

# Bushmeat consumption: A legal and ecological perspective on biodiversity threats

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The consumption of bushmeat, which refers to the hunting of wild animals for food, poses a significant threat to global biodiversity. While deeply ingrained in cultural traditions and subsistence practices, the unsustainable exploitation of wildlife for bushmeat has led to extensive ecological disruptions, sharp declines in vulnerable species, and an increased risk of zoonotic disease outbreaks (Fa et al. 2002). In regions such as Africa, Asia, and Latin America, bushmeat remains a crucial source of protein and income for local populations; however, excessive hunting practices have severe ecological consequences (Wilkie et al. 2005). In India, unsustainable hunting in the north-east has resulted in the drastic depletion of various species that play a crucial role in maintaining ecosystem stability (Bhupathy et al. 2013). Similarly, central Africa faces escalating challenges, where high demand for bushmeat fuels illegal hunting and trade networks, contributing to severe biodiversity loss and increasing the risks of disease transmission, such as Ebola outbreaks (van Vliet & Mbazza 2011).

While the trade in bushmeat involves the hunting and consumption of wild animals for food, the trade in animal parts is typically driven by commercial incentives, such as luxury goods, traditional medicine, or ornaments. Although interconnected under the broader umbrella of wildlife exploitation, bushmeat consumption is often subsistence-based or culturally rooted, whereas the animal parts trade operates through organized trafficking networks. This distinction is critical, as bushmeat may sometimes serve as a by-product of trophy hunting or animal part extraction, making it a subsidiary or secondary element of a more lucrative trade (Nasi et al. 2011). Although international regulatory frameworks like the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) aim to mitigate this issue, enforcement remains a major obstacle due to corruption, governance challenges, and

socio-cultural resistance (Challender et al. 2015). This article examines the legal and ecological dimensions of bushmeat consumption through case studies from northeast India and central Africa. It underscores the necessity for integrated conservation strategies to address this pressing global issue.

## *Northeastern India-the mounting pressure on wildlife*

Northeastern India is a biodiversity hotspot, home to various ecosystems and ethnic communities that have historically relied on bushmeat for subsistence and cultural practices. However, the unsustainable scale of hunting has resulted in devastating biodiversity losses. Bhupathy et al. (2013) reported that in Nagaland alone, approximately 16,000 wild birds and mammals in addition to 29,000 amphibians and 95,000 molluscs are sold in local markets annually. Species such as the Barking Deer, Wild Boar, and Hoolock Gibbon face severe population declines due to excessive hunting.

Hilaluddin & Ghose (2005) documented that in Arunachal Pradesh, wildlife biomass extraction rates surpass natural regeneration capacities, endangering species such as the Asiatic Black Bear and the Clouded Leopard. Traditionally, certain tribal customs, such as the hunting taboos practiced by the Idu Mishmi tribe (Nijhawan & Mihi 2020), have served as informal conservation mechanisms. However, growing urban demand and weakening adherence to traditional regulations have intensified the pressures on local wildlife populations. While traditional bushmeat consumption is often tied to cultural practices, non-traditional buyers in urban markets are increasingly driving illegal trade, highlighting a shift from cultural to commercial exploitation (Ripple et al. 2016).

Efforts to curb bushmeat hunting in the region are hampered by several challenges, including the difficult terrain, socio-political complexities, and inadequate enforcement of the Wildlife Protection Act of 1972. To address this, conservation strategies must incorporate alternative livelihood opportunities and community-driven conservation initiatives. Balancing ecological preservation with the cultural heritage of indigenous communities remains a critical aspect of sustainable conservation efforts.

### Central Africa-the escalating bushmeat crisis

The bushmeat trade in central Africa represents a severe threat to biodiversity, with an estimated 1.3 million metric tons of wildlife harvested annually from the Congo Basin (Fa et al. 2002). This rampant exploitation imperils iconic species such as gorillas, forest elephants, and chimpanzees, whose populations have plummeted due to excessive hunting. Wilkie et al. (2005) reported that in rural Gabon, bushmeat constitutes more than 50% of the local population’s animal protein intake, underscoring its role in food security.

The illegal bushmeat trade is further exacerbated by rising urban demand and lucrative black-market networks. Luiselli et al. (2020) documented a 20% rise in bushmeat consumption in urban centres across western Africa between 2005 and 2015. Notably, urban consumers often prefer larger mammals, which are more vulnerable to extinction due to slow reproductive rates. Overexploitation disrupts forest ecosystems, leading to long-term environmental imbalances and an increased risk of zoonotic disease spillovers, such as Ebola.

Conservation organizations, including the World Wildlife Fund (WWF) and the Wildlife Conservation Society (WCS), have been working to mitigate this crisis by promoting alternative protein sources and sustainable hunting practices. However, enforcing conservation laws such as CITES remains a significant challenge due to political instability, corruption, and the vast, remote nature of central Africa’s forests. Addressing these issues requires a multi-faceted strategy that integrates poverty alleviation, governance reforms, and community-driven conservation efforts.

This comparison highlights the varying wildlife trade dynamics, ecological consequences, legal barriers,

### Comparative analysis of bushmeat consumption in northeast India and central Africa

Feature	Northeastern India	Central Africa
Primary drivers	Cultural traditions, urban market demand, lack of alternative livelihoods	Commercial trade, urban and international demand, poverty, weak governance
Key species affected	Barking Deer, Wild Boar, primates, antelopes, and other mammals	Gorillas, Chimpanzees, antelopes, and other large mammals
Ecological impacts	Population declines, ecosystem imbalances, biodiversity loss	Severe large mammal depletion, ecosystem disruptions, increased zoonotic disease risks
Legal frameworks	Wildlife Protection Act of 1972 (challenging enforcement)	CITES, national laws (weak enforcement due to instability)
Key challenges	Remote locations, weak enforcement, cultural significance of hunting	Political instability, corruption, vast territories, high trade volume
Zoonotic disease risk	Lower but still present	High, with Ebola and other documented outbreaks
Cultural significance	Deep-rooted in ethnic traditions	Historically subsistence-driven but increasingly commercialized

Source: Adapted from Warnock 2013; Ripple et al. 2016.

and socio-economic factors influencing bushmeat consumption in these two regions.

## Conclusion

Bushmeat consumption represents a complex global challenge with profound ecological, legal, and public health implications. As demonstrated through the case studies of northeastern India and central Africa, the underlying drivers of this crisis differ across regions, yet the overarching threat remains the same—unsustainable wildlife exploitation.

In India, the intersection of cultural traditions, increasing urban market demands, and limited economic alternatives have intensified hunting pressures, leading to biodiversity losses. In central Africa, the large-scale commercialization of bushmeat, fuelled by both local and international markets, has significantly contributed to species depletion and heightened risks of zoonotic disease transmission.

Addressing the bushmeat crisis requires a holistic approach that integrates ecological conservation, socioeconomic development, and legal enforcement. Strengthening regulatory mechanisms, promoting sustainable livelihood alternatives, and raising awareness about the ecological ramifications of bushmeat hunting are vital steps in this direction. Promoting plant-based proteins and sustainable farming can reduce bushmeat consumption, but success depends on cultural acceptance and economic feasibility (van Vliet & Mbazza 2011). Case studies show insect farming in Congo improved food security (van Huis et al. 2013). Sustainability requires local engagement, funding, and policy support, contributing to biodiversity and global sustainability goals.

As highlighted by Sanderson et al. (2002), achieving a balance between biodiversity conservation and human socio-economic needs is a formidable challenge. Existing legal frameworks, including CITES and national wildlife protection laws, often face substantial enforcement barriers due to corruption, resource constraints, and logistical difficulties. Therefore, a combination of international cooperation and community-led conservation initiatives is imperative to mitigating the adverse impacts of bushmeat consumption and ensuring the long-term preservation of global biodiversity.

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