

Determinants of Herder's Attitudes Towards Snow Leopard Conservation in Upper Mustang

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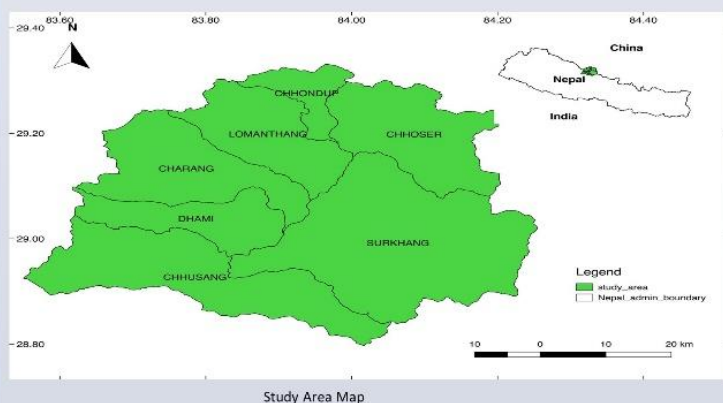
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INTRODUCTION

- Livestock depredation by snow leopards is a major source its conflict with pastoral communities in Himalayas (Mishra, 1997).
- Economic loss incurred due to livestock loss escalates retaliatory killings of snow leopard
- It creates negative attitude among herders and undermine public support for conservation
- In Nepal, local communities often view complete extermination as the only solution (Oli et al. 1994).
- Resolving human -snow leopard conflict requires understanding of local community attitudes towards snow leopard conservation (Suryawanshi et al. 2014)
- This study was conducted to investigate the different factors affecting the attitude of herder toward snow leopard in Upper Mustang of Nepal

METHODS

- Seven VDCs and 30 Villages
- Questionnaire surveys
- 451 respondents
- Response variable: attitude scores
- Seven questions were asked to quantify attitude score (-7 to +7)
- Predictor variables:
 - Age
 - Sex
 - Education
 - Household size
 - Livestock lost
- Multiple linear regression models
- Assess the relative influence of predictor variables on attitude scores
- Akaike Information Criteria was used for model comparison



RESULTS

- Male ($\beta_{\text{male}}=1.31 \pm 0.5$; $p = 0.01$) and educated respondents ($\beta_{\text{edu}}=1.81 \pm 0.52$; $p = 0.00$) were likely to have positive attitudes towards snow leopard conservation
- Household size ($\beta_{\text{hh_size}}=0.15 \pm 0.24$; $p = 0.5$) and age ($\beta_{\text{age}}= -0.02 \pm 0.24$; $p = 0.9$) did not have consistent influence on attitude scores
- Respondents who had lost livestock in the past were likely to have negative attitudes towards snow leopard conservation ($\beta_{\text{livestock lost previously}}= -1.40 \pm 0.56$; $p = 0.01$).
- The regression model with sex as covariate showed greatest support based on AIC criteria (model weight $W_i = 0.92$) (Table. 1)

Table: Linear regression models describing the attitudes of respondents towards snow leopard conservation, ranked according to the Akaike information criterion adjusted for small sample size (AICc).

Model	K	AIC	Δ AIC	Loglink	W_i
Attitude~Sex	2	2758.77	0.00	-1376.36	0.92
Attitude~Livestock	2	2764.11	5.34	-1379.03	0.06
Attitude~HH Size	2	2767.96	9.19	-1380.95	0.01
Attitude~Education	2	2770.36	11.59	-1382.15	0.00
Attitude~Age	2	2770.72	11.95	-1382.33	0.00

DISCUSSION

- The results that females were less likely to have very positive attitude towards snow leopards could be because livestock depredation by snow leopard create much burden on women than on men (Alexander et al., 2015).
- Frequent livestock depredation creates feeling of revenge among respondents towards snow leopard. This could have probably created more negative attitudes among the respondents who had previously experienced livestock depredation.

CONCLUSION

Our results suggest that conflict mitigation and outreach efforts need to target illiterate female respondents and those who had lost livestock to snow leopard to reduce any form of antagonism and retaliatory killing of snow leopard and increase social carrying capacity for its conservation.

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