

LIVING WITH TIGERS:

POVERTY REDUCTION FOR HUMAN
WILDLIFE COEXISTENCE

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Nepal in Global Map

Total Area: 147,181 KM²

Total Population: 26,494,504
(2011 Census)

Capital: Kathmandu

Latitude: 26°22' to 30°27' N

Longitude: 80°4' to 88°12' E

Elevation: 70 to 8848 m

Major Occupation: Agriculture



Top of the world (8848 m)



70 m above mean sea level

Uniquely rich diversity

- Geography
- Dramatic changes in elevation
- High variability in the physiographic and climatic conditions.

Nepal covers 0.1 percent of Global Area. Has 12 of the 867 global terrestrial ecoregions. Has 118 ecosystems and 35 forest types.

Table 5: Status of Nepal's species diversity

Group	Number of known species	Percent of known species in the world*	Reference
Flora			
Angiosperms	6,973	3.2	UNEP-WCMC (2004)
Gymnosperms	26	5.1	Bista (2006)
Pteridophytes	534	5.1	DPR (2000)
Bryophytes	1,150	8.2	Pradhan and Joshi (2009)
Lichens	465	2.3	Sharma (1995)
Fungi	1822	2.6	Adhikari (2000)
Algae	1001	2.5	Prasad (2013)
Flora Total	11,971	3.2	
Fauna			
Mammals	208	5.2	Baral and Shah (2008); Jnawali <i>et al.</i> (2011)
Birds	867 ³	9.5	BCN and DNPWC (2011)
Reptiles	123	1.9	Schleich and Kastle (2002)
Amphibians	117	2.5	ICIMOD and MOEST (2007)
Fishes	230	1.9	Rajbanshi (2013)
Mollusks	192	N/A	Budha (2012)
Moths	3,958	3.6	Haruta (2006)
Butterflies	651	3.7	ICIMOD and MOEST (2007)
Spiders	175	0.4	
Rotifers	61	N/A	Surana <i>et al.</i> (2005)
Crustaceans	59	N/A	Tiwari and Chhetry (2009)
Other Insects	5,052	0.7	Thapa (1997)
Platyhelminthes	168	1.4	Gupta (1997)
Fauna Total	11,861	1.1	

* Computed based on Wilson (1988, 1992); NA = Not Available

40.36% of total area of the country is forest (5.96 million ha)

PAs cover 17.32 % of total forest area (1.03 million ha)

Total PAs = 20

National Parks: 11

Wildlife Reserve: 2

Conservation Area: 6

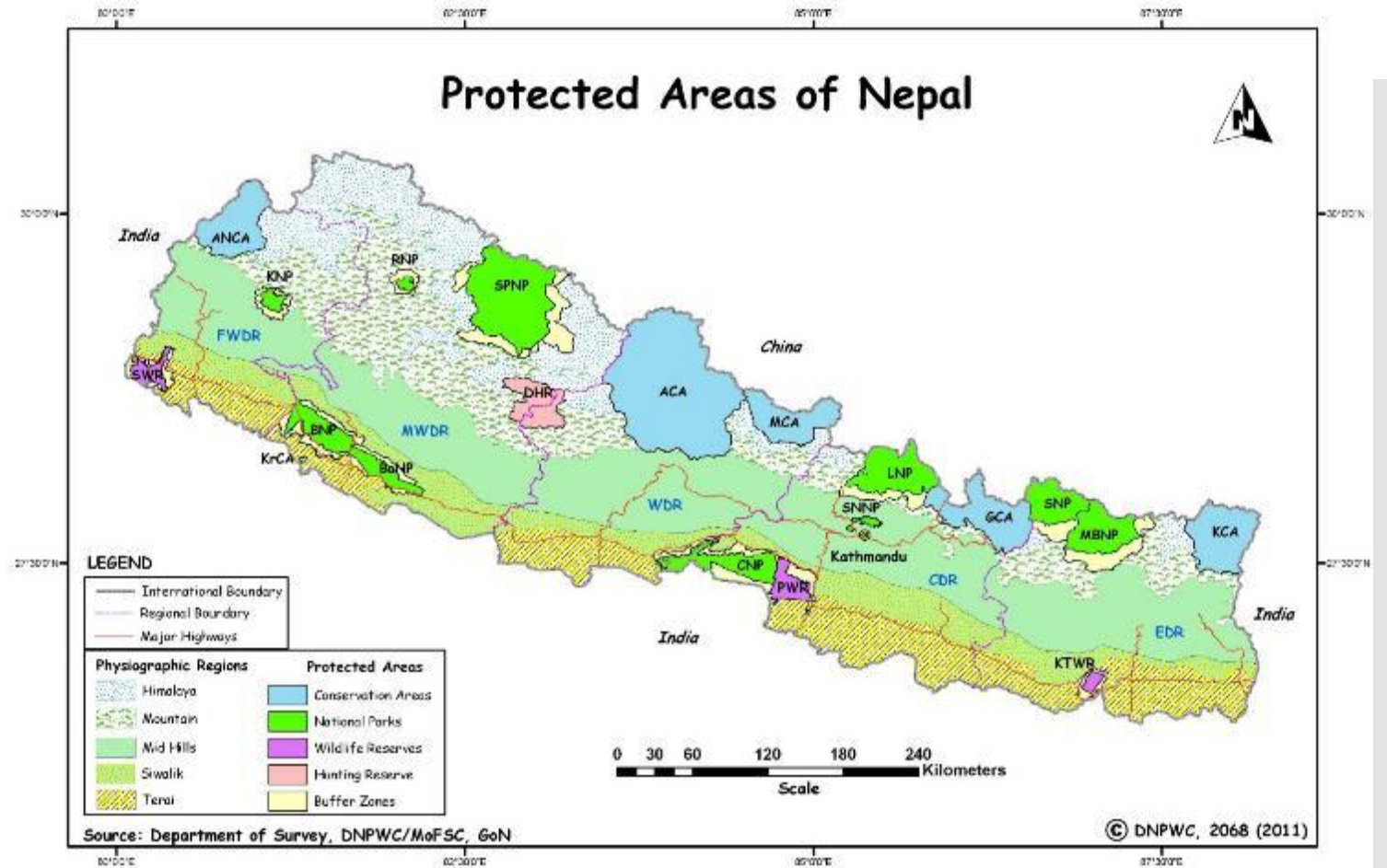
Hunting Reserve: 1

Ramsar Sites (9)

Natural World Heritage Sites (2)

Total Area = 34,193 km² (23.23%)

Data source DNPWC government of Nepal (2013)



Conservation in Nepal

- Effective conservation actions:
 - Community managed buffer zones
 - Successful anti-poaching initiative
 - Tiger Conservation Action Plan for Nepal (2008-2012)
 - Global Tiger Summit 2010, St. Petersburg, Russia, 13 range countries committed to double wild tiger population by 2022.
 - National Tiger Recovery Program (NTRP) since 2010.
- Increased number of tigers (*Panthera tigris tigris*)
 - First national level assessment of tiger number; 121 individuals (year 2008/09)
 - Tiger number estimated at 198 (120 in CNP, 50 in BNP; 28 others NP) 95% Confidence Interval (163-235)

Patterns of human death and injury due to large-mammal attacks (mean and standard deviation) in the period from 2010-2014

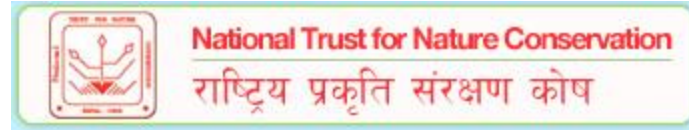
Acharya, KP, et al. Human-wildlife conflicts in Nepal: Patterns of human fatalities and injuries caused by large mammals. PLoS ONE 11(9):e0161717

Doi:10.1371/journal.pone.0161717.to
01

Wildlife	Contribution [%}	Avg # of attacks per yr ^a	Avg # of fatalities per yr ^a	Avg # of attacks per season ^b	Avg # of fatalities per season ^b
Elephant	30	27.4 ± 7.7	18 ± 4.6	34.2 ± 16.5	22.5 ± 11.7
Leopard	21	19.4 ± 11.6	8 ± 5.4	24.2 ± 3.8	10 ± 6.6
Rhinoceros	18	17 ± 4.3	3 ± 1.2	21.2 ± 16	3.7 ± 3.5
Bear	12	11 ± 4.3	1 ± 1.2	13.7 ± 2.6	1.2 ± 1.2
Tiger	10	8.8 ± 5.4	4.8 ± 3.3	11 ± 4.8	6 ± 1.4

^a observation period = 5 years

^b number of seasons per year = 4



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General Objective: To promote human wildlife co-existence

Specific Objectives:

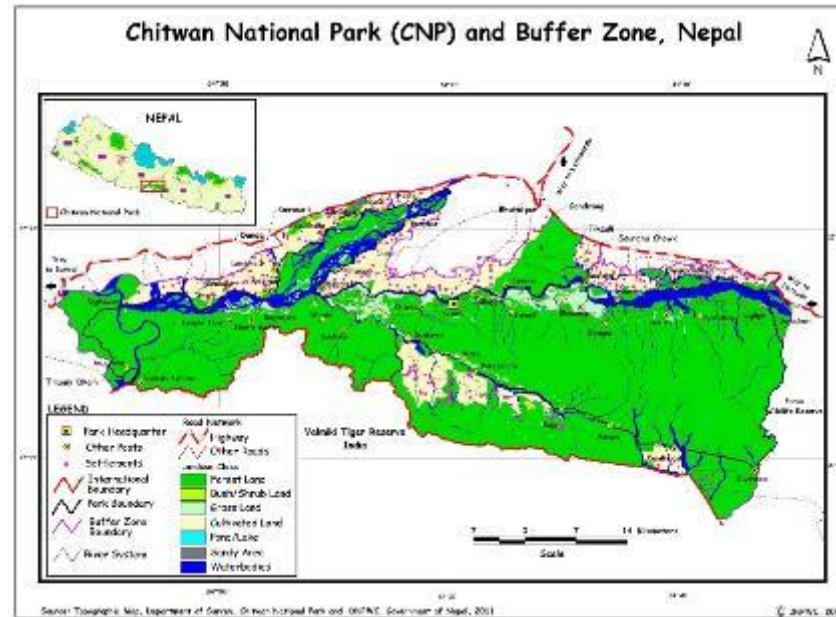
- 1) Reducing loss and damage of human and tigers (life) by implementing preventing measures and alternative livelihood programs
- 2) Increasing tolerance level of communities towards tigers through behavioral change



LWT working with National Parks

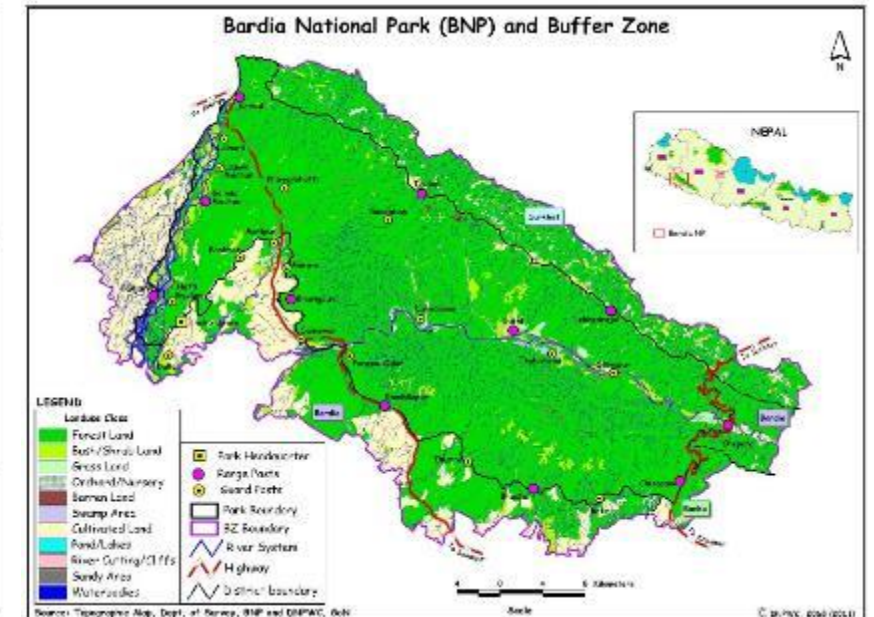
Chitwan National Park

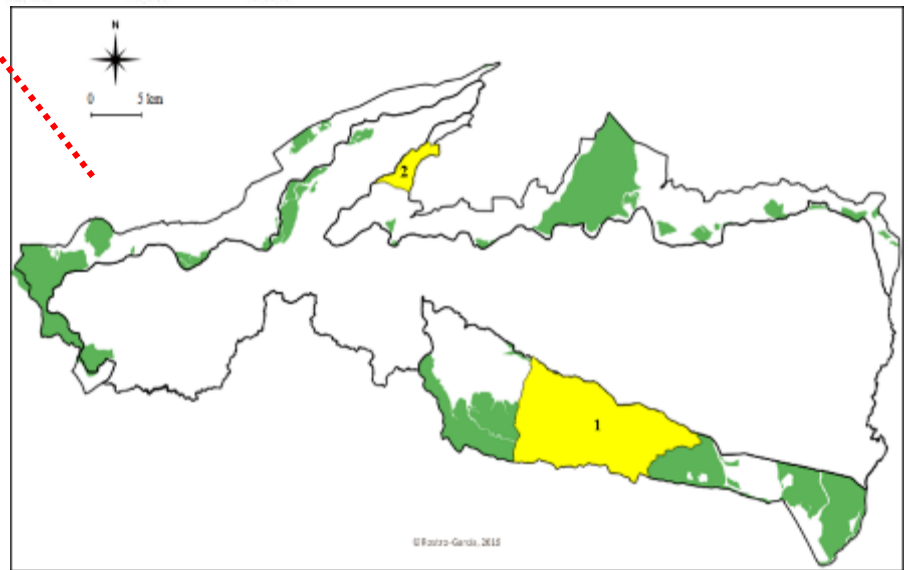
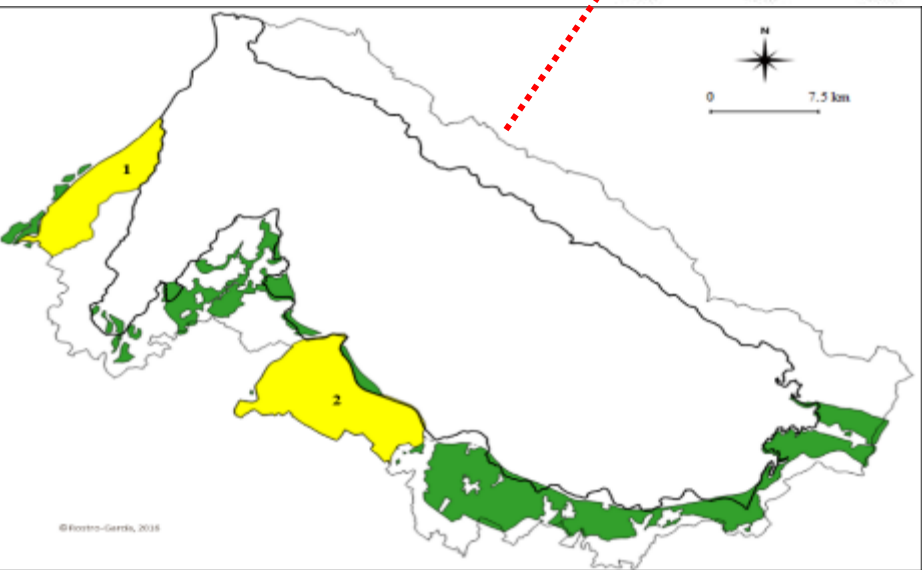
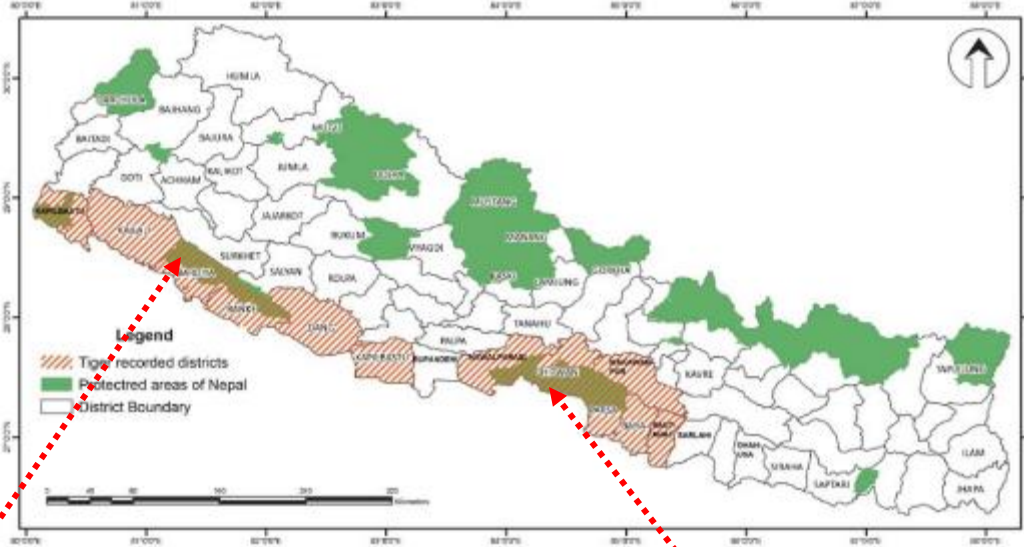
- Established : 1973
- Area : 952.63 km²
- Buffer Zone : 729.37 km²
- UNESCO World Heritage Site in 1984
- BZUC: 21
- BZCFUG: 72



Bardia National Park

- Established : 1976
- Area : 968.00 km²
- Buffer Zone : 507.00 km²
- BZUC: 19
- BZCFUG: 110





BNP:

1. Janaknagar BZCFUG (289 HHs) under Patabhar BZUC
2. Ramvapur BZCFUG (750 HHs) under Kareliya BZUC

CNP

1. Tamta-Nar BZCFUG (454 HHs) under Ayodhyapuri BZUC
2. Hirakunj BZCFUG (154 HHs) under Kalabajar BZUC

BZCFUG: Buffer Zone Community Forest User Groups
BZUC: Buffer Zone User Committee

LWT Activities

Reducing risk of tiger attack

Safe natural resource collection practices and use

Safe livestock husbandry practices

Fodder plantation, energy efficient cook stoves (bio-gas plants)

Sharing information about the tiger habitat, movement pattern, seasonality, trend of attacks and other behaviors (felid ecological research: camera traps, transect surveys, genetic & diet analysis)

DPhil WildCRU, Oxford University student Amy Fitzmaurice



LWT Activities

Improving livestock protection

Improved livestock sheds

Veterinary care and improved husbandry practices

Support in establishing or improving communal grazing land

Stall feeding

First Aid Training

Standard shed



Improved shed



LWT Activities

Alternative livelihoods initiative to reduce the dependency on forest resources

Alternative Livelihoods & Market Research Study conducted by 3rd party expert

Workshops provided in horticultural training, electric fence repair, hospitality training, advanced tailoring, livestock husbandry, pickle making, etc.



LWT Activities

Awareness & Behavioral Change

Use of social marketing tools to raise awareness and bring about lasting human behavioral change

Street drama / Radio drama programmes



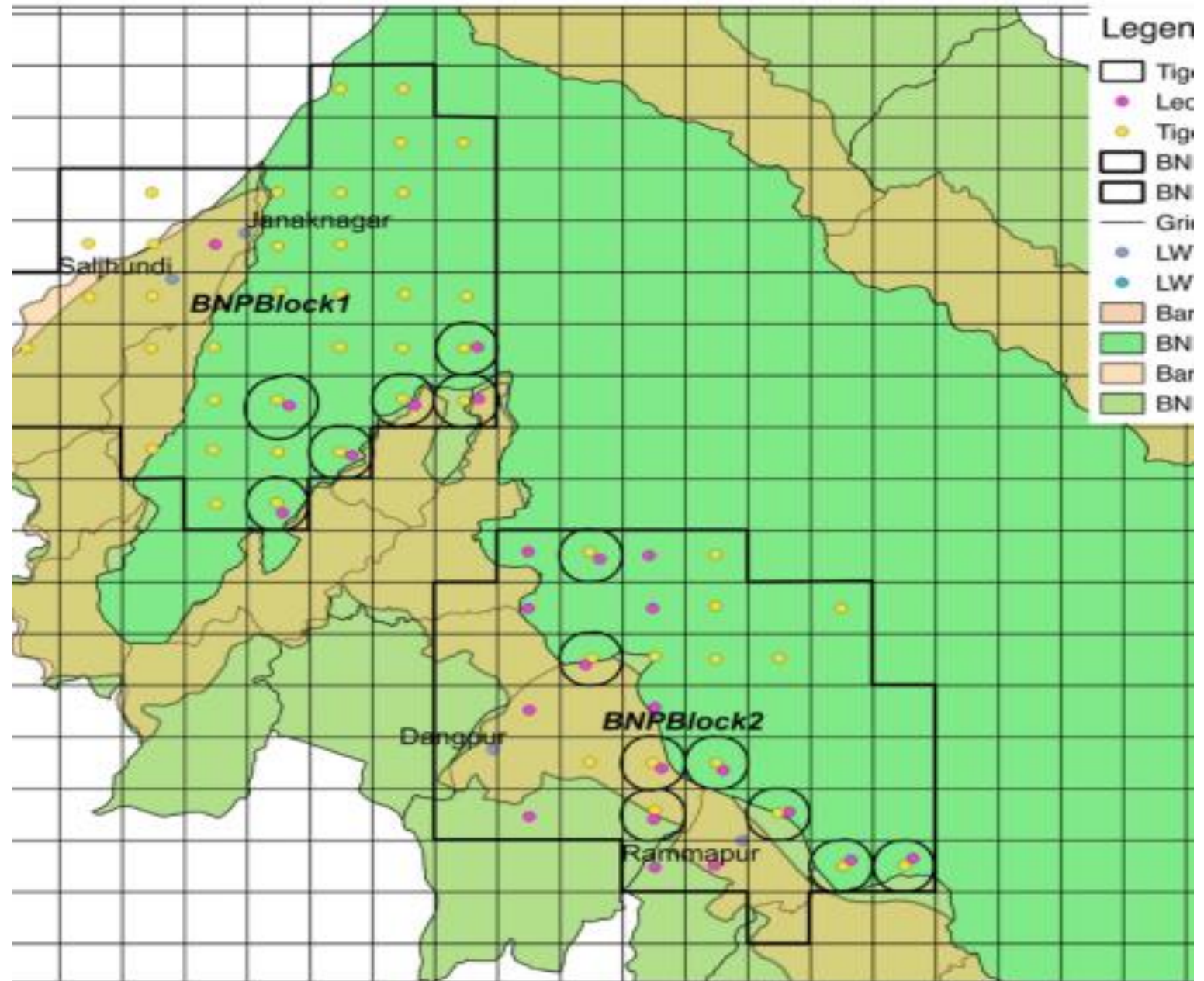
LWT Activities

Social and Ecological Research

To better understand land use by both tigers/leopards & humans

To orient user groups on movement pattern, habitats, incidence status and other behaviors of tigers/leopards

Create conflict hotspot maps indicating areas that present the greatest risks to people & livestock



Approaches Adopted

Working with Multi-stakeholders, like Department of National Parks and Wildlife Conservation, National Parks, BZUC, BZCFUG, National Trust for Nature Conservation, etc.

Local capacity development

Community engagement

Mitigation measures

Training anti-poaching units



Challenges

- Conflicts caused by other animals like Elephants, Rhino, Wild boar, Deer, etc.
- Demand is very high
- High dependency of local community towards project
- Buffer Zone User Committee investment in similar activities is small

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Opportunity

images ©Amy Fitzmaurice

- Potentiality to extend coverage to other BZUCs and BZCFUGs
- Can be replicated in other National Park Buffer Zone areas too
- As a result of the success with the predator proof pens in the LWT project other international NGOs and national NGOs have also invested in building PPPs



A tiger with orange fur and black stripes is walking from left to right across a dirt path in a dense forest. The background is filled with green trees and foliage. The text is overlaid in yellow on the image.

**Thank You
Namaste**

Questions ?

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