

Bushmeat consumption unchanged by COVID-19 in Kenya and Tanzania border towns, new study reveals

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The fact that many pandemics, including possibly COVID-19, have had their origins in wild animals might be expected to cause meat consumers

to reduce their consumption of risky "bushmeats," which are derived from wild animals, to avoid illness. But a new study of bushmeat eaters at the Kenya-Tanzania border tells a different story.

While most people in these rural communities were aware of the dangers posed by [bushmeat](#), they continued to consume it anyway. Some even increased their consumption due to the economic constraints imposed by COVID-19 measures.

The study explored the impact of COVID-19 patterns on wild [meat](#) consumption and perceptions of associated [zoonotic disease](#) risks. This is the first ever study to look at disease risks associated with wild meat value chains in rural settlements. It was undertaken by a team of researchers from the International Livestock Research Institute (ILRI), the Center for International Forestry Research and World Agroforestry (CIFOR-ICRAF), the global wildlife trade monitoring network TRAFFIC, Nature Heritage and the Wildlife Research Training Institute.

"Wildmeat trade and consumption in sub-Saharan Africa are both widespread and complex; we need to better understand the rural and urban demand for wild meat, particularly as the meat of some bird, rodent and other species is particularly risky to consume," says ILRI scientist Ekta Patel.

The study, conducted in December 2021 and now published in *Frontiers in Ecology and Evolution*, interviewed 299 people in communities on the Kenya-Tanzania border. Key findings revealed that levels of education played a critical role in understanding zoonotic disease transmission. Respondents with higher levels of education were more aware of the risks of disease transmission. Nearly 80% of respondents learned about COVID-19 from mass media sources.

Zoonotic diseases are those that originate in animals—be they tamed or

wild—that then mutate and spill over into [human populations](#). Two-thirds of infectious diseases, from HIV/AIDS, which originated in chimpanzee populations in early 20th-century Central Africa, to COVID-19, which is believed to have originated from an as-yet undetermined animal in 2019, originate in animals.

Despite understanding the associated risks of consuming meat from wild animals, the study found that COVID-19 did not strongly affect the consumption of wild meat, with only 30% of respondents reporting lower consumption because of the pandemic. Nearly 70% said that COVID-19 did not impact their levels of wild meat consumption, with some even reporting increased consumption. Researchers attribute this to the increased food costs caused by regulations to control the COVID-19 pandemic, which made many people seek protein sources cheaper than beef, mutton, chicken and other domesticated animal meats.

"While hunting wild animals for their meat has been a crucial activity in the evolution of humans and continues to be an essential source of food and income for millions of indigenous and [rural communities](#) globally, wildlife conservationists rightly fear that excessive hunting of many wild species will cause their demise. To ensure continued use of wildlife resources by those who depend on it, sustainable hunting, marketing and consumption practices must be implemented. Local communities need to remain or become custodians of the wildlife resources within their lands, for their own well-being as well as for biodiversity in general," says Julia Fa, University of Manchester professor and fellow at CIFOR-ICRAF.

The study also examined local perceptions of risks associated with wild meat consumption, where respondents recognized the risk of other disease transmissions, including anthrax and brucellosis. The study's respondents also recognized that high disease risk was associated with people with open wounds slaughtering wild animals and handling wild meat. Moreover, respondents identified meat from wild animals as more

dangerous than meat from domesticated livestock, with hyena meat consumption cited as the riskiest. Ungulates were found to be the most consumed species, followed by birds, rodents and shrews.

"While scientific evidence has shown that spotted hyenas are reservoirs of coronaviruses, we don't know why these [local communities](#) thought hyenas to be risky edible species; more needs to be done to understand community perceptions about what is and isn't a risky species to hunt and consume as well as address potential risks associated with consumption of birds and rodents," says Patel.

Interestingly, community members differed in their responses. While more than 80% of the study's respondents living in Kenya believed that wild meat should not be sold due to concerns for [wildlife conservation](#), less than half the respondents in Tanzania felt the same, perhaps reflecting Kenya's more stringent wildlife use regulations. Gender differences were also observed, with men more concerned than women about getting COVID-19 from live animals. (It is, in fact, difficult to get COVID-19 directly from contact with animals, even from animals infected with the disease pathogens, since animals tend to suffer from species-specific mutations of the virus. But other zoonotic risks remain, such as anthrax.)

This study highlights the need to understand better how local communities perceive zoonotic and other disease risks associated with wild meat hunting, selling and consumption, especially in light of the COVID-19 pandemic. The findings can be used to inform public health strategies targeted at community inclusion and disease behavioral campaigns, particularly in lower-income countries where wild meat trade and consumption remain prevalent.

Safe as well as sustainable wild meat consumption can be advanced in several ways, such as:

- By providing communities with greater access to affordable meat from domesticated livestock
- By giving local communities incentives to change any risky behaviors that may lead to spillover of pathogens from animals to humans
- By supporting food sellers in the informal markets of the poor to adopt greater hygiene and related food safety standards
- By finding new ways to meet the nutritional needs of the poor, for whom wild meat remains an important source of proteins and micronutrients
- By regulating wildlife hunting and sales of [wild animals](#) and their meat for conservation.

More information: Ekta H. Patel et al, Assessing disease risk perceptions of wild meat in savanna borderland settlements in Kenya and Tanzania, *Frontiers in Ecology and Evolution* (2023). [DOI: 10.3389/fevo.2023.1033336](#)

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