Human-Wildlife Conflict in High Altitude: a case from Gaurishankar Conservation Area (968 m – 7181 m amsl), Nepal

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Abstract

The human-wildlife conflict (HWC) is a serious problem that affects both human and wildlife populations worldwide. This study investigates the prevalence and increasing trend of HWC in the Gaurishankar Conservation Area (GCA) of Nepal, with a specific focus on leopard (Panthera pardus) and Himalayan black bear (Ursus thibetanus laniger) as conflict-causing species. The study analyzes a decade of HWC data and identifies goats as the livestock most targeted by leopards. The Dolakha district of GCA experiences the highest number of conflicts, highlighting the need for mitigation measures in the area. In GCA, livestock attacks alone accounted for 85% of compensation, with the remaining 15% for human injuries. Annual attack reports have shown a significant increase, with a 33% rise year-on-year. The rule change in 2076 BS led to 57 more attacks than expected based on the previous year’s growth. While bear attacks showed no significant change post-rule alteration (t = 0.725, p = 0.5105), leopard attack reports surged from 1 to 60 annually, indicating a significant increase in reporting rates (t = 9.77, p = 0.0097). The findings emphasize the economic impact of HWC on local communities and suggest strategies such as increasing prey populations, promoting community education and awareness, enhancing alternative livelihood options such as eco-tourism, and implementing secure enclosures (corrals) to minimize conflicts and foster harmonious coexistence. This research addresses a knowledge gap in HWC in high-altitude conservation areas like the GCA, providing valuable insights for conservation stakeholders and contributing to biodiversity conservation and the well-being of both humans and wildlife. Keywords: Human-wildlife conflict; High altitude, Leopard; Himalayan black bear; Gaurishankar Conservation Area; Conservation intervention; Co-existence

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