

Strategies to Prevent (STOP) Spillover

A conceptual framework for multisectoral zoonotic disease surveillance based on Human-Animal-Environment interfaces in Côte d'Ivoire



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Introduction/Background

- Effective zoonotic disease surveillance system requires a One Health approach and a risk-based strategy.
- The 2023 Joint External Evaluation (JEE) report of Cote D'Ivoire (CDI) surveillance system indicated, among other weaknesses, the lack of multisectoral collaboration framework and the inexistence of the wildlife surveillance.
- To address these challenges, STOP Spillover initiated discussions around these topics and proposed strengthening collaboration at the Human-Animal-Environment interfaces through binding multisectoral agreements to jointly implement a set of agreed upon activities.
- The proposed framework will focus surveillance at Human-Animal-Environment interfaces defined as areas or processes with known intense interactions between humans, animals and the environment and characterized by a potential spillover of zoonotic pathogens of interest.
- We conduct the experience under STOP Spillover, a USAID funded initiative operating in Asia and Africa for risk-based disease surveillance, early disease detection and interventions to mitigate the animal to human pathogens transmission.

Methods

- A workshop of 56 participants was convened in March 2023 to discuss ways to enhance zoonotic disease multisectoral surveillance at Human-Animal-Environment interfaces.



Photo 1 : Participants' group photo with the Minister in charge of livestock and fisheries

- Participants worked in multisectoral and sectoral groups.
- Results of group discussions were discussed in plenary sessions.



Photo 2: Multisectoral group discussion

Questions out for discussion

- 1) What were the key Human-Animal-Environment interfaces in CDI and what was the surveillance status at these interfaces?
- 1) What were key activities that could be jointly or collaboratively implemented at the selected interfaces?
- 2) What mechanism to strengthen and sustain multisectoral zoonotic disease surveillance?

Results

A. Key interfaces to be monitored

Ten Human-Animal-Environment interfaces were identified: Wildlife value chain, Wildlife farming, Halieutic resource sites, Poultry and swine farming, Free ranging farming, Abattoirs, Live animal markets, Peri-domestic rodents at human habitats, Touristic sites, Utilization of animal manure. Overall, disease surveillance seldom occurs or is weak at these interfaces.

B. Key viruses to be monitored

Filoviruses, Avian Influenza, Crimean-Congo virus, Lassa virus, Monkeypox virus, and antimicrobial resistant enterobacteria were identified as pathogens with multisectoral interests.

C. Collaborative activities proposed

Mapping the interfaces, assessing zoonotic disease risks, conducting event-based, wastewater, surface, and effluent water surveillance, Identifying circulating pathogenes.

Conclusions

A collaborative model based on a binding contract was experimented. A consensus was reached to include the proposed activities in the National Action Plan for Health Security (NAPHS) for the next five years period.

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