

# Strengthening capacities of laboratory management in ZNPHRL

ZNPHRL: Zambia National Public Health Reference Laboratory

**PROJECT PURPOSE**  
 Capacities of ZNPHRL to conduct laboratory-based surveillance is strengthened.

**Our Team**



Our team consists of the members of ZNPHRL and JICA experts for surveillance, lab management, and project coordination.

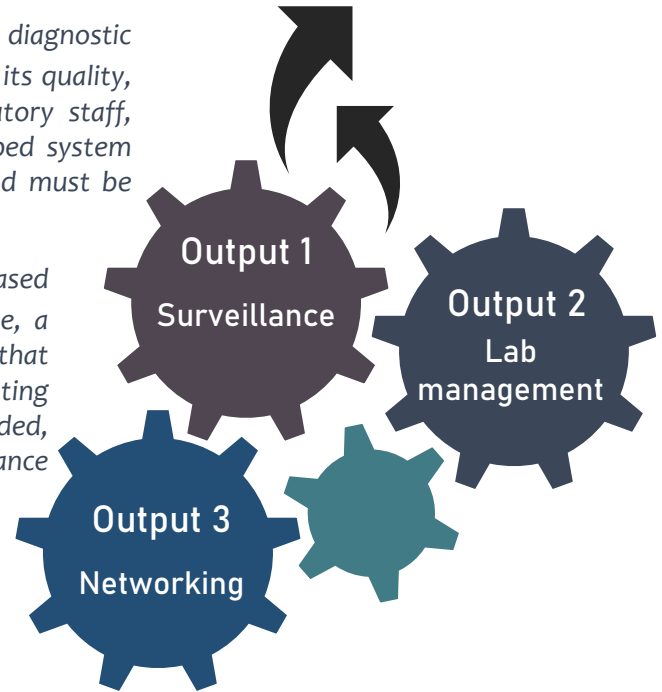


To ensure the adequate capacity of diagnostic response to public health threats, ensuring its quality, and ensuring health and safety of laboratory staff, community, and environment, well-developed system for laboratory management is essential and must be maintained and continuously improved.

To enhance the reliability of laboratory-based surveillance, which is our project's purpose, a functional laboratory management system that guarantees the quality of public health testing in the laboratories described above is needed, along with the establishment of a surveillance system.

**Activities for Output 2**

Our activity for lab management mainly targeting (1) Quality management system, (2) Biosafety and biosecurity, and (3) Equipment management.



We are working to strengthen the laboratory management system at Zambia National Public Health Reference Laboratory through activities targeting the three areas listed on the left.

Our project activities will contribute to strengthening the capacity of public health sector in Zambia to respond with high resilience to public health threats and to provide quality routine public health services, as represented by reliable surveillance.



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Site visit to ensure specimen quality

**QMS** is fundamental system/protocol to enhance laboratory services. In addition to the entire sample process management, including pre-examination (sampling, specimen storage and shipping), examination (test procedures), and post-examination (record keeping and reporting etc.), all laboratory organizational systems (organization, staff, procurement and inventory, documentation and storage of documents and records, internal and external assessment, etc.) related to quality testing including safety and equipment are subjected to management and control. Continual improvement is implemented based on the PDCA (Plan-Do-Check-Act) cycle.

**Activities:**

- Support to develop ZNPHRL Strategic Plan
- Support implementation of QMS including:
  - Gap assessment
  - Develop/implement Annual Quality Management Plan
  - Hold Management Review meeting
  - Support inventory management etc.
- QMS trainings collaborating with the Ministry of Health
- Networking with the surveillance sites to ensure specimen quality etc.



## Quality management system (QMS)



Gap assessment

Sustainable and proper management of laboratory equipment and facility, which are committed to provide safe testing processes and reliable results, is critical to laboratory service delivery.

**Activities:**

- Establish equipment management plan
- Basic equipment management trainings
- Calibration trainings
- Conduct basic maintenance and calibration according to the equipment management plan etc.

## Equipment management



BSBS training

## Biosafety and biosecurity (BSBS)



Biosafety provides principles and practices that addresses the safe handling (to prevent unintentional exposure to) and containment of pathogens and toxins. Biosecurity is principles and practices to prevent the intentional release, theft, or misuse of pathogens and toxins.

Public health reference laboratories are expected to handle infectious disease specimens that pose a threat to public health, and therefore must strengthen and strictly adhere to BSBS and manage the risks associated with BSBS in order to protect the safety and health of staff, community, and environment.

**Activities:**

- Support biological risk assessment on handling pathogens/specimens
- Enrich/rearrange laboratory environment from the aspect of the BSBS
- Support to exchange knowledge and experiences with other research institutes
- Biosafety trainings/study session etc.



BSBS study session