



ODIN project

Strengthening Environmental Surveillance To Advance Public Health Action

Workshop Report, Annex B

M2.1 Stakeholder workshops arranged, and the questionnaire launched at BF

Ramada Hotel, Ouagadougou, Burkina Faso 13nd to 14nd of December, 2023

List of participants
WHO, Unité d'épidémiologie, de préparation et de réponse (2 representatives)
WaterAid
ZIE
West African Organization of Health
Académie Nationale des Sciences, des Arts et des Lettres -BF
Centre National Recherche Scientifique et Technologique, General Delegate (Ministry)
Institut de Recherche Sciences de la Santé, Director
Institut National de Santé Publique, General Director
Centre de Recherche en Santé de Nouna (CRSN)
Laboratoire Central de Référence, Technical Director
Laboratoire National de Référence-Résistance aux anti microbiens (RAM)
Observatoire de la Santé de la Population, Technical Director
Direction de l'Hygiène Publique
Direction Générale des Ressources en Eaux (DGRE)
Direction Générale de l'assainissement, des eaux usées et excreta (DGAEUE)
Direction des Laboratoires de Biologie Médicale (DLBM)
Sécrétariat Technique One Health
Direction de la promotion de la santé de la population (DPSP)
Direction des Systèmes d'Information en Santé (DSIS)
Direction générale des études et des statistiques sectorielles (DGESS)
Laboratoire National d'Eleevage
Direction de la Prévention par la Vaccination
Agence nationale pour la sécurité sanitaire de l'environnement, de l'alimentation, du travail et des produits de santé (ANSSEAT)
Laboratoire d'Analyse de la Qualité des Eaux, Laboratory Responsible and Head of the bacteriology laboratory
Maire de Ouagadougou, Responsable hygiene department
District Sanitaire Nanoro, Head of the District
CMA Saint Camille de Nanoro, Director
Direction Générale de l'Accès aux produits de santé (DGAP), Director
Personnes ressources Professeur Rasmata Ouedraogo and Dr Ouermi/Zerbo Habibata

Day 1: 13 December 2023

1. **Opening speech by General Delegate (Ministry) of CNRST**
2. **Keynote: Environmental monitoring of waterborne pathogens [Tarja Pitkänen – THL, video recording]**
3. **Presentation of the CRUN/IRSS-DRCO [Dr Hermann SORGHO – CRUN/IRSS-DRCO]**

- History of the URCN: 2009: creation of the URCN, 2016: creation of the DRCO
- Affiliations: CNRST, IRSS, DRCO
- Infrastructures
- Missions
- Organisation: eight (08) sections: Administrative and Financial Service, Quality Management, IT and Data Management, Logistics, Clinic, Pharmacy, Laboratory (Clinical Biology and Biomedical Research), Demographic and Health Surveillance System (HDSS).

4. **ODIN project overview and study sites [Dr Marc C. Tahita – CRUN/IRSS-DRCO]**

- The project has seven work packages that will be accomplished in three years.
- Wastewater surveillance offers an early opportunity to detect major diseases outbreaks.
- The ODIN project's major outcomes will be to develop a surveillance system that will be a self-sustainable program for the Ministry of Health.

5. **Existing mobile laboratory network and genomics infrastructure to support epidemic preparedness and response [Dr Isidore Bonkougou – LCR/INSP]**

He set out the responsibilities of the LCR, which are to:

- Coordinating the activities of national and regional reference laboratories to protect health and combat diseases with epidemic and pandemic potential
- Ensuring and alerting on health monitoring and genomic surveillance by centralizing and analyzing data and implementing information from the reference laboratories
- Contributing to the accreditation and certification of NRLs
- To set up, monitor and evaluate a national bio-bank
- Set up national genomic surveillance
- Promote biosafety and biosecurity in the National Reference Laboratories.

6. **Environnemental sureveillance (ES) of poliovirus [Dr Seydou KABORE and Theresa SINARE –WHO]**

This was presented in two phases: the first phase was devoted to general information on the ES of poliovirus, addressed by Dr Seydou KABORE, WHO representative in charge of the ES of poliovirus. In his presentation he described

- the reservoir of the polio virus, which is exclusively human;
- the different types of surveillance;
- the selection criteria for SE polio sites;
- the collection methods
- the environmental monitoring plans;
- the ES information system;
- the data management system;
- the key performance indicators.

The second phase of the presentation was given by Mrs Theresa SINARE, focal point for the SE of poliomyelitis in Burkina Faso. In her speech, Ms SINARE described

- Site selection criteria and conditions for collecting wastewater samples for SE polio;
- Collection sites located in Ouagadougou (4 sites) and Bobo Dioulasso (2 sites);
- Performance indicators: the rate of samples transmitted on time and the rate of samples containing enteroviruses;
- Sampling agents: ONEA agent and field agent trained for the occasion;
- The circuit from sampling, storage to analysis at the Pasteur Institute in Dakar;
- The strengths and weaknesses of ES polio as it is currently carried out;
- Prospects for improving polio ES.

7. Speech by the Director of the French National Institute of Public Health [Dr Hervé Hien]

The Director General of the INSP, who was represented at the opening ceremony for scheduling reasons, was nevertheless keen to attend because of the interest he takes in the new collaborative dynamic that the CRUN/IRSS-DRCO has undertaken through the ODIN project. At the outset, he praised the new collaborative dynamic and expressed his keen interest in the issues addressed by this new ODIN project.

Through this study, he saw the need for the various parties to share their experience in terms of monitoring ONE HEALTH pathogens in wastewater.

8. Panel: "Priority pathogens to include in wastewater monitoring" [Dr Hervé KAFANDO]

The afternoon began with a panel discussion on "Priority pathogens to be included in wastewater monitoring". The panel was made up of : Dr Isidore BONKOUNGOU, Dr Souleymane SORE, Dr Nadège MINOUNGOU and the Head of LAQE SENI Reynaud. The panel discussed water-borne diseases, pathogens isolated in wastewater and the experiences of the various institutions about the panel's theme.

Day 2: 14 December 2023

9. Mentimeter.com survey about priority pathogens and AMR targets

- The Mentimeter.com survey was implemented on the second day due to internet issues the day before.
- General discussion on priority pathogens to include in wastewater surveillance.

10. AMR surveillance

The presentation was made by Dr Hervé KAFANDO, representing the Head of the Laboratoire National de Reference-RAM (LNR-RAM). In his presentation, Dr KAFANDO :

- Situated the national context of AMR surveillance. According to Dr KAFANDO, AMR surveillance has been operational since 2018. It began with 15 sites and will gradually expand to reach 22 sites across the country by 2023;
- Listed the 13 pathogens of interest in Burkina Faso, including the 8 GLASS pathogens;
- Presented the results of surveillance covering January to December 2022 for two pathogens (E. coli and S. aureus);
- Presented the LNR prospects for AMR surveillance, which include the ongoing strengthening of human resources, the implementation of the lab book for routine data collection and transfer to the WHONET database, ongoing communication on the financing of AMR surveillance and active surveillance with the implementation of the TRICYCLE project.

11. An Overview of Water supply and sanitation services in Burkina Faso [Christine Ouédraogo – Ministry of environment, water and sanitation]

This topic was addressed by Ms Christine Ouédraogo, Director of Studies at ONEA. She presented a map of drinking water and sanitation facilities, as well as a map of sanitation facilities, ranging from the smallest to the most complex.

- Ms Ouédraogo raised a major constraint that they encounter, which is the durability of the functionality of the facilities built.

12. Infrastructure and access to sanitation in Burkina Faso: the challenges of MDG6

Presented by Mrs KOLOGHO Isabelle, Sanitation General Direction of Waste Water and Excreta, she gave us a presentation on the following topics

- An update on the structures implemented by sanitation stakeholders
- A presentation of the types of sanitation works
- The state of access to sanitation
- The major challenges of achieving universal access to sanitation and improving people's quality of life, mobilizing financial resources and ensuring synergy between the various players.

The priority of the ministry

- Intensify the implementation of the End of Open Defecation (FDAL), particularly in areas receiving internally displaced persons (IDP) and areas of origin of IDPs;
- Stepping up the construction of wastewater and excreta treatment infrastructure (WETI);
- Promoting public-private partnerships (PPPs) in the sanitation sector;
- Implementing the study for the creation of a sanitation agency;
- Developing a strategy for managing faecal sludge.

13. AMR surveillance implementation in Tanzania [Nyambura – MoH]

- The development of an Antimicrobial Resistance (AMR) surveillance framework includes specifying sites, priority samples, and priority pathogens.
- In Tanzania, nine hospitals and five veterinary centers participate in AMR surveillance.
- The initiative involves strengthening laboratory services to support surveillance, with a passive focus on the human sector and both active and passive components in the animal sector.

14. Infectious disease and AMR surveillance and detection using Integrated Disease Surveillance and Response (IDSR) in Burkina Faso: Opportunities and Challenges [Sore – Ministry of Health and public hygiene]

- At MoH, IDSR is coordinated by the Department of Preventive Services Epidemiology Section: Surveillance unit.
- To improve real time reporting IDSR is using mobile technology.
- IDSR implementation:
 - Diseases under immediate case notification: bacterial meningitis, cholera, yellow fever, plague, measles, rabies, acute flaccid paralysis, bloody diarrhea, anthrax, acute viral hemorrhagic fevers, human influenza caused by new subtypes, neonatal tetanus, epidemic viral, keratoconjunctivitis, smallpox.
 - Diseases under weekly reporting: malnutrition, animal bites, pneumonia < 5 years, diarrhea < 5 years, typhoid, tick borne relapsing fever, onchocerciasis, trachoma, trypanosomiasis, malaria.
 - Diseases reported monthly: diseases under vertical programs, non-communicable diseases, malnutrition, pneumonia below 5 years.

15. One Health Approach Implementation in Burkina Faso [Dr Nadège MINOUGOU, Technical Secretariat One Health]

Dr Nadège MINOUGOU, representing ST One Health, was in charge of the presentation.

She:

- Described the areas of intervention of the One Health approach
- Presented the One Health coordination platform, with particular emphasis on the technical secretariat, which is the section responsible for implementing the approach.

16. The Webropol platform questionnaire considering the clinical and environmental surveillance systems

- The Webropol questionnaire was filled.
- General discussion on the thematic areas of the questionnaire.

17. Closure meeting

After the presentations, Dr Tahita apologised to the participants for any shortcomings and thanked them for their participation.

He concluded by outlining the workshop's objectives and prospects, which were as follows:

Objectives: Current situation

- Better knowledge of the involvement of each player in its primary area of action
- Disparate levels between the various structures
- Improve collaboration between and within institutions
- Empowerment by strengthening the technical platform: in the short term, to be able to identify suspected cases of priority pathogens in Burkina Faso

Perspectives

- Strengthening and upgrading laboratories in the 4 ministries: Environment, Animal Resources, MERSI and MSHP;
- Training needs: local and international; Improve inter- and intra-institutional collaboration;
- Need to find a framework for regular meetings: monitoring and emerging problems