

WILDLIFE IN RISK: THE CASE STUDY OF CHITWAN NATIONAL PARK, NEPAL

THAPA, RAKSHYA¹ & GUPTA, AJAY KUMAR²

^{1,2}Mangalayatan University, Aligarh, India

¹Tribhuvan University, Nepal

ABSTRACT

The wild animals of Chitwan National Park, Nepal has been the attraction for both national as well as international tourists however the ongoing human and wildlife conflict issues has affected largely in wildlife conservation. The future of wild animals seems to be uncertain because it has been realized in these recent years that without the support of local participation in wildlife management, conservation is not effective however the query is how the wild animals can be preserved if the local community is negative towards wild animals. Hence, the need of appropriate and long term mitigation measures has been felt.

KEYWORDS: Wild Animals of Chitwan National Park, Nepal

INTRODUCTION

Wildlife means all the flora and fauna that are found in natural habitat and are not tamed by humans. Wildlife is important because they have economic value, scientific value, survival value and for its own natural beauty. The practice of protecting the wild plant and animal species in their natural habitat is called as wildlife conservation. Wildlife is under threat mainly because of human activities, starting from destruction of habitats to spread of diseases. The anthropogenic activities have largely affected the wildlife. Human activities and their effects on wildlife are increasing since the end of 20th century and the beginning of 21st century. According to Devall (2006), this period by researchers has termed as the period of "Crisis of extinction". In the current scenario, the world is facing a biodiversity loss and degradation of natural resources. The overpopulation of human has also become a major problem in recent years because there is a high demand of space, food and other requirements. The other threats include destruction/fragmentation/degradation, climate change, uncontrolled poaching/hunting/illegal trade, pollution and overexploitation.

Objectives

The specific objectives of the study is

- To determine the risk of wild animals of Chitwan National Park (CNP) on the basis of the responses gathered from local community living around the buffer zone of CNP.

Study Area

Chitwan district lies about 146 km south west from Kathmandu valley, the Capital of Nepal and is the main destination of attraction for tourists. The district covers an area of about 2,238.39 sq km with a total population of 579,984(279,087 male and 300,897 female) (CBS, 2011). About 47% of the Nepal's population occupies the terai region.

The district is divided into forty Village Development Committees (VDCs) and one Sub-Metropolitan city, Bharatpur. The smallest unit is called as ward and under each VDC there are 9 wards.

The study area comprises the five village development committees (VDCs) surrounding the Chitwan National Park which lies in the inner terai region of Chitwan, Makwanpur, Nawalparasai and Parsa districts of Nepal. It is located between 83°87' to 84°74' east longitudes and 27°34' to 27°68' north latitude in the southern part of the Chitwan district. It is in a tropical and subtropical bioclimatic zone so the mean annual rainfall ranges from 2000-2100mm. The maximum temperature is 35°C during summer and it falls around 20°C during night time. Similarly, in winter the maximum temperature is around 25°C and falls below 10°C in night time. Initially, the area of CNP covered 544 sq km and in 1996, 750 sq km areas was separated as a buffer zone (DNPWC, 1997). Buffer zone has been divided into four sectors viz. Central/Kasara, Eastern/Sauraha, Southern/Madi and Western/Amaltari sectors (Nakarmi, 2011) and every year about 30-50% of the revenue of Park is used in community development and conservation purpose. The main reason for the establishment of the buffer zone is to accomplish the needs of the local community along with the increment of the habitat area of wildlife (HMG, 2001). This approach is known as a appeasing approach and the main purpose of the approach is to motivate the local community and convince them to participate in the proper management of the natural resources so as to reduce the Park-people conflict (MoPE, 2004) and conserve wildlife (DNPWC, 2006). The Park now covers a total area of 932 sq km and is surrounded by Parsa wildlife reserve in the east and India in the southeast. Balmiki tiger sanctuary and Udaipur sanctuary lies across the border of India. The park has magnificent fauna and flora. The faunal diversity comprises 50 species of mammals, 526 species of birds, 49 species of herpeto-fauna, and 120 species of fishes and the floral diversity comprises 600 plant species that includes 3 gymnosperm, 13 pteridophytes, 415 dicotyledons, 137 monocots, 16 species of orchids (UNESCO, 2003). CNP is rich in many endangered and vulnerable animal species and this park has the world's second largest population of one-horned rhinoceros (*Rhinoceros unicornis*) along with large population of tigers (*Panthera tigris*). Moreover, it's listing as a world heritage site by United Nations Educational, Scientific and Cultural Organisation (UNESCO) in 1984 has been more advantageous.

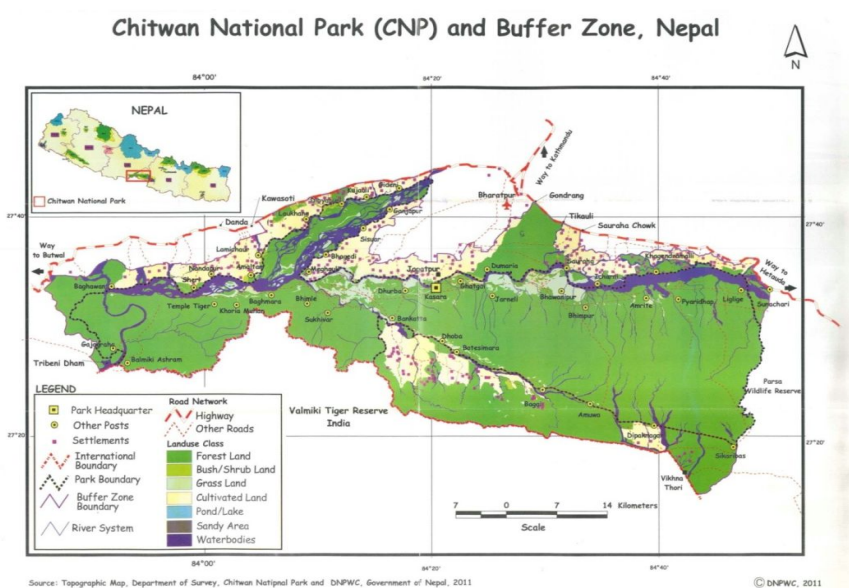


Figure 1: Map of Chitwan National Park

Methodology

The research comprises mixed method approaches i.e. using both qualitative and quantitative approaches. The total number of sample taken was 300 but later on one was excluded for not meeting the criteria of the research. It was able to decrease the sample because the method of sampling was Strata random sampling method. Secondary along with Primary data was used for the study. The Primary data was done through questionnaire survey. The various method includes:

Focus Group Discussions

Group discussions were held in all Five VDCs namely-Meghauri, Patihani, Gardi, Kumroj and Madi in which 299 people participated in total. Discussions were made on socio-economical conditions, hunting/poaching/illegal trade prevalence, causes of hunting, attitudes of local people towards wildlife and park management committees, ongoing threats and conflict issues, significances of wildlife and their conservation and the mitigation measures for ongoing human-wildlife conflicts.

Participatory Appraisal Methods

Participatory appraisal method is used so as to analyze the life and conditions of local people residing in the area. The researcher with the help of some local communities gathered the relevant information required for the study.

Direct Observation during Field Survey

With the help of local people and local tourist guide, the researcher visited the area that has been largely influenced from wild animals especially to analyze the losses from wild animals and to view the defensive measures that have been adopted by local community against wild animals.

Questionnaire Survey

The questionnaire survey was carried by the researchers from the month September to December (2015). The survey was carried in 10 wards in total, each VDC representing 2 wards. The wards were selected by gathering the view from local people on the basis of high impact area from wild animals. 60 households from each ward were selected. The selection of households was done on the basis of strata sampling though some questions were asked on the basis of purposive sampling methods.

Data Analysis

After the completion of questionnaires survey, SPSS Statistics Version 21 licensed software was used by the researcher to analyze the data that has been collected.

RESULTS

Table 1: Local Community Liking Wildlife

Responses	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	285	95.3	96.0	96.0
No	12	4.0	4.0	100.0
Total	297	99.3	100.0	
Missing Ans	2	0.7		

The analysis of data showed that about 285 local people (95.3%) of the total sampled population (299) have explained that they like wildlife however; still they have mentioned that there might be the certain reasons for disliking wildlife. About 149 people (49.8%) mentioned that crop depredation is the main reason for disliking wild animals, 16 people (5.4%) stated that sometimes the attack from wild animals injure/kill human and animals so the activities of wildlife compel the people to dislike them, 30 people (10%) stated the fear as the reason for disliking wild animals, 69 people (23.1%) stated that crop depredation and attack to animals and human are the reason, 22 people (7.4%) stated that the reasons include all of the factors like crop depredation, animal depredation along with fear. Remaining people explained that dangers cannot be measured so the reasons might be specific for the different cases.

Table 2: Local People's Responses on the Losses from Wildlife in the Last Two Years

Responses	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	227	75.9	81.4	81.4
No	52	17.4	18.6	100
Total	279	93.3	100	
Missing Ans	20	6.7		
Total	299	100		

Out of total sampled population that is 299 people, 227(75.9%) of them answered that they have been suffering the losses from wildlife while 52(17.4) of them answered they are lucky as they have not been suffered from. The 20 people (6.7%) did no response on the query. However, the data explains that the local people are affected from wildlife. Further the researcher asked the local people about the kind of losses they have been suffered from wildlife so as to get the consequences caused by wildlife on local people. About 88%(263 people) explained that they suffer mainly from crop depredation, 3%(9 people) explained that they suffer from crop losses as well as casualties and rest of the people explained that losses are of different kinds beyond crop losses and casualties like the expenses they perform for defensive measures, livestock injury/killing, house destruction, fear etc.

Table 3: Local People's Response on Reasons for Killing/Harming Wildlife

Reasons	Frequency	Percent	Valid Percent	Cumulative Percent
Retaliation	15	5.0	5.3	5.3
Trade of body /parts	240	80.3	85.4	90.7
Minimize the risk	25	8.4	8.9	99.5
Poverty	1	0.3	0.4	100
Total	281	94.0	100	
Missing Ans	18	6.0		

When the researcher asked the local people about the reasons for harming/killing wild animals, about 15 people (5%) of the total sampled population addressed the reasons to be retaliation, 240 people (80.3%) stated the reasons to be especially for trade of body or parts of wild animals, 25 people (8.4%) agreed that it might be because to minimize the risks from wild animals, 1 person (0.3%) stated poverty might be the reason while remaining gave no responses at all.

DISCUSSIONS AND CONCLUSIONS

The wild animals are very important in different aspects especially for the eco-tourism and for the economic development of Nation. Moreover, CNP is the focus of attraction for tourists and the main reasons for visiting CNP includes wildlife watching but CNP is affected in large scale by the ongoing human-wildlife conflict issues. The wild animals are in risk because of the negative attitudes of local people towards them. Wildlife populations need to be managed

properly to minimize the conflicts. Management techniques of wildlife may be traditional or modern types depending on the situation. The traditional types are the techniques mainly aimed to stop, reduce or minimize conflict by controlling the number of animals in different ways. Lethal control like translocation, regulation and preservation of animals' populations. Other types include behavioral modification which reduces the interaction between human and wild animals. The other solution may include electric fencing, land use planning, compensation scheme, ecotourism and community based natural resources management (CBNRM). Managing human-wildlife interactions in a broader social context through the use of "human dimensions" methods can help to avert or resolve conflicts over the management of these interactions (Bath and Enck, 2003). Nevertheless, the human-wildlife relationship is quite complex and requires both long term and short term policies and planning in order to deal with the issue. There is an urgent need to develop standard operating principles for each wild animal at the national level first. Moreover, speedy payment of compensation against wild animal needs to be developed along with the schemes for other wild animals led damages like human lives, domestic livestock, crop depredation and other property losses. The priority for effective preventive and mitigation strategies to avoid losses on both sides need to be developed. The researcher during the study analyzed that local people of CNP as well as wild animals are affected by ongoing human-wildlife conflict issues because 80.3% of local people explained that wild animals are killed for body parts and the poverty was not the reason that made the life of wild animals at risk. The results determined by the researcher clearly stated that wild life in CNP are in danger and it is impossible to conserve the wild animals unless the local people are aware regarding the benefits that wild animals hold in nature. The requirement of awareness from local level, national level as well as international level for the proper mitigation measures on human-wildlife conflicts has been felt by the researcher.

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