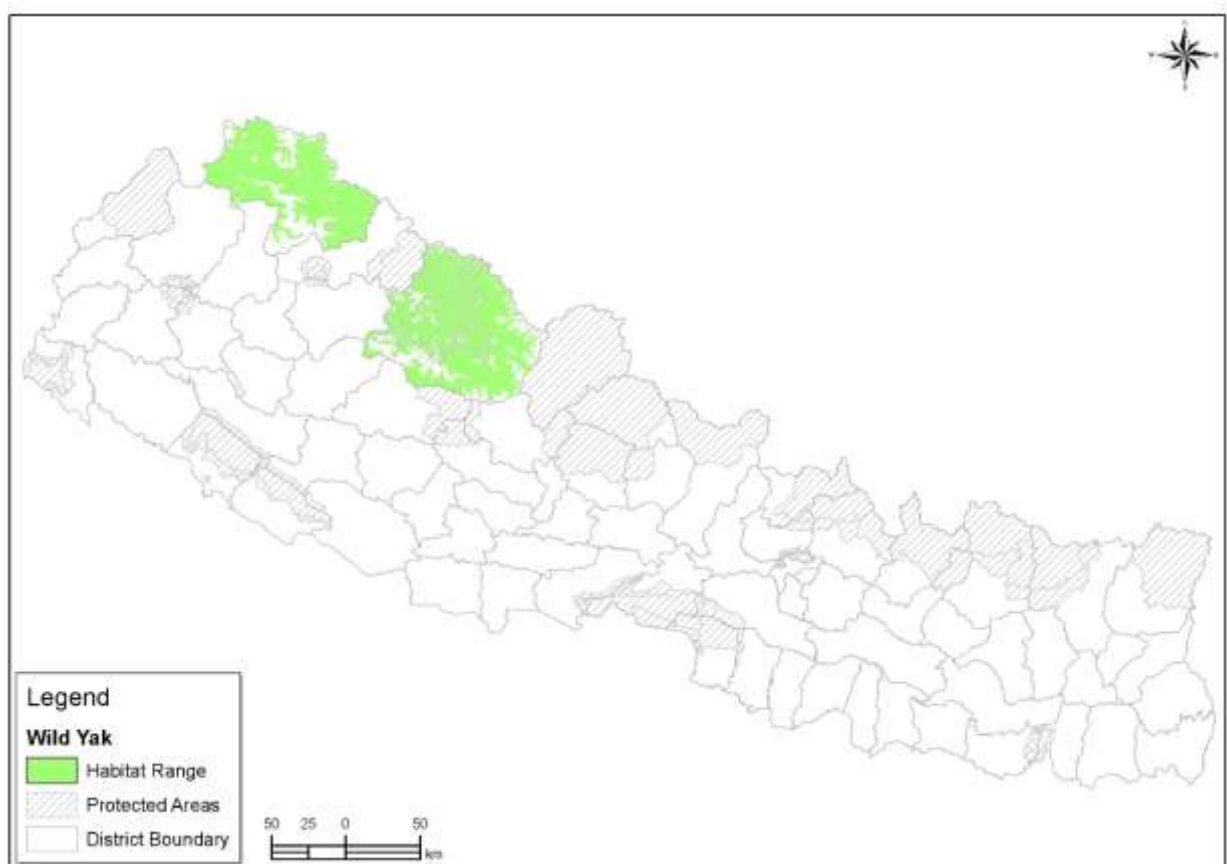
Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Behavior study

Ecological assessment



Citation

Rongchang 1982, Miller *et al.* 1994, Pal and Madan 1996, Schaller 1996, Sherchand and Karki 1996, Haris *et al.* 1999, Yu and Li 2001, Bhatnagar 2002, Wiener *et al.* 2003, Zi 2003, IUCN 2004, Smith and Xie 2008, Baral and Shah 2008, Leslie and Schaller 2009, Jnawali *et al.* 2011, FON 2011, IUCN 2012, Acharya 2015, Buzzard and Berger 2016, Kusi 2016, Kusi 2017,

Canis lupus (Linnaeus, 1758)

Order: Carnivora

Family: Canidae

Common name

Gray Wolf, Timber Wolf, Arctic Wolf, Grey Wolf, Mexican Wolf, Plains Wolf, Common Wolf, Tundra Wolf, Wolf

Vernacular name

ब्वाँसो Bwanso in Nepali

Synonyms: N/A

Morphology

Body coat grey fur blended with long white guard hair showing great variation between light grey and white; distinct white coloration around the throat, chest, belly and inner part of the legs; muzzled arrayed with closely spaced black speckles which extend below the eye on to the upper cheeks and ears; measures 100-130cm body length and weight 15-20 kg.



Distribution

Global:

Afghanistan, Albania, Armenia, Azerbaijan, Belarus, Bhutan, Bosnia and Herzegovina, Bulgaria, Canada, China, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Greenland, Hungary, India, Iran, Israel, Islamic Republic of Iraq, Italy, Jordan, Republic of Kazakhstan, Korea, Democratic People's Republic of Korea, Latvia, Libyan Arab Jamahriya, Lithuania, Macedonia, Mexico, Moldova, Mongolia, Montenegro, Myanmar, Nepal, Norway, Oman, Pakistan, Poland, Portugal, Romania, Russian Federation, Saudi Arabia, Serbia, Slovakia, Slovenia, Spain, Sweden, Syrian Arab Republic, Tajikistan, Turkey, Turkmenistan, Ukraine, United Arab Emirates, United States, Uzbekistan and Yemen.

National:

Distributed between 3600-5150m elevation; protected area: Annapurna Conservation Area (Upper Mustang), Kanchanjunga Conservation Area, Manaslu Conservation Area, Api-Nampa Conservation Area, Dhorpatan Hunting Reserve, Shey Phoksundo National Park; outside the protected areas: Dolpa, Humla and between Shey Phoksundo National Park and Annapurna Conservation Area.

General habitat

Occur from wide range of habitats, from arctic tundra to prairie, forest and arid landscape.

Movement/home range:

Highly territorial animal having 150 km² home range on average; segregate home range by scent marking.

Behavior

They shows direct and indirect defensive strategies to minimize encounters with adjacent packs; show the aggressive, submassive behavior along with wolves mimic or practice hunting skills with fellow pack mates or with novel objects, animals or plants.

Diet:

Carnivore; feed on blue sheep, Tibetan argali, Tibetan gazelle, himalayan tahr and kiang, adult horse and mules. They create great loss in predating livestock, goat and sheep.

Reproduction:

Sexually matured between 5-6 years of age, give birth at 5-7 litter, gestation period 60-65 days, produce up to 4-9 years; lifespan up to 13 years in wild and 20 years in captivity.

Population

Global: N/A

National: 30-50

National trend: Decreasing

Conservation status

IUCN: Least concern

National: Critically Endangered

Legal status

CITES: Appendix-I

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species

Additional information

Believed as a symbolic animal whose killing resulted scarcity of game. Its call is considered as bad omen. Sighting of wolf presumed to be the evil results. So, the local people have negative attitude towards this species (Majupuria, 1991).

Human-wildlife conflict associated wild animals

In this study, there is no evidences of gray wolf as human wildlife conflicts associated wild animal species. It may depredated livestock within its distribution ranges.

Major threats

- Habitat fragmentation.
- Retaliatory killing.

Conservation efforts

Efforts

Species included in protected list of the government

Awareness programs from GoN

Potential habitats incorporated in protected areas

Considered as priority species for research

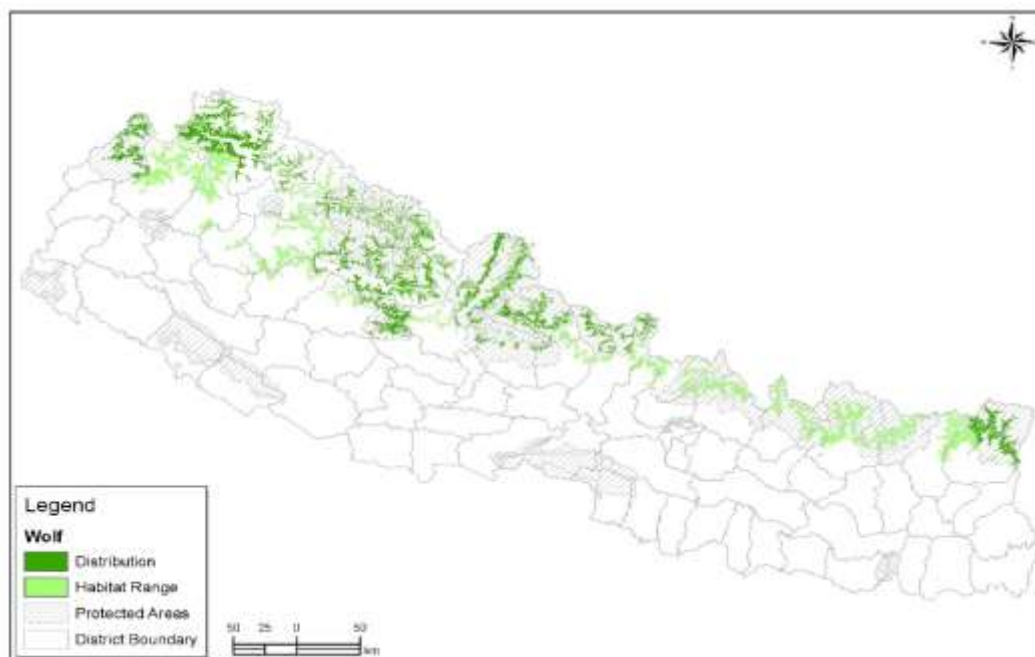
Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Incountry distribution

Ecological assessment



Citation

Sharma 2004, Baral and Shah 2008, Jnawali *et al.* 2011, Shrotriya 2012, Subba 2012, Acharya and Ghimire 2013, Jhala 2013, Arnold 2016, Subba *et al.* 2016, Chetri *et al.* 2016, Chetri *et al.* 2017,

3.5.1.2 PROTECTED BIRDS

***Houbaropsis bengalensis* (Gmelin, 1789)**

Order: Gruiformes

Family: Otididae

Common name

Bengal Florican

Vernacular name

खरमजुर Kharmujur in Nepali

Synonyms: N/A

Morphology

Male, black from head to neck and underparts. Upperparts are buff with fine black vermiculations and black arrowhead markings, and it has a conspicuous white patch on the wing coverts. Female have a buff brown colour, with a dark brown crown and narrow dark streak down the side of the neck. Larger and stockier than lesser florican, with broad head and thicker neck. Females are larger than the male. *Weight:* male 1.25–1.70 kg, female: 1.70– 2.25 kg; *length:* male: 64 cm, female: 68 cm.



Distribution

Global:

Bangladesh, Cambodia, India, Nepal and Vietnam.

National:

Suklaphanta National Park, Bardia National Park, Chitwan National Park and Koshi Tappu Wildlife Reserve.

General habitat

Occurs in lowland grasslands with scattered bushes, sort grassland interspersed with patches of taller.

Movement/home range: 305m – 75m

Behavior

Silent but when disturbed utters a metallic chik-chik-chik call. Displaying males croak and produce a strange deep humming. Short distance migration, encountered in the early mornings.

Diet:

Feeds on shoots, flowers and also insects like grasshoppers and beetles. Occasionally feeds lizards and small snakes. The proportion of food items varies on their availability, so plant matter dominates in winter and spring, while invertebrate prey becomes more important in summer.

Reproduction:

Breeds in March-August; March-May courtship display; males are far more conspicuous than the cryptically-coloured females, which moreover prefer high grassland rich in sugarcane.

Population

Global: 250-999

National: 65-100

National trend: Decreasing

Conservation status

IUCN: Critically Endangered

Regional: Critically Endangered

Legal Status

CITES: Appendix I

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

N/A

Human-wildlife conflict associated wild animals

In this study, there is no evidence of Bengal florican as human wildlife conflicts associated wild animal species.

Major threats

- Poached for feathers and meat.
- Inadequate habitat management by ploughing, grass harvesting and intensive burning.

Conservation efforts

Efforts

Bengal Florican Conservation Action Plan (2016-2020)

Species included in protected list of the government

Awareness programs from GoN

Potential habitats incorporated in protected areas

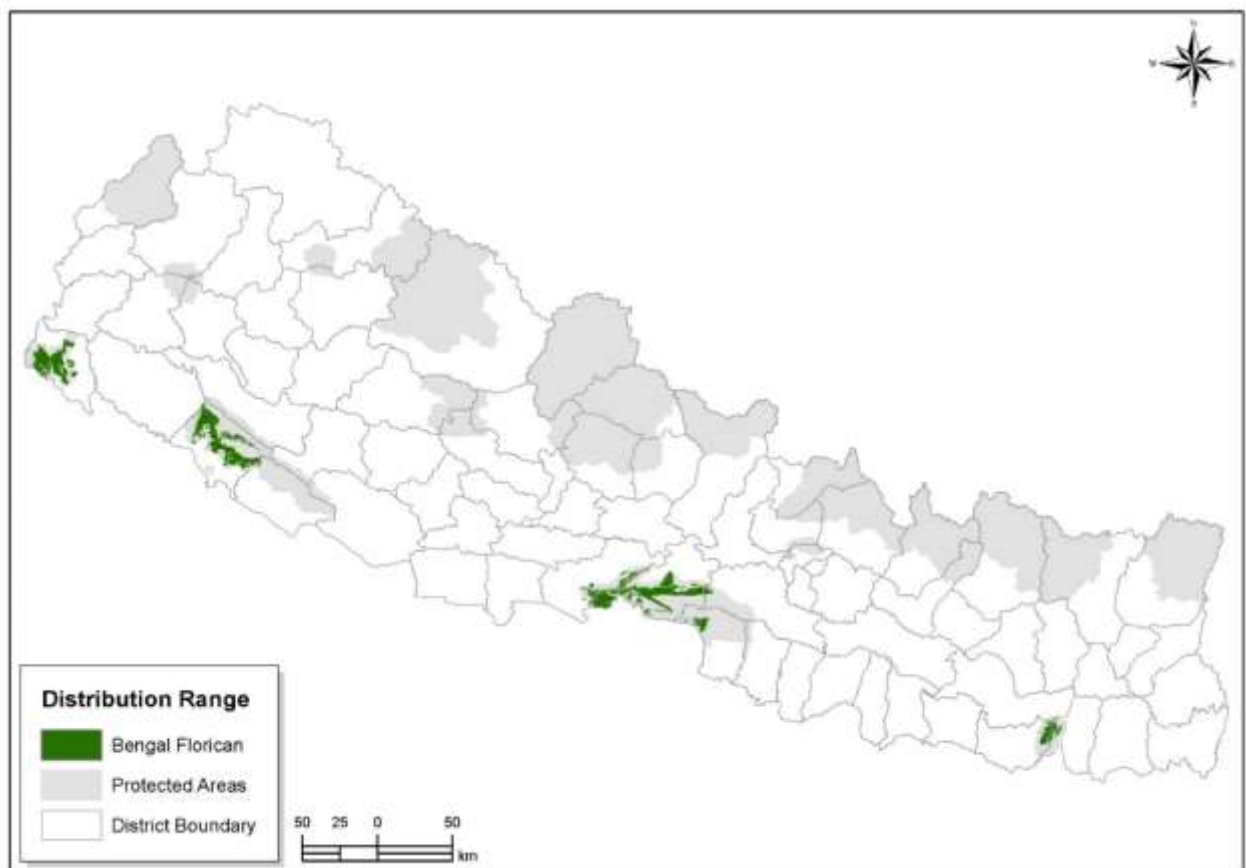
Considered as priority species for research

Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Ecological assessment



Citation

Del Hoyo *et al.* 1996, Grimmette *et al.* 1998, Baral *et al.* 2003, Baral and Inskipp 2004, Poudyal *et al.* 2008a, Poudyal 2008b, BirdLife International 2017.

Sypheotides indica (Miller, 1782)

Order: Gruiformes

Family: Otidae

Common name

Lesser florican

Vernacular name

सानो खरमजुर, लिख, खरमोर Sano Khar Majur, Likh, Kharmore
in Nepali

Synonyms: N/A

Morphology

Small, slim and long necked bustard. Non-breeding male are similar to its female, but has white wing coverts. Breeding male has spatulate tipped head plumes, black head/neck and under-parts and white wing coverts show as patch on closed wing, but have less white on wing. Female and immature are sandy or cinnamon buff; separated from female/immature bengal florican are smaller in size and slimmer appearance, heavily marked wing-coverts and rufous rather than buff background coloration to barred flight feathers. Young birds have a distinct 'U' shaped mark on the neck near the throat. Female is slightly larger than the male, *weight*: 0.51-0.74 kg, *length*: 46-51 cm.



Distribution

Global:

India, Nepal and Pakistan.

National:

Chitwan National Park, Bardia National Park, Suklaphanta National Park, Koshi Tappu Wildlife Reserve, Rapti Dun valley, Kalali and Kathmandu valley (in past).

General habitat

It inhabits in dry grassland and cropland.

Movement/home range:

250 to 300 m

Behavior

The horizontal body carriage, size and habit of holding up their tail feathers when walking on the ground have led their local names to make associations with peacocks, with a popular name being the equivalent of "grass peacock" in some areas. During the breeding season, males leap suddenly from the grass with a peculiar croaking or knocking call, flutter their wings and fall back with slightly open wings. At the apogee of the leap the neck is arched backwards and the legs folded as if in a sitting. These jumps are repeated after intervals of about three or more minutes. The displays are made in early mornings and late evenings, or during other parts of the day in cloudy weather. The breeding system is said to be a dispersed with each male holding a territory of about 1-2 ha. Nest is a shallow scrape on the ground and 3-4 (1.88 x 1.6 inches) eggs are usually in den.

Diet:

Diverse mix of locusts, other insects, seeds and plant shoots; grasshoppers, beetles, caterpillars, worms, frogs, small lizards, leaves, crop shoots, herbs and berries.

Reproduction:

Breed in onset of the monsoon in Southwest; September-October in northern India and April-May in parts of southern India; *egg size*: 1.88*1.6 inch; *clutch size*: 4-5 eggs; *incubation*: 21 days; females take sole part in incubation and rearing chicks.

Population

Global: ≈1,500 mature individuals

National: N/A (very rare seasonal visitor)

National trend: N/A

Conservation status

IUCN: Endangered
Regional: Critically Endangered

Legal status

CITES: Appendix-II
GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

The species is endangered and has been extirpated in some parts of its range such as Pakistan. During courtship, a male may perform his aerial display as many as 500 times a day.

Human-wildlife conflict associated wild animals

In this study, there is no evidences of lesser florican as human wildlife conflicts associated wild animal species.

Major threats

- Hunting and habitat degradation (overgrazing and subsequent grassland degradation)
- Inappropriate management, such as ploughing, as well as indiscriminate burning in protected areas, leading to a loss of suitable habitat.
- Very small areas of suitable habitat remain and these are almost entirely within protected areas.

Conservation efforts

Efforts

Species included in protected list of the government

Awareness programs from GoN

Considered as priority species for research

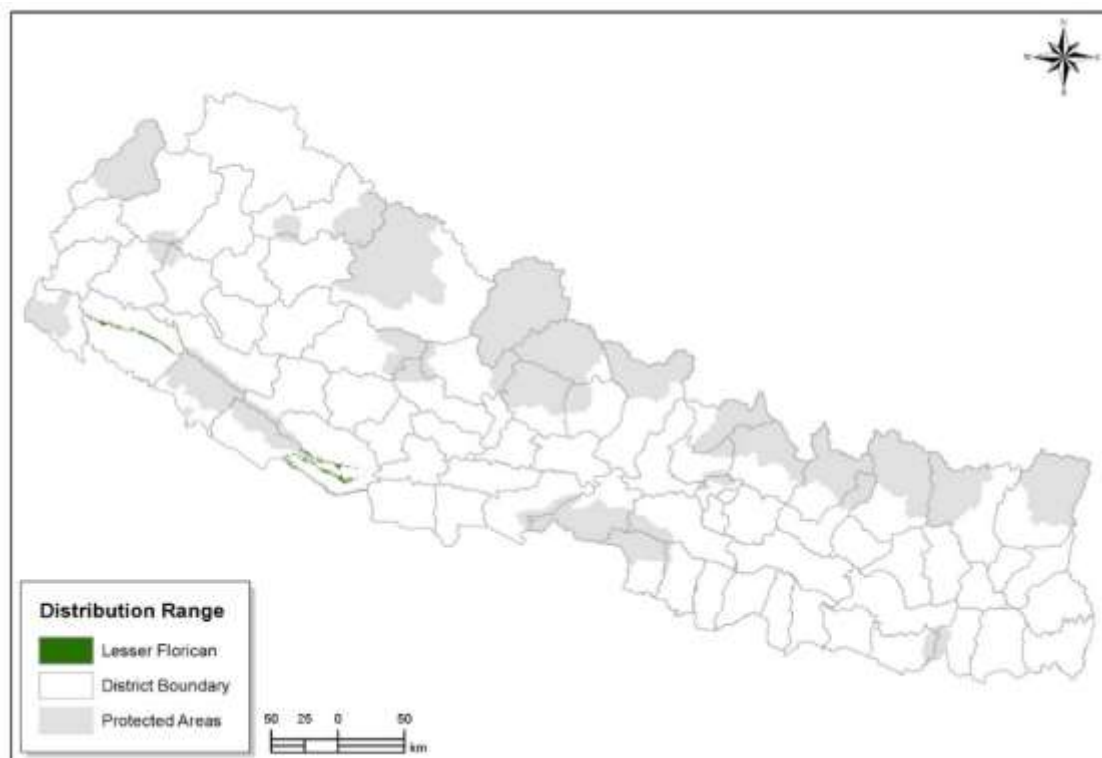
Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Incountry distribution

Ecological assessment



Citation

Jerdon 1864, Russell 1900, Ali and Ripley 1980, Ridley *et al.* 1985, Ali and Ripley 1987, Blanford 1989, Sankaran *et al.* 1992, Grewal *et al.* 2002, Finn 1915, IUCN 2017.

***Ciconia nigra* (Linnaeus, 1758)**

Order: Ciconiiformes

Family: Ciconiidae

Common name

Black Stork

Vernacular name

कालो सारस Kalo Sarus in Nepali

Synonyms: N/A

Morphology

All black except white stomach part and axillaries, and its red bill, legs; the male and female black stork are similar in appearance, though the male is slightly larger, *height*: ≈ 1 m, *weight*: ≈ 3 kg, *length*: 90-100 cm.



Distribution

Global:

Afganistan, Albania, Algeria, Angola, Armenia, Austria, Azerbaijan, Belarus, Belgium, Benin, Bhutan, Bosnia and Herzegovina, Botswana, Bulgaria, Burma, Central African Republic, China, Côte d'Ivoire, Croatia, Cyprus, Czech Republic, Denmark, Djibouti, Egypt, Eritrea, Estonia, Ethiopia, France, Georgia, Germany, Gibraltar, Greece, Guinea, Guinea-Bissau, Hong Kong, Hungary, India, Iran, Islamic Republic of Iraq, Israel, Italy, Japan, Jordan, Kazakhstan, Kenya, Korea, Democratic People's Republic of Korea, Republic of Kyrgyzstan, Lao People's Democratic Republic, Latvia, Lebanon, Lesotho, Libya, Lithuania, Luxembourg, Macedonia, The former Yugoslav Republic of Malawi, Malta, Mauritania, Moldova, Mongolia, Montenegro, Morocco, Mozambique, Myanmar, Namibia, Nepal, Netherlands, Nigeria, Pakistan, Palestinian Territory Occupied, Poland, Portugal, Romania, Russian Federation, Saudi Arabia, Senegal, Serbia, Slovakia, Slovenia, South Africa, South Sudan, Spain, Sri Lanka, Sudan, Swaziland, Sweden, Switzerland, Syrian Arab Republic, Taiwan Province of China, Tajikistan, Tanzania, Thailand, Togo, Tunisia, Turkey, Turkmenistan, Uganda, Ukraine, Uzbekistan, Viet Nam, Yemen, Zambia and Zimbabwe.

National:

Kathmandu, Chitwan National Park, Bardia National Park, Makalu Barun National Park, Koshi, Kaski, Chitwan. Suklaphanta National Park, Nawakot district, Dang Deukhuri, Nawalparasi district, Sunsari district, Jhapa district and Dhorpatan Hunting Reserve.

General habitat

Inhabits old, undisturbed and open forests. It breeds in large marshy wetlands with interspersed coniferous or broadleaved woodlands, but also inhabits hills and mountains with sufficient network of creeks. The species shows a preference for nesting in trees that have canopies large enough to hold the nest away from the main trunk (e.g. trees 25 m high, 120 years old and with a DBH of 66 cm).

Movement/home range:

1000 m (-2925 m on passage)

Behavior

Solitary nester, shy, wary, widespread winter visitor and passage migrant, travel singly or in small of up to 100, capable of long periods of sustained flight, migrations of up to 7,000 kilometres, often making long sea crossings with other species, flies with its neck outstretched.

Diet:

Feeds mainly on frogs, fish, crustacean, insects and occasionally young rodents and birds.

Reproduction:

Breeding varying between populations but generally coinciding with the local spring in the Palearctic Region and southern Africa.

Population

Global: 24,000-44,000 individuals

National: <1000

National trend: N/A

Conservation status

IUCN: Least Concern

Regional: Vulnerable

Legal status

CITES: Appendix-II

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Major threats

- Loss and degradation of wetlands.
- Hunting, disturbances and illegal fishing.
- Heavy use of pesticide and insecticides.

Additional information

N/A

Human-wildlife conflict associated wild animals

In this study, there is no evidences of black stork as human wildlife conflicts associated wild animal species.

Conservation efforts

Efforts

Species included in protected list of the government

Awareness programs from GoN

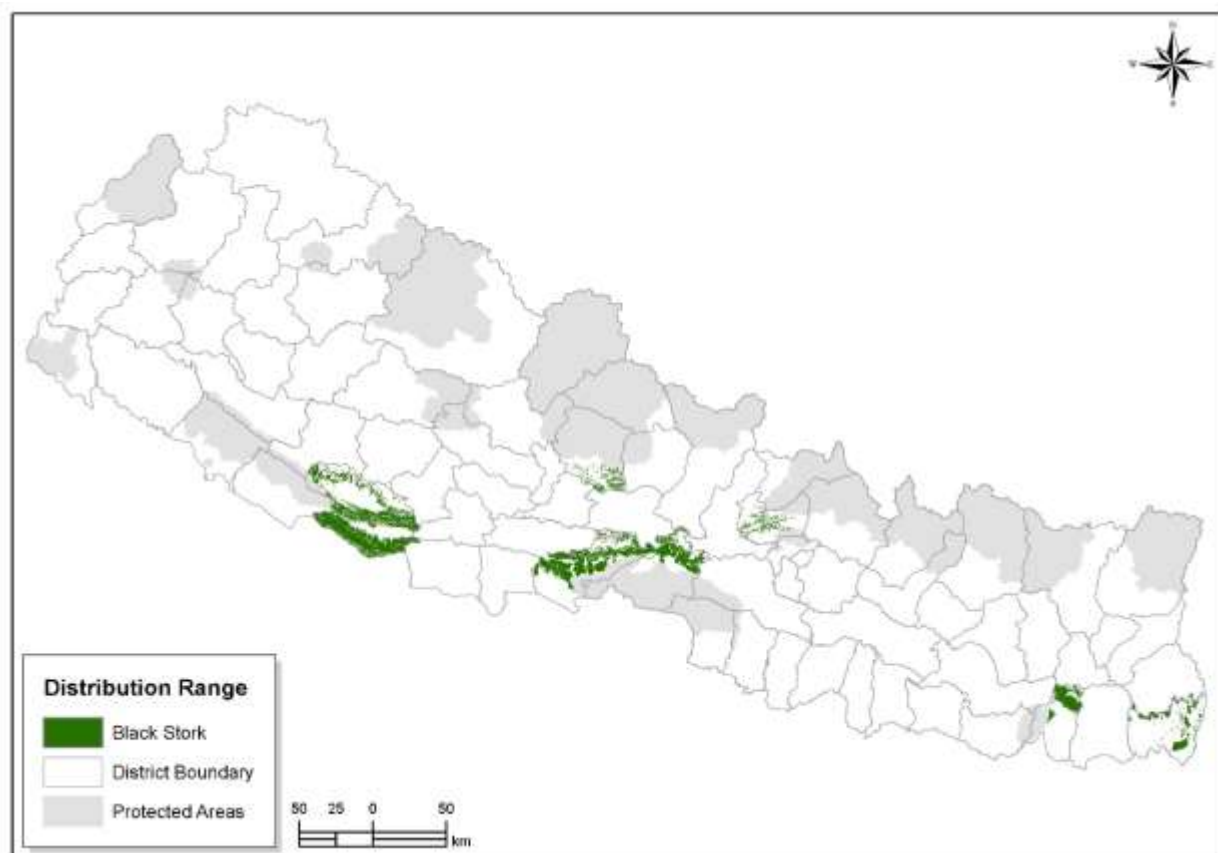
Considered as priority species for research

Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Ecological assessment



Citation

Charlton and Kingery 1918, Wood 1984, Ali and Ipley 1987, Kahl 1987, Del Hoyo *et al.* 1992, Hampl *et al.* 2005, Wetland International 2006, Birdlife International 2010, BCN and DNPWC 2011.

***Ciconia ciconia* (Linnaeus, 1758)**

Order: Ciconiiformes

Family: Ciconiidae

Common name

White Stork, European White Stork

Vernacular name

सेतो सारस Seto Saras in Nepali

Morphology

Large bird, completely white, except black wing flight feathers. Red bill and legs, which are black in juveniles, *height*: 100-125 cm; *weight*: 2.3-4.5 kg; *length*: 95-110 cm; *wingspan*: 155-200 cm.

Distribution

Global:

Afghanistan, Albania, Algeria, Angola, Armenia, Austria, Azerbaijan, Bahrain, Bangladesh, Belarus, Belgium, Benin, Bosnia and Herzegovina, Botswana, Bulgaria, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, China, Congo, The Democratic Republic of the, Côte d'Ivoire, Croatia, Cyprus, Czech Republic, Denmark, Djibouti, Egypt, Eritrea, Estonia, Ethiopia, France, Gabon, Georgia, Germany, Ghana, Gibraltar, Greece, Guinea, Guinea-Bissau, Hungary, India, Iran, Islamic Republic of Iraq, Israel, Italy, Jordan, Kazakhstan, Kenya, Kuwait, Kyrgyzstan, Latvia, Lebanon, Lesotho, Libya, Liechtenstein, Lithuania, Luxembourg, Macedonia, the former Yugoslav Republic of, Malawi, Mali, Malta, Mauritania, Moldova, Montenegro, Morocco, Mozambique, Namibia, Nepal, Netherlands, Niger, Nigeria, Oman, Pakistan, Palestinian Territory, Poland, Portugal, Qatar, Romania, Russian Federation, Rwanda, Saudi Arabia, Senegal, Serbia, Slovakia, Slovenia, Somalia, South Africa, South Sudan, Spain, Sri Lanka, Sudan, Swaziland, Sweden, Switzerland, Syrian Arab Republic, Tajikistan, Tanzania, Thailand, Togo, Tunisia, Turkey, Turkmenistan, Uganda, Ukraine, United Arab Emirates, Uzbekistan, Western Sahara, Yemen, Zambia and Zimbabwe.

National:

Koshi Tappu Wildlife Reserve.

General habitat

Inhabit in open wetlands, savannas, steppes, meadows, pastures and agricultural fields throughout their range, prefer areas with shallow, standing water that are not too cold or humid. Their habitat preferences coincide with human preferences for agricultural areas and settlements, resulting in a long-term commensalism.

Movement/home range:
<770 m elevation.

Behavior

It walks slowly and steadily on the ground. Like all storks, it flies with its neck outstretched. The white stork is almost silent, rely on movement between thermals of hot air for long distance flight, taking great advantage of them during annual migrations. During the breeding season seek out areas with suitable structures on which to build nests, especially sunny sites on tall trees or rooftops. They have also been known to nest on walls, stacks of hay and straw, ruins, chimneys, and artificial nesting. White stork and the black stork soar on broad wings and rely on thermals of hot air for sustained long distance flight.

Diet:

Frogs, large insects, young birds, lizards and rodents.

Reproduction:

Breeds in March-April; breeding interval: once a year; *clutch size:* 3-6 eggs; *incubation:* 30-37 days (both males and females spend time to incubate egg); *lifespan:* >26 years, 22 years on average.

Population

Global: 700,000-704,000 individuals

National: <1 adult (1996)

National trend: N/A



Conservation status

IUCN: Least Concern

Regional: Vulnerable

Legal status

CITES: N/A

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

In Nepal, it has been known from only a handful of records. The stork passes the country only on migration and its migratory movements/routes through Nepal are not well known.

Human-wildlife conflict associated wild animals

In this study, there is no evidences of white stork as human wildlife conflicts associated wild animal species.

Major threats

- Habitat alteration including the drainage of wetlands.
- Prevention of floods in flood-plains by dams, embankments, pumping stations and river canalization.
- Conversion of foraging areas development, industrialization and intensification of agriculture.

Conservation efforts

Efforts:

Species included in protected list of the government

Awareness programs from GoN

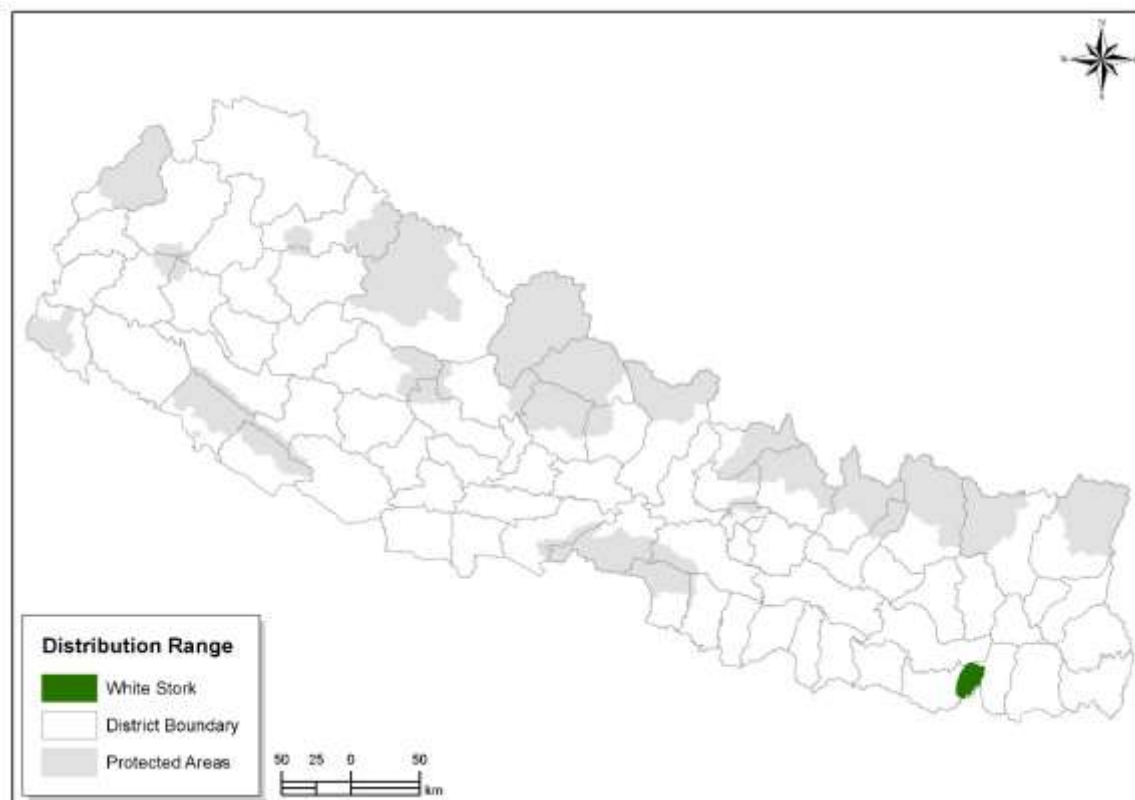
Considered as priority species for research

Produce awareness materials for its conservation and importance

Major gaps:

Population assessment

Ecological assessment



Citation

Cramp *et al.* 1977, Alonso *et al.* 1990, Inskipp and Inskipp 1991, Nowakowski 2003, Latus and Kujawa 2005, Tryjanowski *et al.* 2005, Birdlife International 2016, Mundkur *et al.* 2017.

***Catreus wallichi* (Hardwicke, 1827)**

Order: Galliformes

Family: Phasianidae

Common name

Cheer Pheasant

Vernacular name

चिर Cheer in Nepali

Synonyms: N/A

Morphology

Buffy gray plumage and long gray crests, long tail with gray and brown color, female is slightly smaller than male. Long, broadly barred tail, pronounced crest and red facial skin. Male more cleanly and strongly marked than female, with pronounced barring on mantle, unmarked neck and broader barring across tail. *Weight:* 1.25–1.80 kg (male) and 0.90–1.36 gm (female); *length* 90–118 cm (male) and 61–76 cm (female).



Distribution

Global:

Pakistan, India and Nepal.

National:

Annapurna Conservation Area, Rara National Park, Api Nampa Conservation Area, Dhorpatan Hunting Reserve, Lower Kali (Simikot); Humla, Dolpa, Accham, Doti, Mugu districts and Gandaki valley.

General habitat

Resident bird distributed in the highlands and scrublands, inhabits in steep, steep hillsides, rocky terrain dominated by scrub, tall grass and scattered clump of trees.

Movement/home range:

1.45 km–3.05 km, occasionally 0.95 km.

Behavior

These pheasants tend to be fairly sociable for much of the year, lives in flock of five to fifteen birds. During breeding season it form monogamous pairs from late April to June. Only female pheasants take part in incubation. If young chicks are disturbed by opponent, both parents will act upon it by distraction display and the male will threaten the opponent. Foraging is done in mornings and evenings, typically in pairs or sometimes in family groups. Most of the food is dug from the ground with its powerful beak, along with some diets from above ground.

Diet:

Roots, tubers, bulbs, seeds, grubs, beetles, snails, insect larvae, berries, grasses, leaves and worms.

Reproduction:

Monogamous pairs during breeding period April–June; *clutch sizes:* 10–11 eggs and 14 are also reported; *incubation:* 26 days only by female. It lives for 4–6 years.

Population

Global: 2,000–2,700 mature individuals

National: 1,500 individuals

National trend: N/A

Conservation status

IUCN: Vulnerable

Regional: Endangered

Legal status

CITES: Appendix I

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

There are attempts to reintroduce captive breed Cheer Pheasant in Pakistan.

Human-wildlife conflict associated wild animals

In this study, there is no evidences of cheer pheasant as human wildlife conflicts associated wild animal species.

Major threats

- Land use change.
- Subsistence hunting.
- Heavy grazing on grassland and scrubland.
- Timber and medicinal plant collection.

Conservation efforts

Efforts

Species included in protected list of the government

Awareness programs from GoN

Potential habitats incorporated in protected areas

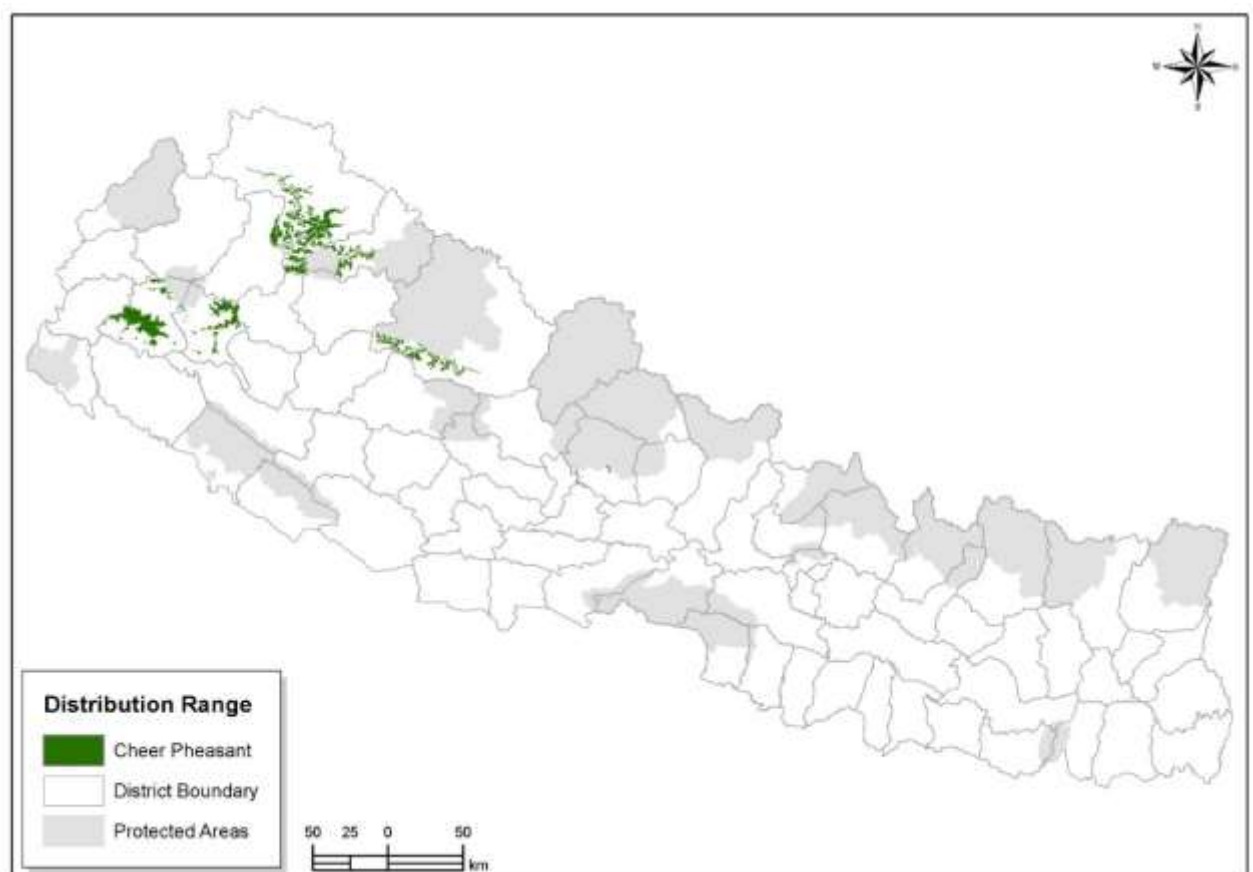
Considered as priority species for research

Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Ecological assessment



Citation

Delacour 1951, Del Hoyo *et al.* 1994, Wildlife Pakistan 2006, Bist *et al.* 2007, Inskipp *et al.* 2016, Birdlife International 2017.

Tragopan satyra (Linnaeus, 1758)

Order: Galliformes

Family: Phasianidae

Common name

Crimson Horned Pheasant, Indian Tragopan

Vernacular name

मुनाल Munal in Nepali

Synonyms: N/A

Morphology

Male has black-bordered white spots and olive brown coloration to upperparts with red under parts. Facial skin is blue. Female is reddish-brown with white streaking and spotting. During mating season male grow blue horns and a gular wattle. *Weight:* 1.6–2.1 kg (male) and 1.0–1.2 kg (female). *Length:* 67–72 cm (male) and 57.5 cm (female).



Distribution

Global:

Bhutan, China, India and Nepal.

National:

Khaptad National Park, Langtang National Park, Sagarmatha National Park, Makalu Barun National Park, Dhorpatan Hunting Reserve, Api Nampa Conservation Area, Khanchenjunga Conservation Area, Mansalu Conservation Area, Gaurishankar Conservation Area, Mai Valley, Kali Gandaki Valley; Illam, Sindhupakchowk, Terathum, Taplejung and Dolkha districts.

General habitat

Inhabits in temperate and sub-alpine forest with dense undergrowth bamboo, mixed forest, scrub and densely vegetated ravines.

Movement/home range:

2.2-4.25 km; 1800m in winter.

Behavior

During breeding season male grow blue horns and a gular wattle. When ready to display, inflate their horns and hide behind a rock, waiting for females to pass by. When one does attractive show in front of female. At the end male will stretch to his full height and show off all of his knick-knacks.

Diet:

Diet comprises seeds, fresh leaves, moss, bamboo shoots, berries and insects, petals, buds, leaves and invertebrates.

Reproduction:

Breeding season April-June; *clutch size* 3-5 eggs; *incubation* 28 days.

Population

Global: 6,000-15,000 mature individuals

National: 600-<1000 individuals

National trend: N/A

Conservation status

IUCN: Near Threatened

Regional: Vulnerable

Legal Status

CITES: Appendix III

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

N/A

Human-wildlife conflict associated wild animals

In this study, there is no evidences of crimson horned pheasant as human wildlife conflicts associated wild animal species.

Major threats

- Hunting and snaring for food and feathers.
- Loss and degradation of habitats.

Conservation efforts

Efforts

Species included in protected list of the government

Awareness programs from GoN

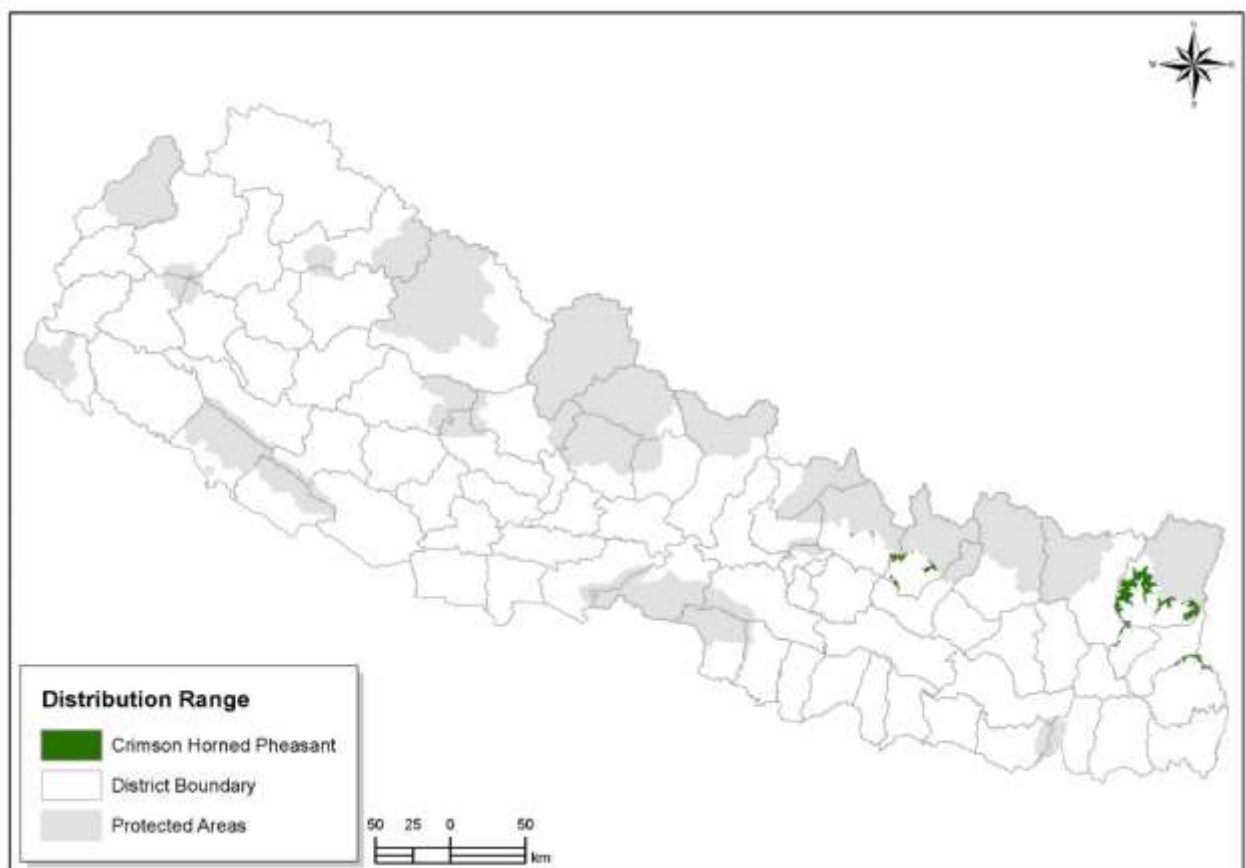
Considered as priority species for research

Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Ecological assessment



Citation

Smith and Barnby 1912, Del hoyo *et al.* 1994, Birdlife International 2001, Birding in India 2006, Birdlife International 2016, Inskipp *et al.* 2106,

***Buceros bicornis* (Linnaeus, 1758)**

Order: Coraciiformes

Family: Bucerotidae

Common name

Great Hornbill, Concave-casqued hornbill, great Indian hornbill, Great pied hornbill, Indian concave-casqued hornbill, Indian hornbill

Vernacular name

राज धनेस, ठूलो धनेस Raj Dhanesh, Thulo Dhanesh in Nepali

Synonyms: N/A

Morphology

Large bird with a very large bill, which bears a sizable, brightly colored, horny growth-the casqued; *weight:* 2.15-5.00kg; *length:* 100-120cm; *wingspan:* 152cm.

Distribution

Global:

Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Nepal, Thailand and Viet Nam.

National:

Makwanpur, Jhapa, Chitwan, Nawalparasi, Bardia and Parsa districts.

General habitat:

Evergreen and moist broadleaved forest with large fruiting trees.

Movement/home range:

100-500m elevation.

Behavior

Seen in small group, large flock at fruit trees, during the flight, its wing beats produced such a loud sound that it can be heard from a distance of about half mile. Make loud duets about once a second by the male, to which the female joins in. The pair then calls in harmony, turning into a rapid blend of roars and barks.

Diet:

The diet consist fruits; like wild figs, nutmegs and drupes of various species. Also feeds on lizards, snakes, rats and chicks of bird.

Reproduction:

Breeding season is January-April; clutch size 1-2 eggs; incubation 25-40 days.

Population

Global: 13,000-27,000 mature individuals

National: 80-150 individuals

National trend: N/A

Conservation status

Global: Near Threatened

Regional: N/A

Legal status

CITES: Appendix-I

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

They consume pest insects and small animals.

Human-wildlife conflict associated wild animals

In this study, there is no evidences of great hornbill as human wildlife conflicts associated wild animal species.



Major threats

- Deforestation and logging.
- Hunting for food and casqued, which are considered trophies.

Conservation efforts

Efforts

Species included in protected list of the government

Awareness programs from GoN

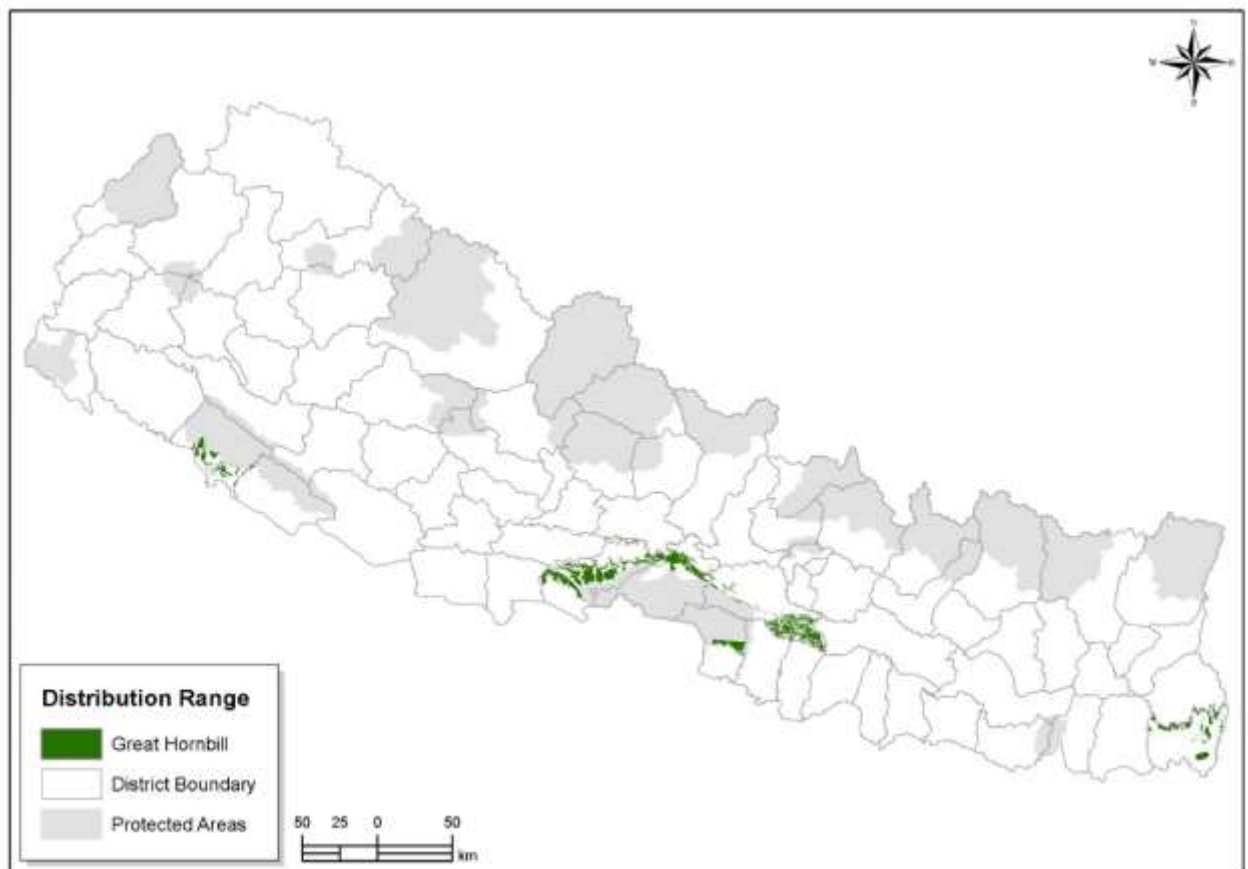
Considered as priority species for research

Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Ecological assessment



Citation

Ali and Ripley 1983, Del Hoyo *et al.* 1994, Kannan and James 1997, Birdlife International 2001, Birding in India 2006, Birdlife International 2017.

***Lophophorus impejanus* (Latham, 1790)**

Order: Galliformes **Family:** Phasianidae

Common name

Himalayan Monal

Vernacular name

डाँफे, मोनाल Danfe, Monal in Nepali

Synonyms: N/A

Morphology

Adult male multicolored plumage, while the female is dull color, tail feathers of the male are uniformly rufous, becoming darker towards the tips, whereas the lower tail coverts of females are white, barred with black and red. Notable features in the male include a long, metallic green crest, coppery feathers on the back and neck and a prominent white rump that is most visible when the bird is in flight. The female has a prominent white patch on the throat and a white strip on the tail. *Weight:* 1.8-2.4 kg, *length:* 63 – 72 cm.

Distribution

Global:

Bhutan, China, India, Myanmar, Nepal, Pakistan and Afghanistan.

National:

Api Nampa Conservaiton Area, Gaurishankar Conservation Area, Khaptad National Park, Rara National Park, Shey Phoksundo National Park, Langtang National Park, Sagarmatha National Park, Makalu Barun National Park, Dhorpatan Hunting Reserve, Annapurna Conservation Area, Manaslu Conservation Area, Kanchenjunga Conservation Area; Jumla, Humla, Myagdi and Taplejung districts.

General habitat

Inhibits in upper temperate oak-conifer forests interspersed with open grassy slopes, cliffs and alpine meadows. Distributed in 3,300 m-4,570 m elevation; descends to 2,000 m in the winter.

Movement/home range: N/A

Behavior

Tolerates snow and digs through it to obtain plant roots and invertebrate prey. They congregate in large coveys and roost communally in winter.

Diet:

Diet apparently varies according to locality, but includes seeds, tubers, shoots, berries and invertebrates. e.g. Salep, Muskroot, Hellebore, Aconites, Silver leaf, Wormwood, Spiked Ginger Lily, *Skimmia laureola*, *Ainsliaea sp.*, Nepal Satyrium, Coinwort Snowberry, Moss, Invertebrates and Girt. Major food items are invertebrates.

Reproduction:

Breeding season is April–August months; clutch size 3-5 eggs; *incubation period* 27 days, only take part by female and male guarding during the incubation period.

Population

Global: N/A

National: 3500-5000 individual

National trend: N/A

Conservation status

IUCN: Least Concern

Regional: Near Threaten



Legal status

CITES: Appendix I

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

It is the national bird of Nepal and locally called as *DANPHE*. It is also the state bird of Uttarakhand and Himachal Pradesh (until 2007) of India.

Human-wildlife conflict associated wild animals

In this study, there is no evidences of Himalayan monal as human wildlife conflicts associated wild animal species.

Major threats

- Poaching for food and feathers.
- Forest degradation.
- Habitat encroachment and human disturbances.

Conservation efforts

Efforts

Species included in protected list of the government

Awareness programs from GoN

Potential habitats incorporated in protected areas

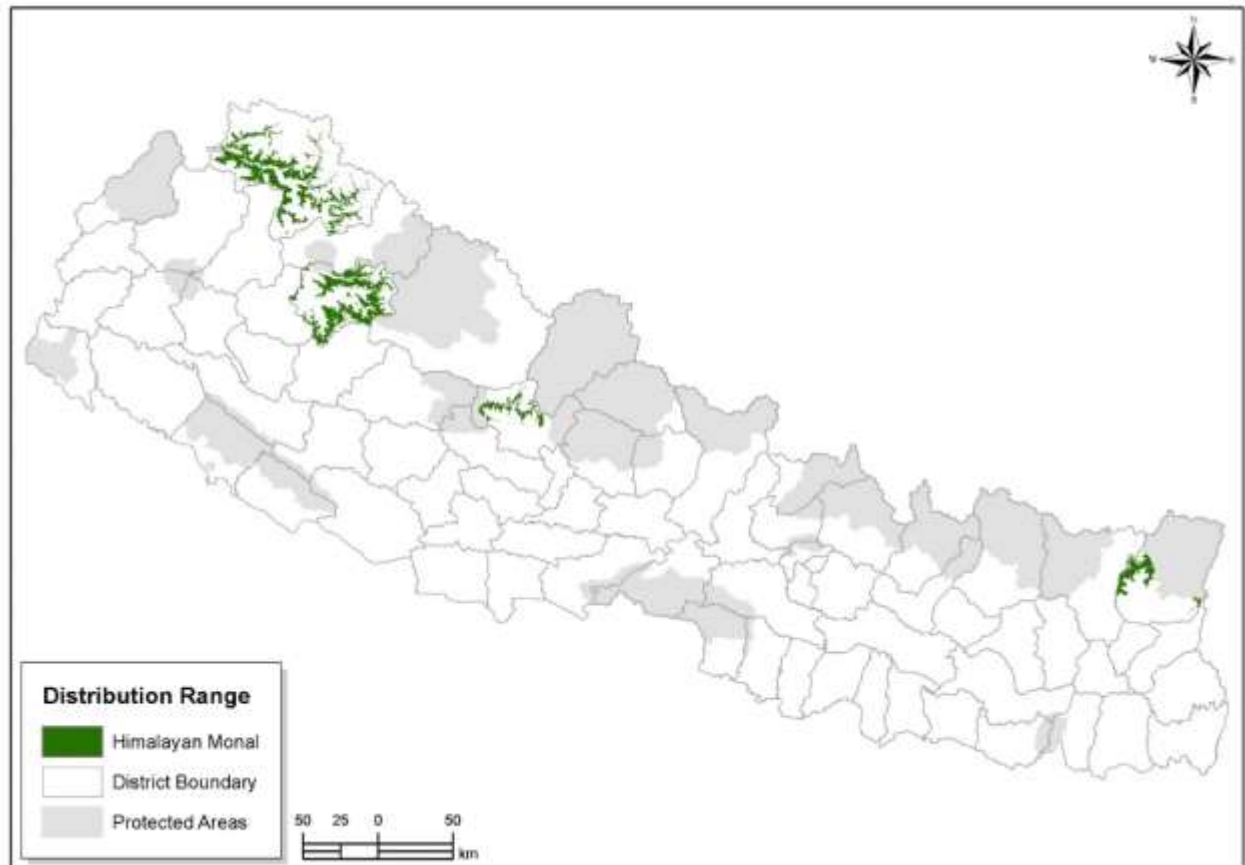
Considered as priority species for research

Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Ecological assessment



Citation

Del Hoyo *et al.* 2001, Hssaina and Sultana 2013, Inskipp *et al.* 2016.

Antigone antigone (Linnaeus, 1758), Subspecies: Grus antigone antigone

Order: Gruiformes

Family: Gruidae

Common name

Sarus Crane

Vernacular name

सारस Sarus in Nepali

Synonyms: N/A

Morphology

Tallest crane and world's tallest living flying bird. Male is larger than the female. Adults are grey with a bare red head and white crown and a long dark pointed bill. In flight the long neck is kept straight and the black wing tips can be seen; their long red or pink legs trail behind them. The sexes do not differ in color, but young birds are duller and browner. *Height* 200 cm; *weight* 6.8-8.0 kg; average *length* 156 cm; *wing span* 250 cm.

Distribution

Global:

Australia, Bangladesh, Cambodia, China, India, Lao People's Democratic Republic, Myanmar, Nepal, Pakistan and Viet Nam.

National:

Rupandehi, Kapilvastu and south-western part of Nawalparasi districts.



General habitat

Inhabits in a variety of wetlands, grasslands and cultivated fields; associated with areas having a mixture of flooded and dry ground.

Movement/home range:

150-300 m elevation.

Behavior

Nonsocial; large flocks have on rare occasions, groups of as many as 200 birds, this appears to be distinctly unusual. The most prevalent group size was of 2 individuals. Families and pairs seem to make up the social groupings, even during the winter period. Young birds remain with their parents for at least ten months, but after the breeding season they begin to assemble and roam the vicinity in groups. Flights are normally made each day between foraging areas and midday roosting places at the edges of rivers.

Diet:

Omnivorous; feeds on insects (especially grass hoppers), aquatic plants, fish, frogs, crustaceans and seeds. Plant matters like tubers, corms of aquatic plants, grass shoots, seeds and grains from cultivated crops.

Reproduction

Breeding season is July-October, preferably during monsoon; *clutch size* 2 eggs, rarely 1 and 3 egg, very rarely 4 eggs; *egg size* 10.03 cm, 6.8 cm, 6.8 cm; *egg weight* 250 gm; *incubation period* about 35 days; male also take part in incubation.

Population

Global: 13,000-15,000 mature individuals

National: 450->700 individuals

National trend: N/A

Conservation status

IUCN: Vulnerable

GoN: N/A

Legal Status

CITES: Appendix I

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

N/A

Human-wildlife conflict associated wild animals

In this study, there is no evidences of sarus crane as human wildlife conflicts associated wild animal species.

Major threats

- Habitat loss.
- Degradation of wetland.
- Hightension electrical lines and sugar cane cultivation in their habitat
- Damming and cementation in water canal.
- Killing for meat and stealing of eggs.

Conservation efforts

Efforts

Species included in protected list of the government

Awareness programs from GoN

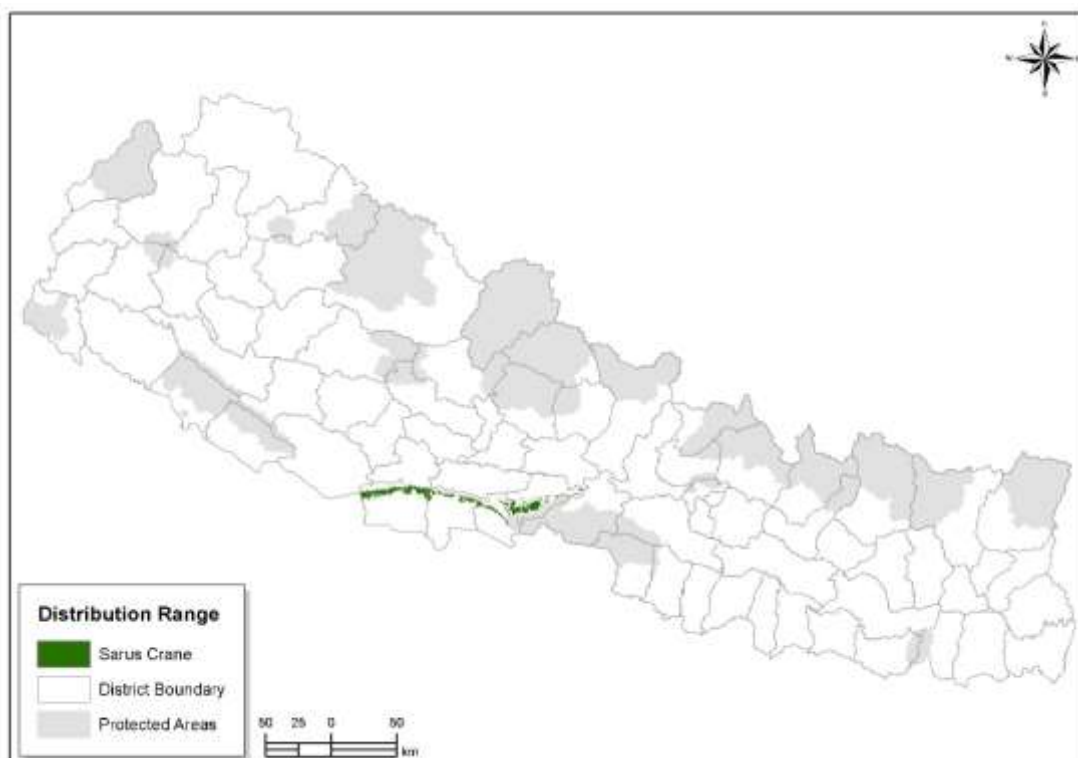
Considered as priority species for research

Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Ecological assessment



Citation

Ali and Ripley 1969, Walkinshaw 1973, Johnsgard 1983, Inskipp and Inskipp 1991, Ramchandran and Vijayan 1994, Shrestha 1996, Suwal 1999, Latt 2001, Red data book 2003, Sundar and Choudhury 2003, Aryal 2004, Gosai et al 2013, Birdlife International 2016, Inskipp *et al.* 2016, IUCN 2017.

3.5.1.2 PROTECTED REPTILES



30.06.2017

***Gavialis gangeticus* (Gmelin, 1789)**

Order: Crocodylia

Family: Gaviadae

Common name

Ghariyal

Vernacular name

घडियाल गोही, नकटा, चिम्टा गोही, गहवा, लामठोडी Ghariyal Gohi, Nakata, Chimta Gohi, Gahawa, Lamthodi in Nepali

Synonyms: N/A

Morphology

Extremely long, thin jaw and knob like structure at the anterior end of upper jaw in male (Ghada). The average size is 5.0m with a maximum report of is 6.75m.

Distribution

Global:

Nepal and India.

National:

Mahakali, Karnali, Babai, Rapti, Kali Gandaki, Narayani and Koshi rivers.

General habitat

Inhabits in deep rivers with the banks of sand, grass or rocks. Nest in seasonal in exposed sandbanks along slow moving sections of large to medium sized rivers.

Movement/home range:

Passively moving animal outside of the water, confined close to the river, move about 5 to 20m on the land during nesting period.

Behavior

Gharial preferred sandy parts of the river banks and sand bars for basking, clay river banks are least preferred. The *Ghada* is used as a visual sex indicator, as a sound resonator, or for bubbling or other associated sexual behaviors.

Diet:

Piscivorous, feed only on variety of fish.

Reproduction:

Breeds in November-January. Sand banks, sand bars and sand islands used as basking and nesting sites. The life span is about 29 years.

Population

Global: <200 adults

National: <35 adults

National trend: Declining

Conservation status

IUCN: Critically Endangered

Regional: N/A

Legal status

CITES: Appendix-I

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information:

N/A

Human-wildlife conflict associated wild animals

In this study, there is no evidences of gharial crocodile as human wildlife conflicts associated wild animal species.

Major threats

- Deaths caused by fishing nets.
- Haphazard construction of dam.



- Degradation of habitats.

Conservation efforts

Efforts

Species included in protected list of the government

Breeding center (n = 2) are in operation

Release of the gharials in the suitable habitats

Awareness programs from GoN

Potential habitats incorporated in protected areas

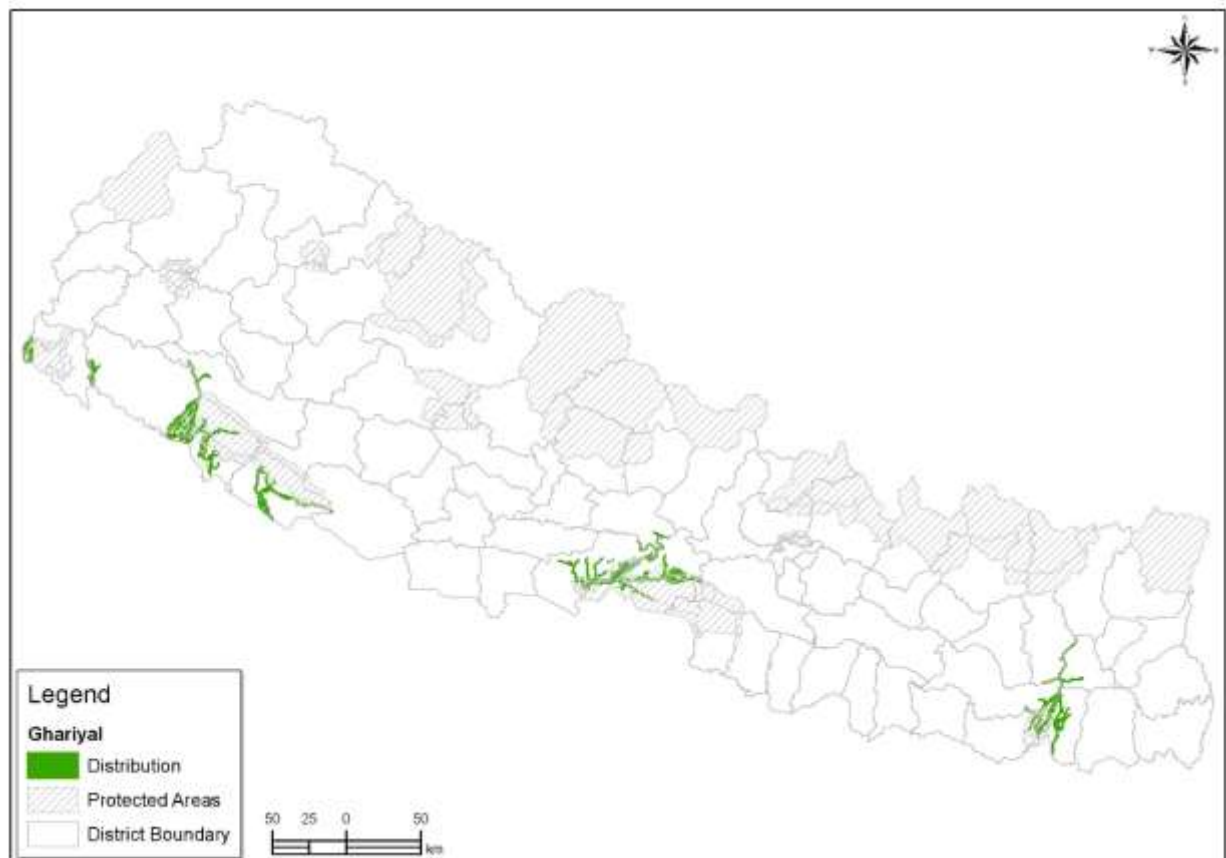
Considered as priority species for research

Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Ecological assessment



Citation

Bustard and Singh 1978, Whitaker and Basu 1983, Shah and Tiwari 2004.

Varanus flavescens (Grey, 1827)

Order: Squamata

Family: Varanidae

Common name

Golden Monitor, yellow Monitor, Short-toed monitor, Indian Yellow monitor

Vernacular name

सुन गोहोरो, रानी गोहोरो, पिरो गोहती, घोती, गोदो, गोहती, भाने मुङ्गो
Suun gohoro, Rani Gohoro, Pirro Gohati, Ghoti, Godo, Gohati, Bhane Mungro in Nepali

Synonyms: N/A

Morphology

Dirty yellowish colored with the neck scales smaller than upper head scales, juvenile with the dark neck chevron, flexible head moved in all direction, maximum size 100cm, weight about 1.5kg, maximum snout-vent 41cm and tail length 51cm.



Distribution

Global:

Nepal, India, Pakistan, Bangladesh and Burma.

National:

Widely distributed in lowland Terai region.

General habitat

Inhabits in lowland marshes and swamps around water bodies, cultivated lands, rarer in mixed evergreen, secondary Sal forest, along the flood plains of large rivers. It is mostly associated with wetter areas with few large trees.

Movement/home range:

This species are excellent swimmer and poor climber due to the short toe. It moves around rivers canal and flooded cultivated land.

Behavior

Most active during the monsoon season when their habitat is flooded but conspicuous to observers during bright and rainless days, hibernate in regions with low winter temperatures and low precipitation between November-February.

Diet:

Carnivorous; food ranges from insects to small mammals.

Reproduction:

Breeding season is June-July. Female lays an annual clutch of 6-30 eggs and are deposited in holes, burrows, termite mounds or in rotten logs. The size of eggs is 45-60cm in length and 26-32 cm in diameter with average weight of 15.8gm.

Population

Global: N/A

National: N/A

National trend: N/A

Conservation status

IUCN: Critically Endangered

National: N/A

Legal status

CITES: Appendix-I

Gon: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

N/A

Human-wildlife conflict associated wild animals

In this study, there is no evidence of golden monitor as human wildlife conflicts associated wild animal species.

Major threats

- Hunting for subsistence.
- Habitat loss and degradation.

Conservation efforts

Efforts

Species included in protected list of the government

Awareness programs from GoN

Potential habitats incorporated in protected areas

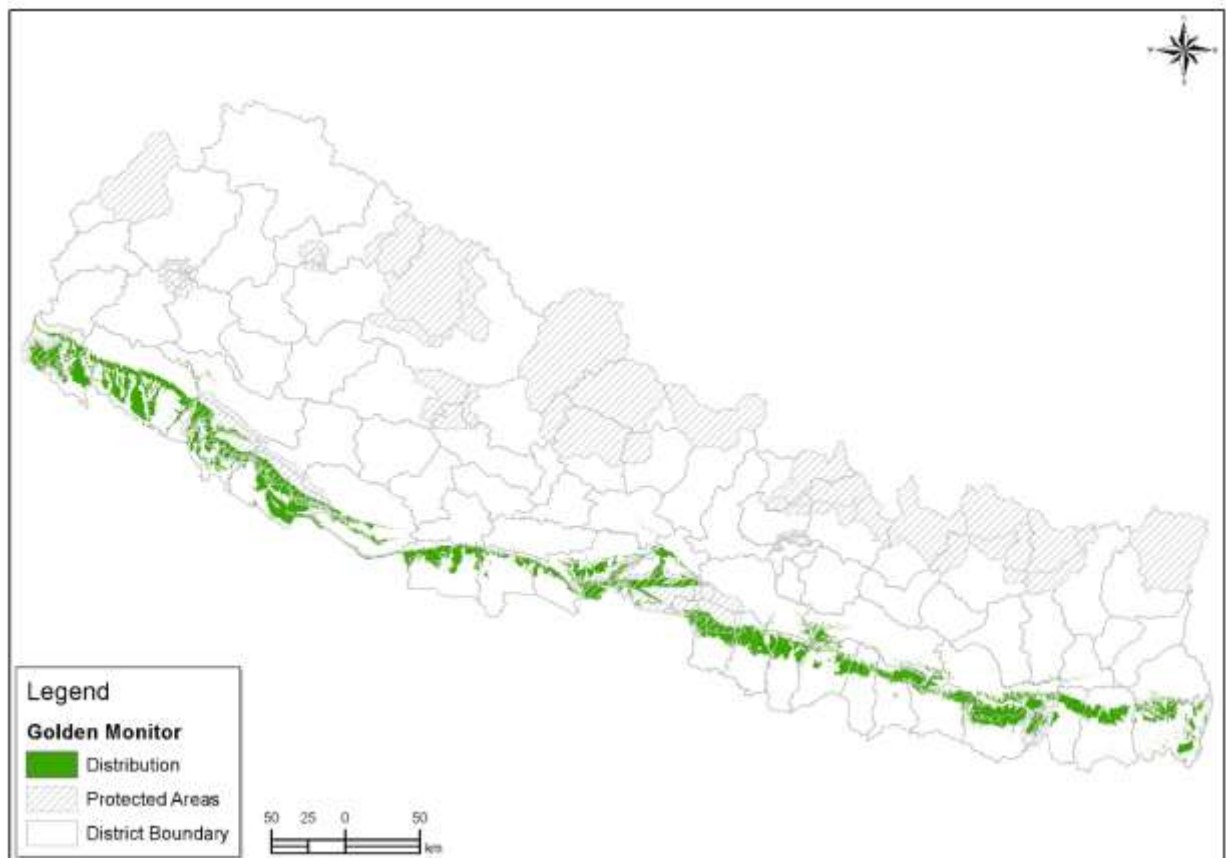
Considered as priority species for research

Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Ecological assessment



Citation

Auffenberg 1989, Shah and Tiwari 2004.

***Python molurus* (Linnaeus, 1758)**

Order: Squamata

Family: Pythonidae

Common name

Asiatic Rock Python, Indian Python

Vernacular name

अजिङ्गर, अजर, सोनकतार Ajinger, Ajagar, Sonakatar in Nepali

Synonyms: N/A

Morphology

Yellowish cream, greyish or brownish above; with a dorsal series of large, elongated, more or less subquandragular dark grey, brown or reddish brown, black and elongated spot.



Distribution

Global:

Nepal, India, Pakistan, Srilanka, Bangladesh and Bhutan

National:

Bardia (below 250m)

General habitat

Inhabits in the variety of habitat including rain forest, river valley, woodlands, scrubland, grassy marches and semi rocky foothills.

Movement/home range: N/A

Behavior

Nocturnal and diurnal.

Diet:

Carnivorous, feed on warm-blooded mammals.

Reproduction:

Reproduction is oviparous; mating in December-February. Female lays about 8-107 egg between March-June and incubation period is 60-80 days.

Population

Global: N/A

National: N/A

National trend: N/A

Conservation status

IUCN: Vulnerable

National: N/A

Legal status

CITES: Appendix-I

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

N/A

Human-wildlife conflict associated wild animals

In this study, there is no evidences of Asiatic rock python as human wildlife conflicts associated wild animal species.

Major threats

- Live capturing for trade.
- Retaliatory killing.

- Conflict with the local inhabitants.

Conservation efforts

Efforts

Species included in protected list of the government

Awareness programs from GoN

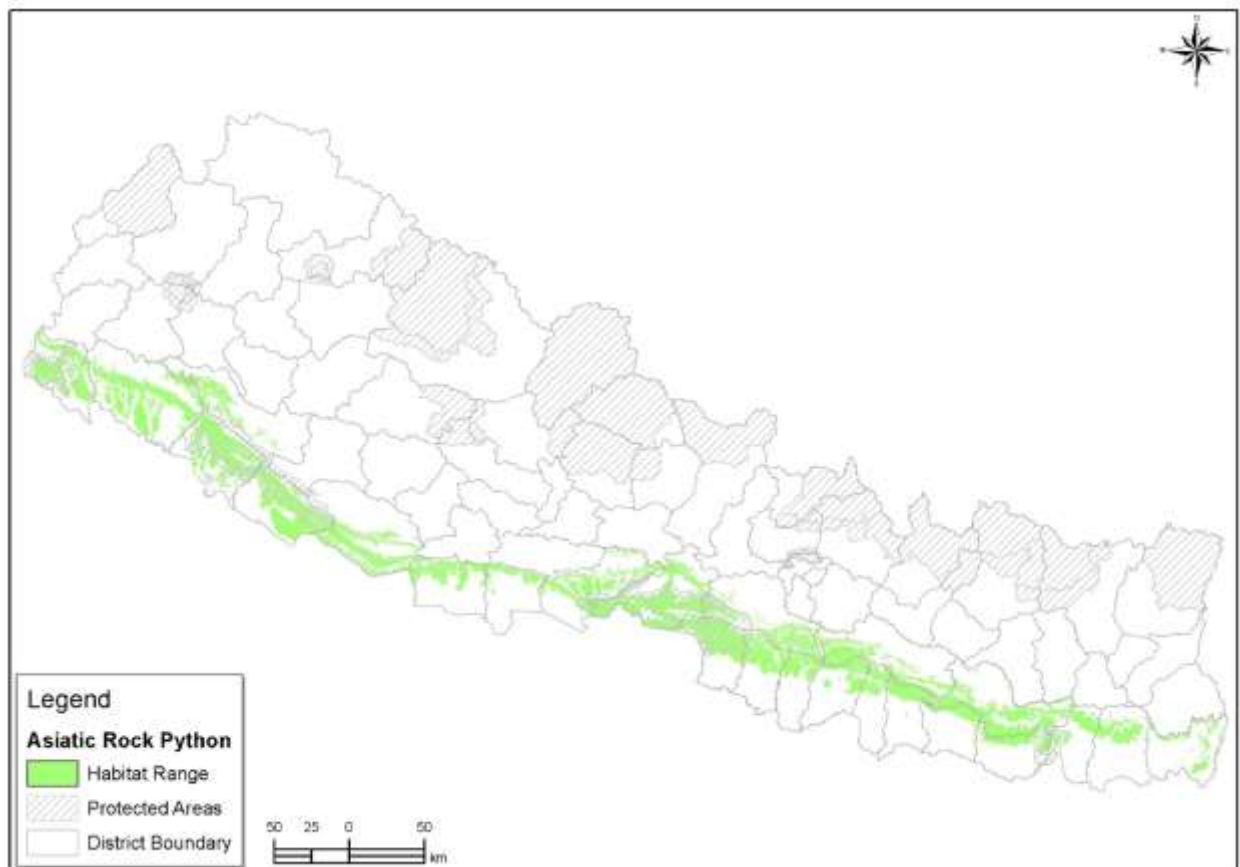
Considered as priority species for research

Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Ecological assessment



Citation

Majupuria 1982, Daniel 2002, Shah and Tiwari 2004, Reed and Rodda 2009.

3.5.2 Protected and human-wildlife conflict associated wild animals

SN	Scientific name	Common name	Nepali names
1	<i>Elephas maximus</i>	Asian Wild Elephant	Hatti
2	<i>Rhinoceros unicornis</i>	One-horned Rhinoceros	Gaida
3	<i>Panthera tigris</i>	Tiger	Bagh
4	<i>Panthera uncia</i>	Snow leopard	Hiun Chituwa
5	<i>Bubalus arnee</i>	Wild Water Buffalo	Arna
6	<i>Bos gaurus</i>	Gaur	Gauri Gai
7	<i>Python molurus</i>	Asiatic Rock Python	Ajingar
8	<i>Python bivittatus</i>	Burmese Python	Ajigar

***Elephas maximus* (Linnaeus, 1758)**

Order: Proboscidea

Family: Elephantidae

Common name

Asian Elephant, Indian Elephant

Vernacular name

हात्ति Hatti in Nepali

Synonyms: N/A

Morphology

Largest animal in the Asian countries; greyish brown body color with wrinkled skin, with large ears and rounded back. The highest height is the crown of the head. Long trunk, modified form of incisor teeth, present in male elephant and only protuberance in female called tushes, weight 4 ton, body length 5.5-6.5m (trunk, head and body) and shoulder height 2.4 (male) and 2.7 (female).



Distribution

Global:

Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Nepal, Sri Lanka, Thailand and Viet Nam.

National:

Upto 500m, once widespread in lowland Terai; in protected areas: Chitwan National Park, Parsa National Park, Bardia National Park and Suklaphanta National Park.

General habitat

Inhabits in grassland, tropical evergreen forest, semi-evergreen forest, moist deciduous forest, dry deciduous forest and dry thorn forest, also occur in cultivated area, secondary forests and scrublands.

Movement/home range

The average homerange is 188-407 km² (male) and 182-326 km² (female).

Behavior

During food shortage they can migrate to long distance in search of food. The herd is led by oldest and often largest female of the group which forms matriarchal family groups. Parental care is prominent where the newly born calf is raised and protected by the matriarchal family. Herds consist of 8-100 individuals depending on terrain and family size. Male leave the group when reach 12-15 years of age and may lead solitary lives or live temporarily with other males.

Diet:

Herbivore; feed on variety of plant, diet differ depending upon the habitat and season, habitat generalist and browser, spend up to 14-19 hrs/day in feeding, during which they may consume up to 150 kg of wet weight, defecate about 16-18 times a day, producing about 100 kg of dung.

Reproduction:

Sexually matured 10-16 years of age, male 10-15 years and female 15-16 years; give birth to single litter except in rare case twins are borne too, gestation period 20-22 month. In life time produce up to 12 calves, average life span 60-70 years.

Population

Global: 41,410-52,345

National: 100-125

National trend: Increasing

Conservation status

IUCN: Endangered

National: Endangered

Legal status

CITES: Appendix-I

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

An elephant is worshipped as God *Shri-gaja*, i.e. representative of *Ganesh*. Despite it as God, when it comes to human unsafely, people have more negative attitude towards wild elephant. Older people who have experienced the damage from wild elephant express negative attitudes. People with higher levels of awareness and education are more positive towards its conservation (Røskaft *et al.*, 2007).

Human-wildlife conflict associated wild animals

It is identified as human wildlife conflicts associated wild animal species for creating problems like crop damage, property damage and human injury and casualties. Within four years' period (2070 to 2073), problems of wild elephant were reported from 87 wards (previous VDCs) of 15 districts of Nepal. In those areas 21 peoples were injured, 57 individuals were killed and 390 households were damaged within the four years' periods. Within this period Government of Nepal provided NRs. 12,720,624 to the victimize people/household from the elephant as a relief amount. Local people used to confront by using local technology like constructing elephant proof trench, drumming vessels, burning *Ukka* (cloth ball saturated with kerosene) and scaring from group of people. Similarly, from government side electric fencing, making elephant proof trenches, awareness program from local FM, strict to enter in the protected areas, youth mobilization, scaring by using vehicles and chemical immobilization are the main means utilized to confront the problem from the elephant.

Major threats

- Habitat loss, degradation and fragmentation.
- Human elephant conflicts.

Conservation efforts

Efforts

The Elephant Conservation Action Plan for Nepal (2009-2018).

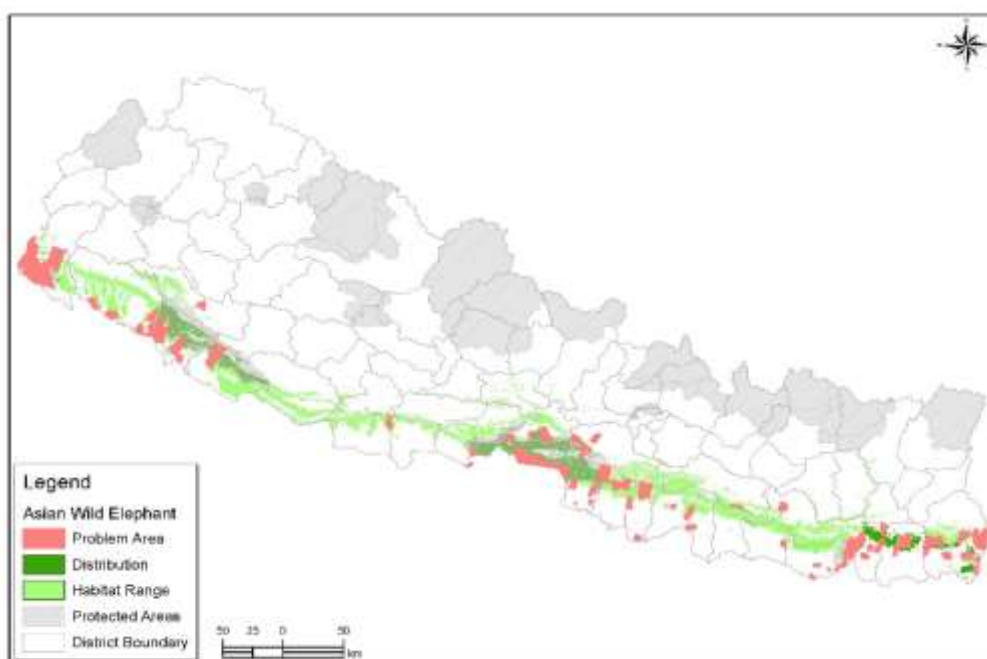
GoN Nepal conducted awareness program; electric fencing, fencing/trench/wall construction, capturing and shooting for most conflict creating individuals; support to grow unpalatable species.

GoN considered as priority species for research

Major gaps

Population assessment

Ecological assessment



Sukumar 1990, Desai 1991, Smith and Mishra 1992, Baskaran *et al.* 1995, Choudhary 1999, Bhatta 2003, Yonzon *et al.* 2003, Yadav 2005a, Yadav 2007, Pradhan 2007, Shrestha *et al.* 2007, DNPWC 2008, Pradhan *et al.* 2008, Baral and Shah 2008, Jnawali *et al.* 2011, Sharma *et al.* 2011, Yadav and Chalise 2013a, Yadav *et al.* 2013, Lilwat *et al.* 2013, Koirala *et al.* 2015, Pant *et al.* 2015, Choudhury *et al.* 2017.

***Rhinoceros unicornis* (Linnaeus, 1758)**

Order: Perissodactyla

Family: Rhinocerotidae

Common name

Greater One-horned, Indian Rhinoceros, Great Indian Rhinoceros

Vernacular name

गैंडा Gaida in Nepali

Synonyms: N/A

Morphology

Greater one-horned rhino has a hairless, thick greyish brown colored skin folds across the flanks and tubercles resembling plates of armour. A black single horn is present at the end of the adult rhino's nose. Male has huge neck folds. *Male:* length 368-380cm; height 170-185cm (shoulder height); weight 2,200 kg. *Female:* length 310-340cm; height 148-173cm (shoulder height); weight 1,600 kg.



Distribution

Global:

India and Nepal.

National:

Occurs between 100-300m elevation; protected areas: Bardia National Park, Chitwan National Park; Parsa National Park and Shukla Phanta National Park.

General habitat

Inhabits the alluvial flood plain vegetation, riverine forest where water and green grass is available in all year round.

Movement/home range:

Excellent swimmers and can run at speeds of up to 55 km/h for short periods. Male rhinos have home ranges of around 2-8 km².

Behavior

Solitary animal, active at night and early morning, but often friendly as they graze and wallow together, excellent senses of hearing and smell, but relatively poor eyesight, greet each other by waving or bobbing their heads, mounting flanks, nuzzling noses, or licking. They are playfully spar, run around and play with twigs in their mouths. Adult males are the main instigators in fights and maintain loosely-defended territories within their habitat. Incisors are used rather than horn for fight. Male chase females over long distance and even attack them face-to-face.

Diet:

Herbivore; feed on grasses, fruits, leaves and branches of tree species and shrubs, sedges, ferns, submerged and floating aquatic plants and agricultural crops (rice, wheat, maize, lentils).

Reproduction:

Female sexual maturity is reached between 5-7 years; male matures after 10 years of age; give birth to one calf, gestation period 16 months, inter-calving intervals of about 3 years. Calves follow mothers for 1-3 years, lifespan 40 years.

Population Status

Global: 2,575-2,575 individuals

National: 645 individuals

National trend: Increasing

Conservation status

IUCN: Vulnerable

National: Endangered

Legal status

CITES: Appendix-I

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

Ancient Hindus treated rhino as very sacred animal. Horns of rhinos are considered to have medicinal value. Cups made from the horns of rhinoceros are believed to have capacity of revealing of poison from mixed drink. Similarly, skin or meat plate is sacred during yearly rituals of death person (*Shrada*). In Newar culture, skin or meat plate is used to offer water during those rituals.

Human-wildlife conflict associated wild animals

It is identified as human wildlife conflicts associated wild animal species for creating problems like crop degradation and human injury and casualties. Within four years' period (2070 to 2073) problems of rhinoceros were reported from 17 wards (previous VDCs) of 5 districts of Nepal. In those areas 26 peoples were injured and 11 individuals were killed within the four years' periods. Within this period Government of Nepal provided NRs. 2,450,439 to the victimize people/household from the rhinoceros as a relief amount. Local people used to confront by using local technology like constructing rhino proof trench. Similarly, from government side electric fencing, making rhino proof trenches, barbed wire fencing, strict to enter in the protected areas and youth mobilization are the main means utilized to confront the problem from rhino.

Major threats

- Poaching
- Habitat degradation
- Habitat encroachment
- Human-Rhino conflict

Conservation efforts

Efforts

The Greater One-horned Rhinoceros Conservation Action Plan for Nepal (2017-2021) - proposed

Species included in protected list of the government

Potential habitats incorporated in protected areas

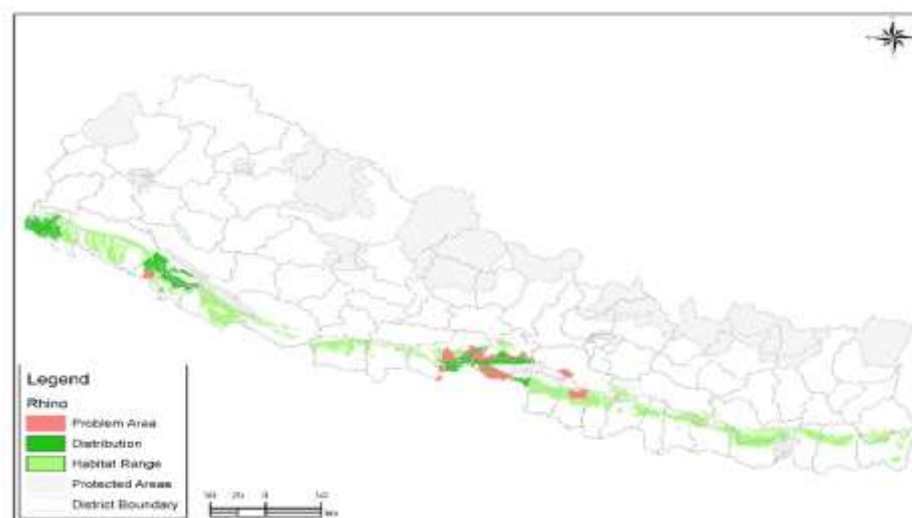
GoN Nepal conducted awareness program; electric fencing, fencing, trench, wall construction

GoN considered as priority species for research.

Major gaps

Interaction with human

Economics of Rhino conservation



Citation

Laurie 1982, Laurie *et al.* 1983, Rookmaker 1984, Sarma *et al.* (nd), Choudhury 1985, Dinerstein and Price 1991, Dinerstein 1992, Vigne and Martin 1998, Ellison 2001, Dhakal 2002, Martin 2004, Rothley *et al.* 2004, Choudhury 2005, Martin and Martin 2006, Government of Nepal 2006, Baral and Shah 2008, Kandel and Jhala 2008, Jnawali *et al.* 2009, IRF 2009, Jnawali *et al.* 2011, Thapa *et al.* 2011, DNPWC 2014, Rhino Count 2015.

***Panthera tigris* (Linnaeus, 1758)**

Order: Carnivora

Family: Felidae

Common name

Tiger

Vernacular name

बाघ Bagh in Nepali

Synonym: *Felis tigris* (Linnaeus, 1758)

Morphology

Body coat color dark reddish-ochre to pale yellow with vertically-arranged black stripes, more pronounced towards the rump and thighs. Under parts is whitish, body length 140-280cm, tail length 60-110cm. Body height measure 95-110cm. Male weights 180-280 kg, female 115-185 kg.



Distribution

Global:

Bangladesh, Bhutan, India and Nepal.

National:

Occurs in 12 district of Terai; Rautahat, Bara, Parsa, Makwanpur, Chitwan, Nawalparasi, Kapilvastu, Dang, Banke, Bardia, Kailali and Kanchanpur.

General habitat

Inhabits in tropical dry forests and mangroves, tropical moist evergreen forests, sub-tropical, temperate upland forest, dense mixed forest, riverine sal dominated forest, grassland and Savannas.

Movement/home range:

Home range is 20 km² (female) and upto 400 km² (male), male home range overlaps with 1-3 female tiger.

Behavior

Solitary, territorial animal, more active at night, opportunistic predators.

Diet:

Carnivore; feed on wild pigs, spotted deer, hog deer, sambar, primates, porcupines, large bovids (water buffalo and gaur) and predate on livestock too.

Reproduction:

Breeds in November-April, give birth to 1-7 cubs, gestation period of 96-110 days, matured at 3-4 years (male), 3 years (female), life span 26 years in captivity and 8-10 years in wild.

Population

Global: 3643 individuals

National: 198

National trend: Increasing

Conservation status

IUCN: Endangered

National: Endangered

Legal status

CITES: Appendix-I

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

As a vehicle of goddess *Durga*, tiger has religious value in Hindu culture. It is also considered as symbol of might. This animals is poached for trophies. Tiger have ecological value and their presence indicate a healthy ecosystem.

Human-wildlife conflict associated wild animals

It is identified as human wildlife conflicts associated wild animal species for creating problems like human injury and casualties and livestock depredation. Within four years' period (2070 to 2073) problems of wild elephant were reported from 27 wards (previous VDCs) of 5 districts of Nepal. In those areas 11 peoples were injured, 16 individuals were killed and 63 livestock were depredated within the four years' periods. Within this period Government of Nepal provided NRs. 5,610,734 to the victimize people/household from the tiger as a relief amount. From the government awareness program from local FM, restrict to enter in the protected and conflict areas and translocation to the cure centers and zoos are the main means utilized to confront the problem from the tiger.

Major threats

- Poaching for trophies.
- Retaliatory killing.
- Habitat fragmentation and degradation.
- Human tiger conflict.

Conservation efforts

Efforts

Tiger conservation action plan for Nepal (2016-2020); the main goal of this action plan are tiger and prey information, habitat management, conflicts resolution, anti-poaching and anti-trafficking operation, transboundary cooperation and logical framework.

Species included in protected list of the government

Awareness programs from GoN

Potential habitats incorporated in protected areas

Considered as priority species for research

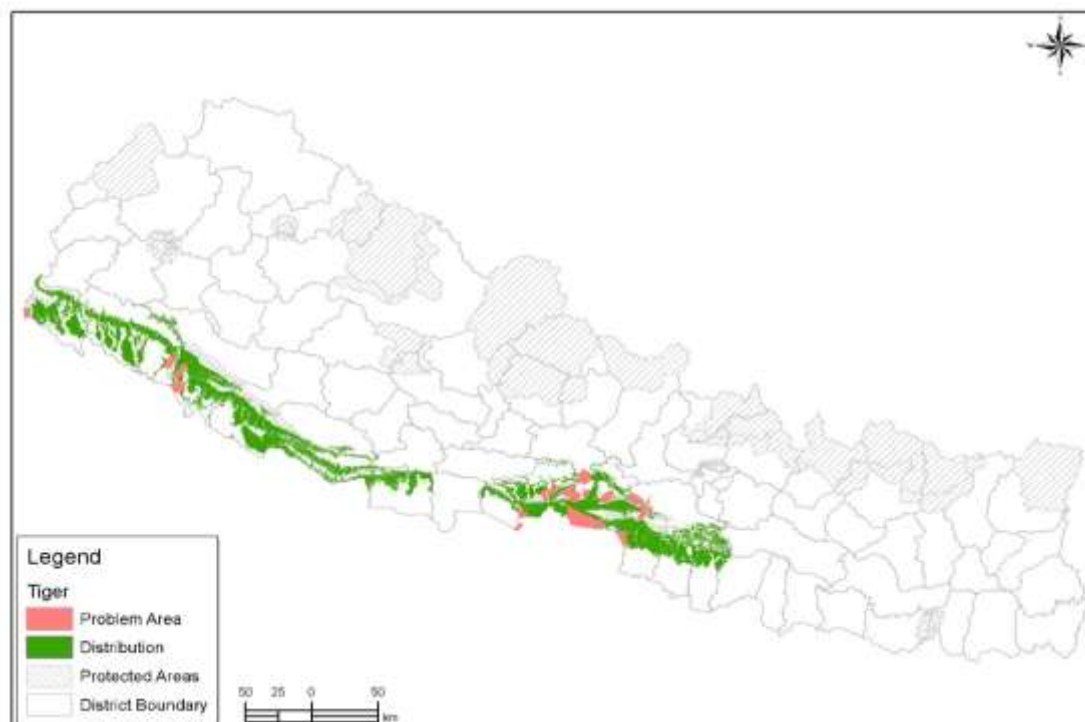
Capturing the conflicts associated individual and manage in zoo; shooting for the most conflict creating individuals

Major gaps

Population assessment

Economics of tiger conservation

Ecological assessment



Citation

Sunquist 1981, Smith 1998, Gurung *et al.* 2008, Baral and Shah 2008, NTRP 2010, Jnawali *et al.* 2011, Carter *et al.* 2012, Karki 2013, Thapa 2014, Dhakal *et al.* 2014, Aryal *et al.* 2015, Kral 2015, Thapa 2016, Dacres 2017.

***Panthera uncia* (Schreber, 1775)**

Order: Carnivora

Family: Felidae

Common name

Snow leopard, Ounce

Vernacular name

हिउँ चितुवा Hiun chituwa in Nepali

Synonyms: *Felis uncia* (Schreiber, 1775); *Uncia uncia* (Schreber, 1775)

Morphology

Body coat color smoky grey-yellowish tan with whitish under parts with long thick fur, dark grey to black rosettes on their body; small black spots on their head, legs and tail; body length 146-300cm with tail length 72-109cm, weight 21-55kg.



Distribution

Global:

Afghanistan, Bhutan, China, India, Kazakhstan, Kyrgyzstan, Mongolia, Nepal, Pakistan, Russian Federation, Tajikistan and Uzbekistan.

National:

2700-5600m elevation range in the mountain; protected areas: Langtang National Park, Shey-Phoksundo National Park, Annapurna Conservation Area, Sagarmatha National Park, Kangchenjunga Conservation Area, Api Nampa Conservation Area, Dhorpatan Hunting Reserve, Manaslu Conservation Area, and Makalu-Barun National Park as well as in outside protected area in Himalayan region.

General habitat

Inhabits in the trans Himalayas region along the northern border with China (Tibet) from east to west in cold, arid and semi-arid shrub land; alpine and subalpine areas, grasslands and open forests; favoring steep terrain characterised by cliffs, ridges, gullies and rocky outcrops.

Movement/home range:

Home range expands between 11-37 km².

Behavior

Solitary, territorial animal mostly active at dawn and dusk. They are known for being extremely secretive and well camouflaged.

Diet:

Carnivore; feeds on blue sheep, Himalayan tahr, ibex, musk deer, goral, Himalayan marmot, pika, hares, small rodents, Tibetan snow cock, Himalayan snow cock, chukar partridge; in the absence of natural prey also feeds on domestic livestock, goat and sheep.

Reproduction:

Breeds in January-March; give birth to 2-4 cubs, gestation period 3.0-3.5 months. Young sexually mature at the age of 3-6 years, follow mother on hunts upto three months and remain with her through their first winter. Life span of 10-15 years in wild and 25 years in captivity.

Population

Global: 4,510-7,400 individuals

National: 350-500 individuals

National trend: N/A

Conservation status

IUCN: Endangered

National: Endangered

Legal status

CITES: Appendix-I

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

Some people kill snow leopards for trophies.

Human-wildlife conflict associated wild animals

It is identified as human wildlife conflicts associated wild animal species for livestock depredation. Within four years' period (2070 to 2073) problems of snow leopard were reported from 7 wards (previous VDCs) of 5 districts of Nepal. In those areas 192 livestock were depredated within the four years' periods. Local people used to confront by using local technology like constructing snow leopard proof coral.

Major threats

- Habitat degradation, loss and fragmentation.
- Human-snow leopard conflict.
- Retaliatory killing.
- Depletion of natural prey.
- Poaching for trophies.

Conservation efforts

Efforts

Snow leopard conservation action plan for Nepal (2017-2021): Focuses on up scaling best practices in snow leopard conservation efforts; and includes five broad objectives - continue research and monitoring using cutting-edge technology; improve habitat and corridors; mitigate conflict through community engagement; reduce wildlife crimes; and, strengthen trans-boundary coordination and cooperation.

Species included in protected list of the government

Awareness programs from GoN

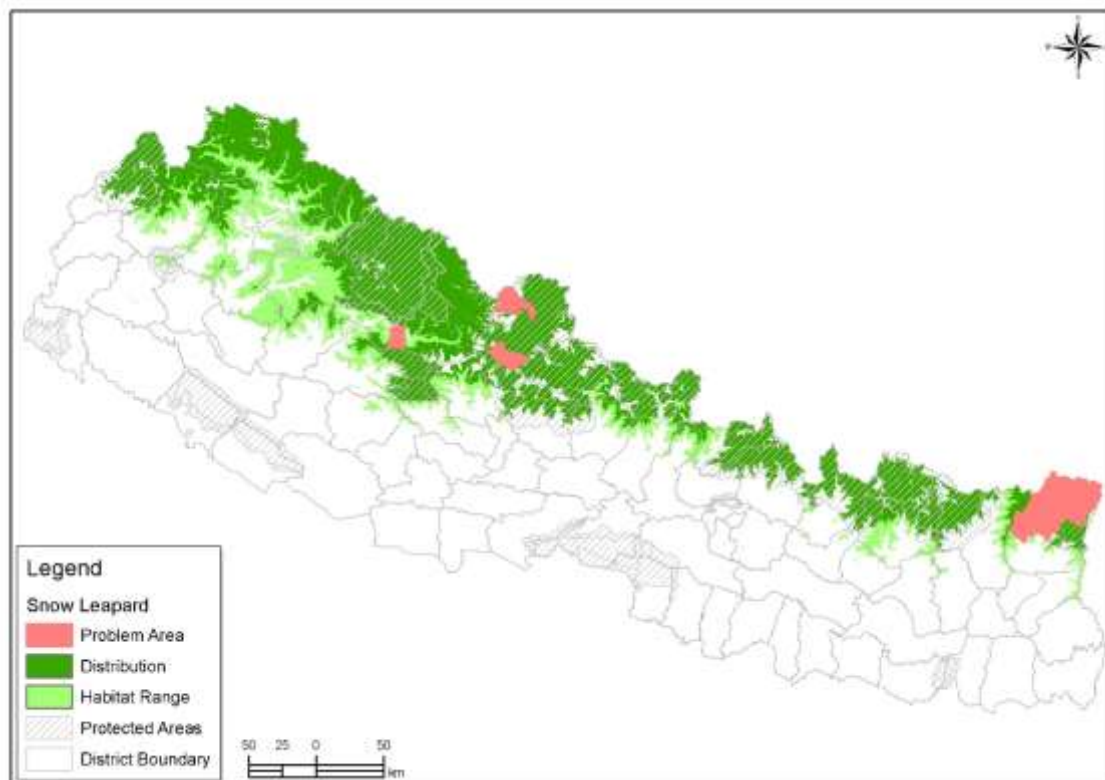
Potential habitats incorporated in protected areas

Considered as priority species for research

Major gaps

Population assessment

Ecological assessment



Citation

Oli *et al.* 1993, Jackson 1996, Oli 1997, Jackson *et al.* 2008. Baral and Shah 2008, Jnawali *et al.* 2011, Karmacharya *et al.* 2011. Jumabay *et al.* 2013, Ale *et al.* 2014, Devkota *et al.* 2017, Chetri *et al.* 2017,

Bubalus arnee (Kerr, 1792)

Order: Cetartiodactyla

Family: Bovidae

Common name

Wild Water Buffalo, Wild Asian Buffalo, Indian Buffalo, Indian Water Buffalo, Water Buffalo, Asiatic Buffalo, Asian Buffalo

Vernacular name

अर्ना Arna in Nepali

Synonyms: *Bos arni* (Hamilton Smith, 1827); *Bos bubalus* var. *fulvus* (Blanford, 1891); *Bubalis bubalis* ssp. *migona* (Deraniyagala, 1953); *Bubalus arna* (Hodgson, 1841); *Bubalus arna* var. *macrocerus* (Hodgson, 1842); *Bubalus bubalus* ssp. *septentrionalis* (Matschie, 1912)



Morphology

Larger and heavier, black and robust with broadest horn span of any bovine, poss horns heavy at the base and widely spread up to 2m along outer edges. Horns thicker (male), but often shorter than those of females; tip of the tail is bushy; hooves large and splayed. Leg white stockings from the knee, body weigh 800-1200kg, body length 2.4-3.0m, tail 60-100cm, body height 1.5-1.9m.

Distribution

Global:

Bhutan, Cambodia, India, Myanmar, Nepal, Thailand and Viet Nam.

National:

Koshi Tappu Wildlife Reserve, recently introduced in Chitwan National Park.

General habitat

Inhabits in low lying alluvial grassland and surrounding area <250m, also occurs in riparian forests and woodlands of high availability of marshes, small pond and flowing water, associated with wet grasslands, swamps and densely vegetated river valleys.

Movement/home range: N/A

Behavior

Diurnal; forms maternal groups of loosely structured herds containing 10–20, can be up to 100 individuals. Adult males form bachelor herds up to 10 individuals, with older males often solitary. In midday they lay up in dense cover or submerging in wallows during hot season.

Diet:

Herbivore; feed on grasses, herbs, fruits, barks of tree, shrubs. They are grazer and browser and also feeds on crops, including sugarcane and jute too.

Reproduction:

Breeds in October–November, give birth to single litter, twins rare; gestation period is 10–11 months, sexually mature at the age of 18 months, life span 25 years in wild.

Population:

Global: <4,000 individuals

National: 432

National trend: Increasing

Conservation status

IUCN: Endangered

National: Endangered

Legal status

CITES: Appendix III

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

N/A

Human-wildlife conflict associated wild animals

It is identified as human wildlife conflicts associated wild animal species for crop depredating and sometimes did human injury. Wild buffalo feeds on crops, including rice, sugarcane, and jute, and sometimes cause considerable damages. Within four years' period (2070 to 2073) problems of wild water buffalo was reported from 1 wards (previous VDCs) of 1 district of Nepal.

Majort threats

- Interbreeding with feral and domestic buffalo.
- Habitat loss/degradation.

Conservation efforts

Efforts

Species included in protected list of the government

Awareness programs from GoN

Potential habitats incorporated in protected areas

Considered as priority species for research

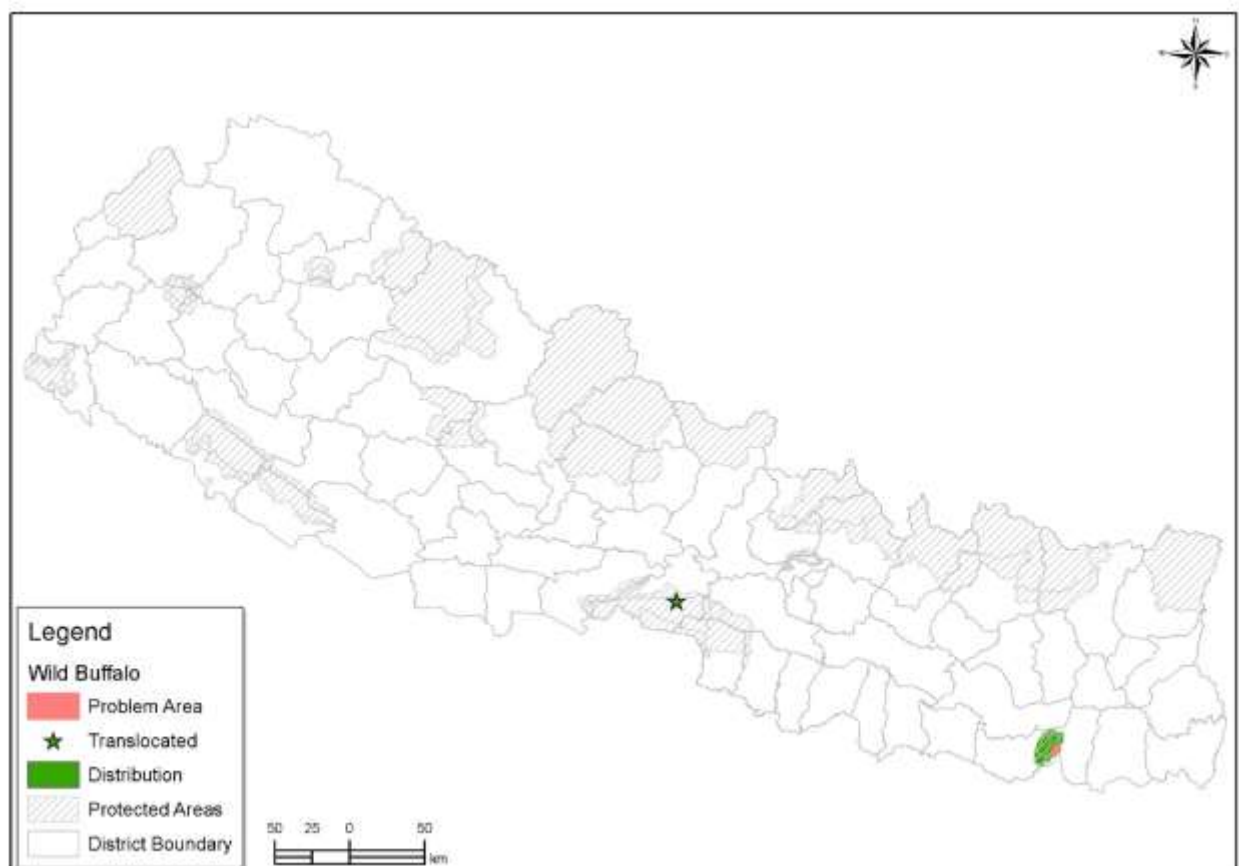
Translocated from KTWR to CNP

Produce awareness materials for its conservation and importance

Major gaps

Behavior study

Ecological assessment



Citation

Lydekker 1926, Prater 1971, Grimsdell 1976, Lekagul and McNeely 1977, Dahmer 1978, Kassim 1979, Kushwaha 1986, Bauer 1987, Uichroensak 1992, Heinen 1993, Choudhury 1994, Suwal and Verheugt 1995, Nowak 1999, Heinen 2000, Heinen 2001, Ryan 2005, Singh 2005, Heinen 2006, Hedges *et al.* 2008, Baral and Shah 2008, DNPWC 2009b, Ram and Acharya 2011, Jnawali *et al.* 2011 Aryal *et al.* 2011, Khatri 2012, Rai 2013, Rai and Chalise 2014.

Bos gaurus (Smith, 1827)

Order: Cetartiodactyla

Family: Bovidae

Common name

Gaur

Vernacular name

गौरि गाई Gauri Gai in Nepali

Synonyms: *Bos asseel* (Horsfield, 1851); *Bos cavifrons* (Hodgson, 1837); *Bos gaur* (Sundevall, 1846); *Bos gaurus* (Lydekker, 1907) ssp. *hubbacki*; *Bos gour* (Hardwicke, 1827); *Bos subhemachalus* (Hodgson, 1837); *Bubalibos annamiticus* (Heude, 1901); *Gauribos brachyrhinus* (Heude, 1901); *Gauribos laosiensis* (Heude, 1901); *Gauribos mekongensis* (Heude, 1901); *Gauribos sylvanus* (Heude, 1901); *Uribos platyceros* (Heude, 1901).



Morphology

Largest bovine in the world, body of male are glossy black. Female and young's coat brown in color, head large with deep chest and muscular shoulder ridge, strong with high convex ridges on forehead in between horns, leg white up to knee from hoof. Possesses horn, male larger, that are yellow-white in color with black tips. Body weight 600-1000 kg, body height of 165-195 cm, body length 250-330 cm with tail length 70-105 cm.

Distribution

Global:

Bangladesh, Bhutan, Cambodia, China, India, Lao PDR, Malaysia, Myanmar, Nepal, Thailand and Viet Nam.

National:

Occurs 800m elevation range; Sal forests of the Churia foothills in Chitwan National Park and Parsa National Park, supposed to be originated from Trijuga forests of Udayapur District.

General habitat

Inhabits in tropical, sub-tropical, moist and dry deciduous forests.

Movement/home range:

Travelled an average of 23 miles per day. The male home ranges is between 135-142 km² and female home ranges is 32-169 km².

Behavior

Diurnal except in case of high human disturbance area, herd size contains adult juveniles and calves. Male either solitary or stay with group of male only.

Diet:

Herbivore; feed on young green grasses, leaves, fruit, twigs, bark of various woody species, coarse dry grasses and bamboo. Gaur are both grazer and browsers.

Reproduction:

Can breed throughout the year, give birth to single litter, gestation period 9 months, mature at the age of three years, life span up to 24 years.

Population

Global: 15,000-35,000

National: 473

National trend: Decreasing

Conservation status

IUCN: Vulnerable

National: Vulnerable

Legal Status

CITES: Appendix-I

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

According to the Hindu myth it is considered as a sacred animal.

Human-wildlife conflict associated wild animals

It is identified as human wildlife conflicts associated wild animal species for creating problems like human injury and casualties. There was no records of the problem provided by gaur within four years' period (2070 to 2073). Previous data (2055 to 2070) reflected that the Government of Nepal provided NRs. 203,100 to the victimize people/household from the gaur as a relief amount for human injury and casualties.

Major threats

- Habitat degradation.
- Habitat fragmentation.
- Disease transmission from domestic livestock.
- Food competition with domestic livestock.

Conservation efforts

Efforts

Species included in protected list of the government

Awareness programs from GoN

Potential habitats incorporated in protected areas

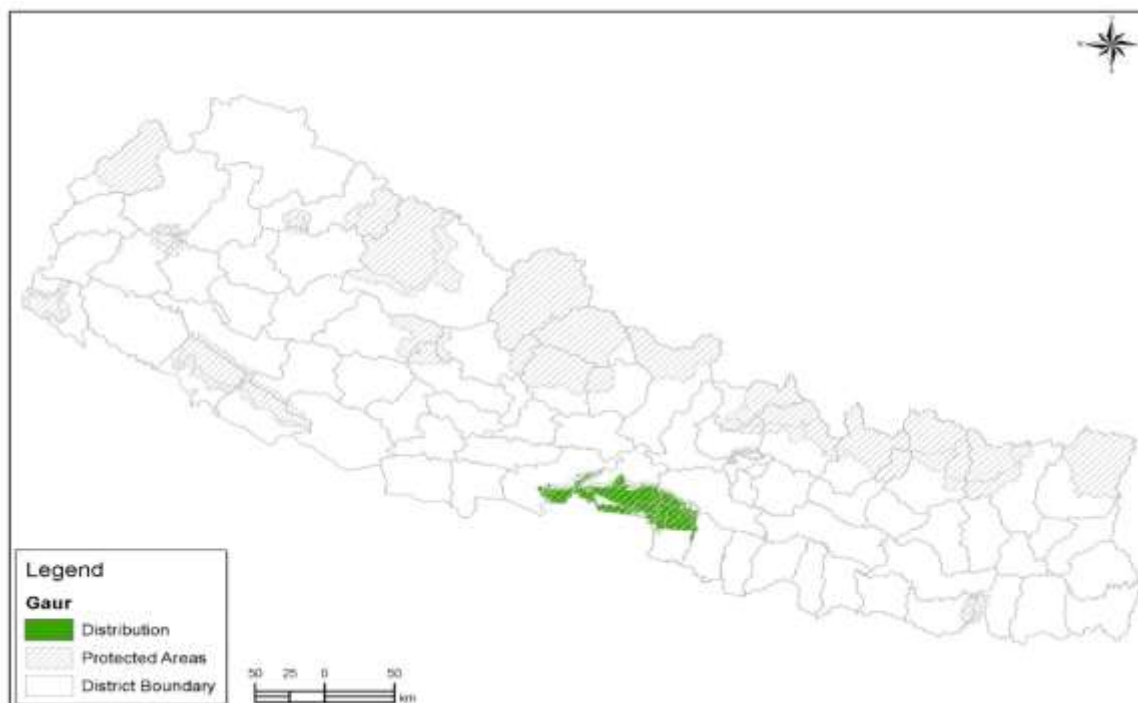
Considered as priority species for research

Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Ecological assessment



Citation

Hubback 1937, Crandall 1964, Schaller 1967, Chetri 2003, Chetri 2006, Baral and Shah 2008, Duckworth *et al.* 2008b, Subedi 2009, Baral 2010, Ahrestani and Herbert 2011, Ahrestani *et al.* 2011, Imam and Kushwaha 2013, Parida *et al.* 2015 Duckworth *et al.* 2016.

***Python molurus* (Linnaeus, 1758)**

Order: Squamata

Family: Pythonidae

Common name

Asiatic Rock Python, Indian Python

Vernacular name

अजिङ्गर, अजर, सोनकतार Ajinger, Ajagar, Sonakatar in Nepali

Synonyms: N/A

Morphology

Yellowish cream, greyish or brownish above; with a dorsal series of large, elongated, more or less subquandragular dark grey, brown or reddish brown, black and elongated spot.



Distribution

Global:

Nepal, India, Pakistan, Srilanka, Bangladesh and Bhutan

National:

Bardia (below 250m)

General habitat

Inhabits in the variety of habitat including rain forest, river valley, woodlands, scrubland, grassy marches and semi rocky foothills.

Movement/home range: N/A

Behavior

Nocturnal and diurnal.

Diet:

Carnivorous, feed on warm-blooded mammals.

Reproduction:

Reproduction is oviparous; mating in December-February. Female lays about 8-107 egg between March-June and incubation period is 60-80 days.

Population

Global: N/A

National: N/A

National trend: N/A

Conservation status

IUCN: Vulnerable

National: N/A

Legal status

CITES: Appendix-I

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

N/A

Human-wildlife conflict associated wild animals

In this study, there is no evidences of Asiatic rock python as human wildlife conflicts associated wild animal species.

Major threats

- Live capturing for trade.
- Retaliatory killing.

- Conflict with the local inhabitants.

Conservation efforts

Efforts

Species included in protected list of the government

Awareness programs from GoN

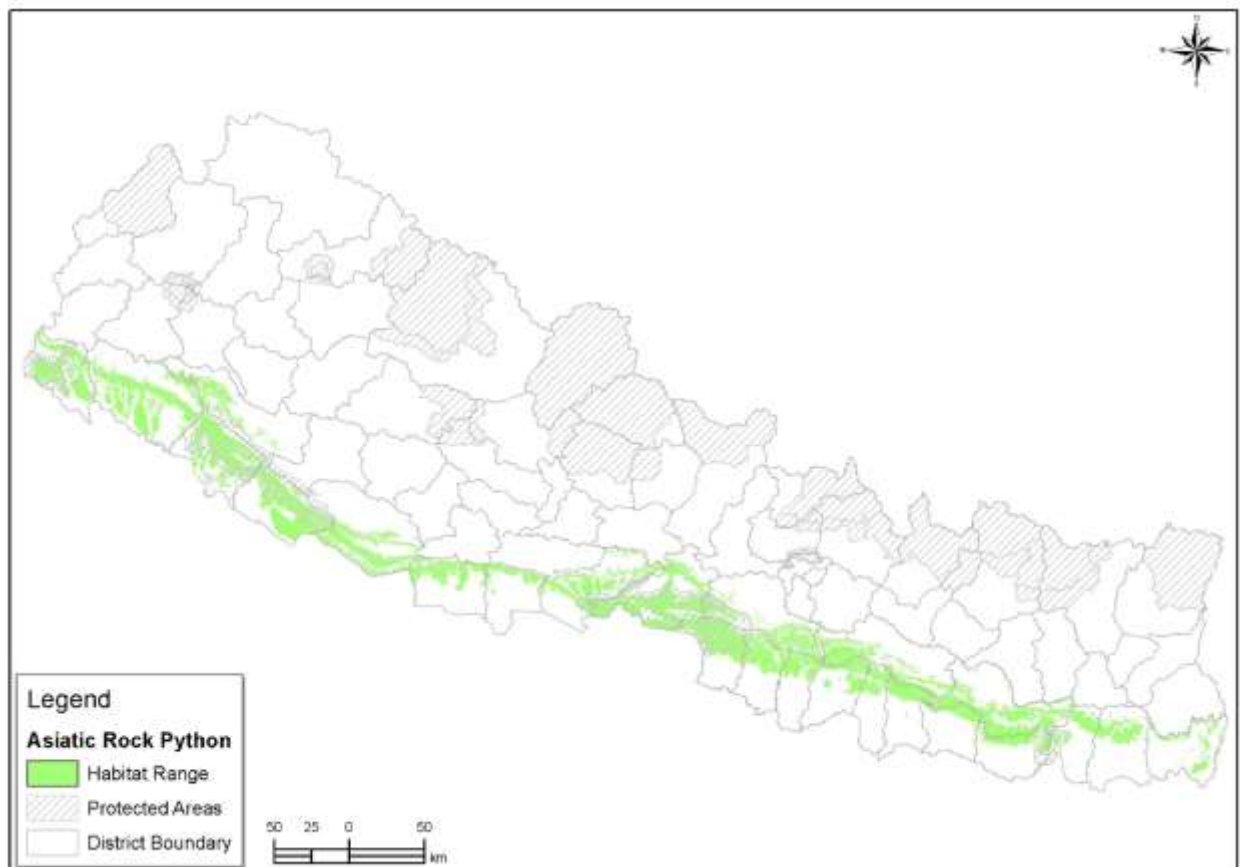
Considered as priority species for research

Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Ecological assessment



Citation

Majupuria 1982, Daniel 2002, Shah and Tiwari 2004, Reed and Rodda 2009.

***Python bivittatus* (Kuhl, 1820)**

Order: Squamata

Family: Pythonidae

Common name

Burmese Python

Vernacular name

अजिङ्गर, अजगर, सोनकतर Ajinger, Ajagar, Sonakatar in Nepali

Synonyms: N/A

Morphology

Light yellowish or greyish color, less distinct arrow pattern on the head, lighter center of the dark lateral patches, measure up to 7-8m.



Distribution

Global:

South-East Asia, China, Nepal, Indonesia and Thailand.

National:

East to West Nepal below 550m elevation

General habitat

Mostly found in warm, humid habitat and prefer forests proximity to water such as lakes, canals, rivers and swamps. It also inhabits in rain forest, arid scrub forest as well as wooded or open grassland.

Movement/home range: N/A

Behavior

Both diurnal and nocturnal depending on the amount of human induced disturbance in their associated environment, non poisonous, excellent swimmers, being able to stay submerged for up to half an hour, majority time hidden in the underbrush.

Diet:

Carnivore; feed on mammals, birds and reptiles but the most preferred is mammals.

Reproduction:

Breeding occurs between December-February. Female lay egg with 80-100 numbers. Gestation in captivity lasts four months and eggs have an incubation period of 60 days. After laying egg, the female coils around the clutch and remains until the young hatch.

Population

Global: N/A

National: N/A

National trend: N/A

Conservation status

IUCN: Vulnerable

National: N/A

Legal status

CITES: Appendix-II

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

N/A

Human-wildlife conflict associated wild animals

It is identified as human wildlife conflicts associated wild animal species for creating problems like human injury and casualties. There was no records of the problem provided by python within four years' period (2070 to 2073). Incidences of attack by this species were reported from BNP.

Major threats

- Poaching for skin
- Live capturing for trade

Conservation efforts

Efforts

Awareness programs from GoN

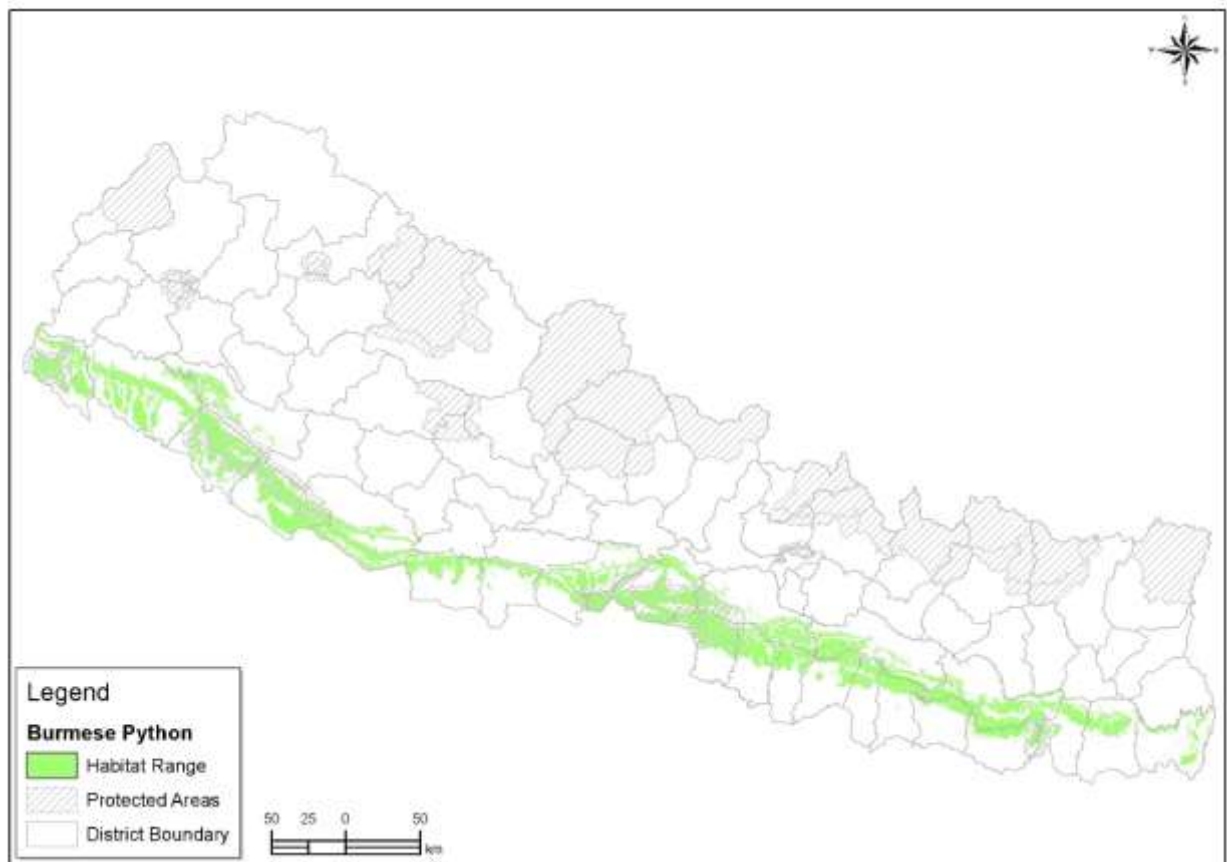
Considered as priority species for research

Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Ecological assessment



Citation

Majupuria 1982, Daniel 2002, Shah and Tiwari 2004, Reed and Rodda 2009.

3.5.3 Conflicts associated wild animals

SN	Scientific name	Common name	Nepali name
1	<i>Muntiacus muntjak</i>	Barking Deer	Ratuwa
2	<i>Vulpes bengalensis</i>	Bengal Fox	Phyauro
3	<i>Sus scrofa</i>	Eurasian Wild Boar	Bandel
4	<i>Canus aureus</i>	Golden Jackal	Syal
5	<i>Ursus thibetanus</i>	Himalayan Black Bear	Kalo Bhalu
6	<i>Melurus ursinus</i>	Sloth Bear	Kathe Bhalu
7	<i>Hystrix indica</i>	Indian Crested Porcupine	Jure Dumsi
8	<i>Lepus nigricollis</i>	Indian Hare (Rufous-tailed)	Kharayo
9	<i>Panthera pardus</i>	Leopard	Chituwa
10	<i>Boselaphus tragocamelus</i>	Nilgai	Nilgai
11	<i>Macaca mulata</i>	Rhesus Macaque	Rato bandar
12	<i>Axis axis</i>	Spotted deer	Chittal
13	<i>Crocodylus palustris</i>	Mugger Crocodile	Mugger crocodile
14	<i>Bungarus caeruleus</i>	Common Krait	Krait
15	<i>Bungarus fasciatus</i>	Banded Krait	Krait
16	<i>Naja kaouthia</i>	Biocellate Cobra	Goman
17	<i>Ophiophagus hannah</i>	King Cobra	Raj Goman
18	<i>Trimeresurus albolabris</i>	White-lipped Pit Viper	Hareu
19*	<i>Elephas maximus</i>	Asian Wild Elephant	Hatti
20*	<i>Rhinoceros unicornis</i>	One-horned Rhinoceros	Gaida
21*	<i>Panthera tigris</i>	Tiger	Bagh
22*	<i>Panthera uncia</i>	Snow leopard	Hiun Chituwa
23*	<i>Bubalus arnee</i>	Wild Water Buffalo	Arna
24*	<i>Bos gaurus</i>	Gaur	Gauri Gai
25*	<i>Python molurus</i>	Asiatic Rock Python	Ajinger
26*	<i>Python bivittatus</i>	Burmese Python	Ajigar

* **Note:** Described in chapter 3.5.2

***Muntiacus vaginalis* (Boddaert, 1785)**

Order: Cetartiodactyla

Family: Cervidae

Common name

Barking Deer

Vernacular name

रतुवा मृग Ratuwa Mriga in Nepali

Synonyms: *Cervus muntjak* (Zimmermann, 1780); *Cervus vaginalis* (Boddaert, 1785); *Cervus moschatus* (Blainville, 1816); *Cervus moschatus* (H. Smith, 1827); *Cervus ratwa* (Hodgson, 1833); *Cervus melas* (Ogilby, 1839); *Cervus stylocerus* (Schinz, 1844); *Prox ratva* (Sundevall, 1846); *Stylocerus muntjac* (Cantor, 1846); *Sylocerus muntjacus* (Kelaart, 1852); *Cervus pleiharicus* (Kohlbrugge, 1896); *Muntiacus bancanus* (Lyon, 1906); *Muntiacus rubidus* (Lyon, 1911)



Morphology

Body coat color golden tan color or chestnut-red with dark brown-black facial markings, ventral white, short coat of hair with tufts of hair and small bony knobs in small antlers in male, ears possess little hair, possess tusk like upper canines measuring about 1 inch long in males. Body length 89-135 cm; tail 13-23cm; body height 40-65cm; body weight 14-35 kg.

Distribution

Global:

Bangladesh, Bhutan, Cambodia, China, Hong Kong, India, Lao PDR, Myanmar, Nepal, Pakistan, Sri Lanka, Thailand and Viet Nam.

National:

Widely distributed in the forested areas.

General habitat

Inhabits a variety of habitats from dense tropical forest, sub-tropical forest to thickly wooded hills, prefers ravines, stream gorges, dried-up stream beds and thick undergrowth for cover.

Movement/home range: N/A

Behavior

Solitary, territorial animal.

Diet:

Herbivore; feeds on fruits, buds, tender leaves, flowers, herbs and young grass.

Reproduction

Breeds in February-March, give birth to single litter, gestation period of 180 days, weaning period 5-6 months, sexually matured in 9-12 months, lifespan 16 years.

Population

Global: N/A

National: >10000

National trend: Decreasing

Conservation status

IUCN: Least concern

National: Vulnerable

Legal status

CITES: N/A

GoN: Not listed in the NPWC Act 2029 (1973) as protected priority species.

Conservation efforts

N/A

Additional information

N/A

Human-wildlife conflict associated wild animals

It is identified as human wildlife conflicts associated wild animal species. It is recognized as one of the crop depredator, especially in the middle hill physiographic region.

Major threats

- Hunting for subsistence.
- Habitat loss and degradation due to human encroachment, clearing for agriculture and livestock grazing.
- Poaching.

Conservation efforts

Efforts

GoN Nepal conducted awareness program

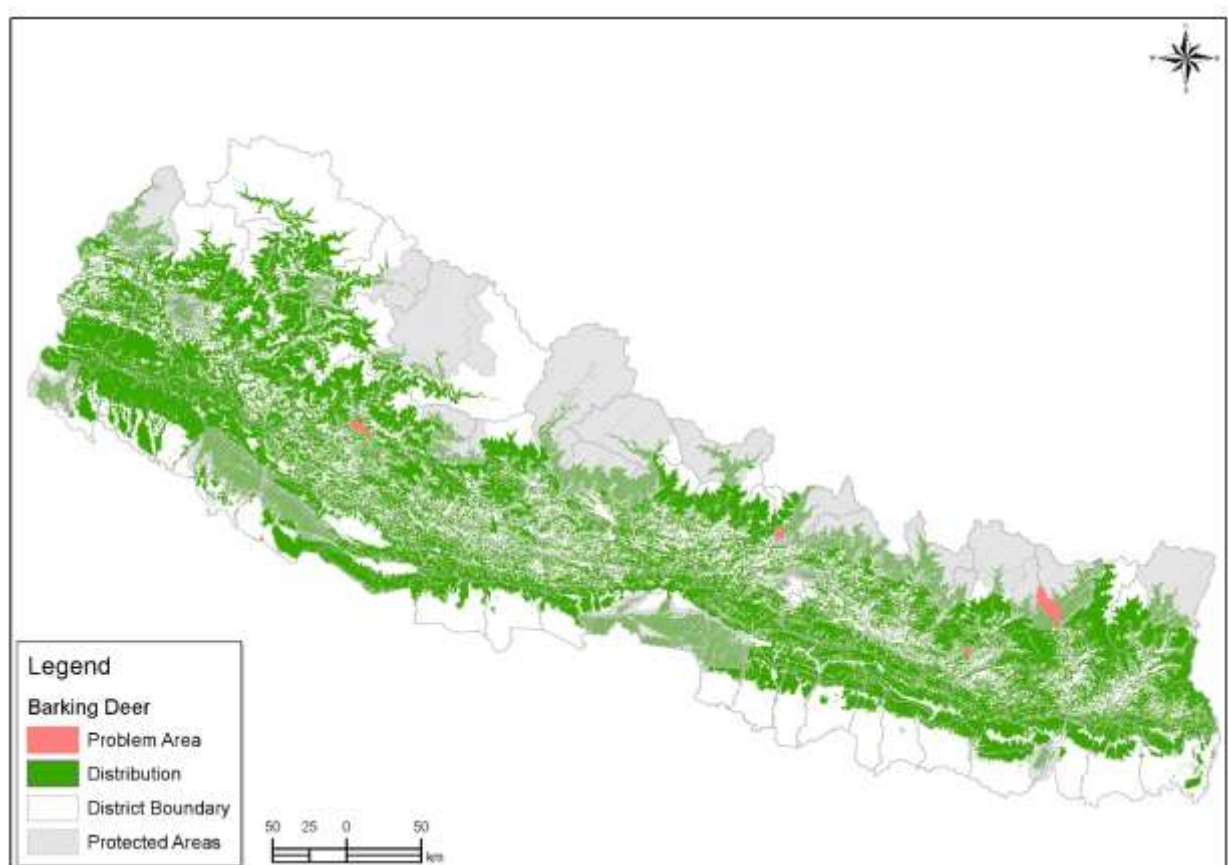
GoN considered as priority species for research

Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Ecological assessment



Citation

Doris *et al.* 1970, Grzimek *et al.* 1990, Walker and Nowak 1999, Jackson 2002, Baral and Shah 2008
Timmins *et al.* 2016.

***Vulpes bengalensis* (Shaw, 1800)**

Order: Carnivora

Family: Canidae

Common name

Bengal Fox

Vernacular name

फुस्रो फ्याउरो Phusro Phyauro in Nepali

Morphology

Grey appearance, black tipped tail, legs browner than the body, ears are brown with a black fringe, small black patches on the muzzle and black tear marks around eye.

Distribution

Global:

Bangladesh, India, Nepal and Pakistan.

National:

Upto 2700m; protected areas: Annapurna Conservation Area, Bardia National Park, Chitwan National Park, Dhorpatan Hunting Reserve, Koshi Tappu Wildlife Reserve, Parsa National Park and Shukla Phanta National Park; outside protected areas: whole Terai region, middle hills physiographic region upto 2700m elevation.

General habitat

Inhabits in scrub land, grassland, semiarid, and near to human settlements.

Movement/home range

Home ranges is about 2 km².

Behavior

Solitary, territorial, crepuscular, nocturnal habit but also hunt on day time.

Diet:

Carnivore; feeds on small mammals, birds, chickens, arthropods, rodents, reptiles and fruits.

Reproduction:

Breeds in December and February, give birth of 2-4 litter, gestation period is 50-53 days, interval of birth is one year.

Population

Global: N/A

National: 500-2500

National trend: Decreasing

Conservation status

IUCN: Least Concern

National: Vulnerable

Legal status

CITES: N/A

GoN: Not listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

N/A

Human-wildlife conflict associated wild animals

It is identified as human wildlife conflicts associated wild animal species. It depredated livestock in middle hill and low land areas.

Major threats

- Persecution.



- Retaliatory killings.
- Poaching for trophies.

Conservation efforts

Efforts

GoN Nepal conducted awareness program

GoN considered as priority species for research

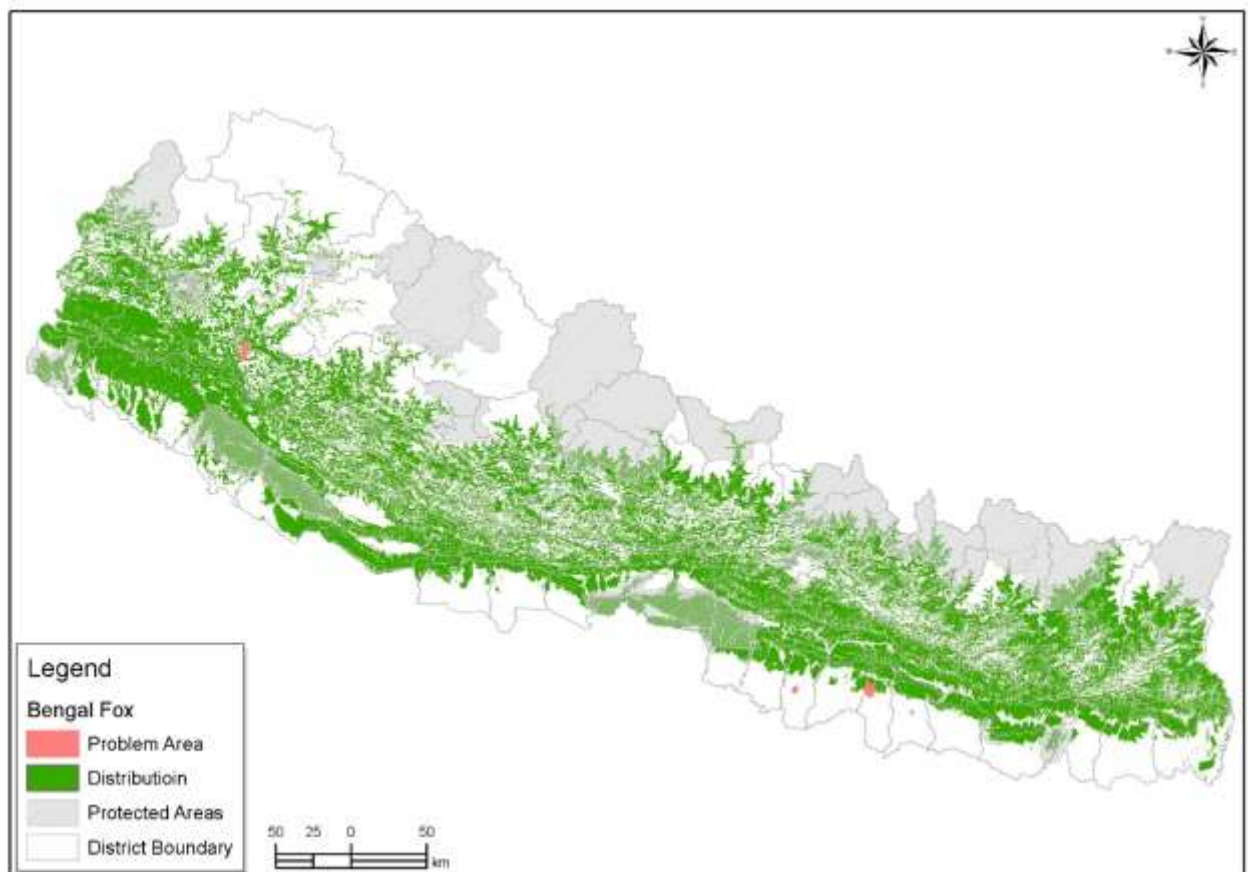
Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Assessment about the interaction with human

Ecological assessment



Citation

Pocock 1936, Mitchell 1977, Johnson *et al.* 1980, Baillie and Groombridge 1996, Rodgers *et al.* 2000, Akadan and Mani 2000, Pradhan *et al.* 2001a, Ernst 2003, Johnsingh and Jhala 2004, Vanak 2005, Gompper and Vanak 2006, Baral and Shah 2008, Home and Jhala 2009, Maurya 2012, Shrestha 1997, tripathi *et al.* 1992, Kumara and Singh 2012, Punjabi *et al.* 2013, Jhala 2016.

***Sus scrofa* (Linnaeus, 1758)**

Order: Cetartiodactyla

Family: Suidae

Common name

Wild Boar, Eurasian Wild Boar, Wild Pig, Ryukyu Island Wild Pig

Vernacular name

बंदेल Bandel in Nepali

Synonyms: *Sus andamanensis* (Blyth, 1858); *Sus aruensis* (Rosenberg, 1878); *Sus babi* (Miller, 1906); *Sus ceramensis* (Rosenberg, 1878); *Sus enganus* (Lyon, 1916); *Sus floresianus* (Jentink, 1905); *Sus goramensis* (De Beaux, 1924); *Sus natunensis* (Miller, 1901); *Sus nicobaricus* (Miller, 1902); *Sus niger* (Finsch, 1886); *Sus papuensis* (Lesson and Garnot, 1826); *Sus ternatensis* (Rolleston, 1877); *Sus tuancus* (Lyon, 1916).



Morphology

Body covered by dark grey-brown coat of coarse and bristle hairs. Male possess four tusk one in each quadrant of the jaw. Young yellowish-brown in color with cream spots and stripes, body weighs 90-100 kg, body length 90-180 cm.

Distribution

Global:

Afghanistan, Albania, Algeria, Andorra, Armenia, Austria, Azerbaijan, Bangladesh, Belarus, Belgium, Bhutan, Bosnia and Herzegovina, Bulgaria, Cambodia, China, Croatia, Cyprus, Czech Republic, Estonia, Finland, France, Georgia, Germany, Greece, Hong Kong, Hungary, India, Indonesia, Iran, Iraq Israel, Italy, Japan, Jordan, Kazakhstan, Korea, Kyrgyzstan, Lao PDR, Latvia, Lebanon, Liechtenstein, Lithuania, Luxembourg, Macedonia, Malaysia, Moldova, Monaco, Mongolia, Montenegro, Morocco, Myanmar, Netherland, Pakistan, Palestinian, Poland, Portugal, Romania, Russian Federation, San Marino, Serbia, Slovakia, Slovenia, Spain, Sri Lanka, Switzerland, Syrian Arab Republic, China, Tajikistan, Thailand, Tunisia, Turkey, Turkmenistan, Ukraine, Uzbekistan and Viet Nam.

National:

Across the Terai, churia and middle hills physiographic regions between 63-4,000m elevations.

General habitat

Occupies a wide varieties of temperate and tropical habitats, from semi-desert to tropical rain forests, temperate woodlands, grasslands and reed jungles; often venturing onto agricultural land to forage.

Movement/home range:

The home range of adult females and adult males ranges from 5-10 km² and 10-20 km² respectively.

Behavior

They are more active in the early morning and late afternoon; nocturnal in disturbed areas. Wild pigs are gregarious, usually of between 6-20 individuals.

Diet:

Omnivorous; principally feeds on fruits, seeds, roots and tubers. These animals are predominately frugivorous feeding on variety of fruits and other included soil, earthworms and roots.

Reproduction:

They breed throughout the year. They breed twice a year with 4-8 litter; the gestation period is about four months. Life span is upto 20 years in wild and 27 year in captivity.

Population

Global: N/A

National: >30,000

National trend: Increasing

Conservation status

IUCN: Least concern

National: Least concern

Legal status

CITES: N/A

GoN: Not listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

It has scared and religious value. The myth is boar dig the earth with his tusks and make suitable to live for people. It is one of the brave and well-armed wild animals. To see a boar in dream is a sign of good luck and fortune (Majupuria, 1991).

Human-wildlife conflict associated wild animals

It is identified as human wildlife conflicts associated wild animal species for creating problems like crop damage and human injury and casualties. Within four years' period (2070 to 2073) problems of wild boar were reported from 18 wards (previous VDCs) of 10 districts of Nepal. In those areas 25 peoples were injured and 1 individuals were killed within the four years' periods. Within this period Government of Nepal provided NRs. 911,745 to the victimize people/household from the wild boar as a relief amount. Local people used to confront by using local technology like bio-fencing and travelling to jungle in group. Similarly, government supported for mesh fencing and wall fencing are the main means utilized to confront the problem from the wild boar.

Major threats

- Hunting for 112osette112nce.
- Habitat degradation.

Conservation efforts

Efforts

Fencing, wall construction and biofencing.

GoN considered as priority species for research

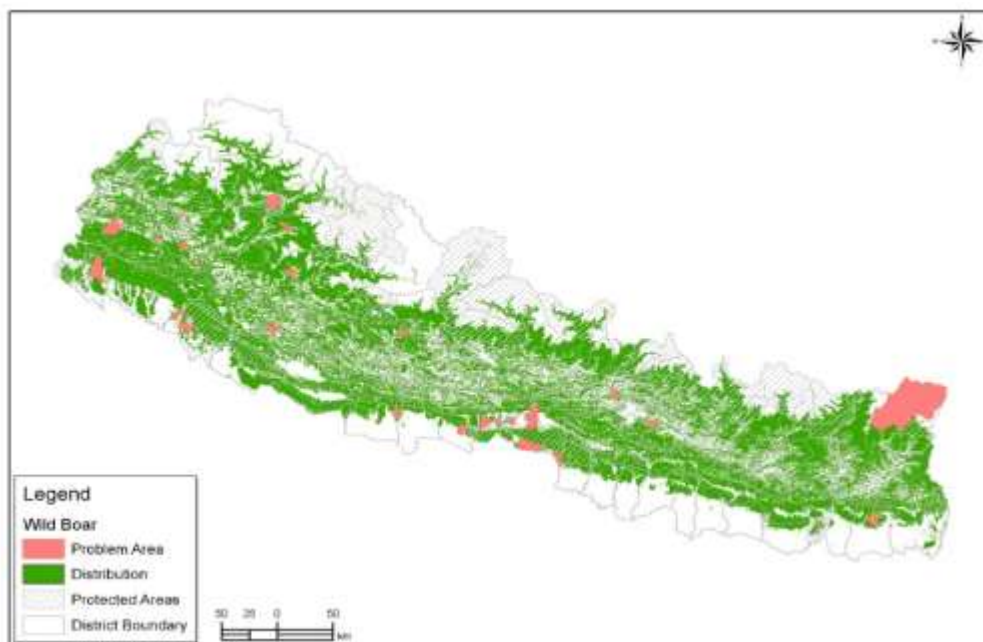
Produce awareness materials for its conservation and importance

Support to grow unpalatable species.

Major gaps

Population assessment

Ecological assessment



Citation

GoV 1973, Sharma 1991, Suwal and Verheugt 1995, GoV 1996, Silwal 2003, Baral and Shah 2008, Smith and Xie 2008, GoV 2009, Thapa 2010, DNPWC 2010, Pradhan 2010, Shama *et al.* 2011, Jnawali *et al.* 2011, DNPWC 2012, Bajimaya 2012, Karanth *et al.* 2012, Silwal *et al.* 2013, GoV 2013, Pandey *et al.* 2015, GoV 2015, Shrestha 2015, Silwal *et al.* 2016.

***Canis aureus* (Linnaeus, 1758)**

Order: Carnivora

Family: Canidae

Common name

Golden Jackal, Asiatic Jackal, Common Jackal

Vernacular name

स्याल Syal in Nepali

Synonyms: N/A

Morphology

Body coat color varies from pale creamy yellow to dark tawny; fur on the back often consists mixture of black, brown and white hairs with sandy color leg; ventral part lighter pale ginger to cream color; bear large ear with bushy tail and black tip. Body length 70-85cm with tail-25cm, body mass 6-14 kg, body height 44.5-50.0 cm.



Distribution

Global:

Afghanistan, Albania, Algeria, Bahrain, Bhutan, Bosnia and Herzegovina, Bulgaria, Central African Republic, Croatia, Djibouti, Egypt, Eritrea, Ethiopia, Greece, India, Iran, Iraq, Israel, Jordan, Kenya, Kuwait, Lebanon, Libyan Arab Jamahiriya, Mali, Mauritania, Morocco, Myanmar, Nepal, Niger, Nigeria, Oman, Pakistan, Qatar, Saudi Arabia, Senegal, Somalia, Sri Lanka, Sudan, Syrian Arab Republic, Tanzania, Thailand, Tunisia, Turkey, Turkmenistan, United Arab Emirates, Viet Nam, Western Sahara and Yemen.

National:

Below 4000m elevation occurring in all protected area and outside the protected area at lowland to high mountain physiographic regions.

General habitat

Inhabits in different habitats ranging from tropical: savannas, arid deserts, grassland; subtropical: bushland, agriculture, semiurban habitats; to temperate region of mountains.

Movement/home range: N/A

Behavior

Solitary; also live in sociability with groups of 4-5 individuals. Most of the time they howls at dawn, midday and the evening, hunt in pack, initiated by dominant one. Youngs are more aggressive and less playful with one another.

Diet:

Omnivorous and opportunistic forager; feeds upon small antelopes, reptiles, insects, ground-dwelling birds, fruits, berries and grass. Also feeds on domestic animal: chickens and young cattle.

Reproduction:

Breeding occurs in February to March, give birth to 2-5 litter, gestation period of 63 days, weaning period 50-90 days, sexually matured in average of 334 days, can produce pups for at least 8 years, average life span is 15 years in captivity.

Population

Global: N/A

National: N/A

National trend: N/A

Conservation status

IUCN: Least concern

National: Least concern

Legal status

CITES: N/A

GoN: Not listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

Horn of this animal is considered as a symbol of rare things. Local people believed that alcohol prepared from its meat is useful to cure gouty arthritis. Local peoples are killing it for the myth of its medicinal used in gout.

Human-wildlife conflict associated wild animals

It is identified as human wildlife conflicts associated wild animal species for creating problems like livestock depredation and human injury. As scavenging wildlife they usually captures the pet animals like chicken, baby goat and other animals. Within four years' period (2070 to 2073) problems of golden jackal were reported from 3 wards (previous VDCs) of 2 districts of Nepal. In those areas 1 person was injured and 2 livestock were depredated within the four years' periods.

Major threats

- Poaching for trophies.
- Habitat destruction.
- Depletion of prey population.

Conservation efforts

Efforts

GoN Nepal conducted awareness program

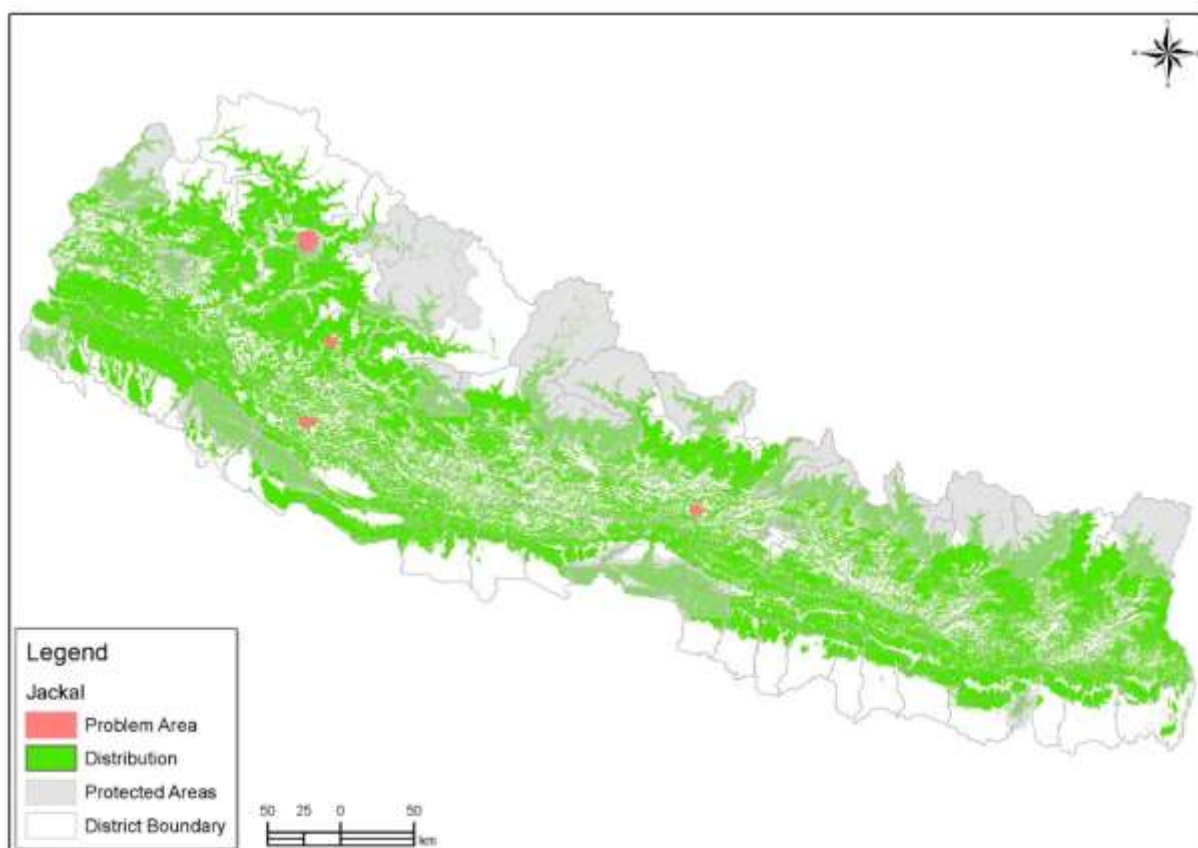
GoN considered as priority species for research

Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Ecological assessment



Citation

Macdonald 1984, Grizmek 1990, Sarker 1990, Nowak 1991, Shrestha 1997, Rotem *et al.* NA, Jhala and Moehlman 2008, Baral and Shah 2008, Giannatos *et al.* 2010, Corbet *et al.* 2010, Jnawali *et al.* 2011, Chourasia *et al.* 2012, Prerna *et al.* 2015, Heyward *et al.* 2017.

***Ursus thibetanus* (Cuvier, 1823)**

Order: Carnivora

Family: Ursidae

Common name

Himalayan Black Bear, Asiatic Black Bear

Vernacular name

कालो भालु Kalo Bhalu in Nepali

Synonyms: N/A

Morphology

Body fur black and shorter except in neck region, horseshoe shaped patch on chest, head large and round with small eyes, body weight about 90-120 kg, legs thick and strong with broad paws, body I 120-180 cm and tail 6.5-10.6 cm.



Distribution

Global:

Afghanistan, Bangladesh, Bhutan, Cambodia, China, Democratic People's Republic of Korea, India, Islamic Republic of Iran, Japan, Myanmar, Nepal, Republic of Korea, Lao PDR, Pakistan, Russian Federation, Province of China, Taiwan, Thailand and Viet Nam.

National:

1400-4000m elevation across the mid-hills and high mountain physiographic regions; protected areas: Kanchenjunga Conservation Area, Manaslu Conservation Area, Makalu-Barun National Park, Sagarmatha National Park, Langtang National Park, Shivapuri Nagarjun National Park, Shey-Phoksundo National Park, Rara National Park, Bardia National Park, Khaptad National Parks, Annapurna Conservation Area and Dhorpatan Hunting Reserve; outside the protected areas: Dhading, Surkhet, Dailekh, Dadeldhura, Doti, Bajura, Rukum and Myagdi districts in the forested areas.

General habitat

Inhabits in variety of habitats including dense broadleaved and coniferous forests.

Movement/home range:

Large variation in home range (6.4-36.5 km²) depending on the availability of food, denser the dispersal of food supply resulted smaller home range.

Behavior

Nocturnal feeders and sleep in a tree hole or in cave during the day time. They are powerful swimmers and plantigrade which typically walk on four feet, but when they fight, they stand up on their two hind feet and slap their enemy with their forepaws. They go into hibernation in winter season.

Diet:

Omnivore; feeds soft mast (e.g. *Prunus* spp., *Rubus* spp., *Machilus* spp. And *Ziziphus spina-christi*), hard mast (e.g. *Quercus* spp., *Pinus* spp., *Fagus* spp. And *Juglans* spp.), green vegetation, crops (corn and potato), cultivated fruits (date palm, pear, banana, papaya and peach), mammals and insects.

Reproduction:

Give birth of 1-3 cubs, become mature in 4-5 years, lifespan is over 30 years.

Population

Global: N/A

National: 500

National trend: Decreasing

Conservation status

IUCN: Vulnerable

National: Endangered

Legal Status

CITES: Appendix-I

GoN: Not listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

According to the evolutionary theory, the human beings are supposed to be the descendants of bear. Hindu myth believed that the bear is great prowess and fortune animal with religious significance. It is

believed that if any Hindu is killed by a bear, they should be buried at the spot of killed. Bears are believed to be resistance with diseases. So, children are given a ride on bears to ward off the diseases. Hair from bear is hung as amulet around the neck of children to protect them from diseases. Bear are regarded as symbols of creative power. It is a semi-god, ancestor, totem, sacred, guardian-spirit and bestowal of medicines, possessing a supernatural sprit and the soul of animals (Majupuria, 1991). Bile of the bear is considered to have medicinal importance.

Human-wildlife conflict associated wild animals

It is identified as human wildlife conflicts associated wild animal species for creating problems like crop damage, livestock killing and human injury and casualties. Within four years' period (2070 to 2073) problems of black bear were reported from 18 wards (previous VDCs) of 11 districts of Nepal. In those areas 25 peoples were injured, 3 individuals were killed within the four years' periods. Within this period Government of Nepal provided NRs. 424,917 to the victimize people/household from the bear as a relief amount.

Major threats

- Habitat fragmentation, habitat loss and destruction, habitat encroachment for agricultural land.
- Trade of body parts (e.g. skin and claws).
- Live cub trade for bear baiting (i.e. illegal fights with dogs), dancing bears and bile farms.

Conservation efforts

Efforts

GoN Nepal conducted awareness program

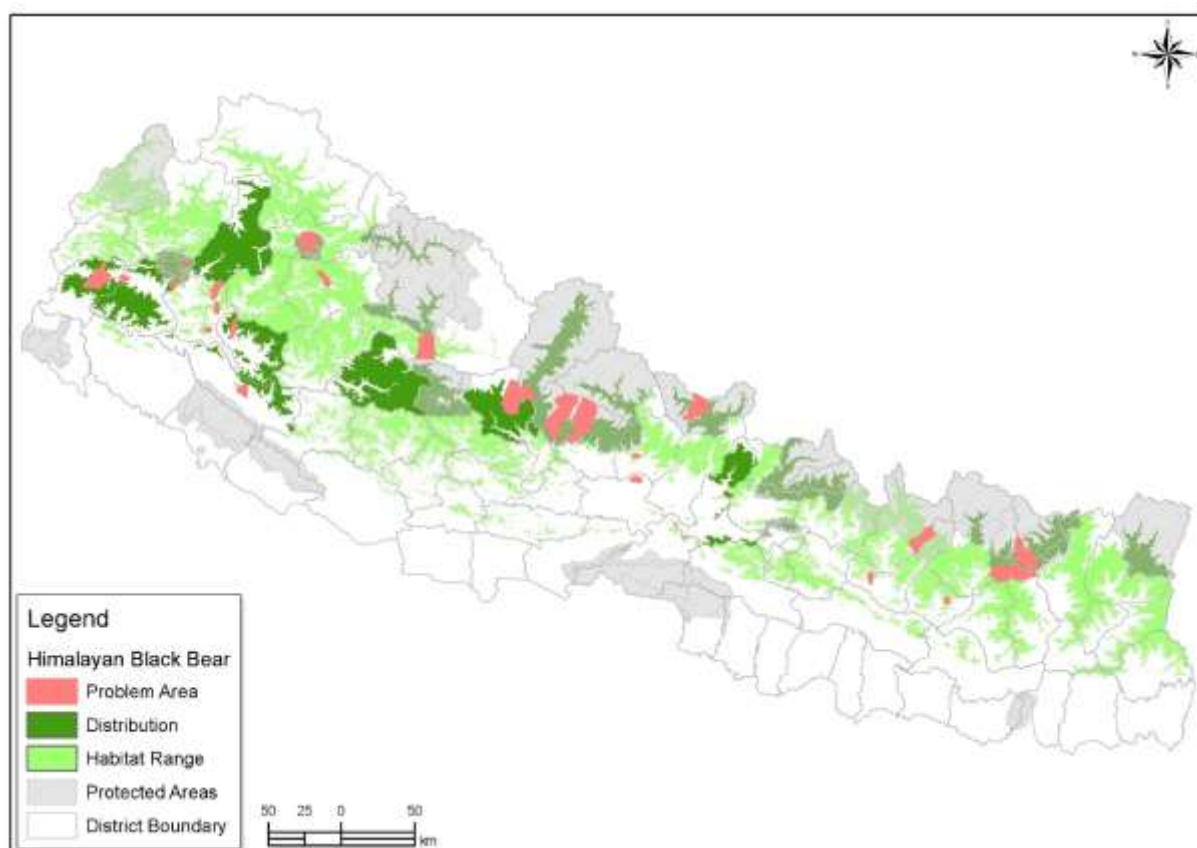
GoN considered as priority species for research

Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Ecological assessment



Citation

Schaller 1969, Hwang *et al.* 2002, Huygens *et al.* 2003, Hwang and Garshelis 2007, Baral and Shah 2008, Liu *et al.* 2009, Hwang *et al.* 2010, Jnawali *et al.* 2011 Nakajima *et al.* 2012, Hashimoto and Anrui 2013, Skripova 2013, Bista and Aryal 2013, IUCN 2014, Dasgupta *et al.* 2015, Escobar *et al.* 2015, Ali *et al.* 2017.

Melursus ursinus (Shaw, 1791)

Order: Carnivora

Family: Ursidae

Common name

Sloth Bear

Vernacular name

काठे भालु 'Kathe Bhalu' in Nepali

Synonyms: N/A

Morphology

Distinct shaggy black coat color, with no underfur, have long flexible grey colored muzzle, cream ring around eyes, creamy horseshoe on chest, front claws long, slightly curved with ivory coloration while shorter claws in rear. Adult males generally weigh between 80–145 kg and adult females weigh 55–95 kg.



Distribution

Global:

Bhutan, India, Nepal, and Sri Lanka.

National:

Between 100-800m elevations; protected areas: Bardia National Park, Chitwan National Park and Parsa National Park; outside the protected areas: Banke, Bara, Kailali, Arghakhachi and Dang districts.

General habitat

Inhabits in a variety of habitats like dry, moist forests, tall grasslands, where boulders and scattered shrubs and trees provide shelter, Sal forest, moist evergreen forest and riverine forest.

Movement/home range:

N/A

Behavior

Nocturnal but become more active in day time with cubs, scrapes on trees with their forepaws and rub against them with their flanks to mark their territories, excellent climbers (to feed and to rest). To protect their young one from predators; such as tigers, leopards and other bears; mother carry their cubs up to 9 months old on their backs.

Diet:

Omnivore; feed on termites, honey, berries, roots, carrion, insects and fruits.

Reproduction:

Breeds during June-July, give birth to 1-2, gestation period 5 months, sexually mature at 5 years, 2-3 years intervals between cubs.

Population

Global: 10,000-25,000

National: <1000

National trend: Decreasing

Conservation status

IUCN: Vulnerable

National: Endangered

Legal status

CITES: Appendix-I

GoN: Not listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

The evolutionary theory indicated the human beings are supposed to be the descendants of bears. According to Hindu myth the bear is considered as great prowess and fortune animal with religious significance. It is believed that if any Hindu is killed by a bear, they should be buried at the spot of killed.

Bears are believed to be resistance with diseases. So, children are given a ride on bears to ward off the diseases. Hair from bear is hung as amulet around the neck of children to protect them from diseases. Bear are regarded as symbols of creative power. It is a semi-god, ancestor, totem, sacred, guardian-spirit and bestowal of medicines, possessing a supernatural sprit and the soul of animals (Majupuria, 1991). Bile of the bear is considered to have medicinal importance.

Human-wildlife conflict associated wild animals

It is identified as human wildlife conflicts associated wild animal species for creating problems like crop damage, livestock killing and human injury and casualties. Within four years' period (2070 to 2073) problems of sloth bear were reported from 8 wards (previous VDCs) of 2 districts of Nepal. In those areas 16 peoples were injured within the four years' periods. Within this period Government of Nepal provided NRs. 428,339 to the victimize people/household from the bear as a relief amount.

Major threats

- Habitat loss, degradation and fragmentation.
- Retaliatory killing.
- Poaching.

Conservation efforts

Efforts

Sloth Bear conservation action plan

GoN Nepal conducted awareness program

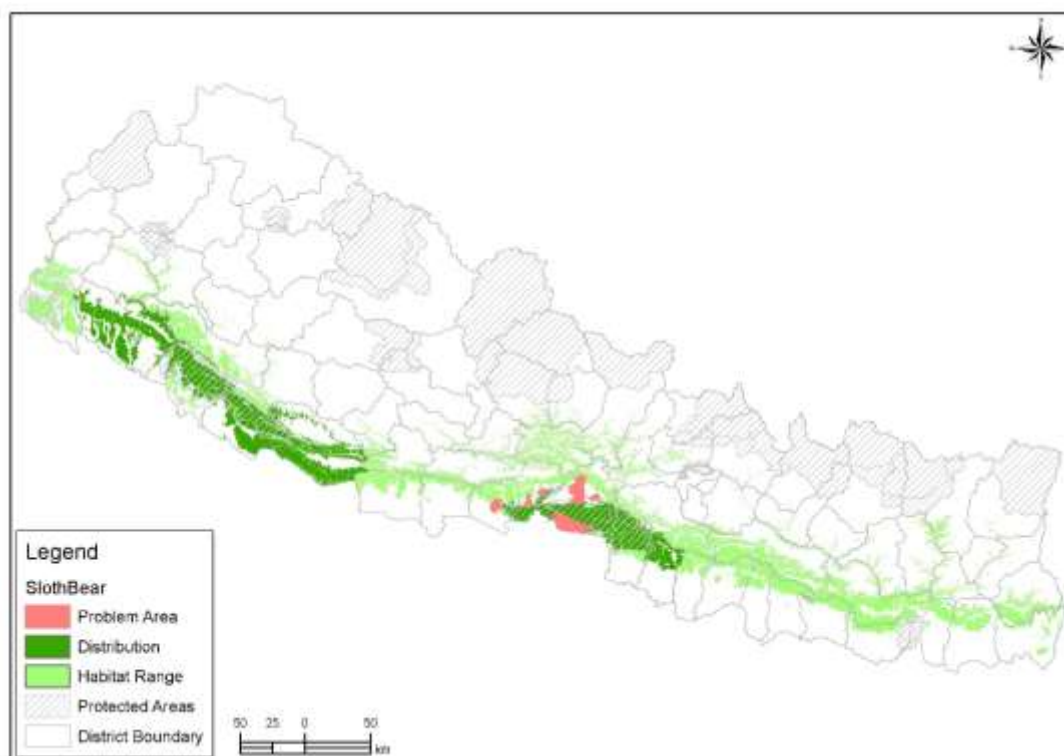
GoN considered as priority species for research

Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Ecological assessment



Citation

Schaller 1969, Laurie and Seidensticker 1977, Maehr and Brady 1984, Mace and Jonkel 1986, Shrestha 1993, Joshi *et al.* 1995, Joshi 1996, Joshi *et al.* 1997, Bargali 2003, Akhtar *et al.* 2004, Bargali 2004, Ratnayake 2007, Baral and Shah 2008, Joshi *et al.* 2011, Jnawali *et al.* 2011, Ramakrishnan *et al.* 2012, Sajer 2012, Sukhadiya *et al.* 2012, Bargali *et al.* 2013, IUCN 2013, Palei *et al.* 2013, Khanal and Thapa 2014, Baskaran *et al.* 2015, Garshelis *et al.* 2015, Dharaia *et al.* 2016, Tadav *et al.* 2016.

***Hystrix indica* (Kerr, 1792)**

Order: Rodentia

Family: Hystricidae

Common name

Indian Crested Porcupine

Vernacular name

जुरे द'म्सी Jure Dumsi in Nepali

Synonyms: N/A

Morphology

Body covered with multiple type of hair called quills, they are longer, thinner and thicker ones and ranger from 10-30 cm length. Quills are brown-black color alternating white and black bands, tail bears short quails that appear white in color, presence of white patch on throat, body lenth 70-90cm with tail length 8-10 cm, weight 11-18 kg.



Distribution

Global:

Afganistan, Armenia, Azerbaijan, China, Georgia, India, Islamic Republic of Iran, Iraq, Israel, Jordan, Kazakhstan, Nepal, Pakistan, Saudi Arabia, Sri Lanka, Turkey, Turkmenistan and Yemen.

National:

Widely distributed in <200m elevation; protected area: Bardia National Park, Chitwan National Park, Parsa National Park and Shukla Phanta National Park; outside the protected areas: Bajhang, Bajura, Banke, Bardia, Chitwan, Doti, Kailali, Kanchanpur, Nawalparasi, Parbat and Rupandehi districts.

General habitat

Inhibits in tropical, sub-tropical as well as in temperate climatic region; occur in hillsides, shrub lands, grasslands, forests, agricultural lands, human settlements, scrub and light open forests close to cultivation.

Movement/home range: N/A

Behavior

Generalist forager and nocturnal in habits, during day they remain in den, semifossorial and live in natural caves or in excavated burrows.

Diet:

Herbivore; feeds on wide variety of cultivated and wild plant species including potatoes, maize, beans, roots and shoots along with insects and small vertebrate.

Reproduction:

Breeds in February-March, give birth 2-4 litter, average life span is 27 years in captivity.

Population

Global: N/A

National: N/A

National trend: N/A

Conservation status

IUCN: Least concern

National: Data deficient

Legal status

CITES: N/A

GoN: Not listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

Among Newar community during *Ihi* ceremony, a quill of porcupine is inserted in the hair of the girl. During ritual ceremony "*Bratabandha*" of a Hindu boy, the porcupine quill is inserted to the hair of the boy.

Human-wildlife conflict associated wild animals

It is identified as human wildlife conflicts associated wild animal species for creating crop damage problem. Within four years' period (2070 to 2073) problems of porcupine were reported from 11 wards (previous VDCs) of 10 districts of Nepal. They preferred to raid the maize and pumpkins. Local people used to confront by using local technology like obstructing its route, blocking the hole of its residence and smoking in its den.

Major threats

- Habitat degradation.
- Poaching.
- Retaliatory killing.

Conservation efforts

Efforts

Fencing to protect agricultural crops

GoN Nepal conducted awareness program

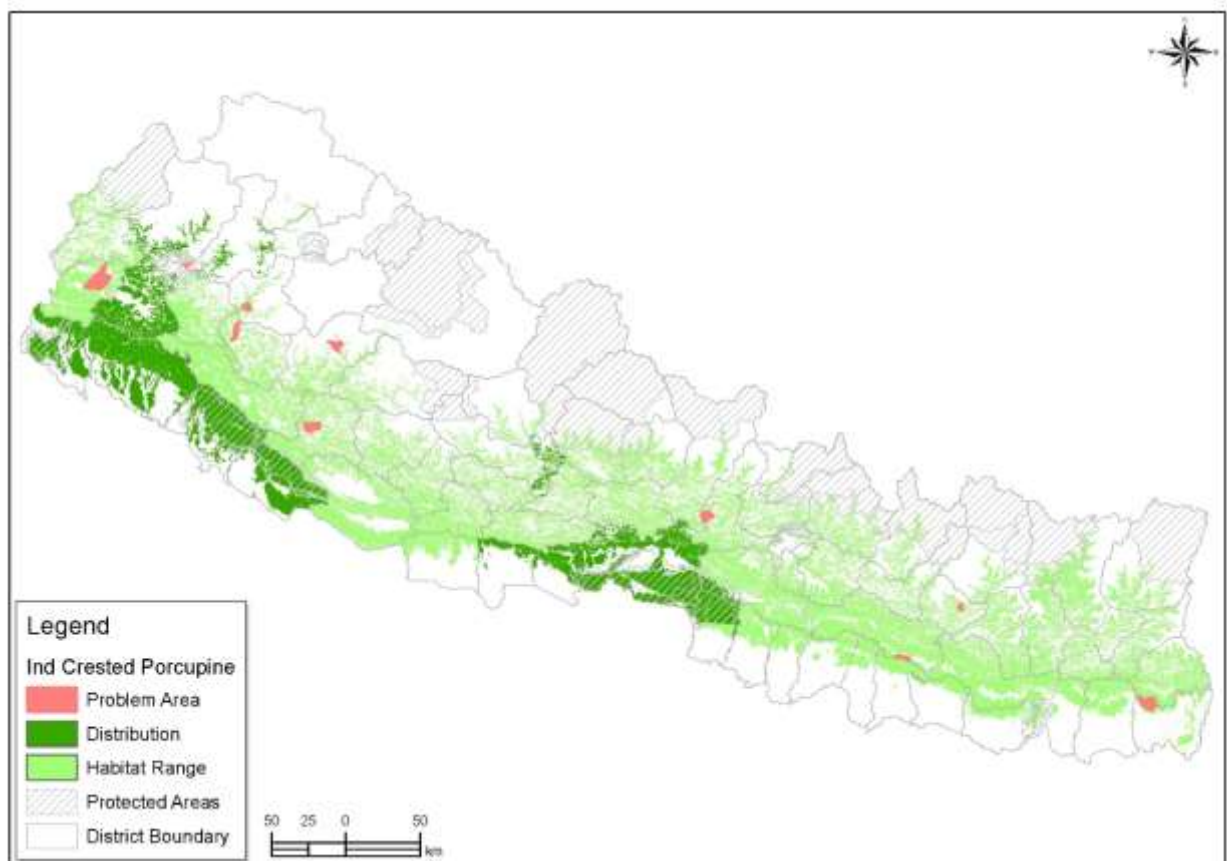
GoN considered as priority species for research

Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Ecological assessment



Citation

Ellerman 1961, Prater 1965, Vanaarde 1985, Pigozzi and Patterson 1990, Gurung and Dingh 1996, Schlimme 2000, Amori *et al.* 2008, Baral and Shah 2008, Hafeez *et al.* 2015, Jnawali *et al.* 2011.

***Lepus nigricollis* (F. Cuvier, 1823)**

Order: Logomorpha

Family: Leporidae

Common name

Indian Hare, Black-naped Hare

Vernacular name

खैरो खरायो Khairo Kharayo in Nepali

Synonyms: N/A

Morphology

Body coat is light brown in color with scattered black hair throughout the body. Black fur in nape of neck and tip of tail, underparts are white, long hind feet with long ear are present, body length 40-50 cm and weight 1.8-3.6 kg.



Distribution

Global:

Bangladesh, India, Indonesia, Nepal, Pakistan and Sri Lanka.

National:

Widely distributed within the ranges of 63-2500m elevations.

General habitat

Inhabits in diverse habitats; short grasslands, barren agricultural fields, crop field and forest road.

Movement/home range: N/A

Behavior

Shy, diurnal and solitary in nature. Sleep in midday time in the depression formation grass.

Diet:

Herbivore; feeds on grass, shoots and forbs. Flowering plants are also consumed during drying season and scare of short grasses.

Reproduction:

Breeding can occur year round and mainly in October-February, give birth to 1-4 litter, gestation period of 42-44 days, life span is 5 years in wild and 7 years in captivity.

Population

Global: N/A

National: >10000

National trend: N/A

Conservation status

IUCN: Least concern

National: Least concern

Legal status

CITES: N/A

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

N/A

Human-wildlife conflict associated wild animals

It is identified as human wildlife conflicts associated wild animal species for creating crop damage problem. Within four years' period (2070 to 2073) problems of Indian hare were reported from 2 wards (previous VDCs) of 2 districts of Nepal. They preferred to raid the vegetable crops. Local people used to confront by using local technology like obstructing its route and blocking the hole of its residence.

Major threats

- Hunting for subsistence.
- Habitat destruction.
- Conversions of suitable habitats for agricultural purpose.

Conservation efforts

Efforts

GoN Nepal conducted awareness program

GoN considered as priority species for research

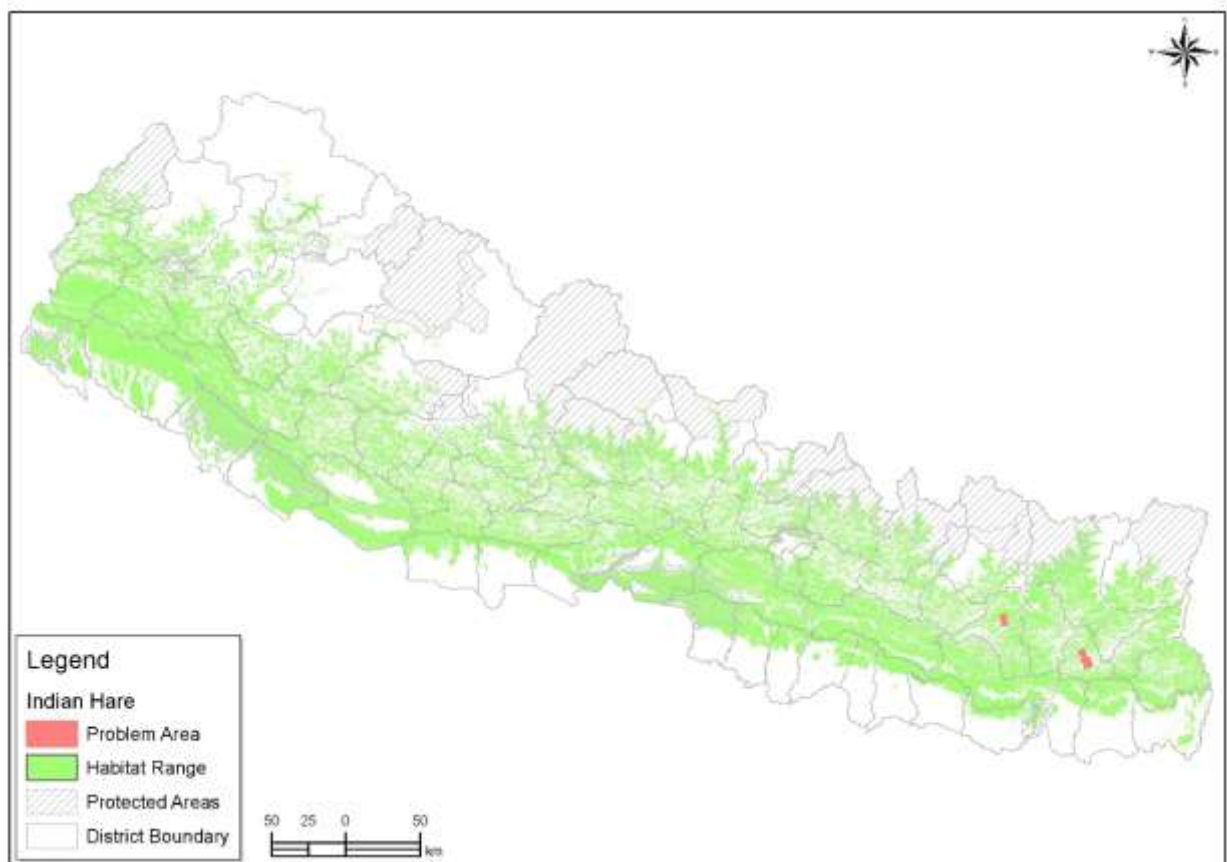
Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Incountry distribution

Ecological assessment



Citation

Prater 1965, Prakash and taneja 1969, Grzimek 1975, DeBalase and Martin 1981, Oliver 1985, Bell 1987, Bell *et al.* 1990, Kirk 1992, Kirk and Bathe 1994, Karanth and Sunquist 1995, Nowak 1995, Logomorpha specialist group 1996, Suchentrunk and Davidovic 2004, longi 2003, Chakraborty *et al.* 2005, Hoffman and Smith 2005, Yadav *et al.* 2008.



***Panthera pardus* (Linnaeus, 1758)**

Order: Carnivora

Family: Felidae

Common name

Leopard

Vernacular name

चितुवा Chituwa in Nepali

Synonym: *Felis pardu* (Linnaeus, 1758)

Morphology

Smaller than tiger, coat color spotted and rosette on pale yellow to yellowish brown or golden background, the color of the coat can vary from gold to tawny. Rosettes are most prominent on the back, flanks and hindquarters. *Length* 97-191cm head to body; *tail* 51-101cm and *weight* 17-90 kg.



Distribution

Global:

Afghanistan, Algeria, Angola, Armenia, Azerbaijan, Bangladesh, Benin, Bhutan, Botswana, Burkina Faso, Burundi, Cambodia, Cameroon, Central African Republic, Chad, China, Congo, The Democratic Republic of the Congo, Côte d'Ivoire, Djibouti, Egypt, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Georgia, Ghana, Guinea, Guinea-Bissau, India, Indonesia, Islamic Republic of Iran, Israel, Jordan, Kenya, Democratic People's Republic of Korea, Lao PDR, Liberia, Malawi, Malaysia, Mali, Morocco, Mozambique, Myanmar, Namibia, Nepal, Niger, Nigeria, Oman, Pakistan, Russian Federation, Rwanda, Saudi Arabia, Senegal, Sierra Leone, Somalia, South Africa, Sri Lanka, Sudan, Swaziland, Tajikistan, Tanzania, Thailand, Togo, Turkey, Turkmenistan, Uganda, United Arab Emirates, Uzbekistan, Viet Nam, Yemen, Zambia and Zimbabwe.

National:

This species is widely distributed in Nepal from low land terai to high mountain physiographic regions up to 4400m elevation.

General habitat

Inhabits in every kind of habitats; desert, tropical rainforests, temperate regions, also inhabits in degraded areas reflecting the adaptability of the species in wide range of habitats, known as habitat generalist predator due to its wide habitat tolerance.

Movement/home range

Quite wide home ranges (6-2000km²); in Nepal the home range of male is 46.8-50.4km² and female is 16.9-20.1 km².

Behavior:

Nocturnal, solitary with territorial behavior.

Diet:

Carnivore; feeds on a variety of prey species ranging in size from the smallest birds/rodent to young buffalo.

Reproduction

May mate all year round, mostly breeds in January-February, give birth to 4-5 litter, gestation period 90-105 days. Cubs stay with parents for 18-24 months and matures in single year, average life span is 14-19 years.

Population

Global: N/A

National: N/A

National trend: N/A

Conservation status

IUCN: Vulnerable

National: Vulnerable

Legal status

CITES: Appendix-I

GoN: Not listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

Local people believe that “they will be strong by wearing leopard bone”. Other myths with the local people is “when the children hang leopard bone in his/her neck, they will not be harmed by evil power”.

Human-wildlife conflict associated wild animals

It is identified as human wildlife conflicts associated wild animal species for creating problems like livestock depredation, human injury and casualties. Within four years’ period (2070 to 2073) problems of common leopard were reported from 57 wards (previous VDCs) of 22 districts of Nepal. In those areas 31 peoples were injured, 48 individuals were killed and 433 livestock were depredated within the four years’ periods. Within this period Government of Nepal provided NRs. 6,178,941 to the victimize people/household from the leopard as a relief amount. Local people used to confront by using local technology like constructing leopard proof coral, drumming vessels and scaring from group of people. Similarly, from government awareness program from local FM and pamphlet, strict to enter in the leopard encounter areas, youth mobilization and translocation of problem animal are the main means utilized to confront the problem from the leopard.

Major threats

- Habitat fragmentation.
- Depletion of prey.
- Retaliatory killing.
- Poaching for trophies.

Conservation efforts

Efforts

GoN Nepal conducted awareness program.

Support for leopard proof shed.

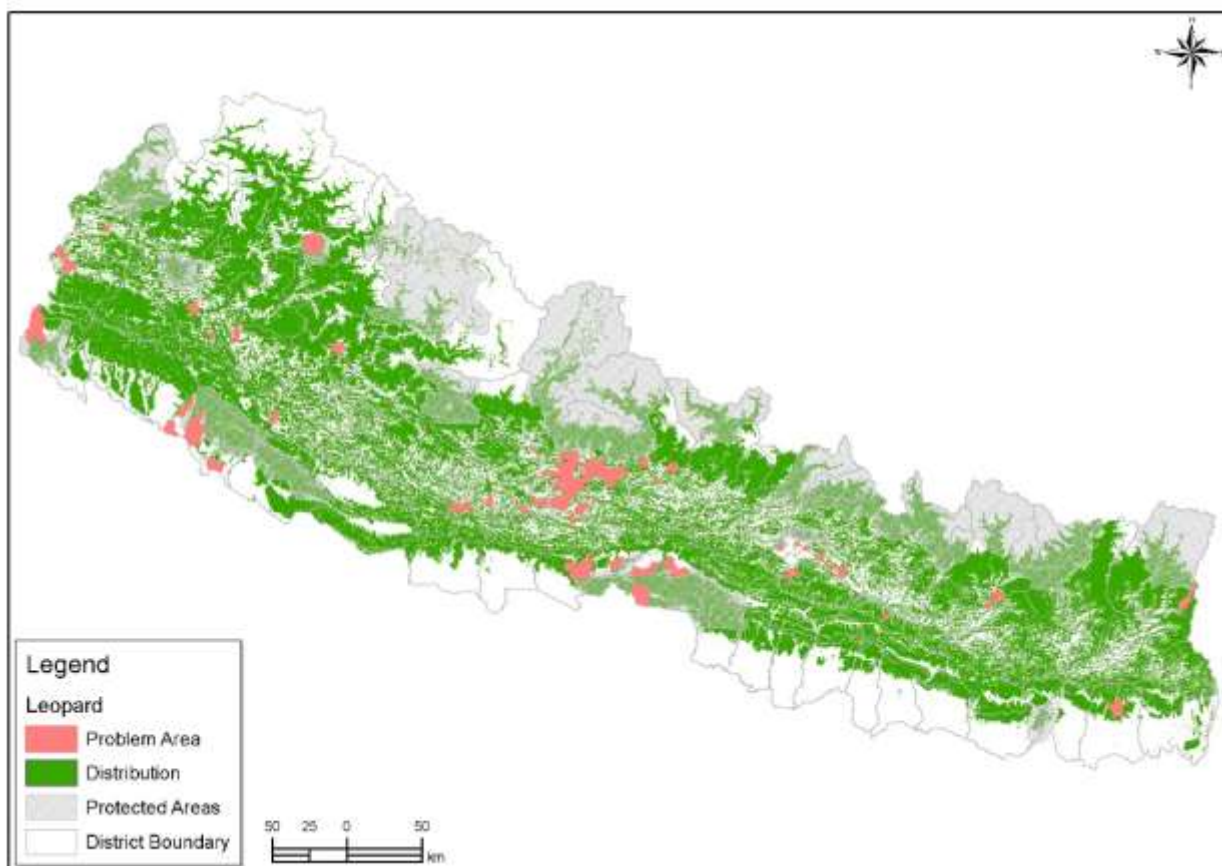
Capturing and handling the conflicts associated individual in zoo.

Shooting for the more conflict creating individual.

Major gaps

Population assessment

Ecological assessment



Citation

Grobler and Wilson 1972, Santiapillai and Ramono 1992, Edgaonkal and Chellum 1998, Odden and Wegge 2005, Bothma and Bothma 2006, Baral and Shah 2008, Edgaonker 2008, Jnawali *et al.* 2011, Thapa 2011, Lovari *et al.* 2014, Tensen *et al.* 2014.

***Boselaphus tragocamelus* (Pallas, 1766)**

Order: Cetartiodactyla

Family: Bovidae

Common name

Bluebull

Vernacular name

निलगाई Nilgai in Nepali

Synonym: N/A

Morphology

Largest antelope in Nepal; coat color dark grey to blue. Female and calves are sandy brown in color, slender legs and stocky body with slopes downwards towards the rear, head long and slender. Small dark colored horn, mark with the white in the form of cheek spots; edge of lips and under the neck. Body length 180-200cm, body height 120-150cm and tail length 40-45 cm, weight 120-240 kg

Distribution

Global:

Bangladesh, India, Nepal and Pakistan.

National:

Distributed between 75-300m elevations; protected areas: Bardia National Park, Chitwan National Park, Koshi Tappu Wildlife Reserve, Parsa National Park and Shuklaphanta National Park; outside the protected areas: Banke, Bardia, Kailali, Kanchanpur, Kapilvastu (Taulihawa), Nawalparasi, Parsa and Rupandehi (Lumbini forests) districts.

General habitat

Inhabits in variety of habitats; which include savannah, scrub forest, Sal and riverine forests and wooded grassland.

Movement/home range:

Territorial during breeding season, home ranges: 93.56 km² (male) and 83.55 km² (female).

Behavior

Diurnal with peak activity in early and late afternoon, mark territory during breeding season, attempting to gather and keep small herds of females (up to 10) within their area, habitat generalist.

Diet:

Herbivore; browser and grazer, feeds on grasses, herbs, and leaves of small bushes.

Reproduction:

Breeding can occur throughout the year, peak season is December-March, give birth 1-3 litter, gestation period 8 months, sexual maturity at 18 months and life span up to 21 years.

Population

Global: 70,000-100,000

National: 289-324

National trend: Stable

Conservation status

IUCN: Least Concern

National: Vulnerable

Legal Status

CITES: N/A

GoN: Not listed in the NPWC Act 2029 (1973) as protected priority species.



Additional information

N/A

Human-wildlife conflict associated wild animals

It is identified as human wildlife conflicts associated wild animal species for crop damage. Within four years' period (2070 to 2073) problems of bluebull were reported from 2 wards (previous VDCs) of 1 district of Nepal.

Major threats

- Habitat encroachment, loss and degradation
- Poaching for subsistence and trophies
- Retaliatory killing in response to crop damage.

Conservation efforts

Efforts

GoN Nepal conducted awareness program

GoN considered as priority species for research

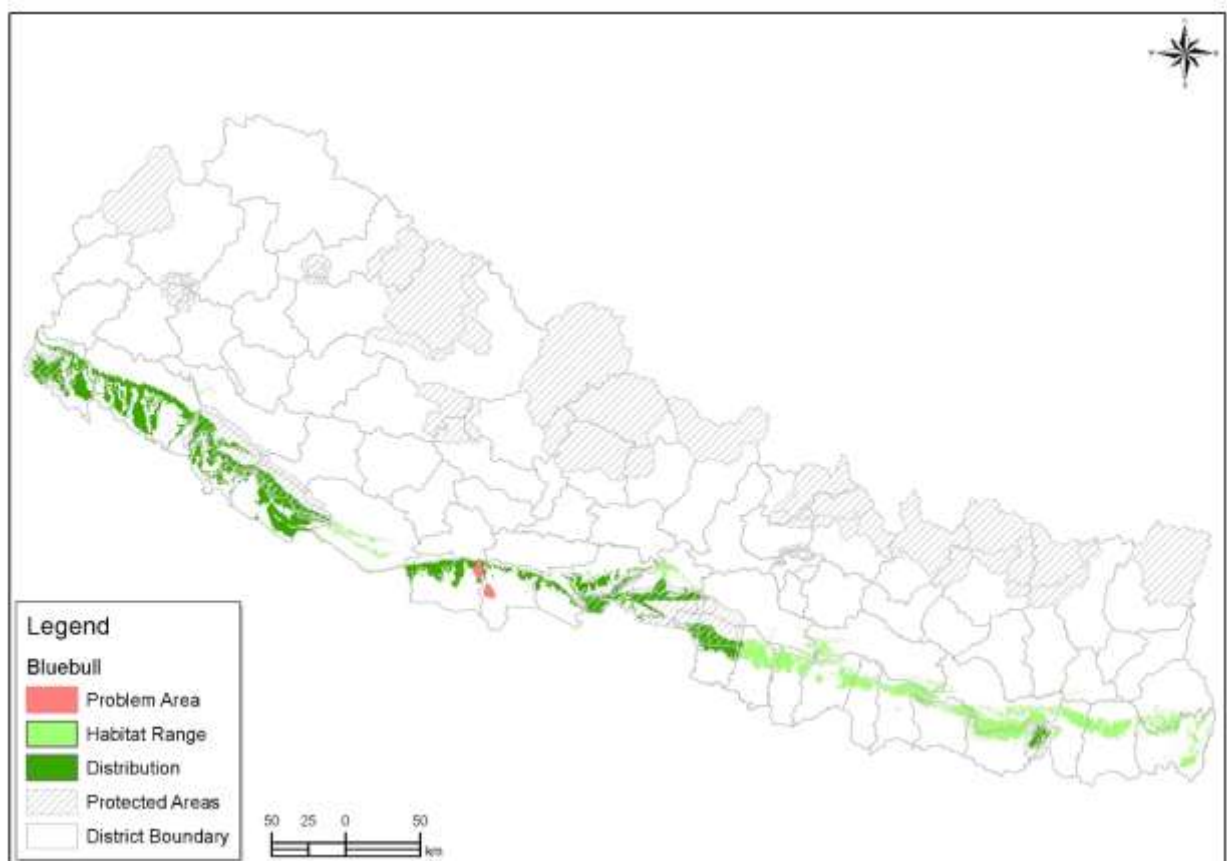
Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Incountry distribution

Ecological assessment



Citation

Eggen *et al.* 1973, Walther 1990, Nowak 1991, Corbett and Hill 1992, Wilson and Reeder 1993, Suwal and Verheugt 1995, Sheffield 1997, Lasiwa 1999, Leslie 2008, Baral and Shah 2008, Ultimate Ungulate 2010, Jnawali *et al.* 2011, Jonathan *et al.* 2012, IUCN 2016.

***Macaca mulata* (Zimmermann, 1780)**

Order: Primates

Family: Cercopithecidae

Common name

Rhesus Monkey, Rhesus Macaque

Vernacular name

रातो बाँदर Rato Bandar in Nepali

Synonyms: *Macaca brachyurus* (Elliot, 1909), *Macaca brevicaudatus* (Elliot, 1913), *Macaca erythraea* (Shaw, 1800), *Macaca fulvus* (Kerr, 1792), *Macaca lasiotus* (Gray, 1868), *Macaca littoralis* (Elliot, 1909), *Macaca mcmahoni* (Pocock, 1932), *Macaca nipalensis* (Hodgson, 1840), *Macaca oinops* (Hodgson, 1840), *Macaca rhesus* (Audebert, 1798), *Macaca sanctijohannis* (Swinhoe, 1866), *Macaca siamica* (Kloss, 1917), *Macaca tcheliensis* (MilneEdwards, 1872), *Macaca vestita* (MilneEdwards, 1892), *Macaca villosa* (True, 1894).



Morphology

Body coat brown or grey, fur on the ventrum is slightly lighter in color with reddish pink in face and rump. Height 53cm (male) and 47cm (female); weight 7.7 kg (male) and 5.3 kg (female) and tail 20.7-22.9cm.

Distribution

Global:

Afganistan, Bangladesh, Bhutan, China, India, Lao PDR, Myanmar, Nepal, Pakistan, Thailand and Viet Nam.

National:

Distributed up to 2440m elevations from terai to middle hill physiographic regions.

General habitat

Inhabits in temperate coniferous, moist and dry deciduous, bamboo, and mixed forests, scrub, rainforest, and around human habitations and developments, including cultivated areas, temples, and roadsides.

Movement/home range:

N/A

Behavior

Arboreal, terrestrial, diurnal, social, gregarious, group comprise a mixture of 20–200 males; females are more in number than male. Males and females both have separate hierarchies, have specialized pouch like cheeks, allowing them to temporarily hoard their food.

Diet:

Herbivorous; feeds mainly on fruits, also feeds on seeds, roots, buds, bark and cereals.

Reproduction:

Female polygynandrous, breeding period can last upto 11 days, give birth single litter, gestation period of 165 days, weaning period 10 month, sexual maturity at age of 4 years, lifespan up to 17 years.

Population

Global: N/A

National: N/A

National trend: N/A

Conservation status

IUCN: Least concern

National: Least concern

Legal status

CITES: Appendix-II

Gon: Not listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

The monkey is considered as a scared animal associated with God *Ram* and respected as the symbol of *HUMANMAN*. Older people insist not to kill them even they damage crops. People have negative attitude to this animals due to problem created by them.

Human-wildlife conflict associated wild animals

It is identified as human wildlife conflicts associated wild animal species for creating problems like crop damage, human harassment and human injury. Within four years' period (2070 to 2073) problems of rhesus monkey were reported from 7 wards (previous VDCs) of 7 districts of Nepal. In those areas 6 peoples were injured within the four years' periods. Government of Nepal did not provide relief to the victimize people/household. During the field verifications, problems from the monkey were observed from almost all districts (n = 21). When the monkeys are in group they attack people travelling alone. People used different traditional methods such as day-night guarding, making wooden platforms "*Chhapro*" and scare-crow (*Mukunda*) in the crop field, producing loud noise "Ho-Ho, Ho-Ho" and killing. Local people also frighten them by throwing stones by hand or using a sling. All the traditional methods used for crop protection are ineffective due to increase population of monkey and legal prohibitions for killing of wild animals. In case of severe problem translocation to the areas with dense forest and far from the settlement have been using by the government. People are expecting effective crop security and relief mechanism from government.

Major threats

- Conflicts with the human.
- Degradation of habitats.

Conservation efforts

Efforts

GoN Nepal conducted awareness program

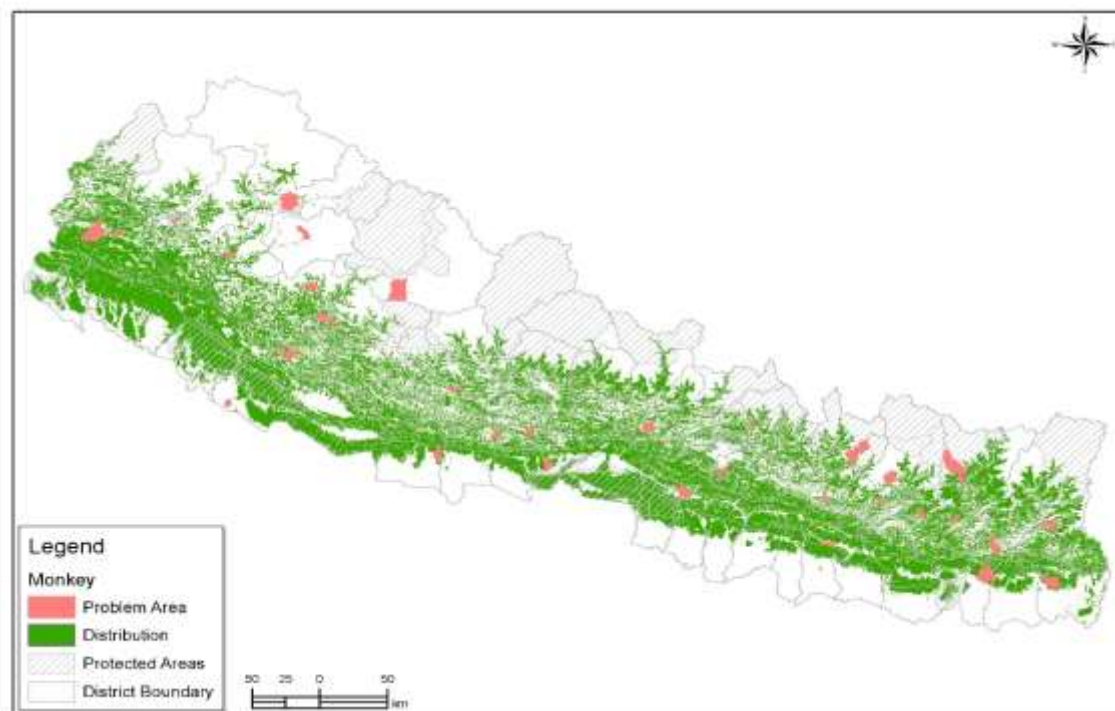
GoN considered as priority species for research

Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Ecological assessment



Citation

Fooden 1964, Buscovitch 1988, Dotta 1993, Bashyal 2005, BBC 2005, Cawthon 2005, Nepal, 2005, Baral and Shah 2008, Timmins *et al.*, 2008, Jnawali *et al.* 2011.

Axis axis (Erxleben, 1777)

Order: Cetartiodactyla

Family: Cervidae

Common name

Chital, Axis Deer, Indian Spotted Deer, Spotted Deer.

Vernacular name

चित्तल Chittal in Nepali

Synonym: *Cervus axis* (Erxleben, 1777)

Morphology

Body lightly built orange rufous coat with scattered white spots. Male are larger than female. A dark line with white spots are present along the spine from shoulder to tail. Underpart are white in color. Male only possess antler of three tines with terminal fork. Males have prominent thick necks and a dark chevron above and between their eyes. Chital measures 110-140 cm from head and body, the shoulder height ranges in 75-100 cm with tail length 20-30cm. Adult male mass ranges in 65-85 kg whereas female mass ranges 45-55 kg.



Distribution

Global:

Bangladesh, Bhutan, India, Nepal and Sri Lanka.

National:

Widely distributed between 75-1000m elevations; protected areas: Bardia National Park, Chitwan National Park, Koshi Tappu Wildlife Reserve, Parsa National Park and Shukla Phanta National; outside protected areas: Bhabar region, lowlands and forests; Banke, Dang, Kathamndu (Gorkana) and Kailali districts.

General habitat

Inhabits in subtropical grassland, open deciduous forest and riverine forest.

Movement/home range:

Average home range of female is 1.4 km² and male 1.95 km².

Behavior

Terrestrial, territorial animal with presence of social behavior. During the danger they alarm other by raising tail. Their herd size ranges from 10-30 individuals.

Diet:

Herbivore; feeds on grasses along with herb and foliage.

Reproduction:

No fixed breeding season, breed throughout the year; give birth to single litter, gestation period 225-235 days, weaning period upto 6 month, sexually mature in 9-14 months.

Population

Global: N/A

National: N/A

National trend: N/A

Conservation status

IUCN: Least Concern

National: Vulnerable

Legal Status

CITES: N/A

GoN: Not listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

N/A

Human-wildlife conflict associated wild animals

It is identified as human wildlife conflicts associated wild animal species. It is crop depredator and feeds different crops. Within four years' period (2070 to 2073) problems of spotted deer was reported from 1 wards (previous VDCs) of 1 district of Nepal.

Major threats

- Habitat degradation, loss and fragmentation.
- Hunting for subsistence and trophies.

Conservation efforts

Efforts

GoN Nepal conducted awareness program

Fencing, wall construction and biofencing

GoN considered as priority species for research

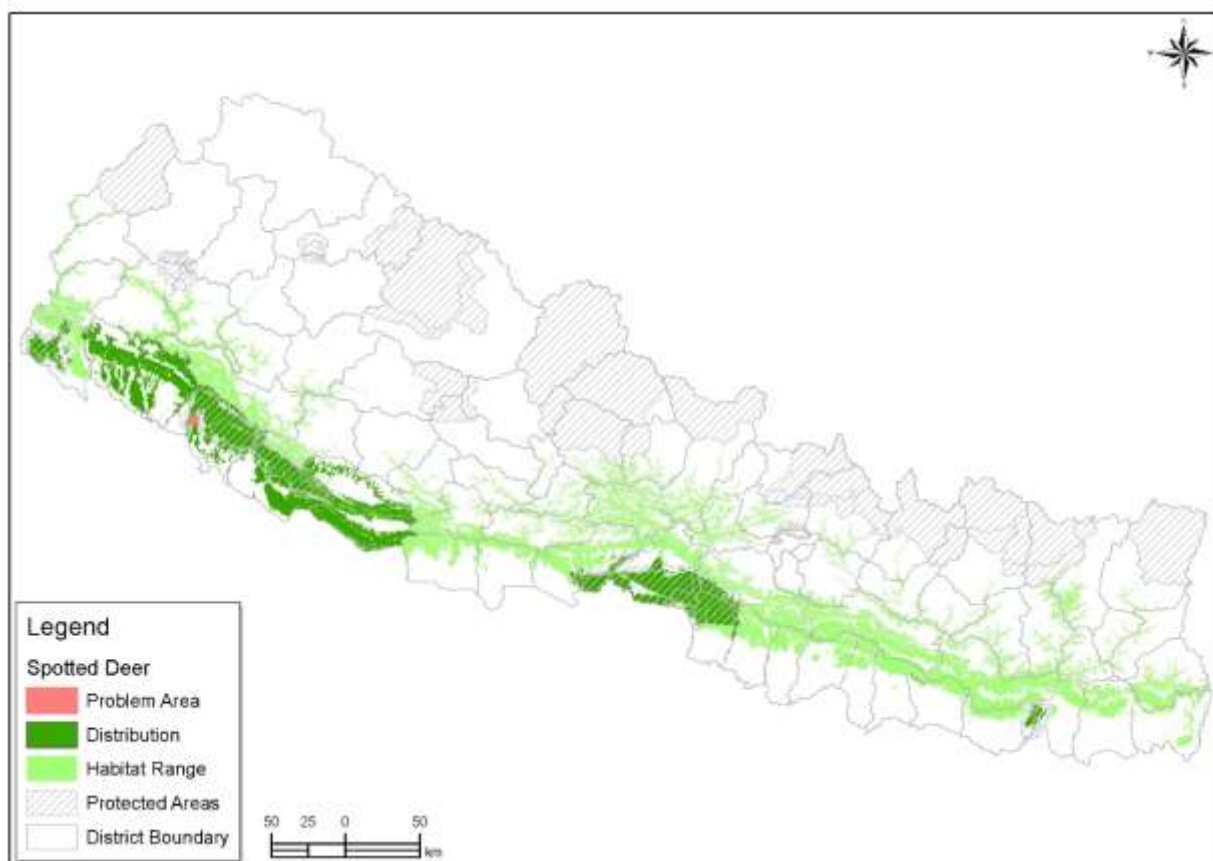
Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Incountry distribution of the species

Ecological assessment



Citation

Sharathandra and Gadgil 1980, Mishra 1982, Mishra 1982ab, Chapple 1989, Johnsingh and Sankar 1991, Chapple *et al.* 1993, Moe and Wegge 1994, Bhat and Rawat 1995, Subedi, Bhat and Rawat 1995, Suwal and Verheugt 1995, Moe and Wegge 1997, Ernst 2003, Baral and Shah 2008, Jnawali *et al.* 2011, Ramesha *et al.* 2012, Duckworth *et al.* 2015.

***Crocodylus palustris* (Lesson, 1831)**

Order: Crocodylia

Family: Crocodylidae

Common name

Mugger, Broad-snouted Crocodile, Marsh Crocodile, Muggar

Vernacular name

मगर गोही Magar Gohi in Nepali

Synonyms: N/A

Morphology

Adult blackish olive above, young pale olive, dotted and spotted with black. Mugger crocodiles have 19 upper teeth on each side; a snout that is $1\frac{1}{3}$ to $1\frac{1}{2}$ as long as broad at the base; a rough head but without any ridges. Scales on limbs keeled. Fingers webbed at the base; outer toes extensively webbed. A serrated fringe on the outer edge of the leg. A medium-sized species grow up to 4–5 m. The males are larger than females, averaging length 3.2 m compared to 2.45 m in females.



Distribution

Global:

India, Iran, Nepal, Pakistan and Sri Lanka.

National:

Mahakali, Karnali, Babai, west and east Rapti, Narayani and Koshi River systems below 400m elevation.

General habitat

Found in freshwater habitats like, rivers, lakes, reservoirs, hill streams, village ponds and manmade tanks. It is a hole-nesting species and may also be found in coastal saltwater lagoons.

Movement/home range: N/A

Behavior

Solitary, territorial animal.

Diet:

Carnivorous reptile; eats fish, snakes, turtles, birds and mammals.

Reproduction

Egg-laying during the dry season. Females become sexually mature at approximately 1.8-2.0 months, and lay 25-30 eggs in the nest, lay single clutch in a year, incubation lasting 55-75 days, life span 25 years.

Population

Global: N/A

National: >300

National trend: Decreasing

Conservation status

IUCN: Vulnerable

National: Vulnerable

Legal status

CITES: Appendix I

GoN: Not listed in the NPWC Act 2029 (1973) as protected priority species.

Conservation efforts

- Establishment of breeding centers at Chitwan and Bardia National Park
- Release of the captive animal in the natural habitats

Additional information

N/A

Human-wildlife conflict associated wild animals

It is identified as human wildlife conflicts associated wild animal species. There are increasing incidents of human conflict with this species because it is considered as a pest to inland fisheries, livestock killing and human injury and death in lowland areas. Within four years' period (2070 to 2073) problems of mugger crocodile were reported from 2 wards (previous VDCs) of 2 districts of Nepal. In those areas 7 livestock were killed and 1 people was killed within the four years' periods.

Major threats

- Modification of habitat.
- Mortality due to fisheries operations.
- Egg collection by humans.
- Poaching for skin and meat.

Conservation efforts

Efforts

Awareness programs from GoN

Potential habitats incorporated in protected areas

Considered as priority species for research

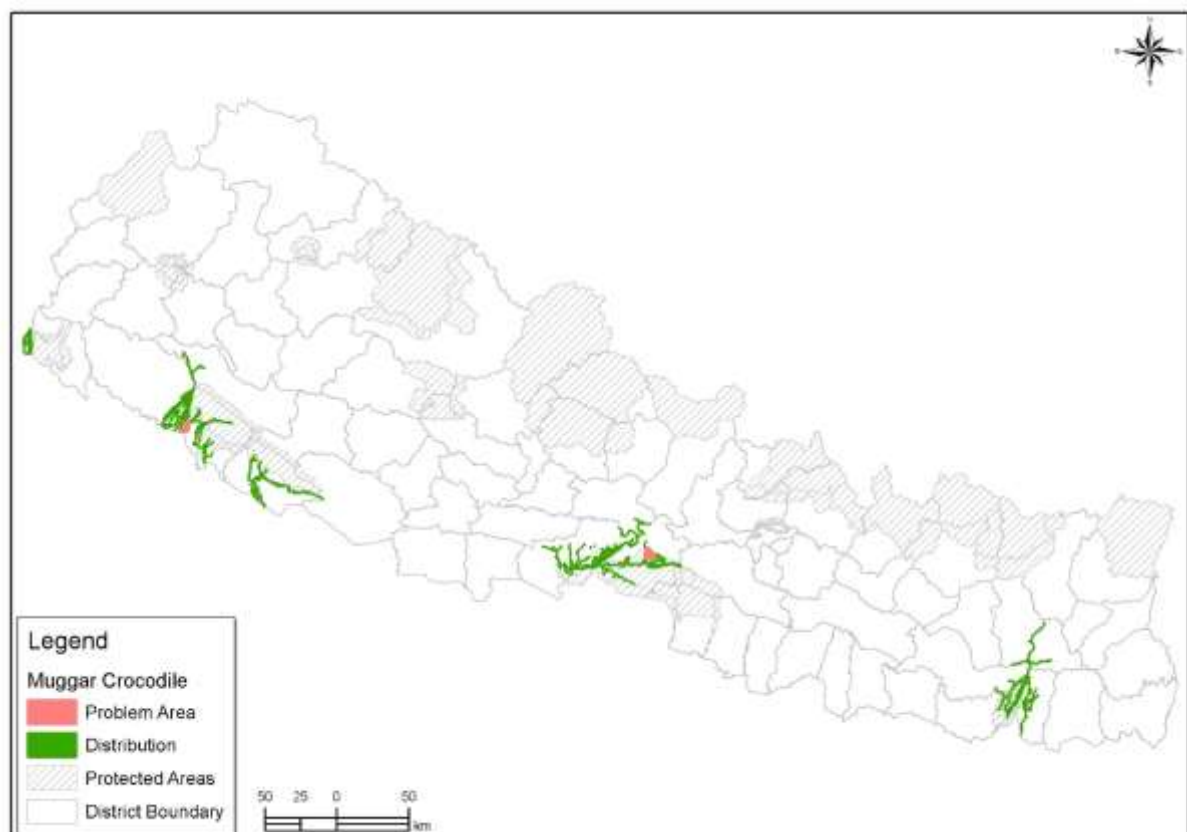
Captive breeding for restocking natural populations

Produce awareness materials for its conservation and importance.

Major gaps

Population assessment

Ecological assessment



Citation

Whitaker and Basu 1983, Bustard and Singh 1978, Shah and Tiwari 2004, Choudhury and de Silva 2013.

Bungarus caeruleus (Schneider, 1801)

Order: Squamata

Family: Elapidae

Common name

Common Krait

Vernacular name

करेत सर्प, गदैचा, कलैच, बैरी करेत Karet Sarpa, Gadainch, Kalaich, Bairi Karet in Nepali

Synonyms: N/A

Morphology

The Common Krait has a shiny milky white body, cylindrical, tapering towards the tail, male longer, with proportionately longer tails, maximum length 173 cm and mostly <120 cm length.



Distribution

Global:

South and South-East Asia.

National:

It is widely distributed in whole Terai west to east in the elevation range 100-400m.

General habitat

Inhabits in plains, low hills, low scrub jungle, grassland, semi desert places, rocky area, plantation, cultivated lands and sub urban gardens.

Movement/home range: N/A

Behavior

Behavioral differences during day and night time have been reported. During the day, it is sluggish and generally docile. It often hides in rodent holes, loose soil, or beneath debris, so is rarely seen.

Diet:

Carnivore; feed on termite mounds, brick piles, rat holes, or inside houses also eat snakes (even other kraits), sometimes rodents, lizards, and frogs.

Reproduction:

Breeding season is March-May, oviparous and lay 8-12 eggs. The female stays with her eggs during the incubation period. Male combat is observed in this species. The life span is 10-17 years.

Population

Global: N/A

National: N/A

National trend: N/A

Conservation status

IUCN: N/A

National: N/A

Legal status

CITES: N/A

GoN: Not listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

N/A

Human-wildlife conflict associated wild animals

It is identified as human wildlife conflicts associated wild animal species. It is problematic in the whole low land areas. This is venomous snake and several people have been injured or died due to its bites (box 2).

Major threat

- Persecuted by people.
- Live capture for trade.
- Mortality through roadkill.

Conservation efforts

Efforts

GoN Nepal conducted awareness program

GoN considered as priority species for research

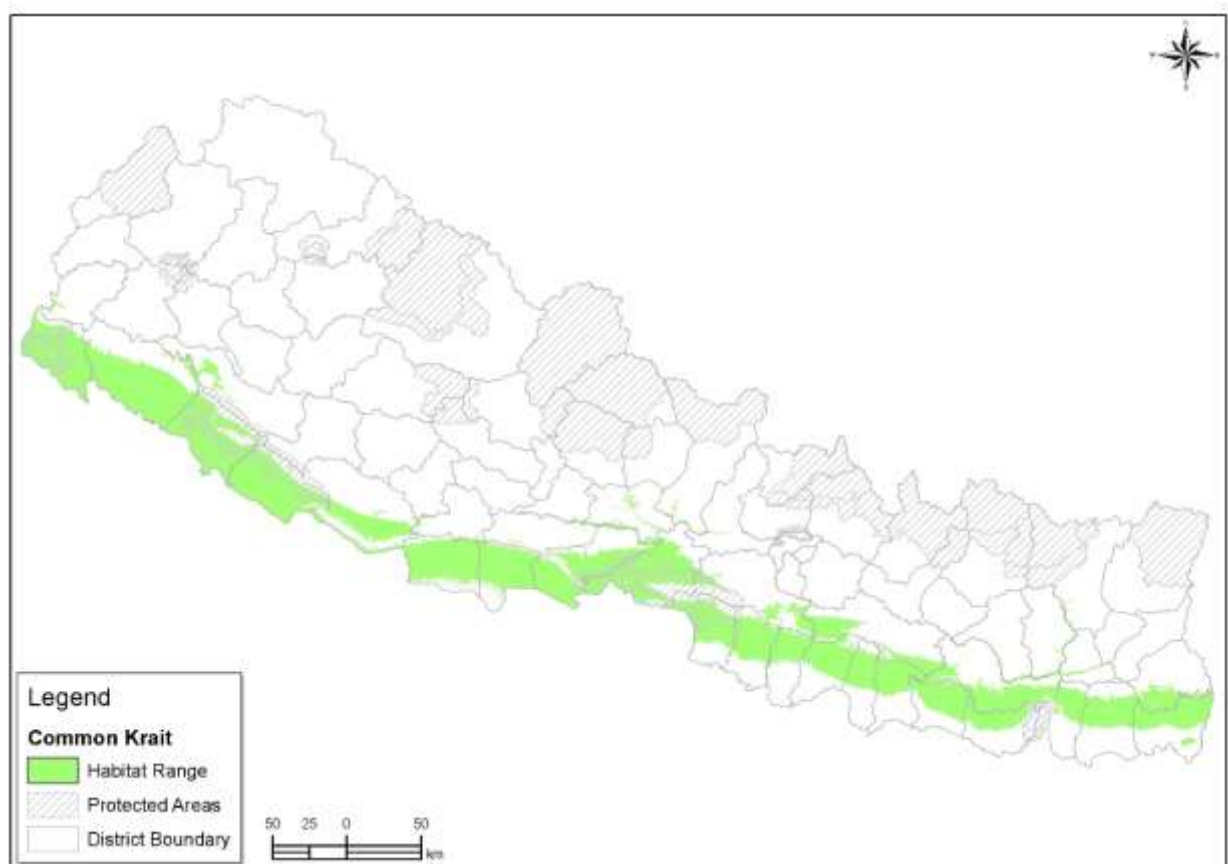
Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Incountry distribution of the species

Ecological assessment



Citation

Shah and Tiwari 2004, Whitaker and Captian 2004.

***Bungarus fasciatus* (Schneider, 1801)**

Order: Squamata

Family: Elapidae

Common name

Banded Krait

Vernacular name

करेत सर्प Karet Sarpa in Nepali

Synonyms: N/A

Morphology

Shiny black or dark chocolate colored body with milky white or yellow bands (paired or unpaired), cylindrical, tapering towards the tail, male longer, with proportionately longer tails, maximum length 173 cm and mostly <120 cm.



Distribution

Global:

South and South-East Asia.

National:

It is widely distributed in whole Terai regions from west to east between 75-400m elevations.

General habitat

Inhabits in plains, low hills, low scrub jungle, grassland, semi desert places, rocky area, plantation, cultivated lands and sub urban gardens.

Movement/home range: N/A

Behavior

Behavioral differences during day and night time have been reported. During the day, it is sluggish and generally docile. It often hides in rodent holes, loose soil, or beneath debris, so is rarely seen.

Diet:

Carnivore; feed on termite mounds, brick piles, rat holes, or inside houses also eat snakes (even other kraits), sometimes rodents, lizards and frogs.

Reproduction:

Breeding season is March-May, oviparous and lay 8-12 eggs. The female stays with her eggs during the incubation period. Male combat is observed in this species. The life span of is 10-17 years.

Population

Global: N/A

National: N/A

National trend: N/A

Conservation status

IUCN: N/A

National: N/A

Legal status

CITES: N/A

GoN: Not listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

N/A

Human-wildlife conflict associated wild animals

It is identified as human wildlife conflicts associated wild animal species. They are quite venomous snake and several people died due to its bites every year (box 2).

Major threat

- Persecuted by people.
- Mortality through roadkill.

Conservation efforts

Efforts

GoN Nepal conducted awareness program

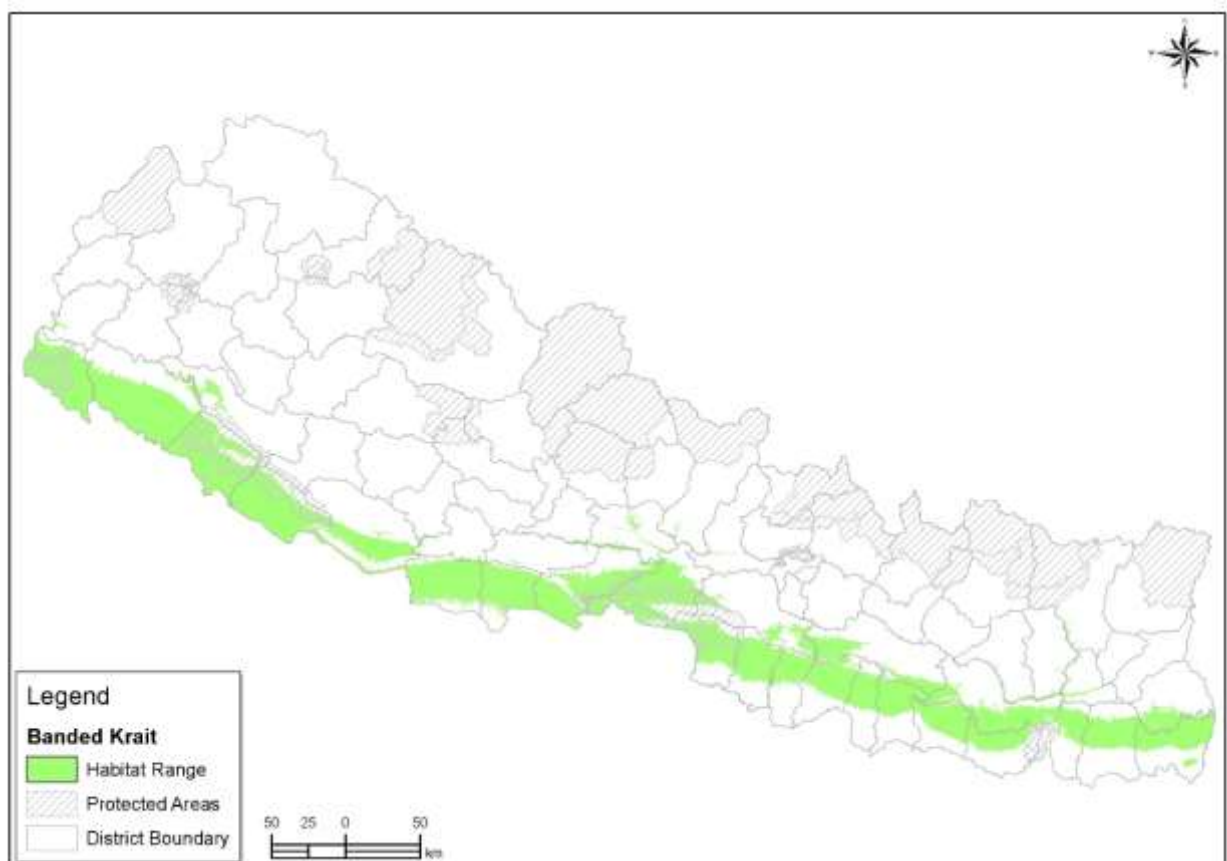
GoN considered as priority species for research

Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Ecological assessment



Citation

Shah and Tiwari 2004, Whitaker and Captian 2004.

***Naja kaouthia* (Lesson, 1831)**

Order: Squamata

Family: Elapidae

Common name

Monocled Cobra

Vernacular name

गोमन सर्प, फेटेरा, सुपैले सांप, डोम, डुमिनी, दुधिया गोमन Goman Sarpa, Phetera, Supaile Sanp, Dom, Dumini, Dudhiya Goman in Nepali

Synonym(s): *Naja naja* ssp. *kaouthia* (Lesson, 1831)

Morphology

Yellowish or brownish; with or without a black and white, or black and yellow, "spectacle" mark on the hood; a black spot at the lower surface on the hood on the each.

Distribution

Global:

South-East Asia, China, Indonesia, India, Thailand, Nepal, Hong Kong and Philippines.

National:

East to west between 100-1600m; Kanchanpur, Kailali, Rupendehi, Nawalparasi, Saptari, Sunsari, Siraha and Solukhumbu districts.

General habitat

Inhibits in grasslands, shrub lands, and forest in the natural environment. This species can adapt to a range of habitats, including both natural and anthropogenic modified environments. It also occurs in agricultural land and human settlements, including cities.

Movement/home range: N/A

Behavior

This snakes are mostly categorized into diurnal and crepuscular but also found active in the night. It also found to be aggressive compare to other snakes. When it is disturbed, shows the typical defense behavior raising of the fore body up to the one third of its body length.

Diet:

Carnivorous; feed on mainly toad, frogs and rodents.

Reproduction:

Reproduction is oviparous; mating observed in November, Janaury and February. The female are found to be attending the next.

Population

Global: N/A

National: N/A

National trend: N/A

Conservation status

IUCN: Least Concern

National: N/A

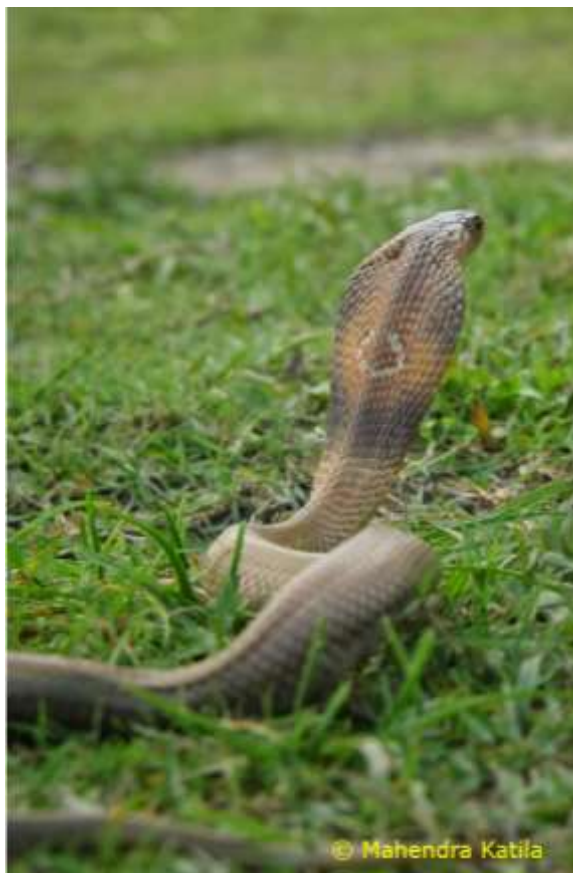
Legal status

CITES: Appendix-II

GoN: Listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

N/A



Human-wildlife conflict associated wild animals

It is identified as human wildlife conflicts associated wild animal species. They are quite venomous snake and several people died due to its bites every year (box 2).

Major threats

- Persecuted by people.
- Live capture for trade.
- Mortality through roadkill.

Conservation efforts

Efforts

GoN Nepal conducted awareness program

GoN considered as priority species for research

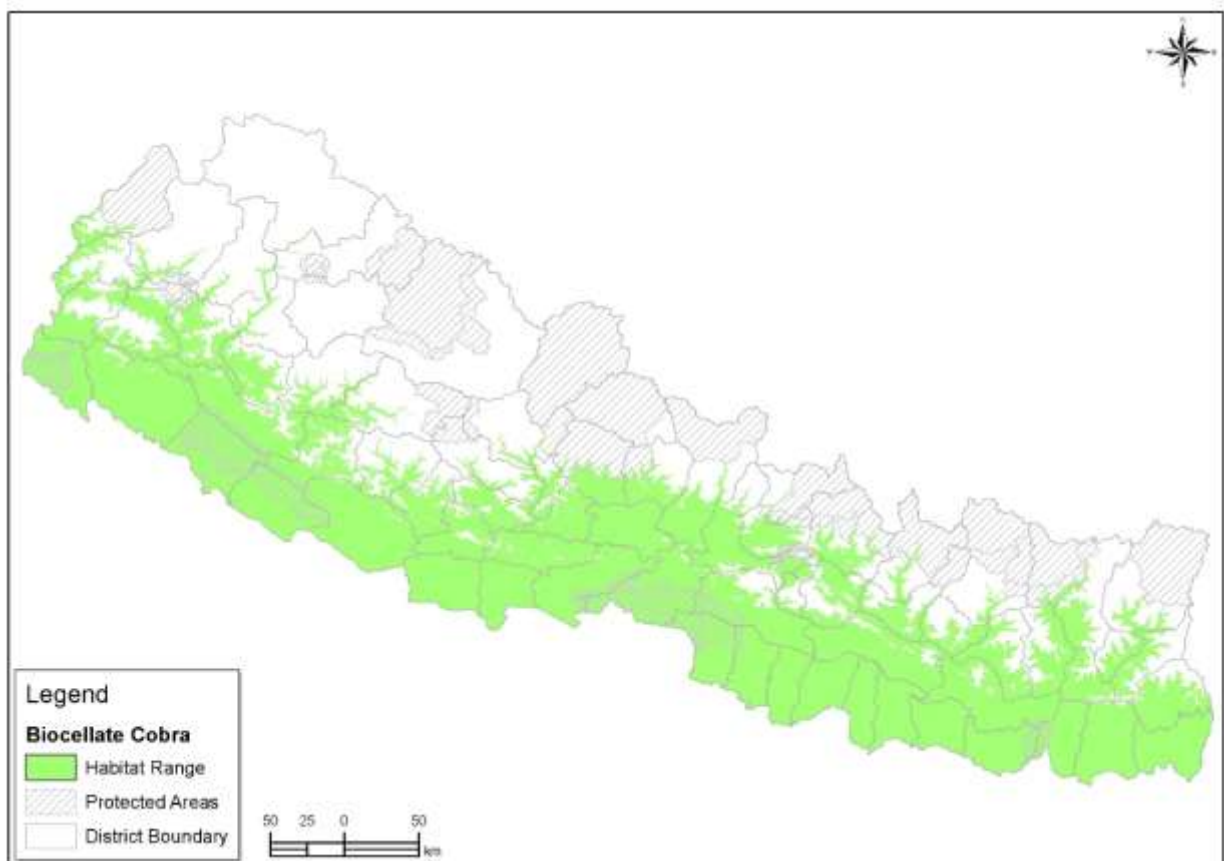
Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Incountry distribution of the species

Ecological assessment



Citation

Shah and Tiwari 2004, Sankar and Whitaker 2009, Bashir *et al.* 2010, Stuart *et al.* 2012.



***Ophiophagus hannah* (Cantor, 1836)**

Order: Squamata

Family: Elapidae

Common name

King Cobra

Vernacular name

राज गोमन, नागराजा, बेतेवा, अलाद Raj goman, Nagaraja, Kentewa, Alaad in Nepali

Synonyms: N/A

Morphology

King cobra coat color are brown, yellowish brown, blackish brown, black, light green, green grey, olive green, olive brown, orange yellow with or without yellowish or white cross bars or chevrons. Ventral surface coat color is whitish, yellowish white. They measure up to 5m (male) and 6m (female) in length.

Distribution

Global:

India, Nepal, Bangladesh, Bhutan, Myanmar and South-east Asia.

National:

Distributed in Bardia, Chitwan, Kathmandu, Nawalparasi, Parsa, Rasuwa, Dolakha, Jhapa, Morang, Sunsari, Saptari, Rautahat, Mustang, Manang and Kaski districts in between 150m to 1530m elevations.

General habitat

Occurs in a wide variety of habitats from littoral, mangrove swamps to broad-leafed alpine forests. They did not actively prefer or avoid any particular habitat type in a mosaic of habitat types.

Movement/home range:

Home range is about 6.3 km².

Behavior

Excellent cognitive abilities, use scent trails to search for and locate prey in addition to finding mates, world's largest venomous snake grows up to 5.85m.

Diet:

Carnivore; feeds on termite, rat and snakes (even other cobra); sometimes feeds on rodents, lizards, and frogs.

Reproduction:

Breeding season late April to May. Females starts building nests from late April to May.

Population

Global: N/A

National: N/A

National trend: N/A

Conservation status

IUCN: Vulnerable

National: N/A

Legal status

CITES: Appendix-II

GoN: Not listed in the NPWC Act 2029 (1973) as protected priority species.



Additional information

N/A

Human-wildlife conflict associated wild animals

It is identified as human wildlife conflicts associated wild animal species. They are quite venomous snake and several people died due to its bites every year (box 2).

Major threats

- Destruction of habitat due to logging and agricultural expansion.
- Persecuted by people.
- Live capture for trade.
- Mortality through roadkill.

Conservation efforts

Efforts

GoN Nepal conducted awareness program

GoN considered as priority species for research

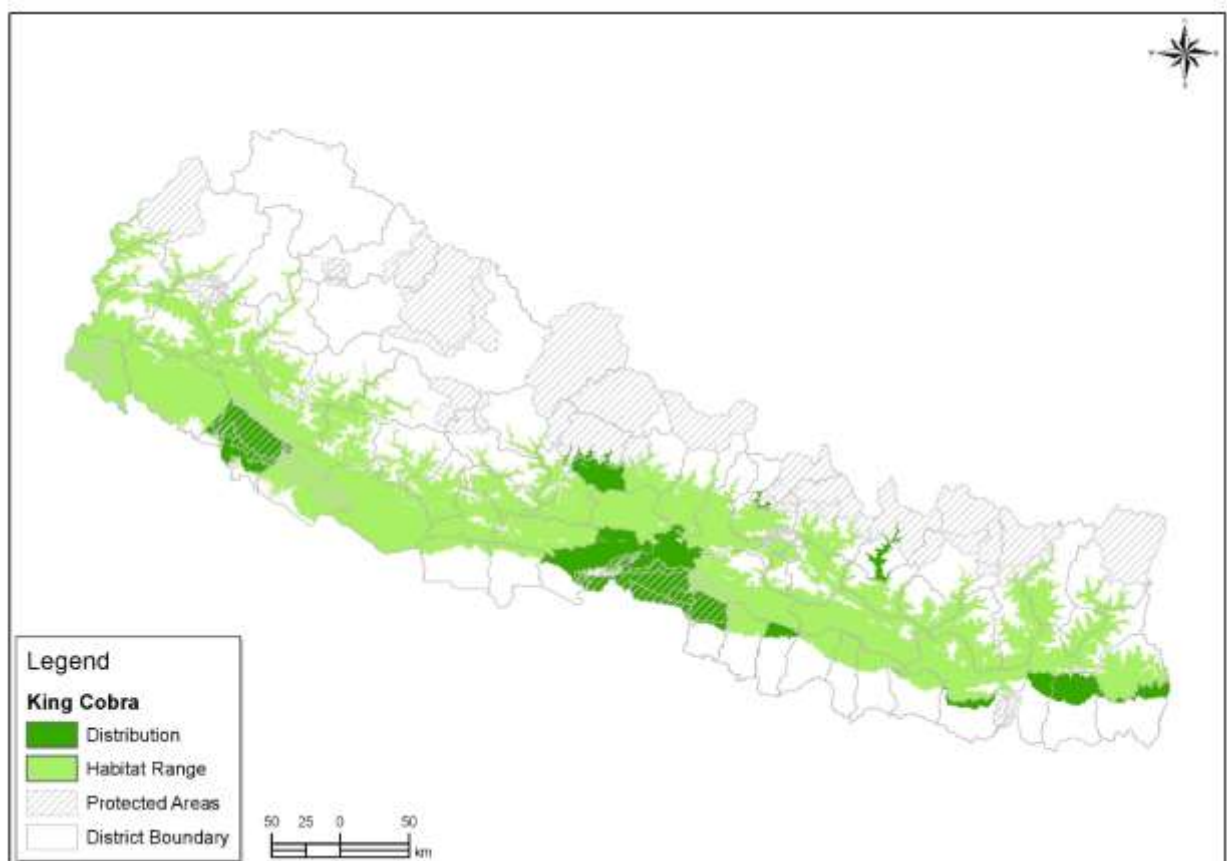
Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Incountry distribution of the species

Ecological assessment



Citation

Shah and Tiwari 2004, Sankar and Whitaker 2009, Bashir *et al.* 2010, Stuart *et al.* 2012.

***Cryptelytrops albolabris* (Malhotra and Thorpe 2004)**

Order: Squamata

Family: Viperidae

Common name

White Lipped Pit Viper

Vernacular name

हय्यौ सर्प, पत्तर Haryou sarpa, Pattar in Nepali

Synonym: *Trimeresurus albolabris* (Gray, 1842)

Morphology

Dorsally bright green colour with a white lateral stripe on the scale bordering the ventral. The length of male is 60 cm and female about 81 cm.



Distribution

Global:

Nepal, China, India and Myanmar

National:

Dedhedhura, Banlung, Myadi, Manang, Mustang, Dhading, Rasuwa, Sindhupalchok, Kathmandu, Lalitpur, Sankhuwasabha districts and lowland areas.

General habitat

Inhabits in a variety of habitats from montane forests to open lowland plains, shrub land, and cultivated areas near human settlements. It is known to remain abundant in highly degraded and altered habitats.

Movement/home range: N/A

Behavior

Striking and tail vibrating as defensive behaviors. Tail vibrations is warning behavior.

Diet:

Carnivore; feed on birds, small frogs and small mammals.

Reproduction:

Ovoviviparous, produce 8-20 neonates in their body.

Population

Global: N/A

National: N/A

National trend: N/A

Conservation status

IUCN: Least concern

National: N/A

Legal status

CITES: N/A

GoN: Not listed in the NPWC Act 2029 (1973) as protected priority species.

Additional information

N/A

Human-wildlife conflict associated wild animals

It is identified as human wildlife conflicts associated wild animal species. They are quite venomous snake and several people died due to its bites every year (box 2).

Major threats

- Destruction of habitat due to logging and agricultural expansion.
- Persecuted by people.
- Mortality through roadkill.

Conservation efforts

Efforts

GoN Nepal conducted awareness program

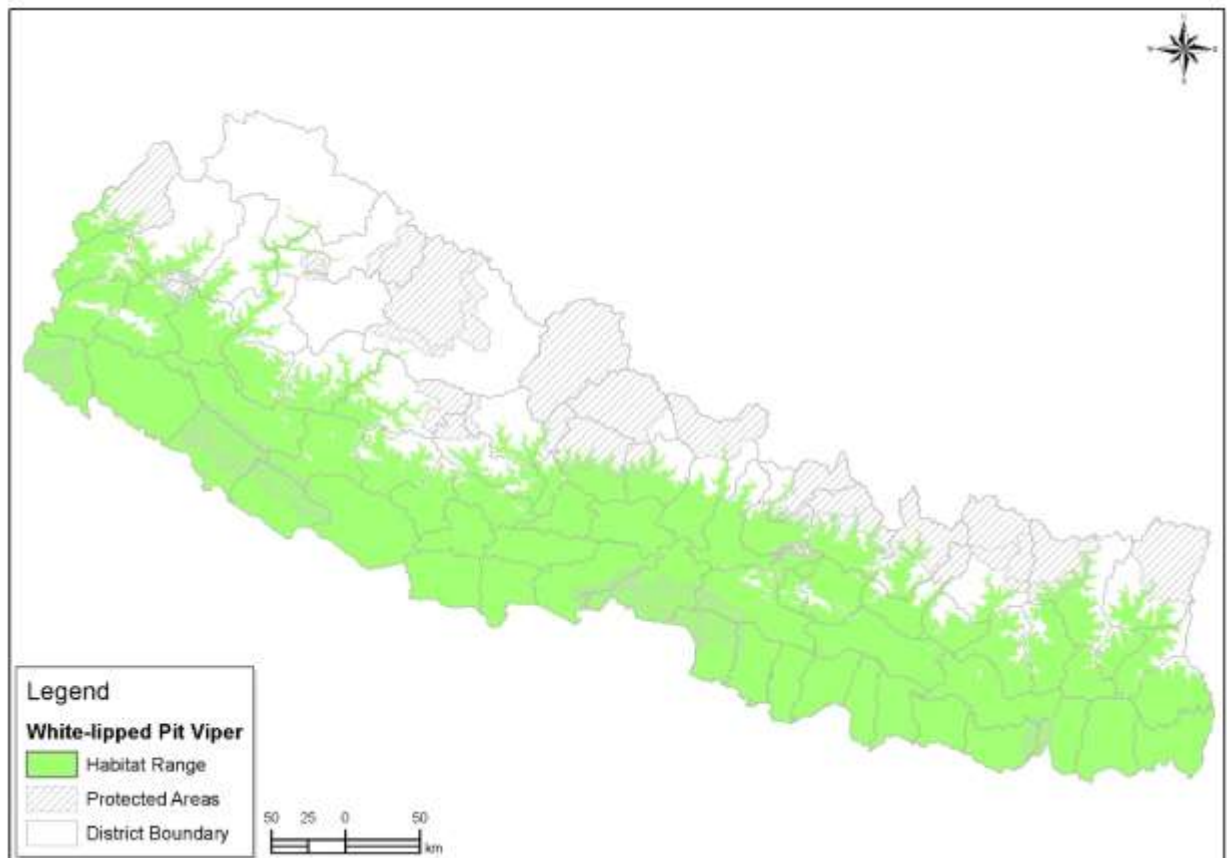
GoN considered as priority species for research

Produce awareness materials for its conservation and importance

Major gaps

Population assessment

Ecological assessment



Citation

Carpenter and Ferguson 1977, Shah and Tiwari 2004.

4. CONCLUSION AND RECOMMENDATIONS

4.1 Conclusion

Biodiversity rich Himalayan country Nepal included floral and faunal diversity as 8.2 and 8.1 individual species km⁻² respectively including globally threatened ones. Wildlife management initiatives started with the National Parks and Wildlife Conservation Act (1973) as the landmark Act for *in situ* conservation of species, which provided special protection provision for wildlife enlisted under schedule 1. Four major conflicts between human and wildlife in Nepal are: crop damage; livestock depredation; property damage; and human injury and casualties. Assessment of collected data resulted that 92% districts (n = 69) of Nepal have specific incidences of conflicts associated wild animals. Similarly, 26 species of animals were recognized as conflict associated wild animals in Nepal. That included 7 protected species enlisted under schedule 1 of NPWC Act. Elephant is more conflict associated wildlife in terms of crop damage, property loss and human injury and casualties. Similarly, leopard was major species for livestock depredation. Beside them 60 mammals, 19 birds, 20 reptiles, 51 insects species were also identified as potential conflict associated wild animals in Nepal. Among identified wildlife in the *wildlife damage relief guideline*; conflict situation from some (n = 4) wild animals were not observed during this assessment.

4.2 Recommendations

Following recommendations are made from analysis:

- GoN prepared a relief guideline directed to provide relief amount in human-wildlife conflicting cases. It is recommended to provide more specific list of wildlife in the relief guideline and update wildlife species list at five years interval.
- Government of Nepal prepared and piloted relief mechanism for crop damage from wildlife. Assessment of the results of piloted mechanism and modify relief scheme based on its findings is recommended.
- Conflicts between human and rhesus monkey is increasing. It is recommended to include rhesus monkey in the list of relief guideline.
- Rapid responses should be stipulated after having conflicts from wild animals. There is urgency to formulate rapid response team to tackle with conflict associated wildlife. The team need to be equipped with all necessary supplies for responding conflicts within the country. The team should also be trained for crowd management.
- Establishment of one well equipped rescue centre with full facilities to cure and handle wild animals, at least one in each federal state, is recommended.
- The HWC associated cases arises as an emergency situation and need to address on time. It is recommended to establish emergency fund to manage the conflicts associated wild animals.

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ANNEXES

Annex 1.

A. HWC associated wild animals of Nepal

SN	Common name	नेपाली नाम	Scientific name	HWC associated	GoN Protected	Types
1	Asian Wild Elephant	जंगली हात्ती	<i>Elephas maximus</i>	✓	Protected	Mammals
2	Himalayan Black Bear	कालो भालु	<i>Ursus thietanus</i>	✓		Mammals
3	Barking Deer	रतुवा मृग	<i>Muntiacus muntjak</i>			Mammals
4	Bengal Fox	फुस्रो फ्याउरो	<i>Vulpes bengalensis</i>			Mammals
5	Spotted deer	चित्तल	<i>Axis axis</i>			Mammals
6	Eurasian Wild Boar	बंदेल	<i>Sus scrofa</i>	✓		Mammals
7	Gaur	गौरी गाई	<i>Bos gaurus</i>		Protected	Mammals
8	Golden Jackal	स्याल	<i>Canus aureus</i>			Mammals
9	Indian Crested Porcupine	दुम्सी, साइरो	<i>Hystrix indica</i>			Mammals
10	Indian Hare (Rufous-tailed)	भाडीमुसो	<i>Lepus nigricollis</i>			Mammals
11	Leopard	चितुवा	<i>Panthera pardus</i>	✓		Mammals
12	Nilgai	नीलगार्ड	<i>Boselaphus tragocamelus</i>			Mammals
13	One-horned Rhinoceros	गैंडा	<i>Rhinoceros unicornis</i>	✓	Protected	Mammals
14	Rhesus Macaque	रातो बांदर	<i>Macaca mulata</i>			Mammals
15	Sloth Bear	काठे भालु	<i>Melurus ursinus</i>	✓		Mammals
16	Snow Leopard	हिउ चितुवा	<i>Uncia uncia</i>	✓	Protected	Mammals
17	Tiger	पाटे बाघ	<i>Panthera tigris</i>	✓	Protected	Mammals
18	Wild Water Buffalo	अर्ना	<i>Bubalus arnee</i>	✓	Protected	Mammals
19	Mugger Crocodile	मगर गोही	<i>Crocodylus palustris</i>	✓		Reptiles
20	Common Krait	करेत सर्प	<i>Bungarus caeruleus</i>			Reptiles
21	Banded Krait	गनग्वारी	<i>Bungarus fasciatus</i>			Reptiles
22	Biocellate Cobra	गोमन सर्प	<i>Naja naja</i>			Reptiles
23	King Cobra	राज गोमन	<i>Ophiophagus hannah</i>			Reptiles
24	Burmese Python	अजिङ्गर	<i>Python molurus bivittatus</i>		Protected	Reptiles
25	Asiatic Rock Python	अजिङ्गर	<i>Python molurus molurus</i>		Protected	Reptiles
26	White-lipped Pit Viper	हरेउ सर्प	<i>Trimeresurus albolabris</i>			Reptiles

B. Potential HWC associated Mammals of Nepal

SN	Common name	नेपाली नाम	Scientific name
1	Asian Golden Cat	सुनौलो विरालो	<i>Felis temminckii</i>
2	Asiatic Long-tailed Climbing Mouse	लाम्पुच्छे रुखमुसो	<i>Vandeleura oleracea</i>
3	Assam Macaque	पहरे वांदर	<i>Macaca assamensis</i>
4	Blackbuck	कृष्णसार	<i>Antilope cervicapra</i>
5	Blyth's Vole	ब्लिथको घांसेमुसो	<i>Microtus leucurus</i>
6	Brown Bear	रातो भालु	<i>Ursus arctos</i>
7	Brown Rat	खैरो धानचरी	<i>Rattus morvegicus</i>
8	Chestnut White-bellied Rat	दुधेभुंडी मुसो	<i>Niviventer fulvescens</i>
9	Clouded Leopard	ध्वांसे चितुवा	<i>Neofelis nebulosa</i>
10	Common Softed-furred rat	मखमली मुसो	<i>Millardia meltada</i>
11	Cook's Mouse	कुकको मुसो	<i>Mus cookii</i>
12	Crump's Mouse	करम्पको मुसो	<i>Diomys crumpi</i>
13	Asiatic Wild Dog	वन कुकुर	<i>Cuon alpinus</i>
14	Eastern House Mouse	खाकिरंगे दूहरे घरमुसो	<i>Mus musculus</i>
15	Eurasian Lynx	फ्याकु विरालो	<i>Felis lynx</i>
16	Fawn Colored Mouse	खाकिरंगे मुसो	<i>Mus cervicolor</i>
17	Fishing Cat	मलाहा विरालो	<i>Prionailurus viverrinus</i>
18	Flat-haired Mouse	कांडे घरमुसो	<i>Mus platythrix</i>
19	Giant Bandicoot-rat	राजा ढाडे मुसो	<i>Bandicota maxima</i>
20	Grey Wolf	ब्वांसो	<i>Canus lupus</i>
21	Himalayan Field Mouse	हिमाली मुसो	<i>Apodemus gorkha</i>
22	Himalayan field Rat	हिमाली खेतमुसो	<i>Rattus nitidus</i>
23	Himalayan Striped Squirrel	हिमाली धर्के लोखर्के	<i>Tamias maclellandii</i>
24	Himalayan Thar	भारल	<i>Hemitragus jemlahicus</i>
25	Hodgson's White-bellied Rat	हड्सन्को खेत मुसो	<i>Niviventer niviventer</i>
26	House Rat	घरमुसो	<i>Rattus rattus</i>
27	Indian Bush Rat	भाडीमुसो	<i>Golunda ellioti</i>
28	Indian Gerbil	--	<i>Tatera indica</i>
29	Indian Grey Mongoose	ठूलो न्याउरी मुसो	<i>Herpestes edwardsi</i>
30	Jungle Cat	वन विरालो	<i>Felis chaus</i>
31	Large Bandicoot Rat	ठूलो ढाडे मुसो	<i>Bandicota indica</i>
32	Large Indian Civet	ठूलो नीरविरालो	<i>Viverra zibetha</i>
33	Lesser Bamboo Rat	सानो तामेवांस मुसो	<i>Cannomys badius</i>
34	Lesser Bandicoot Rat	सानो ढाडे मुसो	<i>Bandicota bengalensis</i>
35	Little Indian Field Mouse	सानो खेत मुसो	<i>Mus booduga</i>
36	Long-tailed Field Mouse	लाम्पुच्छे मुसो	<i>Apodemus sylvaticus</i>
37	Mask Palm Civet	गाजले नीरविरालो	<i>Paguma larvata</i>
38	Millard's Rat	लामादांते मुसो	<i>Macomys millardi</i>
39	Musk Deer	कस्तुरी मृग	<i>Moschus chrysogaster</i>
40	Nepali Grey Langur	नेपाली लंगुर	<i>semnopithecus schistaceus</i>
41	Northern Palm Squirrel	पांचधर्के लोखर्के	<i>Funambulus pennanti</i>
42	Red Fox	रातो फ्याउरो	<i>Vulpes vulpes</i>
43	Rock-Loving Mouse	ढुङ्गे मुसो	<i>Mus saxicola</i>
44	Royle's Vole	पाहाडी घांसेमुसो	<i>Alticola roylei</i>

SN	Common name	नेपाली नाम	Scientific name
45	Sambar Deer	जरायो	<i>Cervus unicolor</i>
46	Short-tailed Bandicoot Rat	ठूटे ढाडे मुसो	<i>Nesokia indica</i>
47	Sikkim Rat	सिक्किमे मुसो	<i>Rattus sikkimensis</i>
48	Sikkim Vole	सिक्किमे घांसेमुसो	<i>Microtus sikimensis</i>
49	Small Indian Civet	सानो नीरविरालो	<i>Viverricula indica</i>
50	Small Indian Mongoose	सानो न्याउरी मुसा	<i>Herpestes auropunctatus</i>
51	Smoke-bellied Rat	ध्वांसे मुसो	<i>Niviventer eha</i>
52	Stoliczka's Mountain Vole	स्टोलिज्काको घांसेमुसो	<i>Alticola atolichkanus</i>
53	Strachey's Mountain Vole	स्रचेइको घांसेमुसो	<i>Alticola stracheyi</i>
54	Striped Hyaena	हुंडार	<i>Hyaena hyaena</i>
55	Terai Grey Langoor	तराई लंगुर	<i>Semnopithecus hector</i>
56	Tibetan Dwarf Hamster	भ्यात्ले मुसो	<i>Cricetulus alticola</i>
57	Toddy Cat (Common Palm Civet)	तदी नील विरालो	<i>Paradoxurus hermaphroditus</i>
58	Turkestan Rat	तुर्किस्तानी मुसो	<i>Rattus turkestanicus</i>
59	Ward's Field Mouse	वार्डको खेत मुसो	<i>Apodemus wardi</i>
60	Yellow-throated Marten	मलसांप्रो	<i>Martes flavigula</i>

C. Potential HWC associated Birds of Nepal

SN	English Name	नेपाली नाम	Scientific Name
1.	Common Myna	डाङ्गे रुपी	<i>Acridotheres tristis</i>
2.	Common Starling	कालो सारौ	<i>Sturnus vulgaris</i>
3.	Rock Pigeon	मलेवा	<i>Columba livia</i>
4.	Red Jungle Fowl	लुईचे	<i>Gallus gallus</i>
5.	Kalij Pheasant	कालिज	<i>Lophura leucomelanos</i>
6.	House Crow	घरकाग	<i>Corvus corvus</i>
7.	Large Billed Crow	कालोकाग	<i>Corvus macrorhynchos</i>
8.	Sarus Crane	सारस	<i>Grus antigone antigone</i>
9.	Rose-ringed Parakeet	कण्ठे सुगा	<i>Psittacula krameri</i>
10.	Alexandrine Parakeet	करा सुगा	<i>Psittacula eupatria</i>
11.	Himalayan Griffon	हिमाली गिद्ध	<i>Gyps himalayensis</i>
12.	Eurasian Vulture	खैरो गिद्ध	<i>Gyps fulvus</i>
13.	Cinereous Vulture	राज गिद्ध	<i>Aegypius monachus</i>
14.	Red-headed Vulture	सुन गिद्ध	<i>Sarcogyps calvus</i>
15.	Lammergeier	हाडफोर	<i>gypaetus barbatus</i>
16.	White-rumped Vulture	डंगर गिद्ध	<i>Gyps bengalensis</i>
17.	Slender-billed Vulture	सानो खैरो गिद्ध	<i>Gyps tenuirostris</i>
18.	Long-billed Vulture	लामो ठुंडे गिद्ध	<i>Gyps indicus</i>
19.	House Sparrow	घर भंगेरा	<i>Passer domesticus</i>

D. Potential HWC associated reptiles of Nepal

SN	Common name	नेपाली नाम	Scientific name
1	Himalayan Krait	करेत सर्प	<i>Bungarus bungaroides</i>
2	Lesser Black Krait	कालो करेत	<i>Bungarus lividus</i>
3	Greater black Krait	कालो करेत	<i>Bungarus niger</i>
4	Laclelland's Coral Snake	रातो सर्प	<i>Hemibungarus maclellandi univirgatus</i>
5	Monocellate Cobra	पानियादराद	<i>Naja kaouthia</i>
6	Mock Viper	सर्प	<i>Psammodynaste pulverulentus</i>
7	Russel's Viper	बाघे सर्प	<i>Daboia russelii ruselii</i>
8	Himalayan Pit Viper	अन्धो सर्प	<i>Gloydius himalayanus</i>
9	Mountain Pit Viper	हरेउ सर्प	<i>Ovophis monticola monticola</i>
10	Jerdon's Pit Viper	हरेउ सर्प	<i>Protobothrops jerdonii jerdonii</i>
11	Red-tailed Pit Viper	हरेउ सर्प	<i>Trimeresurus erythrurus</i>
12	Bamboo Pit Viper	हरेउ सर्प	<i>Trimeresurus gramineus</i>
13	Kramer's Pit Viper	हरेउ सर्प	<i>Trimeresurus septentrionalis</i>
14	Tibetan Pit Viper	हरेउ सर्प	<i>Trimeresurus tibetanus</i>
15	Yunnanese Pit Viper	हरेउ सर्प	<i>Trimeresurus yunnanensis</i>
16	Red-necked Keelback	सर्प	<i>Rhabdophis subminiatus</i>
17	Asiatic Coral Snake	नाग	<i>Sinomicrurus maclellandii</i>
18	Green Cat Snake	हरियो विराले सर्प	<i>Boiga cyanea</i>
19	Common Smooth Water Snake	मछ्छिगिद्धि, इन्द्रेणी सर्प	<i>Enhydris enhydris</i>
20	Siebold Smooth Water Snake	सिबोल्डे चिल्ले पानी सर्प	<i>Enhydris sieboldi</i>

E. Potential human wild animal conflict associated insects of Nepal

SN	Common name	नेपाली नाम	Scientific name
1	Housefly (144 sp)	भ्रिङ्गा	<i>Musca sp.</i>
2	Ants (141 sp.)	कमिला	
3	Papilionidae family (46 sp)	पुतली	
4	Large cabbage white		<i>Pieris brassicae nepalensis</i>
5	Indian cabbage white		<i>Pieris canidia indica</i>
6	Mosquito	लामखुट्टे	
7	Aphid	लाईकिरा	
8	Ladybird beetle	खपटे किरा	
9	Cotton Aphid	लाईकिरा	
10	Mustard aphid	लाईकिरा	
11	Wheat aphid	लाईकिरा	
12	Yellow rice borer		
13	White rice borer		
14	Rice ear cutting caterpillar		
15	Rice caseworm		
16	Green horned caterpillar		
17	White horned caterpillar		
18	Rice skippers		
19	Black hairy caterpillar		
20	Rice hespa		
21	Seed bed beetle	खपटे किरा	
22	Weevil		

SN	Common name	नेपाली नाम	Scientific name
23	Mole cricket	क्रिकेट	
24	White grub		
25	Flea beetle	खपटे किरा	
26	Rice thrips	फट्याङ्गा	
27	Rice leafhoppers	फट्याङ्गा	
28	Rice white planthopper	फट्याङ्गा	
29	Rice earhesh bug		
30	Green bugs		
31	Painted bug		
32	Brown bug		
33	Flavivirus	किर्ना	
34	Large/Rock honey bee	पहरे मौरी	<i>Apis laboriosa</i>
35	King/Giant honey bee	राजा मौरी	<i>Apis dorsata</i>
36	Dwarf/small honey bee	सानो मौरी	<i>Apis florea</i>
37	Eastern/Asian honey bee	एशियाली मौरी	<i>Apis cerana</i>
38	Wasps		<i>Parapolybia nodosa</i>
39	Wasps		<i>Polistes strigosus mimus</i>
40	Wasps		<i>Polistes sagittarius</i>
41	Wasps		<i>Polistes maculipennis</i>
42	Wasps		<i>Polistes stigma</i>
43	Wasps		<i>Polistes adustus</i>
44	Wasps		<i>Polistes tenebricosus sulcatus</i>
45	Wasps		<i>Polistes olivaceus</i>
46	Wasps		<i>Polistes rothneyi rothneyi</i>
47	Wasps		<i>Polistes rothneyi sikkimensi</i>
48	Wasps		<i>Polistes sp.</i>
49	Termites	धमिरा	<i>Heterotermes indicola</i>
50	Termites	धमिरा	<i>Odontotermes distans</i>
51	Termites	धमिरा	<i>Eurytermes sp</i>

Annex 2. Institutions and personnel contacted for direct and indirect consultation work

A. Email address and contacts of District Forest office

District	DFO Name	Email Address	Mobile	Phone
Achham	Surendra K. Shrestha	achdfo@dof.gov.np	9759003646	097-620145
Arghakhanchi	Baliram Pandit	argdfo@dof.gov.np	9855020137	077-420109
Bardia	Bhairab Ghimire	baddfo@dof.gov.np	9851152557	084-520156
Bajhang	Ashoak Shrestha	bahdfo@dof.gov.np	9845020213	092-421021
Baitadi	Prabhat Sapkota	baidfo@dof.gov.np	9845218862	095-520152
Bajura	Besendra Subedi	bajdfo@dof.gov.np	9845218862	097-541006
Banke	Puspa Raj Bartaula	bakdfo@dof.gov.np	9849387762	081-520228
Bara	Jeevan K. Thakur	bardfo@dof.gov.np	9851136544	053-520135
Baglung	Bindu Kumari Misra	bglldfo@dof.gov.np	9841886482	068-520135
Bhaktapur	Surya Kanta Sigdel	bhadfo@dof.gov.np	9846061045	01-6630811
Bhojpur	Dirga Narayan Koirala	bjpgdfo@dof.gov.np	9845088071	029-420134
Chitwan	Ganesh Ray	chidfo@dof.gov.np	9854035825	056-520215
Dandeldhura	Bishow Mani Acharya	daddfo@dof.gov.np	9848721943	096-420145
Dailekh	Ram Kaji Shrestha	daidfo@dof.gov.np	9858422387	089-420132
Dang	Naba Raj Kafle	dandfo@dof.gov.np	9841741652	082-560014
Darchula	Sanjaya Tiwari	dardfo@dof.gov.np	9845027797	093-420145
Dhading	Ima Nath Paudel	dhadfo@dof.gov.np	9855024094	010-520125
Dhankuta	Krishna P. Osti	dhkdfo@dof.gov.np	9852050529	026-520229
Dhanusha	Birendra Sah	dnsdfo@dof.gov.np	9844089295	041-520141
Dolakha	Bishnu P. Bhandari	doldfo@dof.gov.np	9851131495	049-420135
Doti	Badri K. Karki	dotdfo@dof.gov.np	9851198530	094-420145
Dolpa	Ram Bichari Thakur	dpadfo@dof.gov.np	9841555567	087-550053
Gorkha	Jibnath Poudel	gordfo@dof.gov.np	9856050557	064-420136
Gulmi	Bishal Ghimire	guldfo@dof.gov.np	9857064479	079-520179
Humla	Shaym P. Chaudhari	humdfo@dof.gov.np	9842048942	078-680029
Ilam	Bharat Shrestha	ilmdfo@dof.gov.np	9852604617	027-520027
Jajarkot	Surya Kanta Mishra	jajdfo@dof.gov.np	9744002932	089-649133
Jhapa	Bod Raj Subedi	jpadfo@dof.gov.np	9852655198	023-455053
Jumla	Mohan Shrestha	jumdfo@dof.gov.np	9843302010	087-520035
Kavre	Prem P. Khanal	kabdfo@dof.gov.np	9841289400	011-620146
Kailali	Dr. Sindhu P. Dhungana	kaidfo@dof.gov.np	9843151222	091-521133
Kalikot	Achal K. Dhungana	kaldfo@dof.gov.np	9843046532	087-440002
Kanchanpur	Shiva Sharma	kandfo@dof.gov.np	9759003646	099-521128
Kapilbastu	Rakesh Karna	kapdfo@dof.gov.np	9855045828	076-560014
Kaski	Pravat Sapkota	kasdfo@dof.gov.np	9846049112	061-520171
Kathmandu	Dr. Indra P. Sapkota	katdfo@dof.gov.np	9851193986	01-4434857
Khotang	Lok Raj Nepal	khodfo@dof.gov.np	9851164564	036-420134
Lalitpur	Dr Binod Devkota	laldfo@dof.gov.np	9841234131	01-5525559
Lamjung	Dhurga B. Karki	lamdfo@dof.gov.np	9845275662	066-520135
Mahottari	Hira Lal Kusbaha	mahdfo@dof.gov.np	9854031028	044-520694
Makwanpur	Rajendra Naupane	makdfo@dof.gov.np	9841342248	057-520593
Manang	Dilli Raj Chapagai	mandfo@dof.gov.np	9759003646	066-449344
Myagdi	Sukha Lal Jaiswal	mgddfo@dof.gov.np	9855025277	069-520135
Morang	Deepak Gyawali	mordfo@dof.gov.np	9851147255	021-530404
Mugu	Prem Shankhar Chaudhari	mugdfo@dof.gov.np	9857010245	087-450014
Mustang	Madav Baral	musdfo@dof.gov.np	9856032509	069-440117
Nawalparasi	Bijaya Raj Subedi	nawdfo@dof.gov.np	9802030111	078-520135

Nuwakot	Padam Nepal	nuwdfo@dof.gov.np	9849563322	010-560007
Okhaldhunga	Sampait Yadav	okhdfo@dof.gov.np	9842842273	037-520134
Palpa	Dhadi Lal Kadel	paldfo@dof.gov.np	9857062272	075-520002
Panchthar	Debesh Mani Tripathi	pandfo@dof.gov.np	9845665410	024-520117
Parsa	Chandra Dev Lal Karna	pardfo@dof.gov.np	9748019988	051-522243
Parbat	Krishna Prasad Dhakal	pbtldfo@dof.gov.np	9845045087	067-520135
Pyuthan	Dhanjaya Lamichhane	putldfo@dof.gov.np	9841337768	086-420007
Ramechhap	Kedar Poudel	ramldfo@dof.gov.np	9854040068	048-540069
Rasuwa	Uma Paudel	rasldfo@dof.gov.np	9860903231	010-540107
Rauthat	Bhagwan Gupta	raudfo@dof.gov.np	9851014991	055-540210
Rolpa	Hari Narayan Nandal	roldfo@dof.gov.np	985109678	086-449112
Rukum	Jagannath Jaiswal	rukldfo@dof.gov.np	9855020137	088-68356
Rupandehi	Indra Prasai	rupldfo@dof.gov.np	9841661110	071-520222
Salyan	Bidya Nath Jha	saldfo@dof.gov.np	9841409884	088-520008
Saptari	Dhirendra Prasad Singh	sapldfo@dof.gov.np	9849285300	031-520082
Sarlahi	Naresh Thakur	sardfo@dof.gov.np	9854036113	046-501082
Sindhupalchowk	Shiva Sapkota	sdpdfo@dof.gov.np	9851158372	011-620146
Sindhuli	Navin Giri	sindfo@dof.gov.np	9845269900	047-520135
Siraha	Shila Nath Jha	sirdfo@dof.gov.np	9862999656	033-560082
Solukhumbu	Megh Raj Rai	soldfo@dof.gov.np	9854035618	038-620134
Sankhuwasabha	Shushil Bhandhari	ssbdfo@dof.gov.np	9852058370	029-560135
Sunsari	Rajendra Prasad Niraula	sundfo@dof.gov.np	9852055363	025-560178
Surkhet	Hem Raj Bista	surldfo@dof.gov.np	9857831844	083-520254
Syangja	Ajit Kumar Karna	syadfo@dof.gov.np	9851161007	063-420135
Tanahu	Ambika prasad Paudel	tandfo@dof.gov.np	9859000055	065-560135
Taplejung	Madav Dev	tapldfo@dof.gov.np	9842824180	024-460117
Terahathum	Devi Chandra Pokharel	ttmdfo@dof.gov.np	9852053031	026-460408
Udaypur	Dhanjaya Paudel	udadfo@dof.gov.np	9852835134	035-42013

B. District Agricultural Office

Districts	Contact number	Email address
Taplejung	024-460130	dadotpj@gmail.com
Panchthar	024-520130	dado5thar@gmail.com
Illam	027-520046	dadoilam@gmail.com
Jhapa	023-455056	dadojhapa@gmail.com
Morang	021-521358	dadomorang@yahoo.com
Sunsari	025-560124	dadosunsari3@gmail.com
Terhathum	026-460130	dadotthum@gmail.com
Dhankuta	026-520478	dado_dhankuta@yahoo.com
Bhojpur	029-420130	dadobhojpur@gmail.com
Sankhuwasabha	029-560130	dado7412@gmail.com
Okhaldhunga	037-520130	dadookhal@yahoo.com
Solukhumbu	038-520130	dadosolu@yahoo.com
Saptari	031-520050	dadosaptari@gmail.com
Udayapur	035-420130	dadoudayapur@gmail.com
Khotang	036-420130	dadokhotang@gmail.com
Siraha	033-520050	dadosiraha@yahoo.com
Sarlahi	046-520130	dadosarlai@yahoo.com
Dhanusha	041-523739	dadodhanusha@gmail.com
Mahottari	044-520103	shankarsah@yahoo.com
Sindhuli	047-520166	dadosindhuli@gmail.com
Dolakha	049-421130	krishidolakha@gmail.com
Ramechhap	048-540063	ramechapdado@gmail.com
Rasuwa	010-540163	dadorasuwa@gmail.com
Nuwakot	010-560128	dadonuwakot@gmail.com
Dhading	010-520128	dadodhading@gmail.com

Districts	Contact number	Email address
Kavre	011-490589	dadokavre@gmail.com
Sindhupalchok	011-620165	dadosindhu@gmail.com
Kathmandu	01-4823697	agrikath@gmail.com
Lalitpur	01-5534573	dadolalitpur@gmail.com
Bhaktapur	01-5092054	bkttdado@gmail.com
Bara	053-550017	dado.bara@yahoo.com
Makwanpur	057-520466	dadomakawanpur@gmail.com
Chitwan	056-520115	dadochitwan@gmail.com
Parsa	051-522304	dadoparsa@yahoo.com
Rautahat	055-520001	dadorautahat@gmail.com
Gorkha	064-420113	gorkhadado@yahoo.com
Lamjung	066-520130	dadolamjung@gmail.com
Tanahun	065-560130	dadotanahun@yahoo.com
Syangja	063-420130	dadosyangja@yahoo.com
Manang	066-440213	dadomanang@yahoo.com
Kaski	061-461074	dadokaski@yahoo.com
Mustang	069-440130	dadomustang@gmail.com
Myagdi	069-520130	dadomyagdi@gmail.com
Parbat	067-420130	dadoparbat@gmail.com
Baglung	068-520130	dadobaglung@gmail.com
Nawalparasi	078-520126	dadonawalparasi@gmail.com
Rupandehi	071-520201	dadorup@gmail.com
Kapilvastu	076-560023	dadokapilvastu@yahoo.com
Palpa	075-520144	dadoplpa@gmail.com
Gulmi	077-520126	dadogulmi@gmail.com
Argakhanchi	077-420126 077-420533	dadoarghakhanchi@gmail.com
Salyan	088-520130	dado_salyan@yahoo.com
Rukum	088-530019	dadorukum@gmail.com
Puthyan	086-420052	dadopyuthan@yahoo.com
Dang	082-560130	dadodang@gmail.com
Rolpa	086-440118	dadorolpa@yahoo.com
Banke	081-520027 081-526547	dadobanke@gmail.com
Bardia	084-420107 084-420946	dadobardiya2014@gmail.com
Dailekh	089-420145	dado.dailekh@gmail.com
Surkhet	083-520305	qiribkskt@yahoo.com
Jajarkot	089-430125	dadojajarkot121@gmail.com
Humla	087-680011	
Jumla	087-520027	dadojumla2013@gmail.com
Mugu	087-460086	braham_sah@yahoo.com
Kalikot	087-440118	kharelyp@gmail.com
Dolpa	087-550099	dadodolpa@gmail.com
Bajhang	092-421045	dado.bajhang@yahoo.com
Bajura	097-541014	bajuradado@yahoo.com
Doti	094-411126	dadodoti80@gmail.com
Achham	097-620141	dadoacham@rocketmail.com
Kailali	091-521124	dadokailali@gmail.com
darchula	093-420141	dadodarchula@yahoo.com
Baitadi	095-520154	dadobaitadi2027@gmail.com
Dadheldhura	096-410112	dadodadeldhura@yahoo.com
kanchanpur	099-522183	dadokanchanpur@gmail.com

C. District Livestock Offices

Districts	District code	Contact no	Email
Achham	097	620102	dlsomangalsen@gmail.com
Arghakhanchi	077	420062, 420072	Dlso_arghakhnachi@dls.gov.np
Baglung	068	520121	Dlso_baglung@dls.gov.np
Baitadi	095	400006	Dlsopatan.baitadi@yahoo.com
Bajhang	092	421050	bajhangdlso@yahoo.com
Bajura	097	541064	dlsobajura@gmail.com
Banke	081	520254	Dlso_banke@dls.gov.np
Bara	053	550041	Dlsobara777@gmail.com
Bardia	084	421082	Dlso_bardiya@dls.gov.np

Districts	District code	Contact no	Email
Bhaktapur	01	6615094	Dlsobhaktapur26@gmail.com
Bhojpur	029	420129	dlso_bhojpur@dls.gov.np
Chitwan	056	525097	dlsochitwan@gmail.com
Dadheldhura	096	410114	dlsodadeldhura@yahoo.com
Dailekh	089	420148	Dlso_dailekh@dls.gov.np
Dang	082	560021	Dlso_dang@dls.gov.np
Darchula	093	420104	darchuladslo@yahoo.com
Dhading	010	520107	vegatdebendra@yahoo.com
Dhankuta	023	520283, 520280	dlso_dhankuta@dls.gov.np
Dhanusha	041	520179	dr.shbhusah@yahoo.com
Dolakha	049	421115	dlsodolakha@gmail.com
Dolpa	087	550052	Dlso_dolpa@dls.gov.np
Doti	094	420114	dlsodoti@gmail.com
Gorkha	064	420273	Dlso_gorkha@dls.gov.np
Gulmi	079	520227	Dlso_gulmi@dls.gov.np
Humla	087	680010	Dlso_humla@dls.gov.np
Illam	027	520043	dlso_ilam@dls.gov.np
Jajarkot	089	430030	Dlso_jajarkot@dls.gov.np
Jhapa	023	520087	dlso_jhapa@dls.gov.np
Jumla	087	520028	Dlso_jumla@dls.gov.np
Kailali	091	502114	dslo_kailali@dls.gov.np
Kalikot	087	440023	Dlso_kalikot@dls.gov.np
Kanchanpur	099	521176	Dlso_kanchanpur@gmail.com
Kapilvastu	076	560021	Dlso_kapilvastu@dls.gov.np
Kaski	061	520082	Dlso_kaski@dls.gov.np
Kathmandu	01	4375251	Maharjanr99@gmail.com
Kavre	011	490266	Adhikariratna66@yahoo.com
Khotang	036	420107	dlso_khotang@dls.gov.np
Lalitpur	01	500406	karunavet@hotmail.com
Lamjung	066	520131, 521231	Dlso_lamjung@dls.gov.np
Mahottari	044	520073	rabindravet@hotmail.com
Makwanpur	057	520728	prakashvet@yahoo.com
Manang	066	440113	Dlso_manang@dls.gov.np
Morang	021	471958	dlso_morang@dls.gov.np
Mugu	087	460076	Dlso_mugu@dls.gov.np
Mustang	069	420121	Dslo_mustang@dls.gov.np
Myagdi	069	520121	Dlso_myagdi@dls.gov.np
Nawalparasi	078	520149, 520887	Dlso_nawalparasi@dls.gov.np
Nuwakot	010	560012	Dnzsus00@gmail.com
Okhaldhunga	037	520210	dlso_okhaldhunga@dls.gov.np
Palpa	075	520145	Dlso_palpa@dls.gov.np
Panchthar	024	520127, 520469	dlso_panchthar@dls.gov.np
Parbat	067	420123	Dlso_parwat@dls.gov.np
Parsa	051	522551	dlsoparsa@yahoo.com
Puthyan	086	420014	Dlso_pyuthan@dls.gov.np
Ramechhap	048	540032	thapagb2011@hotmail.com
Rasuwa	010	540129	dsedai@yahoo.com
Rautahat	055	520125	Dlsorautahat@gmail.com
Rolpa	086	440056	Dlso_rolpa@dls.gov.np
Rukum	088	530010	Dlso_rukum@dls.gov.np
Rupandehi	071	520206	Dlso_rupandehi@dls.gov.np
Salyan	088	520062	Dlso_salyan@dls.gov.np
sankhuwasabha	029	560159	dlso_sankhuwasabha@dls.gov.np
Saptari	031	520308, 520142	dlso_saptari@dls.gov.np
Sarlahi	046	520145	dlsosarlahi@yahoo.com
Sindhuli	047	520185	dlso_sdl070@yahoo.com
Sindhupalchok	011	620115	Dslosindhupalchowk@yahoo.com
Siraha	033	520008, 520058	dlso_siraha@dls.gov.np
Solukhumbu	038	520103	dlso_solukhumbu@dls.gov.np
sunsari	025	560162	dlso_sunsari@dls.gov.np
Surkhet	083	520288	Dlso_surkhet@dls.gov.np
Syangja	063	420108	Dslo_syanga@dls.gov.np

Districts	District code	Contact no	Email
Tanahun	065	560205	Dlso_tanahu@dls.gov.np
Taplejung	024	460176	dlso_taplejung@dls.gov.np
Tehrathum	026	460127	dlso_terhathum@dls.gov.np
Udayapur	035	420129	dlso_udayapur@dls.gov.np

D. Check list of INGOs/NGOs and Academic institutions

1	Friends of Nature	FON	Mailing address: P.O. Box 23491 Address: Kathmandu, Nepal Email: info@fonnepal.org naturesfren@yahoo.com, Phone number: +977-1-4287540; www.fonnepal.org
2	Wildlife Conservation Nepal	WCN	Address: Bafal, Kathmandu, Nepal phone no: (+977) 1 4289818 Email: mail@wcn.org.np; wcn.org.np
3	Small Mammals Conservation Foundation Nepal	SMCRF	Address : Kathmandu Nepal P.O.Box 9092, Sundhara, Kathmandu, Nepal Email: info@smcrf.org; smcrf.org
4	Global Primate Network	GPN	Address: Kirtipur, Nepal; P.O. Box: 26288 Phone Number: +977 14334784 Email: info@primatelife.org; primatelife.org
5	Resources Himalaya Foundation	RHF	Naya Bato, Sanepa Ring Road GPO Box 2448, Kathmandu, Nepal Tel: +977 1 5537502 Website: resourceshimalaya.org
6	Himalayan Nature		Address: Trishakti Marg, Lazimpat, Kathmandu, Nepal Phone: +977 1 4423225; Fax : +977 1 4444527 info@himalayannature.org; himalayannature.org
7	Zoological Society of London/Nepal	ZSL	
8	World Wildlife Fund - Nepal	WWF	
9	Red Panda Network	RPN	Thapathali, Kathmandu, Nepal P. O. Box 21477; Tel: +977 (01) 55 24 014 Email: rpn@redpanda.org.np; redpanda.org.np
10	The International Union for Conservation of Nature	IUCN	Kupondole, Lalitpur, Nepal Tel: +977-01-5536786 Email: info-np@iucn.org; iucn.org/nepal
11	Central department of Zoology	CDZ	Kirtipur, Kathmandu, Nepal Tel: +977-01-4331896; Email: info@cdztu.edu.np
12	Central Department of Environmental Science	CDES	Kirtipur, Kathmandu, Nepal Tel: +977-01-14332147/4332711; info@cdes.edu.np
13	College of Applied Science	CAS	Kathmandu, Nepal Tel: +977-014102120; info@casnepal.edu.np
14	Khwopa College		Dekocha, Bhaktapur, Nepal Tel: +977-01-6610932; info@khwopacollege.edu.np
15	Golden Gate International		Old Baneshwor, Kathmandu, Nepal Tel: +977-014477082; info@goldengate.edu.np
16	Department of Environmental Science and Engineering Kathmandu University		Kathmandu, Nepal Tel: +977-01-1661443; Email: desehod@ku.edu.np

Annex 3. Check list of researcher

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			Protected	HWC associated		
<i>Ailurus fulgens</i>	Red Panda	Habre	✓		RPN Arjun Thapa Hari Pd Sharma Sonam Tashi Lama Damber bista Mukesh kumar chalise Pralad B. Yonzon(late)	arjunthapaaa@yahoo.com himalayanhari@gmail.com sonam.lama@redpandanetwork.org damber.bista@redpandanetwork.org mukesh57@hotmail.com
<i>Antelope cervicapra</i>	Blackbuck	Krisnasar	✓		Laxman Khanal Amar kunwar	laxkhanal@gmail.com amar.kwr@gmail.com
<i>Bos gaurus</i>	Gaur	Gauri gai	✓		Madhu Chetri	mchetri@gmail.com
<i>Bos grunniens</i>	Wild Yak	Yak	✓		Naresh Kusi	naresh.kusi@gmail.com
<i>Bubalus bubalis</i>	Wild Water Buffalo	Arna	✓	✓	Deep Narayan Shah Naresh Subedi Nir Singh Rai	aquatic.deep@gmail.com nareshsubedi@gmail.com rai1nirsing@gmail.com
<i>Canis lupus</i>	Wolf	Bwanso	✓	✓	Naresh Kusi Samundra Subba Kanchan Thapa Raju Acharya Madhu Chhetri Geraldine Werhahn	Naresh.kusi@gmail.com abi10sam@student.lu.se kanchanthapa@gmail.com rajuhugu_13@yahoo.com mchetri@gmail.com geriwer@yahoo.com
<i>Caprolagus hispidus</i>	Hispid Hare	Hispid kharayo	✓		Dhirendra Bd Chand Manoj chaudhari	sdx2013nepal@gmail.com
<i>Cervus duvauceli</i>	Swamp Deer	Barhasingha	✓		Hemanta Yadav	yadavhemanta@gmail.com
<i>Elephas maximus</i>	Asiatic Elephant	Hatti	✓	✓	Narendra Babu Pradhan Ganesh Pant Roshan Thakur	narendra@birdlifenepl.org ganeshpant@yahoo.com hroshanthakur@gmail.com
<i>Felis bengalensis</i>	Leopard Cat	Chari bagh	✓		Paras Bikram Singh	ecoparas@yahoo.co.uk ecoparas@gmail.com
<i>Felis lynx</i>	Lynx	Lynx	✓			
<i>Hyaena hyaena</i>	Striped Hynae	Hundar	✓		Chirangivi Khanal Shivish Bhandari	chirankhanal1@gmail.com shivish.bhandari@yahoo.com
<i>Macaca assamensis</i>	Assamese Monkey	Assamis rato Bandar	✓		Sabina Koirala Mukesh K Chalise Laxman Khanal Ganga Ram Regmi	loyalsabbu@gmail.com mukesh57@hotmail.com laxkhanal@gmail.com regmigr1978@yahoo.com/ ganga@primatelife.org
<i>Manis crassicaudata</i>	Chinese Pangolin	Salak	✓		Tulsi Laxmi Suwal Ambika pd khatiwada Kumar Poudel Prativa Kaspal SMCRF	ambika.pd.khatiwada@gmail.com info@smcrf.org
<i>Manis pentadactyla</i>	Indian Pangolin	Salak	✓		Tulsi Laxmi Suwal Ambika Pd khatiwada Kumar Poudel Prativa Kaspal SMCRF	ambika.pd.khatiwada@gmail.com info@smcrf.org
<i>Moschus moschiferos</i>	Musk Deer	Kasturi mirga	✓		Paras Bikram Singh Kabita Karki	ecoparas@yahoo.co.uk ecoparas@gmail.com
<i>Neofelis nebulosa</i>	Clouded Leopard	Dwanse chituwa	✓	✓	Yadav Ghimirey Baburam Lamichhane	mustela.altaica@yahoo.com yghimirey@hotmail.com baburaml@gmail.com
<i>Ovis ammon</i>	Great Tibetan Sheep	Nayan	✓		Rinjin Shrestha	
<i>Panthera tigris</i>	Tiger	Bagh	✓	✓	Jhamak Bd Karki Bhim Bahadur Gurung Dev smith	jbkarki@gmail.com

Scientific name	Common Name	Nepali Name	Status		Researcher	Contact Address
			Protected	HWC associated		
					suinquist NTNC WWF	
<i>Panthere uncia</i>	Snow Leopard	Hinu chituwa	√	√	Som Bd Ale Rhodney Jackson SLC Bishnu Pd Devkota Jofox Madhu Chettri	Sale1@uic.edu devkotabishnu@yahoo.com mchettri@gmail.com
<i>Pantholops hodgsoni</i>	Tibetan Antelope	Chiru	√		Rinjin Shrestha Rita Koirala	
<i>Platanista gangetica</i>	Gangetic Dolphin	Shons	√		Tej K. Shrestha	
<i>Prionodon pardicolor</i>	Spotted Linsang	Silu	√			
<i>Rhinoceros unicornis</i>	Rhinoceros	Gainda	√	√	Kamal Jung Kunwar	
<i>Sus salvanius</i>	Pygmy Hog	Pudke Bandel	√		RE	
<i>Tetracerus quadricornis</i>	Four Horned Antelope	Chauka	√		Amar Kunwar Sabina koirala Krishna Pd. pokharel	amar.kwr@gmail.com loyalsabbu@gmail.com wildlife.uni-freiburg.de
<i>Ursus arctos</i>	Himalayan Bear	Himali rato bhalu	√	√	Madhu Chhetri Bhupendra yadhav	mchettri@gmail.com bhupendra.dnpwc@gmail.com
<i>Ursus thibetanus</i>	Himalayan Black Bear	Kalo Bhalu		√	Bhupendra yadhav	bhupendra.dnpwc@gmail.com
<i>Melursus ursinus</i>	Sloth Bear	Kathe Bhalu		√	Bhupendra yadhav	bhupendra.dnpwc@gmail.com
<i>Panthera pardus</i>	Common Leopard	Chituwa		√	Tej Bd. Thapa	tejthapa@gmail.com
<i>Sus scrofa</i>	Wild Boar	Bandel		√		
<i>Cuon alpinus</i>	Wild Dog	Dhole		√	Ambika Pd. Khatiwada	ambika.pd.khatiwada@gmail.com

Annex 4. Date and places of consultative workshops and information collection events

SN	Region	Place	Date	Personnel consulted
1	Eastern	Biratnagar	12 th April 2017	51
2	Central	Hetaunda	19 th May 2017	64
3	Western	Pokhara	8 th June 2017	16
4	Mid-western	Bardia	30 th May 2017	25
5	Far-western	Kanchanpur	31 st May 2017	26

A. Profiling of protected and human wildlife conflicts associated wild animals in Nepal (Consultative Workshop, Biratnagar). Venue: Eastern-Regional Forestry Directorate, Biratnagar. Date: 30 Chaitra, 2073

SN	Name	Position/Name of organization	Contact no.
1	Rajendra Kafle	Regional Director/Eastern Region Forestry Directorate Biratnagar	
2	Shiva Wagle	Senior Vice-Director/Department of Forest	
3	Hem Aryal	Member secretary/Persidence Chure, Terai, Madesh, conservation development committee	
4	Shree Prasad Baral	District development officer/DDC Udayapur	
5	Dhirendra Prasad Sing	District development officer/DDC Saptari	
6	Shyam Kumar Shaha	Warden/Koshi Tappu Wildlife reserve	
7	Bhuwan Keshar Sharma	Cordinator/CODEFUND	
8	Birendra shaha	District development officer/DDC Okhaldunga	9852840134
9	Rambabu shaha	District development officer/DDC Bhojpur	9852052734
10	Lokraj Nepal	District development officer/DDC Siraha	9851164564
11	Devi Chandra Pokhrel	District development officer/DDC Therathum	9851205303
12	Shusil Bhandari	District development officer/DDC Sankhuwashabha	9853058135
13	Manoj Kumar shaha	Warden/Makalu Barun Conservation Area Sankhuwashabha	9851164422
14	Megraj Rai	District Forest officer/DFO Solukhumbu	9852851334
15	Madav Prasad Dev	District Forest officer/DFO Taplejung	9852660501
16	Silanath Jha	District Forest officer/DFO	9862933656
17	Bharat Babu Sharma	District Forest officer/DFO Ilam	9752605695
18	Rajendra Prasad Niraula	District Forest officer/DFO Sunsari	9852055363
19	Bodraj subedi	District Forest officer/DFO Jhapa	
20	Krishna Prasad Wosti	District Forest officer/DFO Dhankuta	
21	Badhiraj Dhungana	District Soil conservation officer/DSCO Udayapur	
22	Dr. Binod Prasad Devkota	District Forest officer/DFO Morang	
23	Sudrsan Prasad	District Soil conservation officer/DSCO Okhaldhuga	9813209245
24	Surat lal Chaudhari	District Soil conservation officer/DSCO	9742663561
25	Santa Kumar Shahi	District Soil conservation officer/DSCO Panchthar	9846262959
26	Bishnu Bhadr Bhandari	District Soil conservation officer/DSCO Saptari	9841354051
27	Chandra Narayan Yadav	District Soil conservation officer/DSCO Taplejung	9842540039
28	Man Bhadr Chettri	District Soil conservation officer/DSCO Khotang	9841319409
29	Sanjaya Kumar Mishra	District Soil conservation officer/DSCO Bhojpur	9857033114
30	Ganga Ram shaha	District Soil conservation officer/DSCO Sankhuwashbha	9845295358
31	Namo Narayan Mishra	District Soil conservation officer/DSCO Dhankuta	9841724669
32	Hirdaya Kumar Mishra	District Soil conservation officer/DSCO Jhapa	9855021129
33	Madav karki	Morang	9842461875
34	Sita Ram Shaha	District Soil conservation officer/DSCO Siraha	9842820182

SN	Name	Position/Name of organization	Contact no.
35	Prabin Kumar Sing	District Soil conservation officer/DSCO Morang	9852030688
36	Juddha Bhadur Gurung	CODEFUND	
37	Prem Sapkota	Vice Forest Officer/Persidence Chure, Terai, Madesh, conservation development committee	9841279721
38	Ila Yadev	Officer/Persidence Chure, Terai, Madesh, conservation development committee	
39	Jagadish Chandra Dev	Vice Forest Officer/DFO Panthar	9852022078
40	Uzzal Raghubhashi	Officer/Persidence Chure, Terai, Madesh, conservation development committee	
41	Bhakhat Bhadur saud	Office head/Tarahara	9852055005
42	Khemlal B.K.	Plantation Head/Ratuwamaye	9851235125
43	Hemraj Acharya	Waden/Kanchanjuga conservation area	
44	Purneswor Subedi	Nurture Officer/DFO Biratnagar	9856025344
45	Ganesh Pant	Waden/Sagarmatha National Park	9851151875
46	Kamala low	District Soil conservation officer/DSCO Terathum	9846717055
47	Kamal Rai	Dhankuta	
48	Laxmi Rai	Renger/Koshi Tappu Wildlife reserve	9860275597
49	Mana raj	Vice Forest Officer/DFO Sunsari	9846232173
50	Mahesh Chaudari	Vice Forest Officer/DFO	9852035377
51	Bikram Amatya	Renger/DFO Saptari	9849250999

B. Profiling of protected and human wildlife conflicts associated wild animals in Nepal (Consultative Workshop, Hetaunda). Venue: Hotel Avocado, Hetauda. Date: 4 Jestha 2074

SN	Name	Address
1	Ganesh Jha	Director, RFD, Hetaunda
2	Yuva Raj Maske	Deputy Director
3	Bishnu Prasad Paudel	Deputy Director
4	Ghanashyam Dangal	Deputy Director
5	Pravindra Prasad Pokharel	DFO, Bhaktapur
6	Hiralal Prasad Kushwaha	DFO, Mahottari
7	Chandra Dev Lal Karna	DFO, Parsa
8	Tahir Hussien	Officer, DPR Dhanusha
9	Bipin Kumar Jha	District Soil Conservation Office, Dhanusa
10	Amarendra Kumar Lal	Ranger, Buffer zone, Hetauda
11	Yuva Raj Regmi	Chief Warden, Langtang NP
12	Bhuvan Keshar Sharma	CODEFUND
13	Hari Prasad Adhikari	Ranger, RFD, Hetauda
14	Prakash Sigdel	ZSL-Nepal F.O.
15	Dipendra Adhikari	ZSL-Nepal F.O.
16	Rajendra Tamang	District Plant Resource Office, Makwanpur
17	Sagir Hussien	District Plant Resource Office, Makwanpur
18	Purna Man Shrestha	CODEFUND
19	Chirenjeevi Prasad Pokhrel	Chief, NTNC-BCC, Chitwan
20	Ram Chandra Kandel	Chief Warden, CNP, Chitwan
21	Dirgha Narayan Koirala	District Forest Office, Rautahat
22	Padam Titunga	President, BZMC, Parsa
23	Bishal Bhattari	District Forest Office, Makwanpur
24	Uttam Katuwal	District Forest Office, Makwanpur
25	Prakash Chapaghae	Program Officer, Living With Tiger, Chitwan
26	Kalindi Paudel	RFD, Hetauda
27	Prem Poudel	TAL-PABZ
28	Iemnath poudel	District Forest Office, Dhanding
29	Nabin Githi	District Forest Office, Sindhuli
30	Tika Ram Adhikari	Ex-Director General, DNPWC
31	Hari Bhakta Acharya	Chief Warden, Parsa NP
32	Padam Raj Nepal	District forest Office, Nuwakot

SN	Name	Address
33	Kishwor Mahota	TAL-PABZ
34	Narhari Chapagae	District Plant Office, Nuwakot
35	Rajendra Neupane	District Forest Office
36	Bhairav Prasad Ghimire	District Forest Office, Bara
37	Ganesh Chaudhary	AFO, RFD
38	Gayatri Sharma	District Forest Officer, Lalitpur
39	Shiva Sapkota	District Forest Officer, Sindhupalchok
40	Indra Sapkota	District Forest Officer, Kathmandu
41	Ram Nath Ray	District Forest Office, Bara
42	Kunja prakash	District Forest Office, Rautahat
43	Rakesh Kumar Yadav	District Forest Office, Rautahat
44	Jay Ram Thapa	District Forest Office, Bhaktapur
45	Bir Bahadur Bala	
46	Bhim Bahadur Malla	District Forest Office, Sarlahi
47	Ram hari Dahal	Regional Forestry Directorate, Hetauda
48	Manoj Aryal	Regional Forestry Directorate, Hetauda
49	Ramesh Kumar Rumba	Regional Forestry Directorate, Hetauda
50	Kamal Yadav	District Forest Office, Hetauda
51	Rakesh Yadav	District Forest Office, Rautahat
52	Ajit Basnet	District Forest Office, Chitwan
53	Arjune Bahadur Kunwar	TAL
54	Megh B. Pokharel	Parsa NP
55	Chiranjeevi pokharel	District forest Office, Bara
56	Saroj Man Pradhan	District Forest Office, Kathmandu
57	Chiring sherpa	District Forest Office, Sindhuli
58	Ram Hari Nepal	District Forest Office, Dhading
59	Man Bahadur Thapa	Langtang NP, Rasuwa
60	Dhan Bahadur	Nuwakot, Bidur
61	Arbendra Yadav	District Soil Conservation Office, Sarlahi
62	Shiva Poudel	Chitwan NP, Kasara
63	Jagadish Rijal	Regional Forestry Directorate, Hetauda
64	Manoj Thakur	District Forest Office, Rammechhap

C. Profiling of protected and human wildlife conflicts associated wild animals in Nepal (CONSULTATION WORKS, POKHARA). DATE: 6-7 JUNE 2017

SN	Name	Address	Phone
1	Dr. Buddhi Sagar Poudel	Regional Forestry Director, Pokhara	9841460874
2	Mr. Kedar Baral	District Forest Officer, Kaski	9856033052
3	Mr. Madhav Prasad Baral	Ass. Forest Officer, Kaski	9856032509
4	Mr. Prakash Neupane	Tindobate, Ambot, Syanja	
5	Mr. Dhadilal Kandel	District Forest Officer, Palpa	
6	Mr. Ahammad Atiullah	Ass. Forest Officer, Palpa	
7	Ms. Rama Shrestha	Administrative Officer, DFO Palpa	
8	Mr. Dadhi Ram Dhakal	Office Assistat, DFO Palpa	
9	Mr. Krishna Prasad Bhattarai	Forest Guard, DFO Palpa	
10	Mr. Gopal Raj Basyal	Driver, DFO Palpa	
11	Mr. Dev Bahadur Khamcha	Sahajkot, Palpa	
12	Mr. Buhan Singh Darlami	Sahajkot, Palpa	
13	Mr. Purna Bahadur Aslami	Sahajkot, Palpa	
14	Mr. Purna Prasad Bharati	Ass. Forest Officer, Syanja	
15	Mr. Lal Prasad Gurung	Director, ACAP	
16	Mr. Binod Basnet	Coordinator, ACA	

D. Profiling of protected and human wildlife conflicts associated wild animals in Nepal (Consulation Workshop, Bardia National Park, Bardia). Venue: Bardia Rhino Camp. Date: May 30, 2017

SN	Name	Address	Phone
1	Ramesh Kumar Thapa	Bardia National Park	9858025755
2	Bimala Yogi	Mahila Swasthya Syamsebika,CBAPU	9848299411
3	Mohan Lal Chau	Eco-tourism Development Committee	9848022906
4	Padmashwor Neupane	Shivapur Buffer Zone Community Forest	9848143381
5	Puspa Yogi	President, Woman Environment SC	9844888030
6	Jit Bahadur Khadka	River Side Venue Park Resort	9748002826

SN	Name	Address	Phone
7	Ram Bahadur Thapa	Journalist, Radio Sathi F.M.	9748004078
8	Prem Yogi	Local of Thakurdwara	9848270274
9	Nilkantha Kandel	BNP/BZMC	9858022051
10	Khadga Bahadur Khadka	Bardia Jungle Cottage	9848270794
11	Sani Ram Chaudhary	TAL-PAB2	9801159796
12	Dharma Raj Regmi	Devi Jarahi Fauta BZCF	9858027745
13	Tulsi Ram Gautam	Nature Guide	9848240129
14	Aanu Ram Chaudhary	CBAPU Sub-Committee	9848126102
15	Sailendra Kumar Yadav	Conservationist Officer, NTNC	9751030475
16	Chotu Sonaha	Gohuwa Village Committee, Prasenipur	9812443046
17	Dukha Ram Sonaha	Gohuwa Village Committee, Prasenipur	9848113763
18	Dhani Ram Tharu	Kamala Buffer zone Committee	9848064994
19	Surya Man Shrestha	CODEFUND, Kathmandu	9851210055
20	Bhim Bahadur Thapa	Chi.cyo.pra.pa.bi.sa.sa	9868095241
21	Ramji Babu Thapa	NTNC-BCP, Accountant	9868075314
22	Som Prasad Tharu	Local people	9868215282
23	Man Bahadur Chaudhary	Local people	9748090844
24	Bishwo Bahadur Tharu	Local people	9804553188
25	Sita Ram Tharu	Local people	9848154402

E. Profiling of protected and human wildlife conflicts associated wild animals in Nepal (Consultant Workshop, Suklaphata National Park, Kanchanpur). Venue: Suklaphata Jungle Cottage. Date: May 31, 2017

SN	Name	Address	Phone
1	Bed Kumar Dhakal	Chief Warden, SuNP, Kanchanpur	9801340435
2	Puskar Bahadur Singh	SuNP/BZMC	9848848796
3	Dipak Bhandhari	BnCmdr, Bhavani Box Battalion	9851156476
4	Shiva Prasad Sharma	DFO, Kanchanpur	9846186435
5	Jaganath Danai	Bhawani Box Battalion	9843751602
6	Raj Kumar Thapa	Bhawani Box Battalion	9841241668
7	Hari Bahadur Shahi	Bhawani Box Battalion	9848063027
8	Laxmi Saud	Chairperson-FECOFUN, Kanchanpur	9848725299
9	Karna Bahadur Kunwar	SuNP/BZMC	9806444082
10	Bharat Bista	Chairperson-Sundevi User Committee	9848065077
11	Mina Chaudhary	Sovatal BZUC	9805781731
12	Satya Narayan Silwal	SuNP	9806489062
13	Karn B. Bam	SuNP	9749508679
14	Manoj Chaudhary	Sovatal, Bhuli	9810647858
15	Pradeep Raj Joshi	Zoological Society of London	9858425221
16	Ramesh Kumar Chaudhary	TAL-PABZ/Chitwan	9801039849
17	Duttha Rana	Nature Guide	9749507470
18	Chandra Jung Hamal	Himalayan Nature	9851044699
19	Shanta B. Magar	Ranger, SuNP	9844061580
20	Subas Bishwokarma	NRCA/NTNC-SCP	9845148571
21	Shil Raj Adhikari	Bageshori User Committee	9801390685
22	Padam B. Singh	Himalayan User Group	9812716098
23	Padam B. Malla	DFO, Kanchanpur	9848722981
24	Lal Bahadur Gharti	Belkot User Group	9848724148
25	Anum Singh	Belkot User Group	9848811949
26	Laxman Shah	Sagarmatha	9812817091

F. Profiling of protected and human wildlife conflicts associated wild animals in Nepal (Field Level Consultation). Venue: Dfo (Darchula) Meeting Room. Date: 03 June, 2017, Tuesday

SN	Name	Address	Phone
1	Sanjay Tiwari	DFO, Darchula	9858755145
2	Ravindra Singh	Ranger, DFO, Darchula	9851230341
3	Saroj Chaudhary	Ranger, DSCO	9845099938
4	Naresh K. Ray Bhar	Ranger ANCA, Dharchula	9845680195
5	Bhulaneshor Chaudhary	Ranger ANCA, Dharchula	9759503136
6	Surya Man Shrestha	CODEFUND, Kathmandu	9851210055

G. Profiling of protected and human wildlife conflicts associated wild animals in Nepal (Field Level Consultation). Venue: Melauli Municipality, Baitadi. Date: 04 June, 2017, Wednesday

SN	Name	Address	Phone
1	Sanjay Mahato	Sector Forest Office, Kulau, Baitadi	9845257166
2	Bhim Bahadur Malla	Sector Forest Office, Tashwodehi, Baitadi	9848768640
3	Shyam Singh Naghi	Sector Forest Office, Kulau, Baitadi	9619224455
4	Daya Krishna Joshi	Sector Forest Office, Melauli Municipality	9749531327
5	Bhupendra Prasad Joshi	Sector Forest Office, Tashwodehi, Baitadi	9849606121
6	Mohan Singh Naghi	Melauli-5	9848891700
7	Gauri Dhami	Shiva Nath Ghaupalika-5	
8	Dal Bahadur Bista	Melauli-1	9865723463
9	Pravat Sapkota	DFO	9846049112
10	Amar Bahadur Bulan	AFO	9848044914
11	Ram Prasad Chaudhary	AFO	9840014142
12	Saru Shrestha	Ranger	9845291952
13	Saroj Pokharel	Ranger	9846360370

H. Profiling of protected and human wildlife conflicts associated wild animals in Nepal (Feedback Presentation During Policy Advocacy Training). Venue: United World Trade Center, Tripureshwar, Kathmandu. Organized By: Fecofun. Date: 08 Asadh 2074

SN	Name	Address
1	Shila Pokharel	FECOFUN, Center
2	Surbir Pokharel	FECOFUN, Chitwan
3	Mina Adhikari	FECOFUN, Gorkha
4	Laxmi BK	FECOFUN, Center
5	Nirmala Regmi	User Committee
6	Rabindra Singh Karki	FECOFUN, Kanchanpur
7	Radha Ballav Joshi	FECOFUN, Kanchanpur
8	Nabin Gurung	FECOFUN, Manang
9	Rupi Gurung	FECOFUN, Manang
10	Lila Nath Naupane	FECOFUN, Rasuwa
11	Man Bahadur Gurung	FECOFUN, Syanja
12	Shyam Bahadur Kattel	FECOFUN, Gorkha
13	Keshav Chandra Naupane	FECOFUN, Tanahu
14	Bharat Bahadur Ghale	FECOFUN, Centre
15	Padma Kumari Paudel	FECOFUN, Bardia
16	Radhika Bohara	FECOFUN, Bardia
17	Gita Sharma	FECOFUN, Syanja
18	Khem Raj Acharya	FECOFUN, Kaski
19	Mina Adhikari	FECOFUN, Tanahu
20	Loka Ahikari	FECOFUN, Lamjung
21	Sun Maya Nepali	FECOFUN, Kaski
22	Shovakar Sapkota	FECOFUN, Dang
23	Ishwori Prasad Pandey	Navadurga CFUG
24	Parvata Gautam	FECOFUN, Center
25	Shanta Sapkota	FECOFUN, Lamjung
26	Tulsi Prasad Adhikari	FECOFUN, Center
27	Bhuvan Keshar Sharma	CODEFUND

I. List of personnels consulted in mid-western development region

SN	Name	District	Phone	Email address
1	Mr. Sher Bahadur Rokaya	Surkhet (Assistant Forest officer)	9848286188	sb.rokaya@gmail.com
2	Mr. Vim prasad kandel	Rukum (Assistant Forest officer)	9846384037	
3	Mr. Jagannath Prasad Jaysewal	Rukum (officer)	9888530349	
4	Mr. Kalyan Sapkota	Surkhet (Regional Forest Officer)	9843064312	sapkota.kalyan@gmail.com
5	Mr. Santosh Gywali	Surkhet (Regional Forest Accountant)	9858050167	santoshgyawali937@gmail.com
6	Mr. Suryakanta Sigdel	Dang (Forest officer)	9857832514	
7	Mr. Navaraj Kafle	Salyan (Forest officer)	9841741652	naba_kafle@yahoo.com

I. List of people consulted in different dististricts

SN	Name of person	Address	District	Phone
1	Bimala Giri	Aadheri	Salyan	
2	Teknath Puri	Aagneta	Salyan	
3	Bali Thapa	Aagneta	Salyan	
4	Mamata Kunwar	Aagneta	Salyan	
5	Kalauti Kunwar	Aagneta	Salyan	
6	Lal Bahadur Gosai	Aagneta	Salyan	
7	Sarita Pariyar	Aanpchaur	Salyan	
8	Aasa Hamal	Aareghat	Salyan	
9	Dev Bahadur Rawal	Babiyachaur	Salyan	
10	Shila Kunwar	Babiyachaur	Salyan	
11	Jharna Kumari Kunwar	Babiyachaur	Salyan	
12	Lok Bahadur Buda	Babiyachaur	Salyan	
13	Sake Pun	Babiyachaur	Salyan	
14	Nepto Gherti	Babiyachaur	Salyan	
15	Shaigali Gosai	Babiyachaur	Salyan	
16	Manisa Puri	Babiyachaur	Salyan	
17	Kalpana Kunwar	Babiyachaur	Salyan	
18	Nirama Yari	Babiyachaur	Salyan	
19	Kalibahadur Yari	Babiyachaur	Salyan	
20	Amar singh Buda	Babiyachaur	Salyan	
21	Rupkali Budathoki	Babiyachaur	Salyan	
22	Dil Bahadur Buda	Babiyachaur	Salyan	
23	Kali Thapa	Babiyachaur	Salyan	
24	Pratima Kunwar	Babiyachaur	Salyan	
25	Sharmila Rokka	Babiyachaur	Salyan	
26	Vuili Thapa	Babiyachaur	Salyan	
27	Prakash Pariyar	Babiyachaur	Salyan	
28	Ganga pariyar	Babiyachaur	Salyan	
29	Sushila pun	Babiyachaur	Salyan	
30	Hukum Bahadur Giri	Babiyachaur	Salyan	
31	Indrakali Pun	Babiyachaur	Salyan	
32	Dali Thapa	Babiyachaur	Salyan	
33	Ganga Gherti	Babiyachaur	Salyan	
34	Moti Pun	Babiyachaur	Salyan	
35	Vim Bahadur Pun	Babiyachaur	Salyan	
36	Bima Pun	Babiyachaur	Salyan	
37	Yasodha Kunwar	Babiyachaur	Salyan	
38	Tul Bahadur Basnet	Babiyachaur	Salyan	
39	Amrit Gosai	Babiyachaur	Salyan	
40	Puspan Basnet	Bankar	Salyan	
41	Dala Bahadur Basnet	Bankar	Salyan	
42	Chuda mani Thapa	Bankar	Salyan	
43	Bajraman Gurung	Bhachok	Kaski	9817111208
44	Chandra Prasad Gurung	Bhachok	Kaski	9815166283
45	Dudhras Gurung	Bhoje	Lamjung	9846617530
46	Kamal pd Gurung	Bhoje	Lamjung	
47	Khamaya Gurung	Bhoje	Lamjung	
48	Baji Ram	Bhoje	Lamjung	
49	Om Prakash Gurung	Bhoje	Lamjung	9846219959
50	Kshiten Gurung	Bhraka	Manang	9846229895
51	Purushotam Mudubari	Bhujung	Lamjung	9846045014
52	Dil Bahadur Gurung	Bhujung	Lamjung	
53	Dil Bd Gurung	Bhujung	Lamjung	
54	Sher Bd Gurung	Bhujung	Lamjung	
55	Gunjaman Gurung	Chairman	Kaski	9746050986
56	Ghanashyam Chapagain	chairman	Kaski	9846054008
57	Til Bd. Gurung	Chairman	Kaski	9806605604
58	Bagbir Paija	Chairman	Kaski	9851107318
59	Gokul Baraula	Chairman	Kaski	9867631098
60	Tej Bd. Gurung	Chairman	Kaski	9857622133
61	Pemba Chiring Lama	Chame	Manang	9846639238

62	Sharmila Dangi	Chhatreswari	Salyan	
63	Sanat kumar bista	Chhonhup	Mustang	9851090495
64	Angel gurung	Chhonhup	Mustang	9746707018
65	Yanging gurung	Chhoser	Mustang	9746026380
66	Uttam gurung	Chhuksang	Mustang	9847680484
67	Diman Singh Gurung	Dharapani	Manang	9846019842
68	Mrs. Sonam Khando Gurung	Djhong	Mustang	9847670320
69	Mr. Dhawa Chiring	Djhong	Mustang	9847711167
70	Ravi Pokhrel	Ghachok	Kaski	9856029044
71	Nima tsiring gurung	Ghami	Mustang	9867608269
72	Ramlal bista	Ghami	Mustang	9860780327
73	Kasi Gurung	Ghanapokhara	Lamjung	
74	Chet Bahadur Gurung	Ghanapokhara	Lamjung	9846089832
75	Buddhi Prasad Gurung	Ghanapokhara	Lamjung	
76	Raj Gurung	Ghandruk	Kaski	9846398625
77	Malal Gurung	Ghyaru	Manang	9846229850
78	Krishna Basnet	Ghyrau	Manang	9849381193
79	Mrs. Dhnu K. Gurung	Jomsom	Mustang	9857650711
80	Mr. Narayan Pd. Thakali	Jomsom	Mustang	9847637947
81	Kalu yari	Jyamire	Salyan	
82	Mr. Rinjin Gurung	Kagbeni	Mustang	9847670444
83	Top Bahadur kunwar	Khagal	Salyan	
84	Momekaur Kunwar	Khagal	Salyan	
85	Goberdan Giri	Khagal	Salyan	
86	Tulasi Kunwar	Khagal	Salyan	
87	Jiuni Kunwar	Khagal	Salyan	
88	Raldu Karm Sarki Gurung	Khansar	Manang	9846229838
89	Prem Basnet	Khudi	Lamjung	9856030585
90	Gehendra Bhandari	Khudi	Lamjung	
91	Lekh bdr Bhandari	Khudi	Lamjung	
92	Narayan Bhandari	Khudi	Lamjung	
93	Mr. Jeewan Thakali	Kobang	Mustang	9846602746
94	Mr. Basan Magar	Kobang	Mustang	9847680295
95	Mr. Somal Hirachan	Kunjo	Mustang	9849367126
96	Mr. Avilal Magar	Kunjo	Mustang	
97	Purna Bahadur Sahi	Lahachok	Kaski	9851023671
98	Mr. Airways Jarbuga	Lete	Mustang	9847737115
99	Mr. Hai Bd. Bk	Lete	Mustang	9867700515
100	Tasi gurung	Lomanthang	Mustang	9746708402
101	Gyachu Bista	Lomanthang	Mustang	9746707915
102	Yomdel Gurung	Lomanthang	Mustang	
103	Tulsi dahal(uco officer)	Lomanthang	Mustang	9851160526
104	Bikash(accountant)	Lomanthang	Mustang	9856029626
105	Aash Kumar Gurung	Machhapuchhre	Kaski	9816649645
106	Binod Gurung	Manag	Manang	9851151971
107	Babulal Tiruwa	Manang	Manang	9843061124
108	Mr. Man Bd. Hirachan	Marpha	Mustang	9746700686
109	Yam Nath Adhikari	Mijuredanda	Kaski	
110	Hom Bahadur Gurung	Mijuredanda	Kaski	9846231786, 9815121182
111	Mr. Ghirmi Gurung	Muktinath	Mustang	9847682165
112	Mr. Suklal Sunuwar	Muktinath	Mustang	9867769425
113	Prem Prasad Gurung	Namarjung	Kaski	9806555786
114	Dilip Gurung	Namarjung	Kaski	
115	Mani Prasad Gurung	Namarjung	Kaski	
116	Mingmar Phuntsok	Nar	Manang	9846786812
117	Krishna Lama	Ngawal	Manang	9856049199
118	Ganesh Rokka Magar	Nigalchul	Salyan	
119	Gehendra Gurung	Parche	Kaski	9846257732, 9816660571
120	Bhim Raj Gurung	Parche	Kaski	
121	Ratan Singh Gurung	Parche	Kaski	
122	Fadindra Gurung	Parche	Kaski	
123	Tej Man Gurung Member	Pasgaon	Lamjung	
124	Golal Gurung	Pasgaon	Lamjung	

125	Manlal Gurung	Pasgaon	Lamjung	
126	Chandra Gurung	Pasgaon	Lamjung	9806756095
127	Bal Mukunda Gurung	Pasgaon	Lamjung	
128	Ratan Singh Gurung	Pasgaon	Lamjung	974601329
129	Birman Gharti Chhetri	Pasgaon	Lamjung	
130	Yog Devi Gurung	Pasgaon	Lamjung	
131	Pema Dhorje Lama	Phoo	Manang	9849144826
132	Yam Bahadur Ghale	Pisang	Manang	9849421945
133	Toran Bahaur Gurung	Rivan	Kaski	9846182679
134	Hukum Singh Gurung	Sardikhola	Kaski	9819160547
135	Man Pd. Gurung	Secretary	Kaski	9746028013
136	Purna Pd. Devkota	Secretary	Kaski	9846111971
137	Ghana Bd. Gurung	Secretary	Kaski	9819136104
138	Beg Bd. Pun	Secretary	Kaski	9847642750
139	Jas Bd. Tilija	Secretary	Kaski	9847655610
140	Om Budhathoki	Secretary	Kaski	9746718671
141	Prem Bd. Gurung	Secretary	Kaski	9846031994
142	Aananda Subedi	Shikha	Myagdi	9756000019
143	Aita Bahadur Tamang	Siding	Kaski	9846398708
144	Dan Gahadur Gurung	Sildujure	Kaski	9816126057
145	Surya Pandey	Sildujure	Kaski	
146	Dungi Raj Baral	Sildujure	Kaski	
147	Dhaknath Baral	Sildujure	Kaski	
148	Ram Bahadur Thapa	Simpani	Lamjung	9846567587
149	Babu Ram Bhandari	Simpani	Lamjung	
150	Ramesh gurung	Surkhang	Mustang	9846151752
151	Dhundu gurung	Surkhang	Mustang	9867644496
152	Maya bista	T- sarang	Mustang	9847788897
153	Tsewing gurung	T- sarang	Mustang	9861461323
154	Bal Bahadur Gurung	Taghring	Lamjung	9846273817
155	Dhan Bahadur Gurung	Taghring	Lamjung	
156	Jeet Bahadur Gurung	Taghring	Lamjung	
157	Shree Prasad Gurung	Tangting	Kaski	9846323081
158	Karma Ungel Ghale	Tankimanang	Manang	9849896194
159	Deepak Baral	Taprang	Kaski	9846333695
160	Manakali Gherti	Thara	Salyan	
161	Devi Pun	Thara	Salyan	
162	Laxmi Kunwar	Thara	Salyan	
163	Dhansingh Gosai	Thara	Salyan	
164	Gyan Kumari Gurung	Thoche	Manang	9843138036
165	Shree Prasad Gurung	Thumakodanda	Kaski	
166	Yubraj Gurung	Thumakodanda	Kaski	
167	Bharat Gurung	Thumakodanda	Kaski	
168	Pushpa Gurung	Thumakodanda	Kaski	
169	Mr. Deep Sagar Thakali	Tukuche	Mustang	9849356546
170	Mr. Dud Bd. Magar	Tukuche	Mustang	9849685267
171	Bin Prasad Ghale	Uttarkanya	Lamjung	9819196733
172	Kharka Jung Gurung	Uttarkanya	Lamjung	
173	Lok Bahadur Ghale	Uttarkanya	Lamjung	
174	Chhabi Prasad Gurung	Warchok	Kaski	9803554532
175	Yogendra Gurung	Yanjakot	Kaski	9816132023
176	Ghanshyam Lamichhane		Kaski	
177	Ganesh Khanal		Kaski	
178	Bhim Prasad Kafle		Kaski	
179	Kumar Gurung		Kaski	
180	Maya Gurung		Kaski	
181	Nanda Prasad Gurung		Kaski	
182	Amar Singh BK		Kaski	
183	Prem Gurung		Kaski	
184	Nanda Lal Adhikari		Kaski	

Annex 5. Visited districts for information collection

Baitadi	Kaski	Palpa
Bardia	Lamjung	Rukum
Chitwan	Manang	Salyan
Dadeldhura	Mustang	Surkhet
Dang	Myagdi	Syanja
Kabhrepalanchok	Okhaldhunga	Palpa
Kanchanpur	Kailali	Solukhumbu

Annex 6. List of districts having human wild animal conflicts cases

SN	Districts	SN	Districts
1	Achham	44	Nuwakot
2	Arghakhanchi	45	Okhaldhunga
3	Baglung	46	Pachthar
4	Baitadi	47	Palpa
5	Bajura	48	Parbat
6	Banke	49	Parsa
7	Bara	50	Ramechhap
8	Bardia	51	Rasuwa
9	Bhaktapur	52	Rautahat
10	Bhojpur	53	Rukum
11	Chitwan	54	Rupandehi
12	Dailekh	55	Salyan
13	Dang	56	sanghja
14	Dedheldhura	57	Sangkhuwashava
15	Dhading	58	Saptari
16	Dhankuta	59	Sarlahi
17	Dhanusha	60	Sindhuli
18	Dolakha	61	Sindhupalchok
19	Dolpa	62	Siraha
20	Doti	63	Solukhumbhu
21	Gorkha	64	Sunsari
22	Gulmi	65	Surkhet
23	Illam	66	Tanahu
24	Jajarkot	67	Taplegunj
25	Jhapa	68	Therathum
26	Jumla	69	Udayapur
27	Kailali		
28	Kalikot		
29	kanchhanpur		
30	Kapilvastu		
31	Kaski		
32	Kathmandu		
33	Kavrepalanchowk		
34	Khotang		
35	Lalitpur		
36	Lamjung		
37	Mahottari		
38	Makawanpur		
39	Morang		
40	Mugu		
41	Mustang		
42	Myagdi		
43	Nawalarasi		

Annex 7. Photo Plates

Consultation workshops and field activities related photo plates.



Consulation Workshop at Pokhara, Kaski



Consulation Workshop at Hetauda



Consulation Workshop at Biratnagar.



Consulation workshop at Suklaphanta National Park



Group photo with members of Baljanath Buffer Zone Community Forest User Group Hattihala, Bedkot Municipality Kanchanpur



Interaction with Mr. Sudhir Koirala, Director, Far-west Regional Forest Directorate, Dhangadi, Kailali.



Interaction with members of Forest Department, Kailali, Nepal.



Interacting with women Group, Shikhar-2, Mahesh, Kailali.



Interaction with students of Baitadi, Nepal.



Interaction with local people about problematic animals in the area. Jhulaghat, Baitadi.



Interacting with local people of Melauli Municipality, Baitadi.





Case: Leopard attacked
Name of victim: Gauri Dhami
Address: Sibanath Gaunpalika, Ward: 5
Date/Time: 2074/2/17; 01:00 am

Local people of Suryabinayak, Bhaktapur, injured by Leopard in 2013



Note: In single day, leopard injured 8 people in 2013 in periphery of Suryabinayak Forest area, Bhaktapur. Incident was controlled by killing leopard by local people.

Annex 6

Photo plates of human wild animal conflict cases.

