

# Evaluation of Land-Use and Crop-Conversion Policies to Mitigate Human–Wildlife Conflicts\*

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**Abstract.** Human–wildlife conflicts are increasingly common in residential areas, causing injuries and the spread of zoonotic diseases. Governments have implemented measures such as extermination, land-use regulation, and deterrent fencing. In this process, because some wildlife has high ecological value, we should take account of trade-offs between conservation and human safety. We assess the welfare effects of several urban policies, using an ecosystem–urban economics model factoring in the spatial interactions between land use and wildlife foraging behavior. We introduce a novel policy: converting some farmland to crops preferred by wildlife to redirect animals away from residential zones. Our simulations show that the crop conversion consistently yields the highest welfare, improving outcomes by around 6% even compared to ideal fencing that entirely prevents animal intrusions into urban areas. In contrast, the widely-adopted extermination policy is relatively ineffective.

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