Mapping of wild meat supply chains in relation to zoonotic disease transmissionin selected provinces in Viet Nam

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Background*:*
Southeast Asia, including Viet Nam, is a global hotspot for emerging infectious diseases due to dense human populations, rapid land-use change, and frequent interactions among wildlife, livestock, and people. The increasing demand for wild meat (Shairp, 2016)—driven by rural dependence on protein sources and urban consumption linked to social status—drives increased activities in both legal and illegal value chains (hunting, farming, trade), contributing to biodiversity loss and zoonotic spillover risks (Latinne, 2023). Viet Nam also plays a central role in transboundary illegal wildlife trade, with seizures involving thousands of individuals and tons of wildlife products despite strengthened regulations. Evidence shows pathogens such as coronaviruses can amplify along wild meat supply chains (Huong, 2020), yet empirical data on these dynamics remain scarce. Addressing this knowledge gap is critical for balancing biodiversity conservation, food security, and livelihood resilience while mitigating pandemic risks.

Methods:
The study employs a mixed-methods approach combining desk reviews, stakeholder interviews, and online surveys/media scanning to generate a comprehensive picture of wild meat supply chains in Viet Nam. Desk reviews provide a national and provincial-level overview of wildlife hunting, poaching, and farming practices, establishing the structural context of supply chains. Interviews and consultations with rural communities and provincial stakeholders add depth by verifying local drivers of hunting and poaching, while also capturing socio-cultural and livelihood dimensions often absent from official records. Online surveys and media scanning complement these by quantifying the flow of selected species—particularly those farmed but potentially of wild origin—into and out of supply chains, offering insights into consumer demand and market dynamics. Together, these three methods reinforce one another: desk reviews identify broad patterns, interviews ground these patterns in lived realities, and online surveys/media scanning provide quantitative evidence of trade volumes and trends. This triangulation ensures that the mapping of wild meat value chains is both empirically robust and contextually nuanced, enabling identification of critical nodes where zoonotic disease risks are most likely to emerge and where interventions can be most effective.

Results:
Data collection is still underway, but preliminary findings indicate that human–wildlife interactions along Viet Nam's wild meat supply chains create multiple opportunities for zoonotic spillover. Early mapping of stakeholders highlights critical nodes where risks are concentrated, including hunting and poaching sites, wildlife farms, and points of sale to urban consumers. These insights are already raising awareness among provincial stakeholders about the interconnectedness of biodiversity loss, food security, and public health. The final results, to be presented at the conference, will provide a more complete picture of national wild meat supply chain dynamics and inform targeted recommendations for policy and practice to reduce zoonotic disease transmission and biodiversity loss.

Conclusions*:*
Wild meat supply chains in Viet Nam present an increased risk for zoonotic spillover and threaten biodiversity. Final data analyses, completed ahead of the conference, will provide empirical evidence to inform sustainable wildlife management models that balance biodiversity conservation with food security and livelihood needs, while mitigating zoonotic disease risks. This study will provide dynamic mapping of wild meat value chains that generate actionable insights for pandemic prevention, conservation, and livelihood resilience in Viet Nam.

Keywords: wild meat, zoonotic disease, wildlife trade, supply chains.

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