

Strategies to Prevent Spillover (STOP Spillover)

Activity Brief – Cote D'Ivoire

Activity I.4.6: Waste Water and Waste Effluent Surveillance: Training in Sample Collection for Waste Water and Waste Effluent Surveillance

INTRODUCTION

Prior work shows that wastewater surveillance can provide two to three weeks of early warning of emerging trends in the prevalence of certain pathogens, including viruses, and can help identify disease clusters. In Côte d'Ivoire, a sample collection and analysis protocol developed by STOP Spillover consortium experts and approved by USAID has been validated by stakeholders for the Wastewater Surveillance (WWS) and Liquid Effluent Surveillance (WES) activity. Training for collectors designated by laboratories and entities at the national level was held in Montagnes district, Yopougon, and Grand Bassam in Greater Abidjan. The goal was to train collectors to gather samples for pathogenic monitoring of wastewater and liquid effluents.

In Yopougon, two collection points were identified at the canal level, and both active and passive collection methods were used. For passive sampling, the technique involved attaching a heavy object (e.g., a stone) to the collection device before dipping it into the wastewater. In Grand Bassam, one site was identified at the poultry market, and the passive sampling method was chosen.

Expected Outcomes

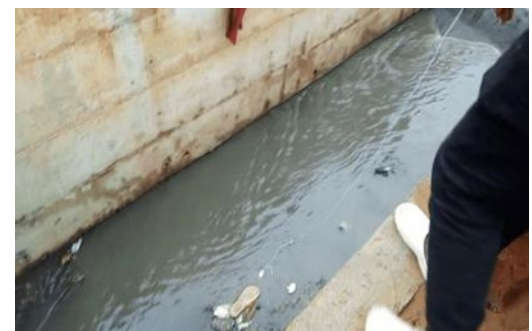
- Teams of collection agents from the various stakeholders, including partners LANADA and IPCI were trained to effectively collect WWS and WES samples from different sites.
- The system for packaging and dispatching samples to laboratories was demonstrated.
- The laboratories, LANADA and IPCI, were assessed for their capacity to implement the biosafety and biosecurity protocols and to effectively test the samples.

Achievements

The training and collection mission took place from July 17-21, 2023. Indoor training sessions, one in Abidjan at the Adiopodoumé IPCI and the other in the meeting room of the Man health district were held. Fifteen people participated in the training, and represented various



Collection device preparation prior to active sampling.



Passive sampling technique for COVID-19 at the Yopougon open canal.



Passive sampling for HPAI at Grand Bassam.

departments, including, Direction des Services Vétérinaires, Laboratoire National d'Appui au Développement Agricole, Institut Pasteur de Côte d'Ivoire, Centre Ivoirien Antipollution, Institut National d'Hygiène Publique, Centre d'Entomologie Médicale et Vétérinaire de l'Université Alassane Ouattara, Unité de Formation et de Recherches en Biosciences de l'Université Félix Houphouët Boigny and the STOP Spillover team. At the end of the training, collection and analysis equipment was handed over to IPCI and LANADA for sample collection. The training focused on the following points: the presentation of wastewater, and a review of the wastewater and liquid effluent collection protocol, including the equipment required for collection. This was followed by field-level training for the collection agents.



Active sampling training.

More activities at a glance

Discussions and LANADA and IPCI guided tours

A meeting with the laboratories (LANADA and IPCI), the Wastewater Collection Expert, and the SMM team lead from STOP Spillover provided an opportunity to discuss the activity's feasibility. A guided tour of the facilities and equipment rounded off the meeting with the laboratories.



Discussion with managers followed by a LANADA guided tour.



Classroom training followed by active sampling training in the field for collection agents.

Next Steps

- The trained collection agents will begin wastewater and waste effluent sampling and testing for COVID-19 and HPAI. This will be done regularly, and test results will be used as a monitoring and /or early warning system for these pathogens.