

Adoption of vegan dog and cat diets could have environmental benefits

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The new analysis estimates a variety of potential benefits for environmental sustainability—for instance, reduced freshwater consumption and greenhouse gas emissions—that could result from switching all pet dogs and cats in the US or around the world to nutritionally sound, vegan diets. Credit: Andrew S, Unsplash, CC0 (creativecommons.org/publicdomain/zero/1.0/)

A new analysis estimates a variety of potential benefits for environmental sustainability—for instance, reduced freshwater consumption and greenhouse gas emissions—that could result from switching all pet dogs and cats in the US or around the world to nutritionally sound, vegan diets. Andrew Knight of Griffith University, Australia, presented these calculations in the open-access journal *PLOS ONE*.

The [livestock industry](#) has environmental impacts, such as land and freshwater consumption and emission of pollutants. However, while many prior studies have focused on livestock impacts in relation to [human diets](#), few have considered the relative role of cat and dog diets.

Recent research suggests that nutritionally sound vegan cat and dog diets—lacking meat, eggs, and dairy—are safe and may have comparable healthfulness to meat-based diets, raising questions about their environmental benefits.

To better understand these [potential benefits](#), Knight calculated a series of estimates of the potential impacts of a hypothetical scenario in which all cats and dogs in the US or around the world were switched to nutritious vegan diets. He used pet population data from 2020 for the US and 2018 data for the worldwide estimates. Other inputs came from a variety of prior studies and governmental databases.

The estimates suggest that the amount of livestock consumed by dogs and cats in the US may be about one fifth of that consumed by humans, and about one tenth globally. If all US dogs and cats switched to vegan diets, the model estimates, nearly 2 billion land-based livestock animals might be spared from slaughter yearly, and nearly 7 billion if all cats and dogs around the world switched. Billions of [aquatic animals](#) would also be spared.

The estimates also suggest significant potential reductions in land and [water use](#), greenhouse gas emissions, use of biocides, and emissions of other pollutants.

For instance, switching all dogs worldwide to vegan diets could free up an area of land larger than Saudi Arabia, and for cats, larger than Germany; for comparison, if all humans became vegan, an amount of land larger than Russia and India combined might be spared. Switching all dogs' diets could result in an estimated reduction of [greenhouse gas emissions](#) greater than the amount of all emissions from the UK, and for cats, Israel.

The author notes that the pet population and animal energy requirement data he used might underestimate true numbers, so the true environmental benefits of vegan diets might be greater than estimated. However, he also notes that the calculations required making some assumptions, and that more research is needed to bolster confidence in the estimates.

For instance, the analysis applied US data on various diet ingredients to the global calculations, instead of accounting for national differences in ingredients. It also used data from 2009 through 2011 to estimate environmental impacts; more recent data could result in better estimates. In addition, future research could incorporate data on the actual energy density of different animal-sourced ingredients, instead of averaging across ingredients as was done for this study.

The author adds, "This study shows environmental benefits when vegan diets are used to feed not just people, but dogs and cats as well. However, to safeguard health, it's important that people feed only vegan pet food labeled as nutritionally complete, produced by reputable companies with good standards."

More information: Andrew Knight, The relative benefits for environmental sustainability of vegan diets for dogs, cats and people, *PLoS ONE* (2023). [DOI: 10.1371/journal.pone.0291791](https://doi.org/10.1371/journal.pone.0291791)

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