

Strategies to Prevent (STOP) Spillover

Developing guidelines and training for safe handling and processing of wild meat using biosafety practices in Côte d'Ivoire

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Background

In Côte d'Ivoire, despite regulations prohibiting hunting, the illegal wild meat trade is widespread. Wild meat is widely sold in urban markets and restaurants, putting those who handle, butcher, process and sell wild meat at risk. Due to its illegal nature, systems, policies, and structures are lacking to protect the health of those involved in the wild meat sector, leaving them exposed daily to wild animal bodily fluids and potential infectious pathogens, particularly those involved in processing.

STOP Spillover in Côte d'Ivoire implements interventions in the District des Montagnes, located in the western part of the country, on the border of the countries affected by Ebola epidemics, Guinea and Liberia. The proximity of these countries and the existence of the Ebola Taï strain in this region make the wild meat sector, particularly in this part of the country, a potential hotspot for the spread of zoonotic diseases from wildlife.

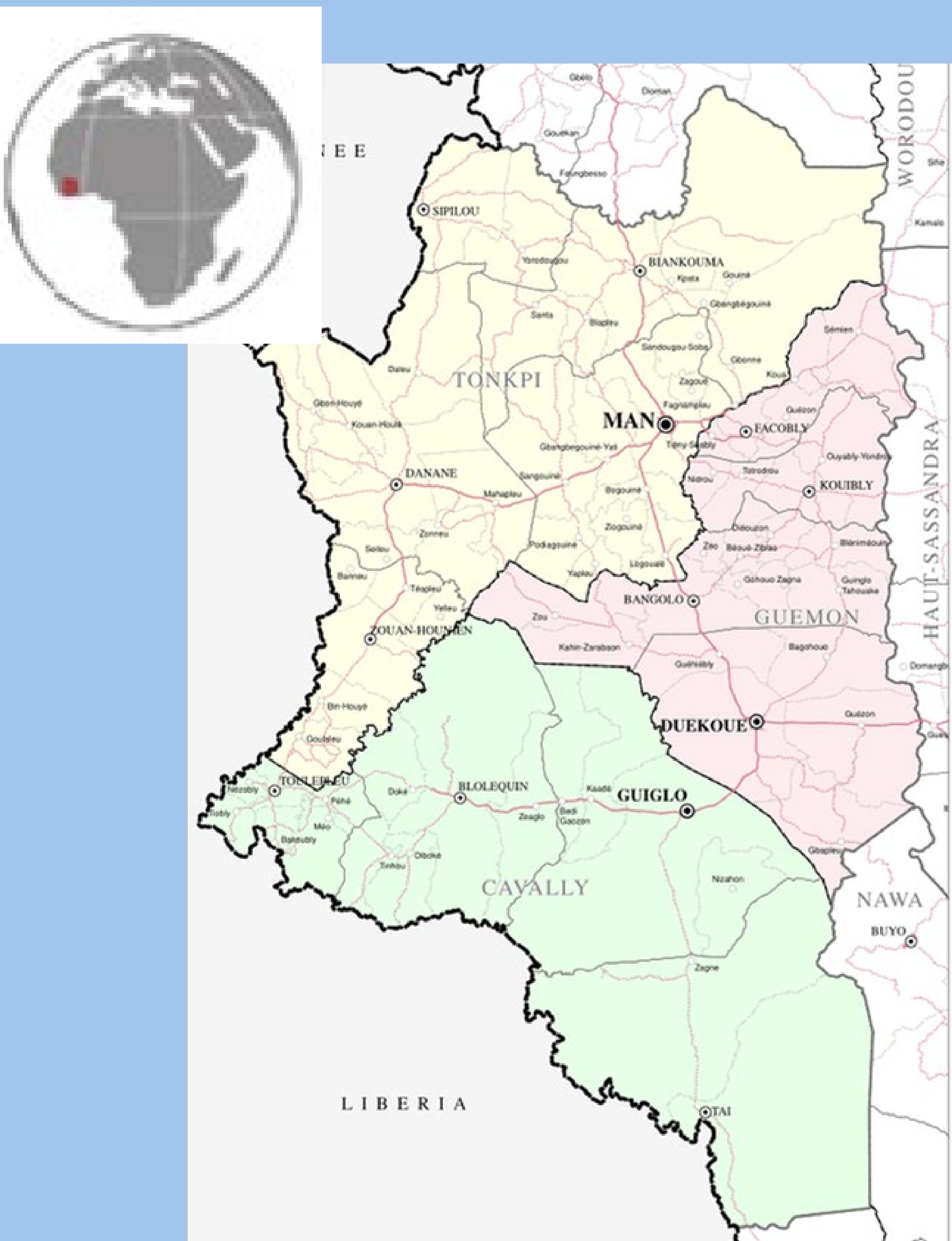


Figure 1: Map of Côte d'Ivoire showing the District des Montagnes bordering Liberia and Guinea

To strengthen the animal sector in mitigating risk of spillover at high-risk interfaces, STOP Spillover in Côte d'Ivoire is working on the wild meat value chain to:

- Develop protocols and guidelines for safe wild meat handling and processing: Wildlife carcasses preparation and transportation from the bush to the processing site.
- Test the introduction of a package of biosafety tools and practices among those handling, processing, and selling wild meat in markets and restaurants.

Methods

Rapid Assessment of Practices

In June 2023, the STOP Spillover Côte d'Ivoire team conducted an assessment using direct observation to document current practices in handling and processing wild animal meat and managing waste from their processing to propose risk reduction interventions.



Figure 2: Evisceration of a hedgehog on wooden material in a restaurant

Development of Guidelines for the Safe Handling of Wild Meat

In collaboration with researchers from various Ivorian universities and research centers, guidelines and protocols were developed. Topics covered:

- proper use of protective personal equipment,
- cleaning, disinfection and sanitization,
- risks and behaviors and knowledge on zoonotic disease,
- conservation, recognition and reporting of endangered wildlife species and,
- waste disposal and management.

Training for Safe Handling and Processing of Wild Meat

In September 2023 and in April 2024, 50 market and restaurant workers were trained on the protocols and guidelines for safe wild meat handling and processing. To encourage adoption of the good practices, participants received materials and equipment demonstrated during the training.



Figure 3: A market vendor trying PPE during the training

Results

Frequency in Using the Biosafety Measures

Initial assessments of the adoption of biosecurity practices showed that those trained in meat handling were making good use of the new hygiene and biosafety equipment and practices. Some noted physical discomfort when using certain equipment such as gloves, washable boots, face shields and masks, as they were not used to using them. The use of UV sanitizers was particularly low, as the instructions for use were not properly understood.

Table 1: Proportion of participants using the various biosafety intervention

Material and equipment	Everyday/ Regularly n (%)	Sometimes/ Often n (%)	Rarely n (%)	Only once/Never n (%)
Nitrile Gloves	11 (84.6)	2 (15.4)	0	0
Household Gloves	7 (53.8)	2 (15.4)	1 (7.7)	3 (23.1)
Washable shoes	8 (61.5)	1 (7.7)	1 (7.7)	3 (23.1)
Face shield	6 (46.2)	1 (7.7)	2 (15.4)	4 (30.8)
Mask	8 (61.5)	0	1 (7.7)	4 (30.8)
Cutting board	7 (53.8)	15.4%	1 (7.7)	3 (23.1)
Apron	13 (100)	0	0	0
Hair covering	13 (100)	0	0	0
Bleach	12 (92.3)	1 (7.7)	0	0
Hydroalcoholic gel	11 (84.6)	1 (7.7)	0	1 (7.7)
UV sanitizer	1 (7.7)	0	0	12 (92.3)

Impact from the training

Participants shared what they learned during the training with: their peers (46.2%); their family (38.5%) including partner, children, and other family members; their employees (30.8%); their friends (15.4%); their providers meaning hunters and intermediary traders (15.4%) and their customers (1, 7.7%). One of them organized a feedback meeting with their peers and their ethnic association for restitution of the training. Another, a wild meat restaurant owner, made aprons and hair coverings for all her employees.

Conclusions

The guidelines developed for the safe handling of wild meat are the first of their kind to be provided to wild meat restaurateurs and processors. The training resulting from these guidelines not only provided information on exposure to pathogens, but also enabled participants to make informed choices with a view to improving public health. To maintain and increase hygiene and biosafety practices and tools, STOP Spillover is also introducing a chatbot to reinforce the training topics and provide immediate responses to any biosafety related questions.

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