

# Livestock predation by carnivores in Jigme Singye Wangchuck National Park, Bhutan

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Biological Conservation, Volume 129, Issue 4, May 2006, Pages 558-565

[http://www.sciencedirect.com/science?\\_ob=ArticleURL&\\_udi=B6V5X-4J624PT-2&\\_user=10&\\_coverDate=05%2F31%2F2006&\\_rdoc=1&\\_fmt=high&\\_orig=search&\\_sort=d&\\_docanchor=&\\_view=c&\\_searchStrId=1319330556&\\_rerunOrigin=google&\\_acct=C000050221&\\_version=1&\\_urlVersion=0&\\_userid=10&md5=15e98d6a09158e873e6e2823808e08c4](http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6V5X-4J624PT-2&_user=10&_coverDate=05%2F31%2F2006&_rdoc=1&_fmt=high&_orig=search&_sort=d&_docanchor=&_view=c&_searchStrId=1319330556&_rerunOrigin=google&_acct=C000050221&_version=1&_urlVersion=0&_userid=10&md5=15e98d6a09158e873e6e2823808e08c4)

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## Abstract

Villages in Jigme Singye Wangchuck National Park, central Bhutan, report livestock depredation by wild carnivores including leopard (*Panthera pardus*), tiger (*Panthera tigris*), Himalayan black bear (*Ursus thibetanus*), and dhole (*Cuon alpinus*). In a survey of 274 households in six different geogs (sub-districts) within the park, 21.2% of households surveyed reported losses of a total of 2.3% of their domestic animals to wild predators over 12 months. This loss equated to an average annual financial loss equal to 17% (US\$ 44.72) of their total per-capita cash income. Total reported losses during 2000 amounted to US\$ 12,252, of which leopard and tiger kills accounted for 82% (US\$ 10,047). Annual mean livestock loss per household (of those that reported loss) was 1.29 head of stock, equating to more than two-thirds of their annual cash income of \$250. Lax herding, inadequate guarding practices, and overgrazing may have contributed to livestock losses. Approximately 60% of the households lacked proper stables for corralling their livestock at night and there was a significant correlation between the number of livestock lost and the distance between the household and the grazing pasture. Overall, reported predation rates have increased since the inception of the park in 1993 and since implementation of the Forest and Nature Conservation Act in 1995, which prioritises some of Bhutan's key livestock predators for conservation. We propose livestock intensification programmes, including pasture improvement, and financial compensation as short-term measures to reduce conflict between people and predators. In the long-term, we recommend that the feasibility of an insurance scheme should be tested, the possibility of relaxing the resource use restrictions in the Forest and Nature Conservation Act of 1995 be explored, and that farmers should be involved in managing human-wildlife conflicts – particularly through improving their own herding and guarding practices, and building proper corralling facilities and adopting reliable corralling procedures.

**Keywords:** Bhutan; Carnivores; Conservation; Livestock; Predation

