



Eating wild animals: rewards, risks and recommendations

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Key messages

- ‘Wild meat’ eaten for food and perceived medicinal properties, is neglected both as a pathway for zoonosis transmission and emergence and a pathway out of poverty in Africa and Southeast Asia.
- Wild meat makes substantial contributions to nutrition in Africa and to satisfying food preferences in Asia. In at least 60 countries, wild meat makes up at least 20% of dietary protein. At least 15 countries would risk food insecurity if not able to utilize wild meat.
- More than 91 disease spillover events have been documented from wild meat consumption leading to 25 different zoonotic disease outbreaks. Wild meat consumption is directly and substantially responsible for transmission of neglected zoonoses and the emergence of new diseases.
- Wildlife farming is intrinsically high in risk, low in animal welfare, and deleterious for biodiversity: it is unlikely to be safe or sustainable.
- Domesticated animal farming is an attractive alternative especially in Africa. Shifting cultural attitudes towards non-consumptive use is attractive especially in Southeast Asia.
- Community engagement is crucial to the sustainable management of wild meat resources.
- Approaches for improving food safety in informal markets can be extended to de-risking wild meat value chains.

Background

A major new report—*Eating wild animals: rewards, risks and recommendations*—published by the International Livestock Research Institute (ILRI) in September 2024—focuses on the uses of wild meat in the developing countries of East Asia—China and Mongolia—as well as Southeast Asia and sub-Saharan Africa, regions where wildlife is especially abundant and widely consumed. The report synthesizes available evidence on wild meat and recommends practices and research priorities to mitigate the biodiversity and zoonotic risks related to wild meat consumption, for an audience of health, veterinary, environment and wildlife sectors. It covers the actors and communities involved in the wild meat trade, their behaviours, and the factors driving wild meat consumption practices. The importance of meat from wild animals to human diets has long been studied and so has the human health risks from consuming wild meat but this is the first report to integrate both aspects for Africa and Asia. Based on literature reviews, it seeks to understand wild meat consumption by people and the value chains that supply it—including hunting, marketing and consumption.

During the COVID-19 pandemic, highly publicised calls were made to end the hunting, selling and eating of meat from wild animals. This report is a partial response, arguing that such a ban would be difficult to implement

and might cause more harm than good considering the benefits wild meat provides for millions of mostly poor people and the lack of acceptable substitutes. Rather, emphasis should be on reshaping and de-risking the wild meat trade to ensure it is sustainable and fair to poor and under-nourished populations of the Global South; it does not harm or improves biodiversity and ecosystem services; it is safe for human, animal and environment health; and it is more humane and ethical in its treatment of animals.

Key findings?

Characteristics of the wild meat value chain

Whereas 'the poor man's meat' may be pulses in South Asia, in Africa it is often wild meat. Here, extraction is mainly driven by remoteness, lack of alternative protein sources, and cultural preferences. In contrast, in much of East and Southeast Asia, wild meat is mostly valued as a luxury and celebratory food and for its medicinal properties. The high demand and increasing wealth in East and Southeast Asia have led to a rapid expansion of commercial wildlife farming in that region.

The amount of wild meat consumed compared to livestock meat in Africa is remarkably high. In Central Africa, for example, people consume on average some 35 kg of wild meat each year, much higher than the average level of livestock meat consumption in the same countries. There is, however, considerable variation across Africa. In general, rural inhabitants, men, and older people consume more wild meat frequently than urban dwellers, women, and younger people. Some studies from rural West Africa show that nearly all respondents have consumed wild meat. Studies in East and Southeast Asia suggest that around half of the general population consume wild meat, while in rural areas and those with greater access, three-quarters of people or more consume wild meat. However, per capita consumption is lower than in Africa.

Value, scale and trends of the wild meat market

Accurate estimates of wild meat trade volumes are difficult to obtain due to the clandestine nature of the trade, lack of comprehensive data, and the underreporting of certain species like bats and pangolins. Best national estimates estimates of its value for countries range from USD 5 million per year in Gabon to over USD 200 million per year in Ghana. The total value of the wild meat trade in Africa likely exceeds USD 1 billion annually. Across Africa, the volume of wild meat extracted is estimated at 1–5 million metric tonnes per year, a significant amount when compared to the 14 million metric tonnes of livestock meat produced

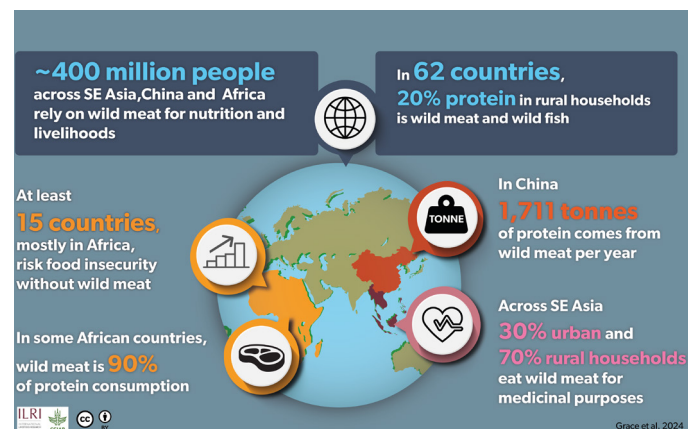
annually. The illegal wildlife trade in Southeast Asia is estimated to be worth between USD 8–11 billion per year, highlighting the scale of the underground market for wild meat and other wildlife products.

With shrinking wildlife habitats and increasing human populations, it seems inevitable that in Africa wildlife will provide an increasingly smaller proportion of human diets, even for rural families living close to wildlife. However, climate change may increase wild meat extraction by reducing the availability of alternative protein sources. The last decades have seen growth of wildlife farming in East and Southeast Asia (with some setback during and after the COVID-19 pandemic), giving rise to concerns about wildlife laundering and zoonotic risks.

Overall, the COVID-19 pandemic had a mixed impact on wild meat consumption, with some areas reporting increased hunting due to food insecurity and others showing a decrease in consumption due to heightened awareness of zoonotic risks. In Africa, while urban consumption decreased, rural consumption increased as people sought affordable food sources.

Wild meat and nutrition

Wild meat is a nutritious food. It is often rich in proteins and micronutrients and sometimes energy density. Perhaps more importantly it is often perceived to be more nutritious, natural and safe than meat from livestock. In at least 62 countries, wildlife and wild-caught fish contribute at least 20% of the animal protein in rural household diets, providing calories, essential proteins, fats and micronutrients. In some African countries, wild meat provides up to 90% of animal protein consumption. At least 15 countries, mostly in Africa, would risk food insecurity if wild meat were excluded from human diets. Access to wild meat benefits the nutrition of women and children, who are among the most nutritionally vulnerable groups. In Central Africa, reduced availability of wild meat has been linked to childhood stunting.



Wild meat and medicine

Zootherapy often, although not always, involves ingestion of wild animal products. More than 2,000 zootherapeutic practices have been documented in Africa utilizing products from around 521 mammalian species to treat 371 ailments. Of these species, 155 are threatened and a further 46 are near threatened. Around 70% of rural households and 30% of urban households in China consume wild meat for medicinal purposes.

Wild meat and biodiversity

The current rates of extraction of wild meat are unsustainable except for some small and fast-reproducing species such as rodents. Ungulates (hooved animals) are the most frequently hunted animals and the most important in terms of biomass extracted, followed in importance by large rodents and primates. Near human settlements, larger animals have often been 'hunted out' and replaced by smaller species (such as duikers and large rodents), which reproduce at faster rates and can be more sustainably hunted.

The conservation of important or vulnerable wildlife species is typically approached through designating protected areas and by enacting regulations against hunting and marketing specific species. This 'fortress conservation' has been characterized as addressing the symptoms of the problem but not the root causes, and in driving wild meat use underground and hence more difficult to sustainably manage. Other researchers find that any legal use of endangered species can act as cover for their illegal use and argue for the necessity of criminalizing wildlife use. This is referred to as 'wildlife laundering' and has been well documented (around half of all legally traded python skins are believed to come from wild-sourced animals).

The illegal international trade in wild meat

The international illegal trade in wild meat in Africa is substantial, with significant volumes smuggled into countries with large African diasporas and where demand for wildlife products is high. Southeast Asia is a major hub for the illegal wildlife trade, acting as both a source and transit hub for international wildlife trafficking. This trade includes not only meat but also other wildlife products like skins and medicinal items and is estimated to be worth USD 8–10 billion per year.

The zoonotic risks of wild meat handling and consumption

Zoonotic diseases are transmitted, or 'spilled over' to humans through shared disease vectors (e.g. Rift Valley fever from mosquito bites), indirect contacts in shared environments (e.g. Lassa fever from contact

with rodent faeces), and direct human contact with animals via consumption, animal bites and scratches, or contact with animal body fluids, tissues or excrement. While spillover linked to consuming wild meat is notably higher in Africa than in other regions, wild meat consumption may be less important than exposure to animal body fluids and faeces during the handling and butchering of wild animals. Wildlife farming, wildlife trade, and wet markets where wild animals and wild meat are often sold are all conducive to the emergence of zoonotic diseases.

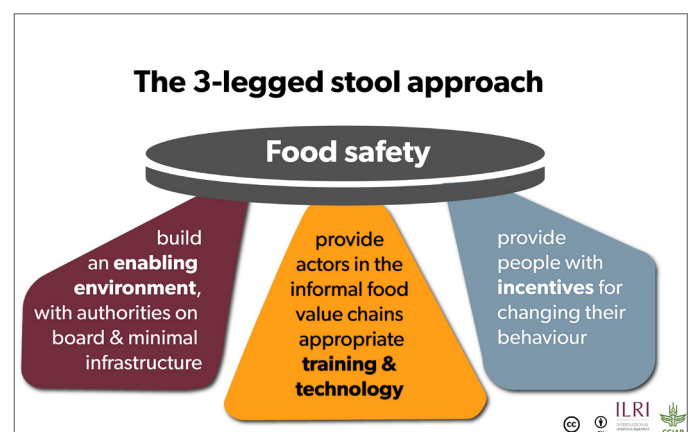
From a zoonotic risk perspective, all wild meat species are not equal. Mammals (around 80%) are the primary hosts for zoonotic diseases, followed by avian hosts. Among mammals, primates, rodents, bats are most implicated.

Recommendations

Fortress Conservation – the regulation of wild meat use through establishing protected areas and restricting the legal use of wildlife is not sufficient for safeguarding the health of humans and animals or efficient for the optimal and ethical use of wildlife and can have negative impacts on the nutrition and livelihoods of the most vulnerable. New approaches are urgently needed to complement and improve existing efforts.

Lack of evidence and lack of metrics hinder our ability to better manage wildlife. Wild meat needs to be included in national and international food consumption data. Existing approaches to wildlife use need to be better evaluated and compared and new approaches (including use of novel technologies) must be developed and trialed.

Engagement of local communities is crucial for sustainable and ethical use of wildlife. This can be done through a combination of increasing the costs of participating in illegal wildlife trade, providing incentives for wildlife stewardship, decreasing the costs of living alongside wildlife, and supporting livelihoods not related to wildlife.



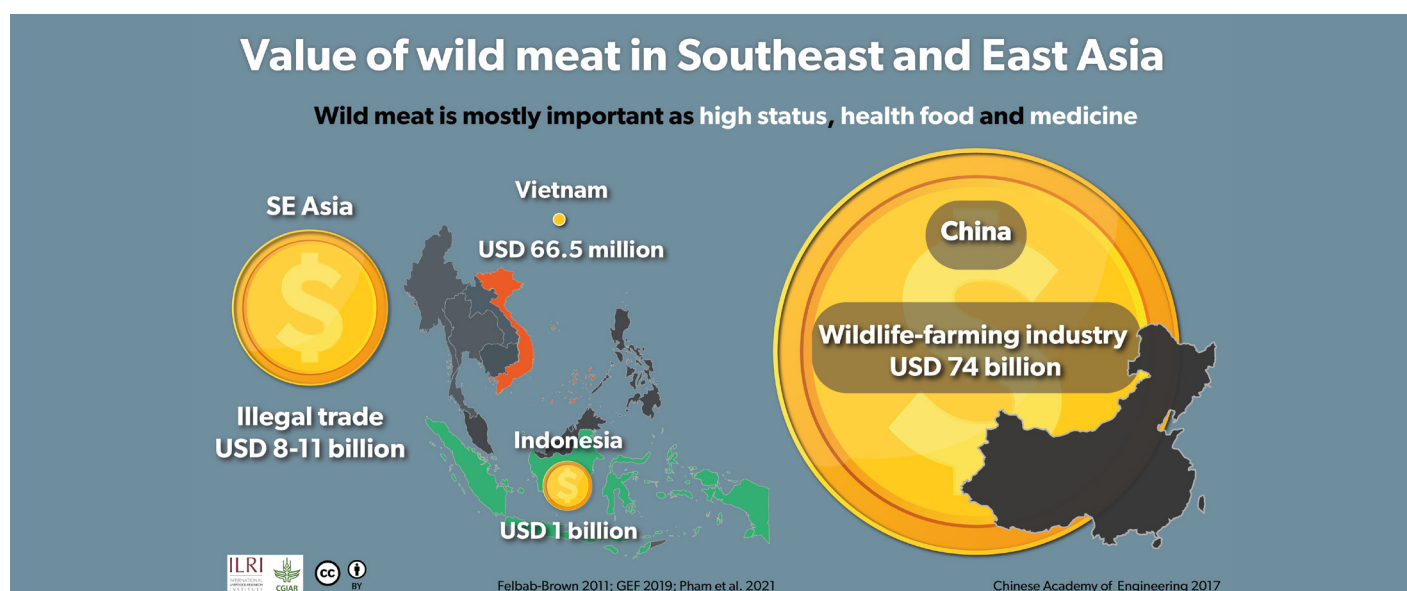
Market incentives that increase the rewards from sustainable use of wildlife (e.g. conservancies and commercial ranches) can be effective if well managed. Decreasing the cost of meat alternatives is attractive especially in Africa where poverty is a major driver of consumption. Moral and social incentives have been neglected yet have potential to bring about radical changes in consumptive use of wild animals.

Recent years have seen growing attention to the informal, territorial or traditional food markets in African and Asia which supply most of the fresh meat, fruits and vegetables and are also responsible for most of the enormous health burden of foodborne disease. Successful approaches to improving food safety in informal markets can be extended to de-risking wild meat value chains.

Current decision-making around wild meat is driven mainly by conservation concerns, with increasing emphasis on epidemiological concerns. Implications for human wellbeing (livelihoods and especially nutrition) have been neglected and animal welfare concerns hardly addressed. We recommend an Eco-Epi-Well approach to wild meat which integrates all four goals, their trade-offs and synergies (Ecological betterment, reducing Epidemiological risk for people and animals, improving Wellbeing of people, and Welfare of wild and domestic animals). One Health, with its emphasis on system thinking and collaboration across sectors and integration of social economic and environmental factors, provides an implementation framework for this new approach.

References

All statements of fact and recommendations in this brief are cited in the accompanying report.



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