



Executive Summary

The WOAHP sub-regional wildlife health networks in Asia and the Pacific have prioritized various topics including laboratory capacity building and coordination of laboratory activities in the region. This report reviews the wildlife disease laboratory capacities in the region, highlighting common challenges, strengths, and priority topics for support across the region. It summarises a survey of WOAHP Focal Points for Wildlife conducted in 2023, which included responses from n.18 Members.

Common challenges included **sample quality** (poor quality of samples due to decomposition or improper preservation), **resource limitations** (limited financial and human resources, especially for wildlife-specific diagnostics), **diagnostic capacity** (lack of validated diagnostic tests for wild species and underdeveloped testing methods), **logistics** (difficulties in sample transfer, especially across borders, due to regulatory constraints like CITES permits) and **surge capacity** (inadequate preparedness for a surge in samples during disease outbreaks).

Strengths across the region included **established protocols** (some countries have standard protocols for specific diseases like avian influenza and African swine fever), **inter-laboratory programs** (participation in inter-laboratory proficiency testing programs to ensure diagnostic accuracy), **regional collaboration** (experience in shipping samples to regional laboratories and WOAHP Reference Laboratories) and **technical expertise** (availability of trained personnel and technical expertise in specific areas of wildlife disease diagnostics).

Priority topics for support requests were on **training** (need for capacity-building activities, especially in wildlife disease diagnosis and biosafety), **reference materials** (access to reference materials and positive control samples for various wildlife diseases), **infrastructure** (development of laboratory infrastructure to enhance diagnostic capabilities), **financial support** (increased budgetary allocation for wildlife disease surveillance and diagnosis) and **surveillance strategies** (establishment of wildlife disease surveillance strategies and inter-laboratory proficiency testing schemes).

INTRODUCTION

During previous discussions, the WOAHP Focal Points for Wildlife and members of WOAHP wildlife health networks in Asia and the Pacific have prioritised various topics including laboratory capacity building and coordination of laboratory activities in the region. To better understand the situation in each Member in the region, a short survey was conducted in July-August 2023 to review current laboratory diagnostic capacity and to identify challenges faced in wildlife disease diagnosis by Members. The data and insights obtained are a valuable resource for informing WOAHP and guiding future support initiatives.

SUB-REGIONAL SUMMARIES

East Asia

Responses were received from Chinese Taipei, Japan, Mongolia and the Republic of Korea.

Countries like Japan, Mongolia, Chinese Taipei and the Republic of Korea have established laboratories with **capacities** for handling a range of wildlife diseases. **Prioritised diseases** include highly pathogenic avian influenza (HPAI), classical swine fever (CSF), African swine fever (ASF), foot and mouth disease (FMD), peste des petits ruminants (PPR), rabies, brucellosis, West Nile virus (WNV), severe acute respiratory syndrome (SARS), trichinosis and Nipah virus. Members report successful experience in **transferring samples** to local, national and regional laboratories. Standard protocols are in place for investigation of certain diseases; however, preparedness and surge capacity for wildlife **outbreaks** may be limited.

The **main challenges** faced are a reluctance in sampling due to concerns about positive cases, and the need for sensitivity evaluation of new diagnosis methods. **Technical support requested from WOAHP** includes training courses, reference materials, proficiency programs, and supplies/consumables.

Pacific

Responses were received from Australia, New Caledonia, New Zealand and Papua New Guinea.

Australia and New Zealand have robust systems for **laboratory capacity** with national and sub-national laboratories capable of handling various tests. **Prioritised diseases** include avian influenza, Newcastle disease virus, COVID-19 (in deer), ASF, brucellosis and Aujeszky's disease. There has been success in **transferring samples** within the region and to WOAHP Reference Laboratories. Preparedness plans for wildlife **outbreaks** are in place.

The **main challenges** are diagnosis of exotic diseases (for example, in fruit bats), and obtaining CITES permits for sample transfer. **Technical support requested from WOA**H includes inter-laboratory proficiency programs, certified quality controls for PCR and serology and technical support in outbreaks.

South Asia

Responses were received from Bangladesh, Bhutan, Iran, Nepal and Sri Lanka.

Regarding current **laboratory capacity**, there are limited wildlife disease diagnostic facilities, and they often rely on livestock disease diagnosis laboratories for confirmation. **Prioritised diseases** include avian influenza, rabies, FMD, lumpy skin disease (LSD), PPR, canine parvo viral infection, animal coronaviruses and canine distemper. There is experience in **sending samples** to national laboratories within Asia and the Pacific. There are limited facilities and financial resources for dealing with a surge in samples during **outbreaks**.

The **main challenges** are a lack of reference laboratories for wildlife disease diagnosis, limited facilities, and financial constraints. **Technical support requested from WOA**H includes training, financial allocation, improvement of laboratory facilities, and support for outbreak investigation and disease management.

South-East Asia

Responses were received from Laos, Malaysia, the Philippines, Thailand and Viet Nam.

Laboratories in countries like the Philippines, Viet Nam, Malaysia, Laos and Thailand have established **laboratory capacities** for diseases like rabies, avian influenza and ASF. **Prioritised diseases** include avian influenza, ASF, Ebola Reston virus, rabies and Newcastle disease. There is some experience in **transferring samples**, but it is not consistent across all countries. **Preparedness for wildlife outbreaks** varies by country – some have standard protocols, while others may lack surge capacity.

The **main challenges** are unknown or various pathogens, poor quality of samples and limited resources. **Technical support requested from WOA**H includes training, biohazard management and inter-laboratory proficiency tests.

CONCLUSION

This report encapsulates the key points from the survey, providing a clear picture of the wildlife disease laboratory capacities across Asia and the Pacific. It shows several cross-cutting issues which affect all sub-regions, as well as some specific priorities in each sub-region.