



Credit: J. Thomson

# BUSHMEAT CONSUMPTION AND ASSOCIATED ZOOONOTIC DISEASE RISKS

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# BUSHMEAT AND ZOOONOTIC DISEASES

## Zoonotic diseases transmission

### Transmission

- Contacts
- Respiration
- Ingestion
- Vector

- Wildlife harbor zoonotic disease pathogens with no clinical illness
- Bushmeat hunting and processing places people in contact with wildlife blood/tissues and increases risks of disease transmission
- Livestock in close contact with wildlife can become infected with zoonotic diseases and pass onto humans (as they are in close contact)
- Pathogen spillover to livestock is amplified
- Livestock can serve as an intermediate of zoonotic disease transmission between wildlife and humans

# EA COMMON ZONOSIS

- ANTHRAX
- BRUCELLOSIS
- RIFT VALLEY FEVER
- RABIES

Zoonoses that have jumped from wildlife reservoirs to humans through bushmeat hunting/consumption in Africa:

- HIV
- Ebola Virus
- Marburg Virus
- Monkeypox Virus
- Simian Foamy Virus
- Rift Valley Fever

# STUDY FINDINGS

- Analysis from Dar es Salaam, Morogoro, Mbeya, Arusha, and Manyara shows bushmeat is regularly consumed in Tanzania, assessment and flow up discovered motorcycles and public buses used for transportation (Andimile *et al.* 2021)
- The volume of bushmeat in circulation across Central Africa is vast, with consumption of bushmeat in the Congo basin estimated at 1 million metric tons (Fa JE, *et al.* 2002)
- Central Africa Overall: Estimate: ~ 579 million animals off-take as bushmeat (Fa JE, *et. al.* In: Conservation of Exploited Species. Cambridge University Press. 2003 203-241)

# ZOO NOTIC DISEASE RISKS PATHWAY

- **Wildlife hunting**
  - **Bushmeat processing – skinning, evisceration and portioning**
  - **Transportation**
  - **Storage/distribution/selling**
  - **Preparation before consumption**
- *Hunting – Highest risks associated with hunting nonhuman primates, particularly chimpanzees, bats and small carnivores*
  - *Processing - Risks increase associated with level of contact*
  - *Transportation – Transportation and distance from source increase risk of taking pathogens far from source*
  - *Storage – Mixing of meat from different species increase the risk of RNA viruses which have high mutation and recombination rates*
  - *Preparation – On preparing and cooking meats*

# STAKEHOLDERS ROLE IN RISK REDUCTION

- Regulators (Government MDAs)
- Hunters
- Processors
- Transporters
- Sellers
- Traders
- Consumers
- NGOs
- International organizations

- *Human behavior*
- *Environmental changes*
- *Human wildlife interactions*

# KEY TO SUCCESS

- Awareness creation/Behaviour change
- Outreach
- Enforcement
- Alternative protein source
- Alternative livelihoods

## Prevention and Response

- Monitoring & Surveillance
- Early detection
- Prepare for response

# THANK YOU FOR LISTENING

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