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HUMAN/WILDLIFE BRIEFING

SEPTEMBER 2021
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Photo: AWF

HUMAN/WILDLIFE

Context:

As Ebola can be passed through contact with animal's blood, and also from scratches, dung and other body fluids, this briefing reports on hunter scavenger behaviours and wildmeat movement between DRC and Uganda to establish what risks are posed by the unsolicited collecting, storing and selling of illegal wildmeat. This briefing also reports on current hunting behaviours and rationales, and assesses the risk of further pathogen spillover events as a result of COVID-19. In doing so, we provide practical recommendations in an effort to emphasise the need to collaborate with wildmeat handlers, in particular hunters/poachers, to report unusual wildlife signs and in particular not to touch already dead wildlife. Drawing on lessons learnt from Ebola outbreaks elsewhere, messaging needs to focus on simple handling practices that reduce the risk of contamination through body fluids.

Data Collection:

Through semi-structured interviews with active and reformed poachers in Bwindi Impenetrable Forest, Southern Uganda, this study facilitated research on Ebola transmission risk due to human-wildlife conflict and the movement of wildmeat in the border regions between eastern DRC and Southern Uganda. Interviews were conducted by trained research assistants at Conservation Through Public Health (CTPH) in Bwindi (Kanungu), under the supervision of a LSHTM researcher from March to May 2021. This study was conducted due to reports of increased hunting as a result of a loss of livelihoods caused by COVID-19.

****This document draws from research on building trust in epidemic response in the Uganda-DRC border region, focusing on experiences with Ebola (DRC epidemic) and COVID-19. Data were collected from 231 participants in Uganda's western border region, including Hoima, Kasese, and Kisoro districts in May 2021 primarily with Banyoro, Bakhonzo, and Bafumbira ethnic groups. Many recommendations apply to the current outbreak (20th September 2022, Ebola – Sudan strain), though we did not conduct research with the Baganda.****

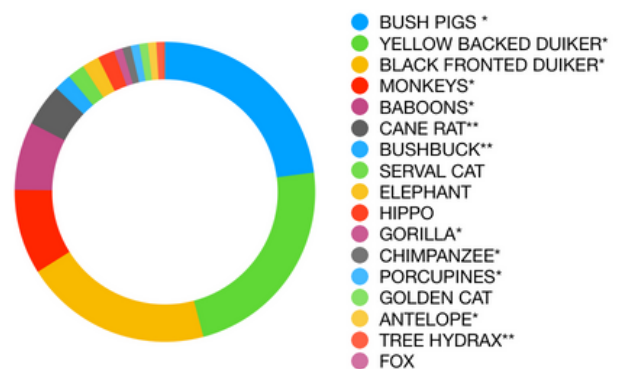
Sources of Disease Transmission: Ebola Virus Disease (EVD)

Although bats have been cited as a host of the Ebola virus, the evidence remains very contested. The most likely carriers of Ebola are primates (monkeys, great apes and humans) and a number of other species including Duikers (small antelopes), brush-tailed porcupines and bush pigs, which have been identified as potential carriers. A border forest between DRC and Uganda, Bwindi Impenetrable Forest, contains a large variety and number of these species and they constitute a large component of the wildmeat consumed in this part of Southern Uganda. Carriers themselves die of the disease when infected, so the greatest risk is in handling and eating those animals that have already died. An infected animal that is carrying the disease may appear sick or already be dead. Therefore, meat from sick or already dead wildlife is very high risk for the handler(s). The consumption of sick and already dead wildlife is practiced in DRC and Uganda and needs priority attention.

Most Commonly Hunted/Consumed Animals

The most commonly hunted or consumed animals in our dataset were:

- Bush Pigs
- Yellow and Black Duikers
- Monkeys
- Baboons
- Cane Rats
- Bush Beck.



Of these species, 5 are known EBOV host species, and 2 are potential EBOV host species.

Rationales for Hunting or Consuming Wild Animals

Our data has shown us that rationales for increased hunting and consumption of wild animals in Bwindi Impenetrable Forest is due to a lack of food, to protect crops from invasive species, a lack of money and poverty forcing community members back into the forest to earn a livelihood, peer pressure, community and generational traditions, medicinal purposes and in self-defence. There was a collective awareness that this behaviour is illegal, but community members felt like they had no alternative to supplement their diets or incomes, especially during the COVID-19 pandemic.



Operational Recommendations:**Support and Strengthen Schemes That Promote Alternative Livelihoods Such as Livestock Farming and Coffee or Avocado Plantations**

The most commonly reported factor that influenced the hunting of wild animals in our dataset was a lack of food and source of livelihood. As a result of COVID-19, the tourist and supplementary industries have all but disappeared, forcing community members back into the forest to hunt. This in turn increases the risk of spillover events, especially when we consider that the 5 of the most commonly hunted and consumed animals in our dataset are known EBOV host species. Instead, supporting long-term, sustainable programmes that provide alternative livelihoods and food sources, such as micro-loan schemes, livestock rearing and coffee or avocado plantations, provide a means to reduce dependency on wild animals and their products in these areas. This has already been successfully implemented in this region with local NGO's such as Conservation Through Public Health (CTPH), but they require further support to generate long-term impact.

Re-Focus Community Engagement

Our data has shown that there is community awareness of increased risk of disease transmission when people enter the forest and when animals leave, examples given included Ebola. Most participants described hesitations surrounding collecting and consuming already dead wild animals, due to unknown cause of death and reports of illness and death of hunters/community members. This suggests that awareness of disease transmission risk at community level is already well understood. Community members are often forced back into the forest to hunt due to a number of reasons including a lack of food, loss of livelihood etc. We therefore suggest that community engagement should instead direct attention towards safer handling and consuming practices, such as increased hygiene practices, to reduce the risk of pathogen spillover.

Work With Hunter/Scavengers to Track the Emergence of Notifiable Diseases

Epizootic disease outbreaks, such as Ebola virus (EBOV), often occur up to a year before human transmission with Ebola virus Disease (EVD). Employing the expertise of hunter/scavengers, those who spend large parts of their life tracking animals, observing changing population numbers and animal behaviour, to report carcasses of known EBOV hosts and to monitor changes in specific animal population numbers - often a clear indicator of the presence of infectious disease, could support livelihoods and reduce the risk of pathogen spillover.





Monitor the Movement of Wildmeat

Wildmeat and wild animal products are being moved across the border between Uganda and DRC, as well as from other National parks within Uganda, such as the Queen Elizabeth National Park, and from within Bwindi Impenetrable Forest. The movement of wildmeat and wild animals increases the risk of disease outbreaks across large areas and borders. Because this is an illegal behaviour, tracking its movement is extremely difficult. Therefore, new strategies to identify and reduce this movement are required to prevent the accelerated spread of epizootic and zoonotic diseases that pose a significant threat to public and animal health.

Change Messaging Around the Collection and Consumption of Wildmeat

Much of the current messaging about Ebola and wildmeat in Uganda has aimed to raise awareness about its perceived relationship with certain wildlife species and the risks involved in the wildmeat handling process. Evidence generated during our discussions with community members in Bwindi Impenetrable Forest suggested that messaging should be simple, firm and informative, i.e. advocating for naming individual species that *could* be hunted, rather than reinforcing a complete ban on hunting all wild species in the forest regions. We must acknowledge that hunting will happen, meaning that messaging should focus on how to make this practice safer to reduce further risk of pathogen spillover and protect vulnerable wild animal species.

The brief was developed in response to a request from the Centre for Disease Control and Prevention (CDC) and UNICEF. It aims to provide actionable recommendations based on a realistic analysis of the available, local resources. It is one of a series of briefs focusing on Ebola preparedness efforts between DRC and Uganda. We would like to acknowledge the contributions made by research staff at Makerere University & David Kaawa-Mafigiri, research staff at Conservation Through Public Health, Alex Bowmer, Hannah Brindle & Shelley Lees at LSHTM, Megan Schmidt-Sane at IDS, and Christine Fricke at TWB.