Impacts of Wild Animals on Community People in Dallagaon, Bardiya Nepal

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Abstract

This study examines the impact of wild animals on the livelihoods of people living in and around Dallagaon, Bardiya National Park, Nepal. Using interviews, observations, and survey questionnaires, the research explores awareness, safety, economic, psychological, and social effects of wildlife. Findings (mean score 4.3) reveal frequent crop and property damage, financial losses, and widespread fear and stress disrupting daily life. Despite tourism benefits, economic and emotional hardships prevail. A mean score 2.75 indicates community dissatisfaction with government support and compensation. Nevertheless, local awareness and collective efforts show resilience. The study concludes that human–wildlife conflict is a multidimensional issue requiring integrated solutions, improved preventive measures, fair compensation, and community-centered policies for sustainable coexistence.

Key Words: Bardiya National Park, Community, Conservation, Crops, human wildlife conflict

Introduction

Protected areas are an essential component of conservation strategies throughout the world (Andrade & Rhodes, 2012). And it represents the only one significant method of conservation of biodiversity (Martín-López et al., 2008). Over the past two decade, it has become widely accepted method that management of conservation areas should include the cooperation and support of local communities (Berkes, 2007a). This has exhilarated the development of community based conservation (Campbell & Vainio-Mattila, 2003), which emphasizes the role of local communities in decision making (Rijal, 2023). According to this approach, local communities should be active members in conservation areas

management (Vodouhê et al., 2010). Community based conservation projects have now started in many countries (Berkes, 2007b), Nepal also adopted community based conservation projects, and have contributed to decrease in poaching, improved conservation through increase in wildlife games scout and direct economic benefit (Lamichhane et al., 2020).

Wildlife conservation started in Nepal in 1958 with the declaration of wild life conservation act 1958 (Chaudhary, 2000). The WWF (World wildlife fund for nature) and government of Nepal started the first Rhino conservation project in chitwan in 1967 for increasing the population one-horned rhinoceros (Subedi et al., 2017). Since then government of Nepal started protection of large mammals, including endangered tigers and Asian elephants, and their habitats (Pradhan et al., 2011.). Then governments of Nepal also lunched community-based forest rehabilitation program in 1976 to protect natural resource and prevent unsustainable utilization of natural resource (Cadman et al., 2023).

Community forest under the forestry program was state owned forests handed over to the local community's people so that the forest and the resource could be locally sustainably managed (Tole, 2010). Community forests make up 39% of Nepal total forest cover, and provide goods and services to 50% of Nepal population (Pathak et al., 2017). Rural community's people, whose livelihood totally depends on agriculture and livestock farming, typically incur economic losses when crops are attacked or livestock are killed by wild animals (Baral et al., 2021a). Some wildlife, such as leopards, tigers and elephant not only kill livestock they also causes property damage, injure people (Acharya et al., 2016). These events especially the ones that are human life loss events, can lead retaliatory killings of wild animals, even legally protected, endangered or threatened (Viollaz et al., 2021).

Many protected sites were originally established by either displacing local community people or without proper consideration to their livelihoods (Kabra, 2009). The creation of protected areas can conflict with rural communities in a variety of negative ways (Soliku & Schraml, 2018). like as the restriction of access to traditionally used resource, tourist disruption of economy and culture, wild animal depredation of crops and livestock and displacement of human beings from their original homelands, leading to social and cultural disruption and imposed poverty (Massé, 2016) .The concept of linking conservation to development that has brought about a major shift in the way conservation management (Sharma et al., 2010), believing that the local population will be more willing to support the conservation of biodiversity if they gain some benefit from it (Pretty & Smith, 2004).

The forestry sector plays important role in supporting the economic development and social life of the Nepalese people (Bhatt et al., 2021). Forest shrub, and land around farmer's offers the primary energy inputs and fodder needs (Franzel et al., 2014). Forest litter and

dung help to increase the fertility of farms land (Gauli et al., 2022). Forest watersheds are the main source of water, which is used in energy, irrigation, and for domestic uses (Lele, 2009). People in rural areas to a large extent depend on the production of non - wood forest products for income (Derebe & Alemu, 2023). People in Nepal uses forest products as fuel, fodder, timber, medicine and food (Shrestha et al., 2020). Forest supply over 75% of the energy resources and over 40% of the fodder needs (Khadka et al., 2021).Mismanagement in the gathering harvesting process of the major economic plants like medicines and orchids is a critical problem which has been pushing plants to extinction from the species, particularly timber, medicines and ornaments are hence under threat (Boampong, 2021.).

Various researchers (Dahal et al., 2022, Gillingham & Lee, 1999 , Pozo et al., 2021, Studsrød & Wegge, 1995) research on the topic related to Impact of Wild Animals on Community People however there are under research in the case of Nepalese universities. There are many studies have conducted on wild animals impacts on community and it did not compare wild animals impact on different community people (Baird et al., 2009). Thus, in our study, we focus on understanding about Dallagaon Impact of Wild Animals on Community People in Bardiya National park.

Statement of the Problem
Human–wildlife conflict is a major concern for communities around Bardiya National Park, causing crop and livestock losses, threats to human life, economic damage, psychological trauma, and disruption of daily and social activities. Despite legal protections and compensation schemes, local people remain dissatisfied with authorities' responsiveness. Socio-demographic factors such as education, gender, and dependence on natural resources influence perceptions and reactions to wildlife impacts. This study aims to understand the effects of wildlife on community life and local attitudes toward conservation.

Objectives of this Study
The main objective of this study is
Specific Objective
1. To examine the level of awareness and perception of Dallagoan community people regarding wildlife conservation.
2. To analyze the economic, social, security, and psychological impacts of wild animals on the daily lives of Dallagoan local people.
3. To examine how wildlife-related activities influence the overall well-being of the community local resident.

Limitations
This study is delimited to the following boundaries

1. **Subject Delimitation:** The research focuses exclusively on the awareness levels, and the economic, social security and psychological impacts of wild life on community people. Other aspects of conservation such as ecological or biological assessment of wild life are beyond the scope of the study.
2. **Area Delimitation:** The study is geographically limited to Dallagoan a community people located near Bardiya National Park.
3. **Methodological Delimitation:** The study is limited to **self-reported data** collected through **structured questionnaires and interviews**, which may include personal bias or subjective interpretation. Additionally, the study did not incorporate **direct field observations,** wildlife monitoring, or official records from park authorities due to time and resource limitations.
4. **Time Delimitation:** The data for this study are collected within a **specific time period (May - 2025).** Wildlife activities and community responses outside this timeframe are not captured.

Literature Review

In Nepal mostly people are highly depend on forest resource and face significant challenges of human wildlife conflict (Baral et al., 2021b). Those people who live with wildlife in and around protected areas directly experience the impacts of human wildlife conflicts (Ayalew & Melese, 2025a). The lack of access to forest resource for the local community people residing in buffer zones of protected areas has created conflict between human and wild life (Silwal et al., 2022). Human wildlife conflict has been understood as negative interaction between people and wildlife that generates unwanted impacts on human social, economic or cultural life, wildlife conservation of species (Nyhus, 2016).

It affects the economy of both human beings and wildlife (Barua et al., 2013). People lose their crops, livestock, property and sometimes their lives whereas animals, which are already endangered or threatened, are often killed by people (Poudel & Lamichhane, 2020) Human and wildlife conflict is a universal problem that varies according to geography, and land use patterns, attitude of people and the habitat of the wild life and behavior of wildlife or individual animal behavior within the species (Megaze et al., 2017). Wildlife damage has disastrous economic disadvantage for vulnerable residences (Thompson et al., 2014). The major sources of human wildlife conflict include property damage, crops, loss of livestock, harassment to the people, sometimes even death (Gemeda & Meles, 2018). To reduce the negative impacts of wildlife on people (Higginbottom et al., 2003), different types of social security schemes ought to be proposed as a part of conservation strategies because poor societies are relatively more dependent on forest products (Tirivayi & Rodriguez, 2017), which is likely to increase the intricacies of protected area management both for human and wildlife needs (Campbell, 2018).

In most of the protected areas the time spent protecting property (Bitariho et al., 2015). Poverty increase due to loss of crops and damage of property is commonly reported, resulting in dependence on selling labour to earn livelihood(Mehta & Ghosh, 2004.). Man are engage in night watching while women and children watching during the day time. Time spent guarding by children obviously leads to loss of opportunities for education (David, 2012.). Farmers suffer from attacks by wildlife such as monkeys, elephants, buffalos and tigers (Madhusudan, 2003).In addition there have been human deaths from attacks by Rhino, Tigers and elephants, Wild animals are very aggressive to the native people who were around the National parks (Silwal et al., 2017).Wild animals create numerous employment opportunities, Wild animals attract foreign communities who travel to such treasured wildernesses to view wild animals (Ivanova et al., 2022).

In some context, wildlife is revered, contributing to a sense of culture identity and spiritual well-being (Bell et al., 2018). In Nepal and India, for example, elephants, tigers and monkeys are considered scared in Hindu and Buddhist traditions (Acharya et al., 2019).

Method and Procedures

Study Area

Bardiya National Park (BNP) is one of the largest protected areas in the lowland Terai covering an area of 368 km2 in the Bardiya districts of western Nepal. The terrain of the park ranges from 152 m to 1561 m from mean sea level (BNP report, 2020). BNP provides a home to around 61 species of mammals including tigers, leopards, rhino ceros, elephants, and spotted deer and 513 species of birds, 42 herpetofauna and 120 fishes have been recorded from the park area. The southern end of the park extends into Khata forest corridor, connecting to Katarniaghat Wildlife Sanctuary in India (BNP Report, 2020).

Madhuwan is a municipality located in Bardiya District of Lumbini Province of Nepal. The municipality was established on 2 December 2014, when the government announced 61 more new municipalities. This new municipality was established merging the two then VDCs, e.g. Sanoshree and Taratal and this new municipality was named Sanoshree Taratal. On 10 March 2017, two more VDCs Suryapatawa and Dhodhari Incorporated merged with this municipality and renamed it to Madhuwan. Suryapatawa ward No-1 Dallagaun was selected for the study. This was a backward area of this municipality and far from municipalities and very near from BNP. Bardiya National Park touches the border of the municipality by north.

This research is mainly based on primary data which is obtained through household survey, direct observation. The questionnaires included close ended questions

Participants

The data was collected using the primary method. Then the data collected is computed and interpreted based on the objectives of the Study. In 126 household only 112 respondents were available and rest of the respondent were not available during data collection time. The participants were Community people of Dallagaon. Among the 112 households 40 are male 72 Female were respondents.

Data Collection

This research is mainly based on primary data which is obtained through household survey, direct observation.

Research Instrument

The research of this study is a survey questionnaire, direct observation. The study adopts a survey research design based on survey method through questionnaires under a quantitative research. The questionnaires included close ended questions. Research data were collected by using the survey method and the questionnaire is divided into five sections of 26 questions. Respondents indicate their level of agreement with each statement, allowing researchers to quantify and analyze the impact of wild animals on the community people. It consists of five sections; Section 1: Demographic Information, Section 2. Awareness and Knowledge of Wild animals, Section 3: Safety and security, Section 4: Economic Impact, Section 5: Psychological and Social Impact, Respondents indicate their level of agreement with each statement, allowing researchers to quantify and analyze their Impacts of Wild Animals on Community people the subject being studied. Each part of questionnaire is consisting of Likert scales strongly disagree, disagree, undecided, agree, and strongly agree.

Data Analysis:

The study incorporates mixed data obtained through survey questionnaires, direct observations. Quantitative data will be processed and presented through descriptive statistics.

Result

Demographic factors that influence Impacts of Wild Animals on Community people.

The sample accurately represents communities near the national park, considering demographic factors such as gender, age, education, occupation, and length of residence.

Table: 1

Demographic Characteristics of the Survey Respondents

Variable	Categories	Frequency	Percentage
Sex Respondent	Male	40	35.71%
	Female	72	64.28%
Age of Respondent	18-30	22	19.64%
	31-40	23	20.53%
	41-50	34	30.35%
	51-60	21	18.75%
	61+	12	10.71%
Education level of the respondent	Master	1	0.89%
	Bachelor	5	4.46%
	12 PASS	3	2.67%
	10/SLC/SEE PASS	24	21.42%
	Non-formal education	79	70.53%
Occupation of Respondent	Farmer	87	77.67%
	Trade/Business	4	3.57%
	Government Employee	--	--
	Other	21	18.75%
Length of Residence Near Conservation Area	01-May	3	2.64%
	05-Oct	4	3.57%
	Nov-20	5	4.46%
	20+	100	89.28%

Source: Field Survey, 2025

Awareness and Knowledge of Wildlife Animals

Table: 2

Awareness and knowledge of wild Animals
The study reveals high awareness and concern about wildlife impacts among respondents. Most 99.11% reported frequent wild animal intrusions, and 80.35% felt unsafe in forest areas. About 89.28% agreed that wild animals cause fear and injury, and 69.64% reported financial losses. Similarly, 89.29% believed women, children, and disabled people face higher risks, while 69.64% avoid certain areas due to fear. A strong majority 95.52% urged greater government protection, and 82.15% supported awareness programs to reduce conflict. Overall, findings highlight that human–wildlife conflict causes fear, insecurity, and economic loss, demanding stronger government action and community awareness initiatives.

StatemA1:G11ents	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Mean Score
Wild animals often enter our community.	0	0	1 (0.89)	54 (48.21)	57 (50.90)	4.5
I feel unsafe working a forest area.	3 (2.68)	15 (13.40)	4 (3.57)	60 (53.57)	30 (26.78)	3.88
Wild animals have caused injuries or fear in the community.	2 (1.79)	8 (7.14)	2 (1.79)	71 (63.39)	29 (25.89)	4.04
My family has suffered financial loss due to wild animals attack.	4 (3.57)	28 (25)	2 (1.79)	51 (45.53)	27 (24.11)	3.61
Children, women, elderly and disabled people are more at risk from wild animals.	1 (0.89)	9 (8.03)	2 (1.79)	66 (58.93)	34 (30.36)	4.09
I avoid certain areas because of fear of wild animals	2 (1.79)	28 (25)	4 (3.57)	66 (58.93)	12 (10.71)	3.51
The government should do more to protect communities from wild animals.	1 (0.89)	4 (3.57)	0	61 (54.46)	46 (41.07)	4.31
Awareness program can help reduce human wild life conflict.	1 (0.89)	13 (11.60)	6 (5.36)	69 (61.61)	23 (20.54)	3.89
Building fences or barriers would help prevent wild animals.	5 (4.46)	19 (16.97)	14 (12.5)	56 (50)	18 (16.07)	3.56

Source: Field Survey, 2025

Safety and Security

The study shows that wild animals significantly affect community safety and security. Most respondents 92.86% feel unsafe, and 95.54% report property damage by wild animals. About 94.64% have experienced or heard of wildlife-related injuries, creating widespread fear. Although 61.61% acknowledge some government measures, many remain dissatisfied. Overall, human–wildlife conflict causes fear, insecurity, and economic loss,

emphasizing the need for stronger, community-centered government action with effective protection, compensation, and awareness programs.

Table: 3
Safety and Security

Statements	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Mean Score
I feel unsafe due to wild animals in my area.	0	6 (5.36)	2 (1.78)	66 (58.93)	38 (33.93)	4.21
Wild animals often damage property in my community.	1 (0.89)	3 (2.68)	1 (0.89)	62 (55.36)	45 (40.18)	4.31
I have experienced or heard of injuries caused by wild animals.	2 (1.78)	3 (2.68)	1 (0.89)	61 (54.46)	45 (40.18)	4.28
Authorities take adequate measure to protect us from wild animals.	5 (4.46)	23 (20.54)	15 (13.39)	59 (52.68)	10 (8.93)	3.41

Source: Field Survey, 2025

Economic Impact

The study found that wild animals cause major economic losses in the community. Most respondents 94.65% reported crop or property damage, and 75.85% had direct financial losses. While 72.32% were aware of compensation schemes, many were dissatisfied—only 39.29% found them sufficient. Although 81.25% recognized wildlife's tourism potential, the benefits are unevenly shared. Overall, wildlife poses serious economic challenges, with inadequate compensation and limited support for affected households.

Table: 4
Economic Impact

Statements	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Mean Score

Wild animals have damage our crops or property in our community.	2 (1.78)	4 (3.57)	0	58 (51.79)	48 (42.86)	4.3
I am aware of any financial support or compensation available for wildlife related losses.	1 (0.89)	24 (21.43)	6 (5.36)	69 (61.61)	12 (10.71)	3.59
My household has suffered financial losses due to wild animals.	5 (4.46)	21 (18.75)	1 (0.89)	57 (50.89)	28 (25)	3.73
The presence of wild animals supports tourism and local businesses.	0	12 (10.71)	9 (8.04)	61 (54.46)	30 (26.79)	3.97
Compensation provided for damages by wild animals is sufficient.	21 (18.75)	38 (33.93)	9 (8.03)	35 (31.25)	9 (8.04)	2.75

Source: Field Survey, 2025

Psychological and Social Impact

The study examined the psychological and social impacts of wild animals on local communities. Results show that most respondents over 90% experience fear, anxiety, and stress due to wildlife, with a mean score of 4.20 indicating strong psychological effects. Many 86.61% report disturbed sleep (mean = 3.91) and significant stress (mean = 4.04). About 74% feel their daily activities are restricted (mean = 3.72), and over half avoid social gatherings out of fear (mean = 3.22). However, neighborly relations remain mostly unaffected (mean = 2.96), suggesting shared experiences may foster solidarity. Nearly all respondents 96.44% actively discuss wildlife issues (mean = 4.30), reflecting strong community awareness. Almost all 98.22% report crop or property damage (mean = 4.44), underscoring that economic losses underpin psychological and social distress. Overall, wild animal conflicts impose significant mental and social burdens, disrupting daily life yet also encouraging collective resilience.

Table: 5
Psychological and Social Impact

Statements	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)	Mean Score
I feel fear or anxiety due to the presence of wild animals.	3 (2.68)	5 (4.46)	0	62 (55.36)	42 (37.5)	4.2
Wild animals disturb my sleep.	2 (1.78)	4 (3.57)	9 (8.04)	84 (75)	13 (11.61)	3.91
I experience mental stress because of wild animals.	1 (0.89)	10 (8.93)	1 (0.89)	71 (63.40)	29 (25.89)	4.04
Fear of wild animals affects my daily activities and movements.	1 (0.89)	25 (22.32)	3 (2.68)	58 (51.79)	25 (22.32)	3.72
I avoid attending social events due to fear of wild animals.	6 (5.35)	35 (31.25)	9 (8.04)	52 (46.43)	10 (8.93)	3.22
Wild animals have affected my relationship with neighbors.	6 (5.35)	52 (46.43)	5 (4.47)	38 (33.92)	11 (9.83)	2.96
There are community discussions or programs about wild life related issues.	0	2 (1.78)	2 (1.78)	68 (60.72)	40 (35.72)	4.3
Wild animals have damage our crops or property in our community.	0	2 (1.78)	0	56 (50)	54 (48.22)	4.44

Source: Field Survey, 2025

Discussion

In developing countries, wildlife significantly impacts crops and livestock (Herrero et al., 2013), making crop damage a major source of human–wildlife conflict that hinders conservation efforts (Ayalew & Melese, 2025b). Successful conservation depends on local communities gaining tangible benefits(Igoe, 2006; Stem et al., 2003) . In Dallagaon, communities derive mostly non-monetary benefits—such as firewood, fodder, timber, and wild vegetables—from Bardiya National Park. However, wild animals cause serious fear, property damage, and injuries, disrupting livelihoods and wellbeing. The gap between

community expectations and institutional responses highlights the need for stronger government action, including protection measures, fair compensation, and awareness programs.

Conclusion

The study found that socio-demographic factors (gender, age, education, and proximity to the park) influence how wild animals affect people's lives. Wildlife causes significant economic losses, psychological distress, and social disruption. While communities show resilience through dialogue and cooperation, inadequate government support and compensation remain major concerns. Human–wildlife conflict is thus a multidimensional issue—economic, psychological, social, and governance-related. Addressing it requires integrated measures combining preventive infrastructure, livelihood protection, mental health support, and responsive policies to ensure sustainable coexistence between people and wildlife.

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