



United States Department of Agriculture

# Estimating the impact of airport wildlife hazards management on realized wildlife strike risk

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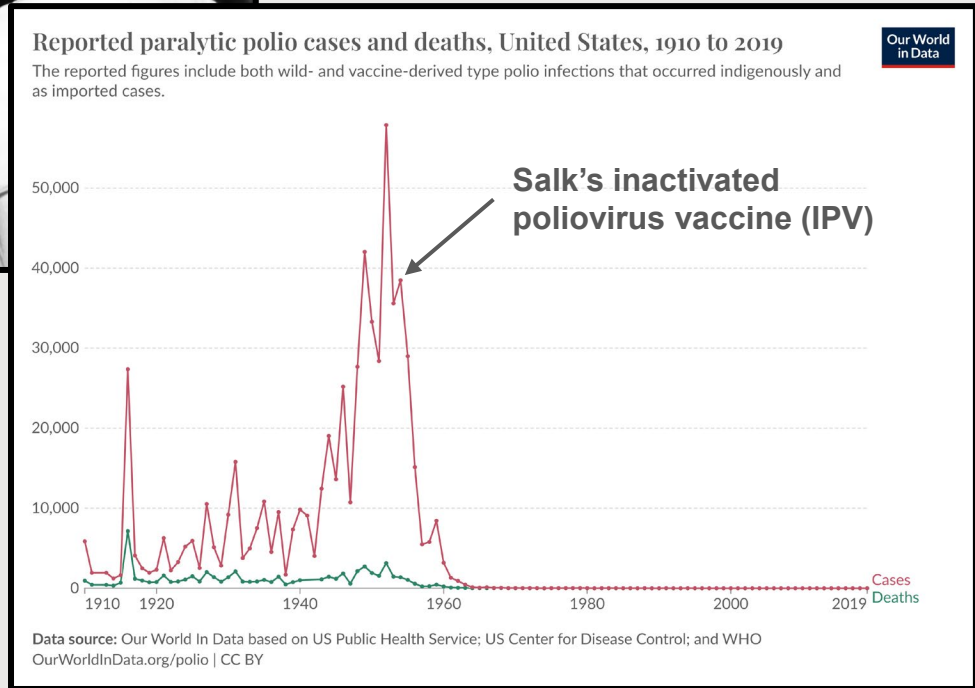


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**Wildlife Services**

Protecting People ♦ Protecting Agriculture ♦ Protecting Wildlife





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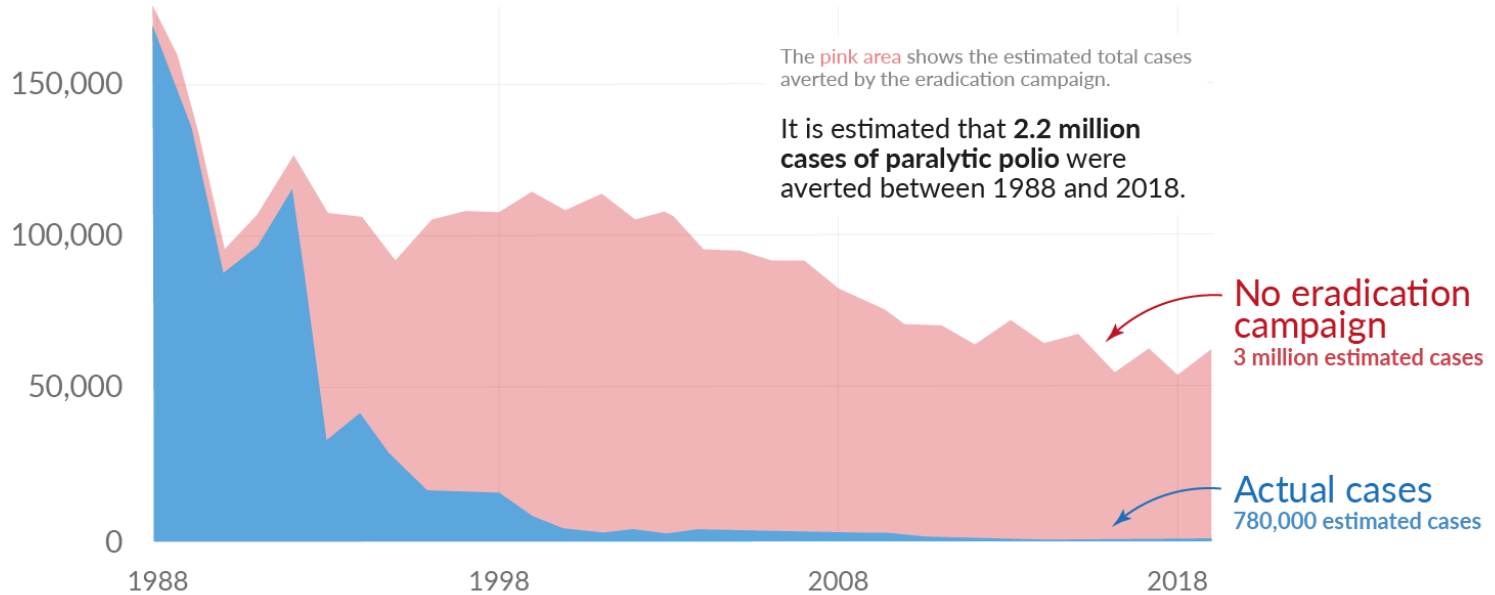
# Wildlife Services

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# How many cases of paralytic polio were averted by the Global Polio Eradication Initiative (GPEI)?

With the GPEI, 105 countries received support for surveillance, childhood immunizations and campaigns to control new outbreaks.

Estimated number of cases of paralytic polio per year



Note: The researchers estimated the number of polio cases that would have occurred if polio vaccination followed the same coverage rates as other routine vaccinations.  
 Source: Kimberly M Thompson and Dominika A Kalkowska (2021). An updated economic analysis of the Global Polio Eradication Initiative (GPEI). *Risk Analysis*.

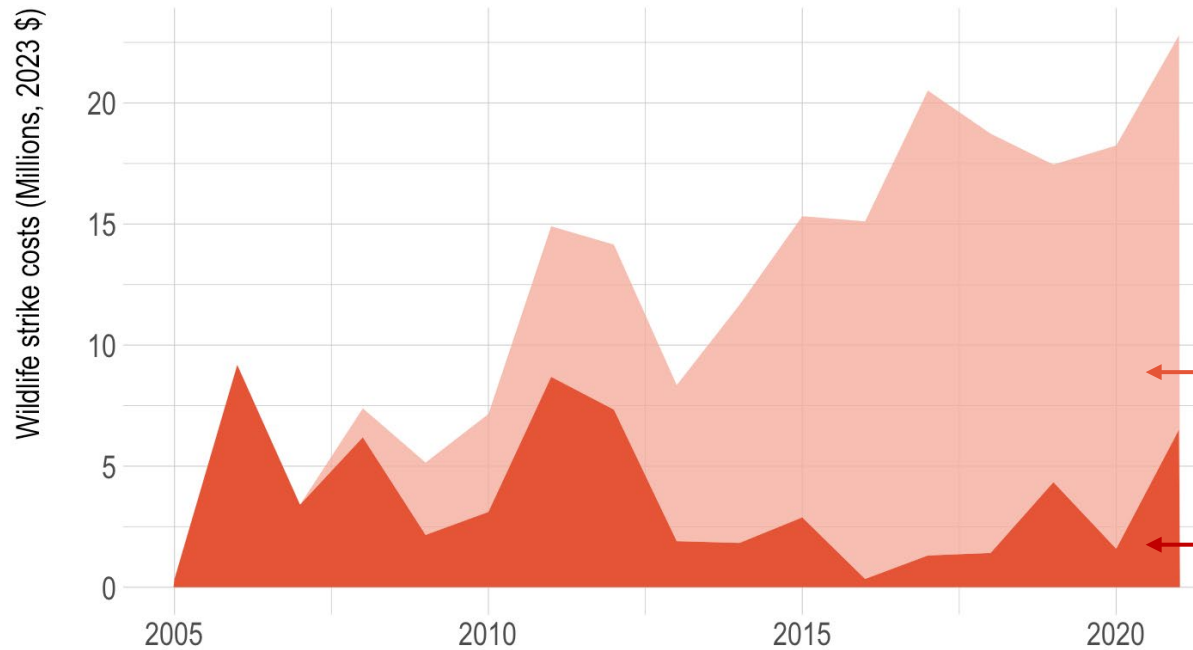
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# What are the economic benefits of Airport Wildlife Hazards Program (AWHP) management?

Estimated cost savings among 13 joint-use airports that received AWHP management over the period 2005-2021.



**An estimated \$147 million in wildlife strike costs averted between 2008 and 2021.**

AWHP management costs of \$19.4 million over the same period suggests a **benefit-cost ratio of 7:1.**

**No AWHP management**

Estimated \$210 million in strike-induced costs

**Actual costs realized**

\$63 million in strike-induced costs

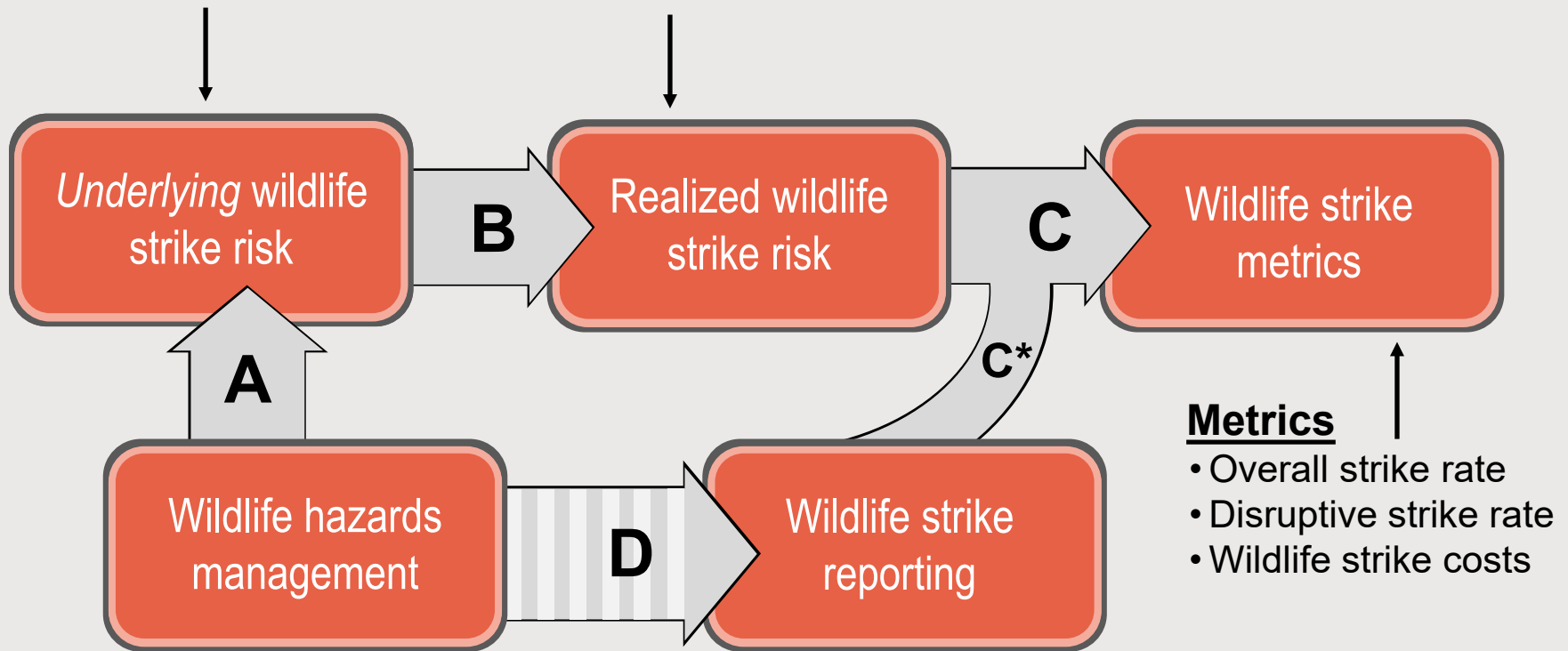
Source: Altringer et al. (2024) Estimating the impact of airport wildlife hazards management on realized wildlife strike risk. *Forthcoming.*

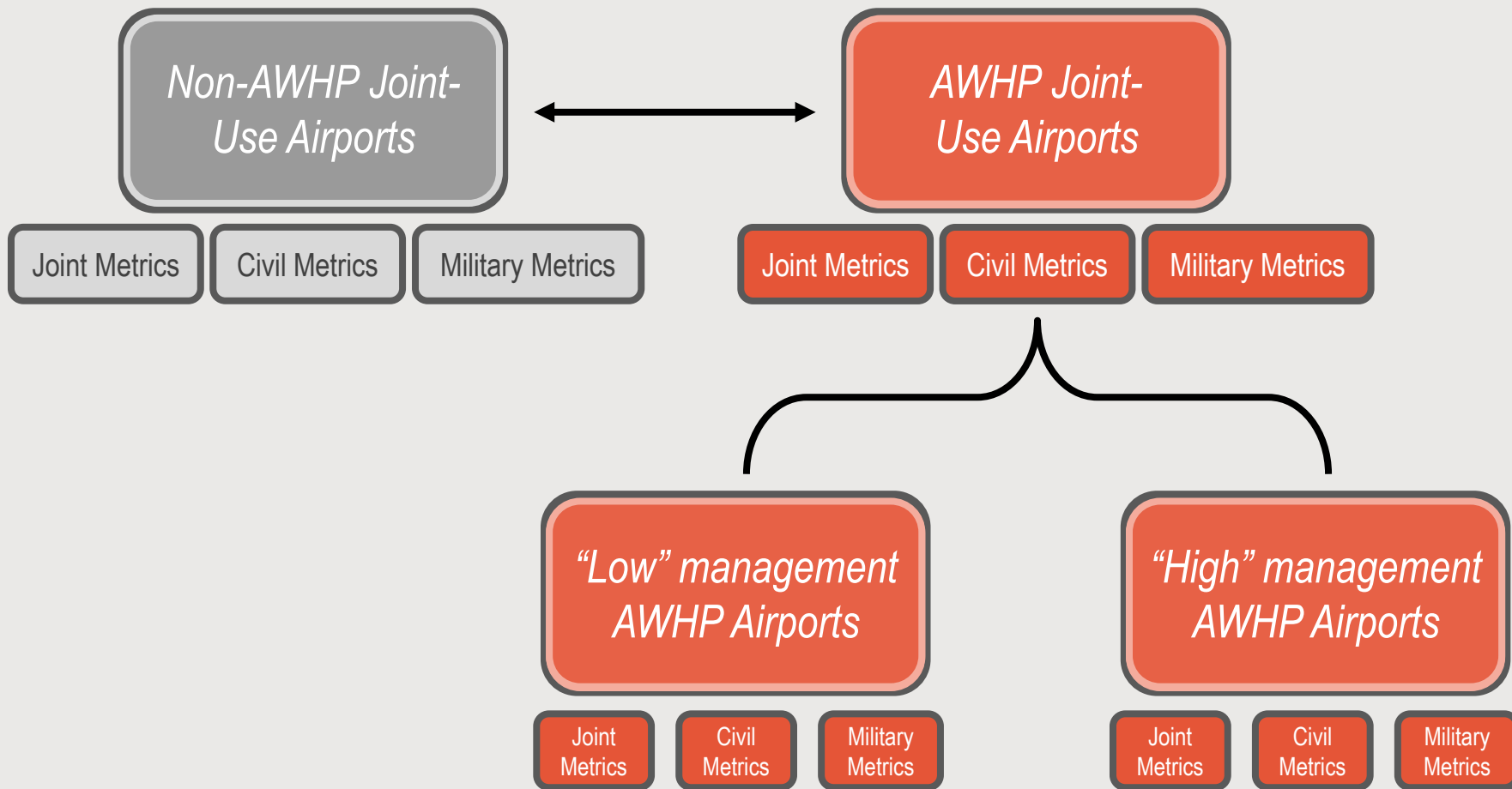
**Measurement Strategy 1**

Synthesizing ecological and biological variables hypothesized to constitute wildlife strike risk.

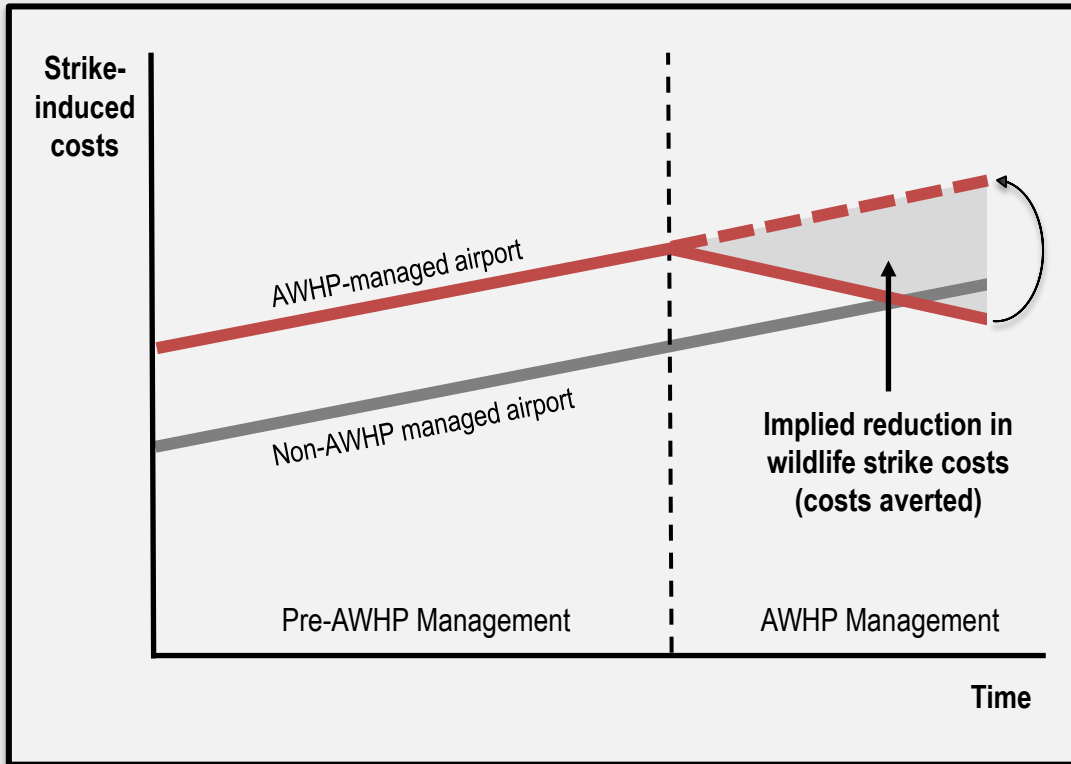
**Measurement Strategy 2**

Wildlife strike risk is inferred *ex post* from wildlife strike incidents.





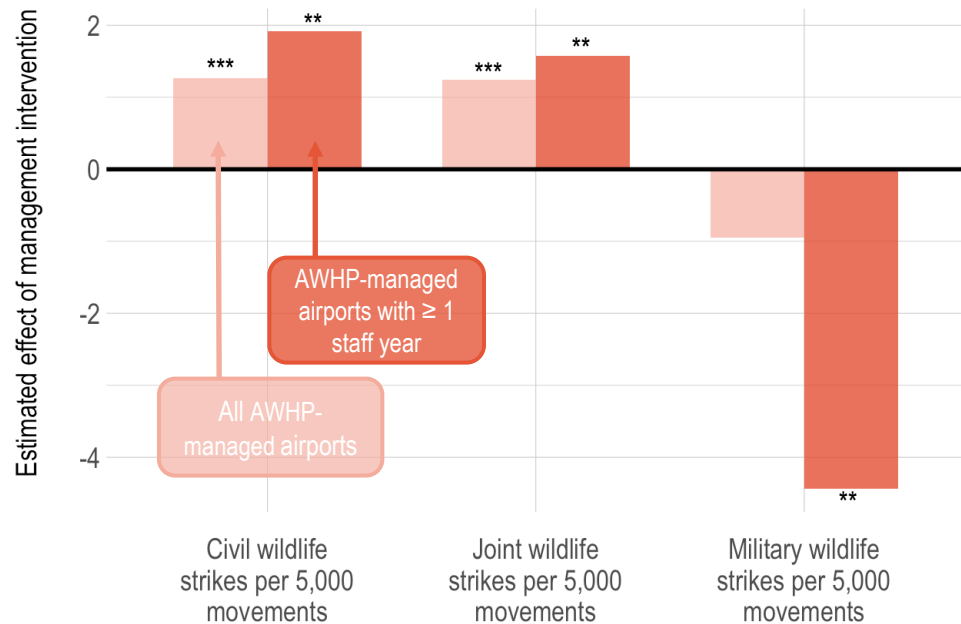
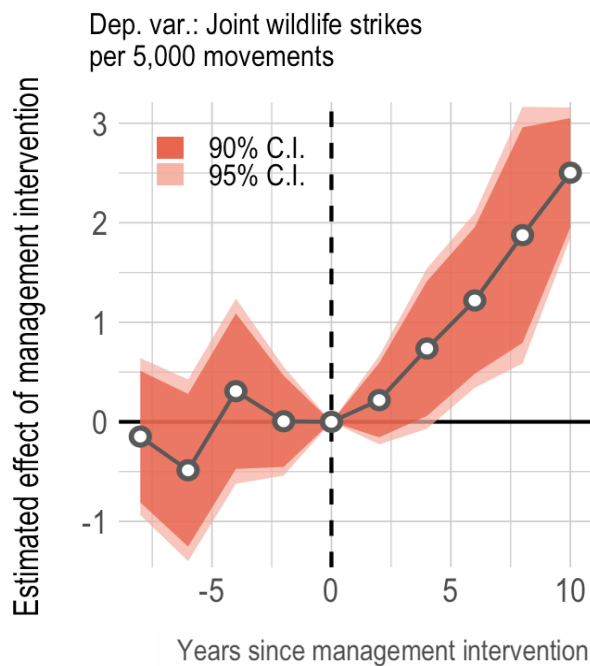




# What is the impact Airport Wildlife Hazards Program (AWHP) management on overall strike rates?



Estimated impact of AWHP management intervention on reported joint, civil-, and military-specific wildlife strike rates.



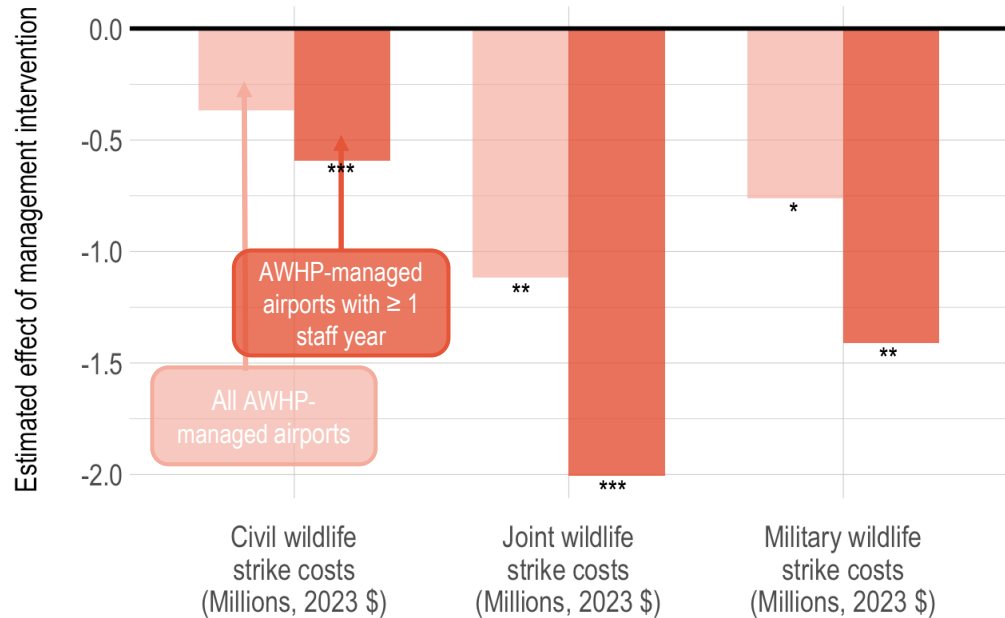
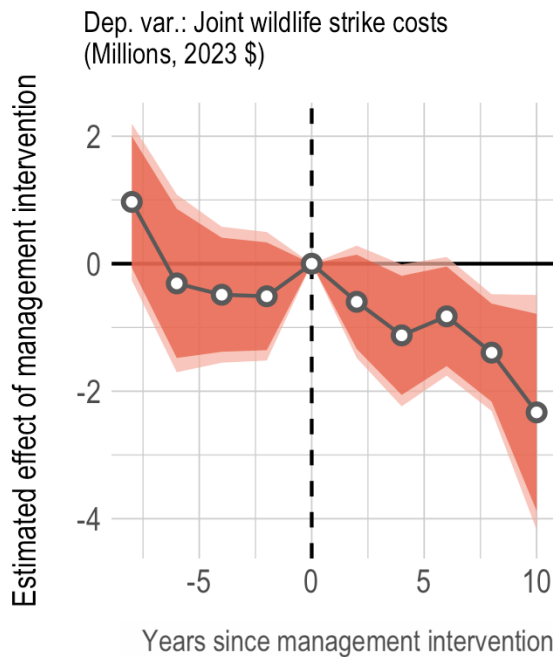
NOTE: Traditional levels of statistical significance indicated by \*  $p < 0.1$ , \*\*  $p < 0.05$ , and \*\*\*  $p < 0.01$ .

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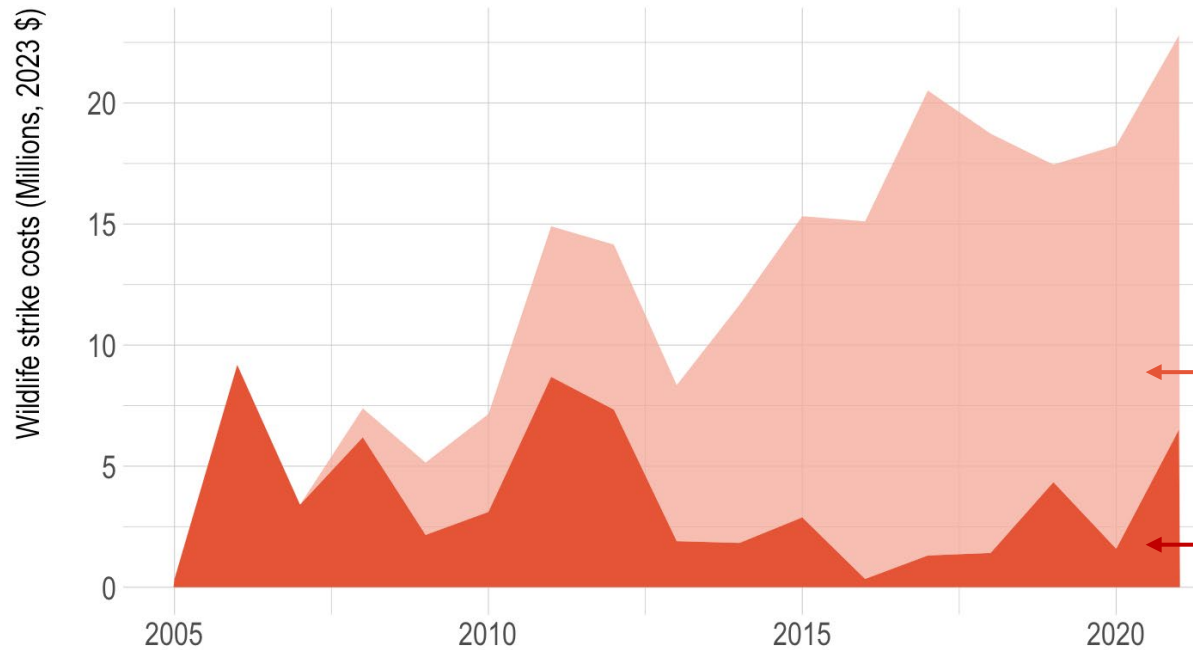


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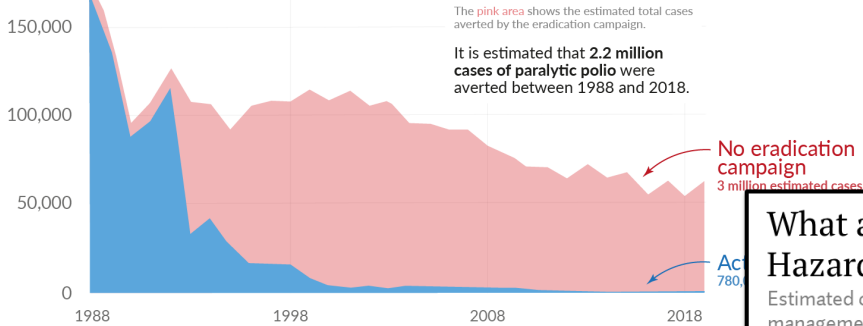
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Our World in Data

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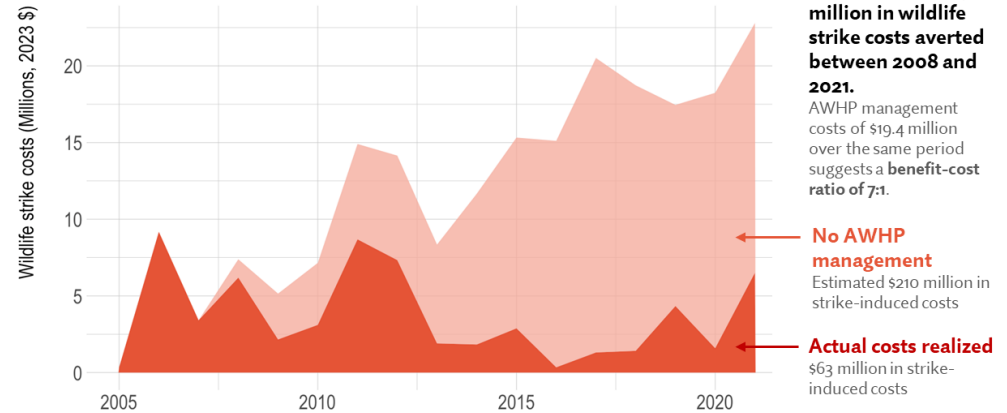
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Wildlife Services  
**NWRC**  
National Wildlife Research Center

Wildlife strike costs (Millions, 2023 \$)



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# Questions?

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