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## Human Wildlife Conflict Outside Protected Areas of Nepal: Causes, Consequences and Mitigation Strategies

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Abstract: This study was carried out in Mustang, Kaski, Tanahun, Baitadi, and Jhapa districts of Nepal. The study explored the spatial and temporal pattern of HWC, socio economic factors associated with it, impacts of conflict on life / livelihood of people and survival of wildlife species, and impact of climate change and forest fire on HWC. Study also evaluated people's attitude towards wildlife conservation and assessed relevant policies and programs. Questionnaire survey was carried out with the 250 respondents, and both socio-demographic and HWC related information werecollected. Secondary information were collected from Divisional Forest Offices and Annapurna Conservation Area Project.HWC events were grouped by season /months/sites (forest type, distances from forest, and settlement), and the coordinates of the events were exported to ArcGIS. Collected data were analyzed using descriptive statistics in Excel and R Program. A total of 1465 events were recorded in 5 districts during 2015 and 2019. Out of that, livestock killing, crop damage, human attack, and cattle shed damage events were 70 %, 12%, 11%, and 7%, respectively. Among 151 human attack cases, 23 people were killed, and 128 were injured. Elephant in Terai, common leopard and monkey in Middle Mountain, and snow leopard in high mountains were found as major problematic animals. Common leopard attacks were found more in the autumn, evening, and on human settlement area. Whereas elephant attacks were found higher in winter, day time, and on farmland. Poor people farmers were found highly victimized, and they were losing 26% of their income due to crop raiding and livestock depredation. On the other hand, people are killing many wildlife in revenge, and this number is increasing every year. Based on the people's perception, climate change is causing increased temperature and forest fire events and decreased water sources within the forest. Due to the scarcity of food and water within forests, wildlife are compelled to dwell at human settlement area, hence HWC events are increasing. Nevertheless, more than half of the respondents were found positive about conserving entire wildlife species. Forests outside PAs are under the community forestry (CF) system, which restored the forest, improved the habitat, and increased the wildlife. However, CF policies and programs were found to be more focused on forest management with least priority on wildlife conservation and HWC mitigation. Compensation / relief scheme of government for wildlife damage was found some how effective to manage HWC, but the lengthy process, being applicable to the damage of few wildlife species and highly increasing events made it necessary to revisit. Based on these facts, the study suggest to carry out awareness generation activities to the poor farmers, linking the property of people with the insurance scheme, conducting habitat management activities within CF, promoting the unpalatable crops, improvement of shed house of livestock, simplifying compensation scheme and establishing a fund at the district level and incorporating the wildlife conservation and HWCmitigation programs in CF. Finally, the study suggests to carry out rigorous researches to understand the impacts of current forest management practices on forest, biodiversity, wildlife, and HWC.

Keywords: community forest, conflict mitigation, wildlife conservation, climate change

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