

# **Andean bear-cattle conflict in Oyacachi, Cayambe-Coca Ecological Reserve, ECUADOR**

## **Abstract**

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Many rural or indigenous populations in Ecuador live close or within governmental protected areas. The environmental sector is always mentioning the impact that these communities produce on nature because of productive activities, and the responsibility that local people have in preserving these areas. Nevertheless, very little is spoken about the costs that people confront when living within or adjacent to protected areas.

One example of such cost is the result of Andean bear-cattle conflicts. This conflict occurs in many localities throughout the Andean bear (*Tremarctos ornatus*) distribution and it has become chronic in some specific sites. One of those areas is Oyacachi, a small native community of 120 families within 55.000 hectares, located in the northeastern highlands of Andes mountains, inside Cayambe-Coca Ecological Reserve. Between 2001 and 2004, 41 predation events took place in Oyacachi, where 61 cattle have been lost. The present work present the results of a research focused on the ecological, social and economic aspects of the Andean Bear-Cattle conflict at Oyacachi community

The study area showed high habitat availability for the Andean bear. The species has a high and moderate presence probability in 27% of to the study area. This probability is distributed in a 43,26% in highlands or *paramos* and 56,74% in forest. Barely 5% of the study area has a high and moderate probability of cattle predation by Andean bear. The 41 predation events were concentrated in the altitudinal belt of the forest-paramo ecotone. The community lost USD 74,615.89 between 2001 and 2004. This cost includes direct costs such as meat, milk production and reproductive capacity, and indirect costs such as cattle transfers. These losses are distributed only in 28 of the 120 families that live in Oyacachi, which corresponds to 25% of the total of families. There is poor knowledge about the conflict, yet a positive attitude towards its resolution. Unfortunately, the solutions that were identified by the community only address economic compensations. No cattle or Andean bear management programs which could help reduce the number of predation events were addressed. The perceptions towards the species have become negative due to the conflict; however the attitudes and practices remain positive since people dislike the idea of killing the bears as a solution.

The above results suggest that moving cattle to areas with low conflict probability and increasing surveillance could lower the predation risk. Also, an environmental education program is needed to improve peoples' perceptions towards the Andean bear. Finally, some sort of financial compensation should be implemented to compensate the affected families.