

Park–people Conflict in Koshi Tappu Wildlife Reserve

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Abstract

Conflict between people and wildlife is a major conservation issue that is difficult to resolve. It is difficult to decide what to do when the needs of people clash so directly with the needs of threatened species. The study was conducted in Paschim Kusaha VDC, adjoining area of Koshi Tappu Wildlife Reserve from Jan1997 to Jan1998 to identify the major conflict issues existing between reserve authorities and villagers. It was based on the observation and responses elicited from schedules that were distributed separately to the local people and reserve staff. Crop depredation and human harassment by wild animals were identified as a major problem to the villagers. Illegal activities of people in reserve area were the main problem for the management of reserve. The present study makes the recommendation to minimize the conflict, helps in the future planning programmes to the management policy and to the further research of this field.

Keywords: Conflict, Koshi Tappu Wildlife Reserve, Crop depredation, *Bubalus bubalis arnee*

Introduction

Park-people conflict is the major problem in almost all the protected areas of Nepal. According to Mishra(1984)the tug of war between wildlife and park management versus local people is not restricted to Nepal, but is going on in parks and reserves through out most of the developing world. Koshi Tappu Wildlife Reserve is also facing Park-people conflict for several years. Since its establishment, the reserve has gained success in conserving wildlife, improved its biodiversity and benefited the nation's economy. But people have been denied the right access to utilize the resources inside the reserve. The impact of endangered species on human lives and livelihoods can also be severe. Similarly human settlements in surrounding areas of reserve also pose

critical disturbances to the reserve. Thus it is becoming a matter of conflict between reserve authorities and local people living around the adjoining areas. According to Gilbert (1971)we know how to manage the resource but not the people which means Park –people conflict is the challenges for management of the reserve.

Koshi Tappu Wildlife Reserve (86°55'-87°05'E longitude and 26°34'-26°45'N latitude) lies on the flood plain of the Sapta Koshi River in Saptari and Sunsari district of eastern Nepal. It was established in 1976AD primarily for the protection of wild water buffalo (*Bubalus bubalis arnee*). It covers an area of 175 sq.km.Realizing the importance of the site, it was designated as a wetland of international importance and added to the Ramsar list on 17th Dec, 1987 (IUCN 1990). The climate is of tropical monsoon type. Several villages belonging to 12VDC are located to the east and west boundary of reserve. A perusal of the

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literature reveals several studies of Park-people conflict in other protected areas of Nepal have been done (Upreti 1985, Thapa 1989, Gyawali 1989, Sharma 1990, Kasu 1993, Soti 1995, Limbu 1997). However, only few literatures are available regarding the Park-people conflict in Koshi Tappu Wildlife Reserve (Sharma 1995). So an attempt has been made to investigate the following problem that entirely based on the survey done in major conflict issues between reserve authorities and villagers. The present study was therefore, undertaken to identify the source of conflict and possible effective solution for the management of reserve.

Materials and Methods

Paschim Kusaha VDC was selected for the study, which lies in the east of Koshi Tappu Wildlife Reserve. It was inflicted with serious problem due to wild animals. The study was carried out from Jan 1997 to Jan 1998 that entirely based on primary and secondary data. Interviews to reserve staff, Nepalese army and local people were conducted with a help of structurally designed schedules including crop depredation, local harassment, people attitude towards reserve, and economic condition of villagers. Simple random sampling method was adopted. Actual damage area was visited to assess the magnitude of economic loss due to reserve animals. Impact of human encroachment in the reserve area was done through elephant ride.

Results and Discussion

Farming system in Paschim Kusaha VDC was traditional and seasonal type. Most of the villagers grew rice, wheat and potato in their fields. The present findings

show wild buffalo and wild boar were the major crop raider. Wild buffalo preferred to eat paddy and wheat whereas wild boar was found to eat wheat and potato. The heavy trampling also destroyed crop. Wild buffalo and wild boar were responsible for damaging 85.15 % and 14.84% crop respectively. These results corroborate with the earlier worker (Sharma 1995). Crop damage depends on availability of palatable food, stages of crop (Table 1), favorable environment to travel toward field, types of preventive measures and distance of crop field from reserve boundary. During misty and cloudy night, crop raiding was most destructive due to difficulty of detection. According to survey, wild buffalo attacked paddy in young and milky stage, which was very tasty and delicious than the reserve food. Both wild buffalo and wild boar ate the wheat in young to adult milky stage. Potato was damaged in tuber stage. Per head loss / bigha (1 bigha = 0.68 hectare) of paddy, wheat and potato were estimated to be Rs.353.80, Rs.482.48 and Rs.2080.84 respectively (Table 2). The main reason of crop raiding was found due to insufficient food in the reserve (Table 3). Another serious problem experienced by the local people was fear of wild animals attack. Quite a number of people were chased, attacked and even killed by wild buffalo in the previous year. No such incidents were took place during the study period. Illegal utilization of forest products, cattle grazing, poaching and river fishing in reserve area were the problems created by the local people. Large number of cattle was found grazing freely inside the reserve, which were the main causes of wild buffalo to come outside onto crop field due to competition of food.

Conclusion and Recommendation

It can be concluded that negative interface exists between reserve authorities and villagers is causing great harm on both sides. It has been observed that illegal activities of villagers inside the reserve are the problem for reserve whereas crop destruction and human harassment are the problem for local people. To minimize the conflict, one can suggest the following recommendation as a solution.

1. Fences are the important barriers to check the crop damage from wild animals. To check their free movement, broken fences should be repaired. The area can also be fenced with barbed wire using trenches. Trenches should be dug outside the fence. Plantation of thorny plants near the barbed wire will also be effective.
2. Wildlife should be confined within the boundary of the reserve by providing them palatable and preferable diets inside the reserve during crop raiding season.
3. The problem of overgrazing, other human activities that degrade the natural habitat should be strictly reduced. Degradation of habitat and competition of food with domestic cattle inside the reserve is the main causes for wild buffalo to raid the crop field. Domestic cattle should be completely evicted from the reserve and should be auctioned.
4. Local villagers should be encouraged for reducing the number of livestock and to introduce better breeds of cattle. They should be suggested to plant fodder trees on private land.
5. Crop depredation also depends on the taste of crop plants. The food habit of wildlife should be thoroughly studied and villagers should be encouraged to grow less preferable crops and other varieties of unpalatable crops.
6. Local farmers injured by attack of wild animals should be helped during medical treatment. Those whose family members are being killed should be compensated directly in negotiable cash.
7. Poaching is serious problem created by local people. Patrolling management should be improved to reduce illegal activities and should be provided with modern equipments.
8. Effective conservation and management of reserve cannot be imagined without the help of local people. However most of the villagers are illiterate and do not have the knowledge about the issue of environmental degradation and its overall impact. Education on the importance of reserve, conservation of natural resources should be given them time to time so they can realize the importance of reserve for present and future generation. They can enjoy the nature; feel the importance of wildlife as their own and for their benefit.
9. Illegal utilization of forest products by villagers can be reduced by establishing plantation on public and government lands in participation with them. Grassland area in the form of buffer zone should be allowed for domestic cattle grazing.
10. Koshi Tappu Wildlife Reserve has great potential for tourism. The reserve should provide local tourist guides. Experienced wildlife experts should train them. Villagers should be encouraged to open up hotels, restaurants and lodges that may help them to improve their economic status.

Table 1. Stage of severe attack and its raiding season by different animals

S. No	Wild animals	Crop	Stage of crop raiding	Season of attack
1.	Wild buffalo	Paddy	Young, adult milky, ripen	Sep-Nov
		Wheat	Young to adult milky	Dec-Mar
2.	Wild boar	Wheat	Milky stage	Dec-Feb
		Potato	Tuber stage	Dec-Feb

Table 2. Per head loss (NC)/Bigha due to crop damage by wild animals

S.No	Crops	Estimated loss /bigha (Kg)	Market rate/Kg	Total loss/Bigha (NC)	Perhead loss/bigha(NC)
1.	Paddy	381.96	Rs.7/-	Rs.2673.72	Rs.353.80
2.	Wheat	Rs.456.06	Rs.8/-	Rs.3648.48	Rs.482.78
3.	Potato	Rs.3145.05	Rs.5/-	Rs.15725.25	Rs.2080.84

Table 3. Reason and percent (%) of respondents to animals visiting settlement

S.No	Reasons	No. of respondents	Percentage
1.	Lack of sufficient food in reserve	21	30
2.	To change taste	7	10
3.	Lack of suitable habitat	5	7.14
4.	Liking of field crop	21	28.57
5.	Lack of fences in boundary of reserve	17	24.28

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