



MoZWE & Thailand-NWHC Structure and Diagnostic Centers

Sarin Suwanpakdee



MoZWE

The Monitoring and Surveillance Center for Zoonotic Diseases in Wildlife and Exotic Animals

- Approved by Thai cabinet 2004
- MoZWE was first established to provide monitoring and warning of avian influenza outbreaks and other diseases of wildlife



FAO Reference Centre for
Zoonotic and Wildlife Diseases

2016 -2024



**Accreditation
No.1360/66**



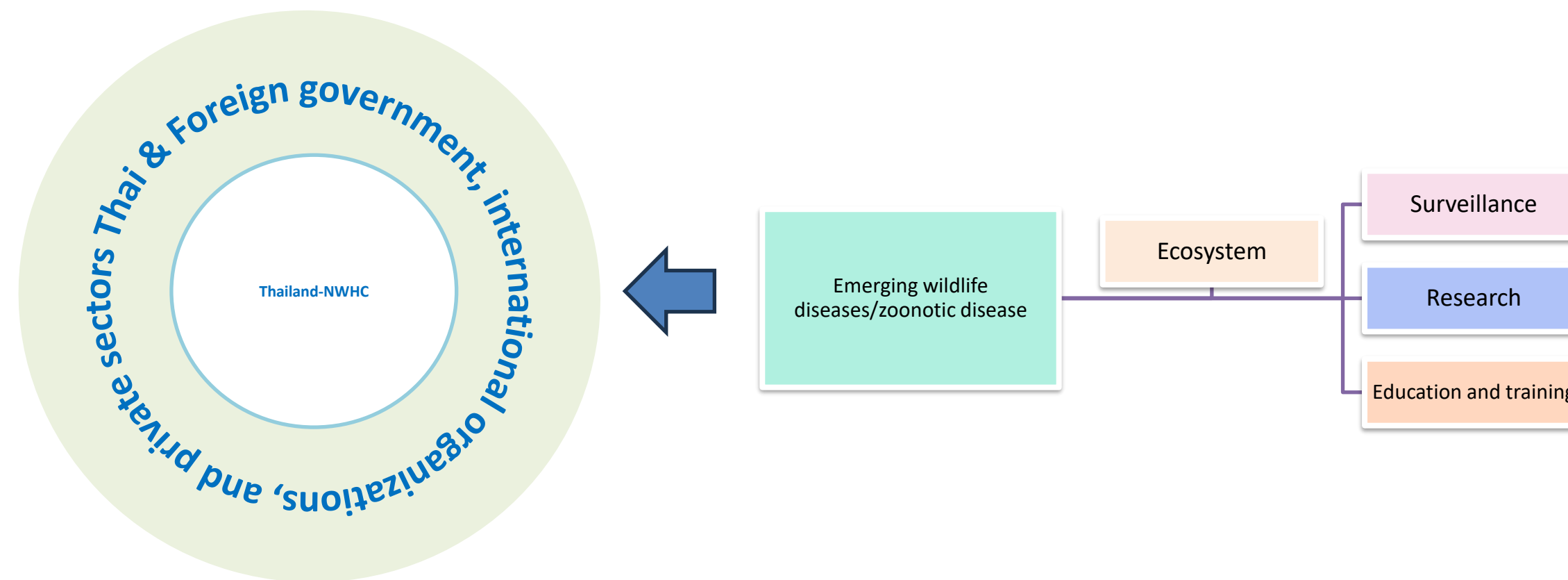
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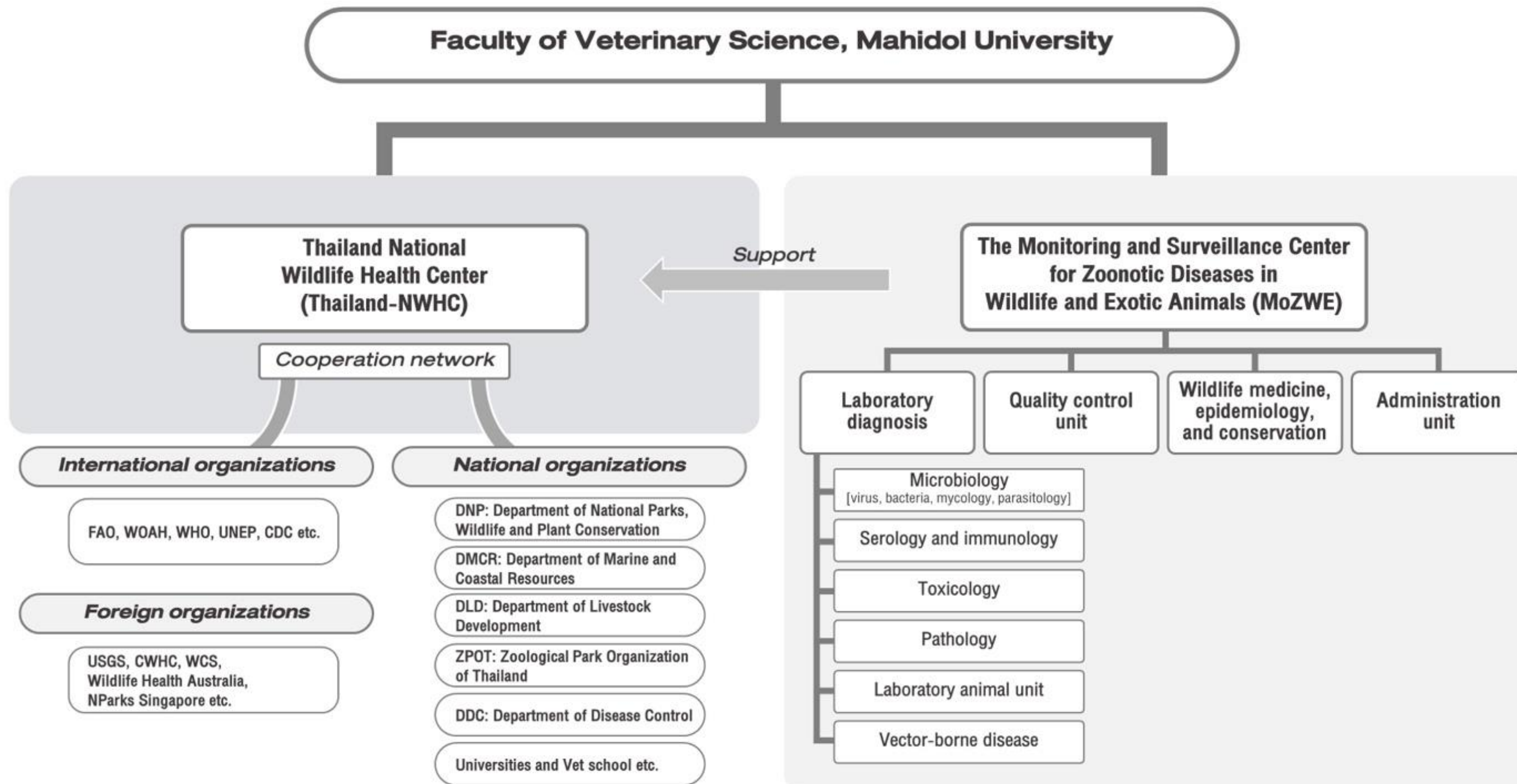


Thailand National Wildlife Health Center (Thailand-NWHC)

- Approved by Thai Cabinet 2011
- Acts as a coordinating office for wildlife health to facilitate the activities of wildlife health surveillance, monitoring, education, and research



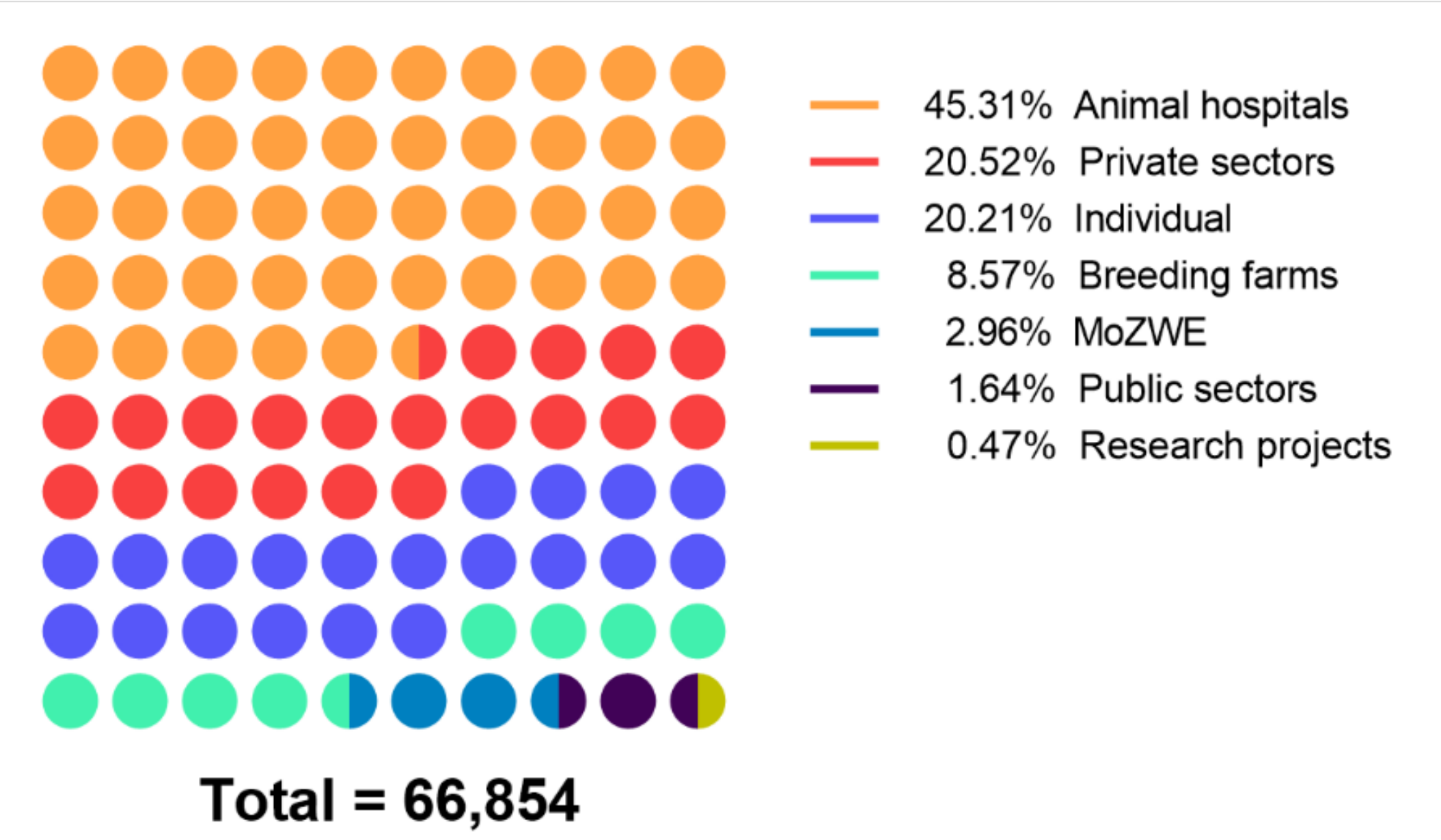
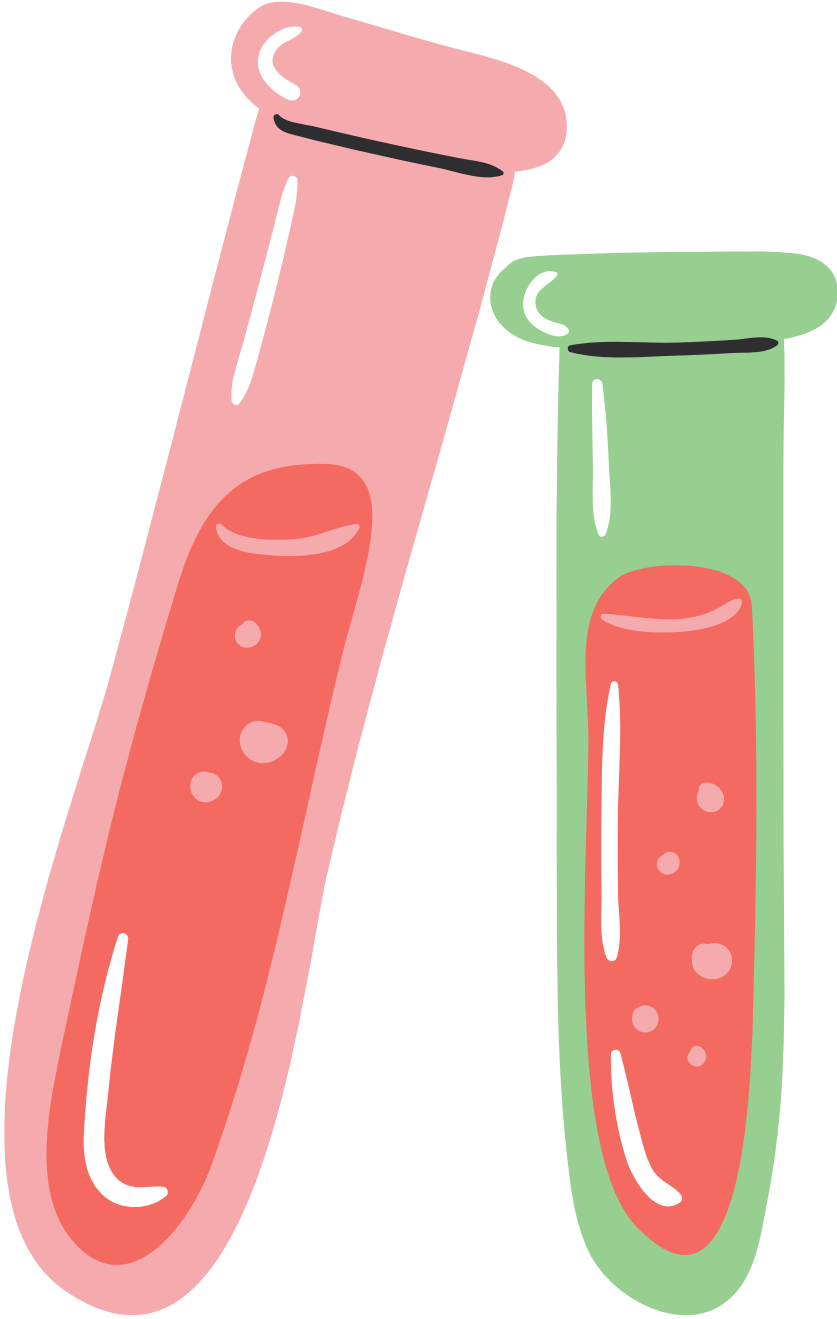
Organizational chart



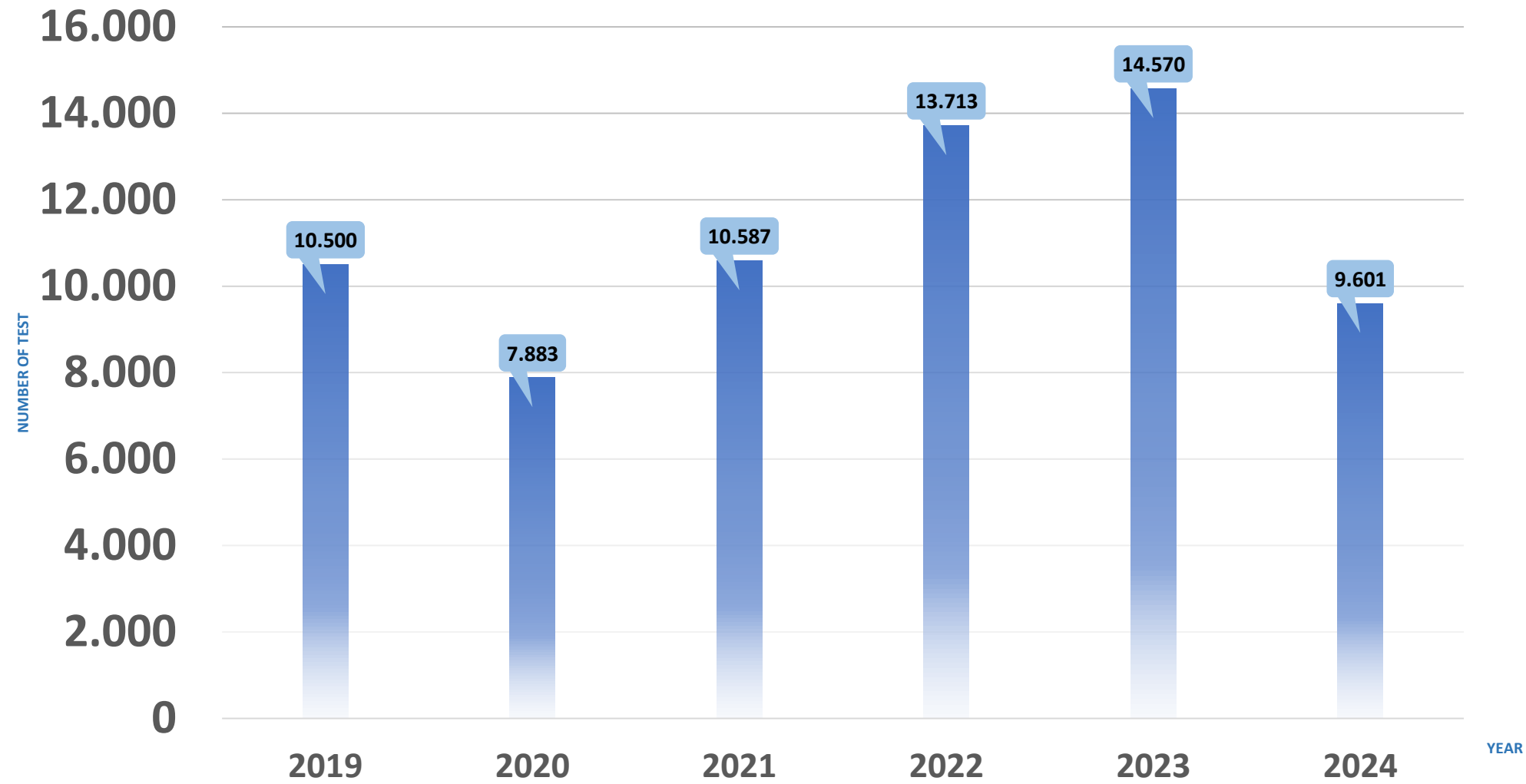


Wildlife Health Capacity

Wildlife health surveillance

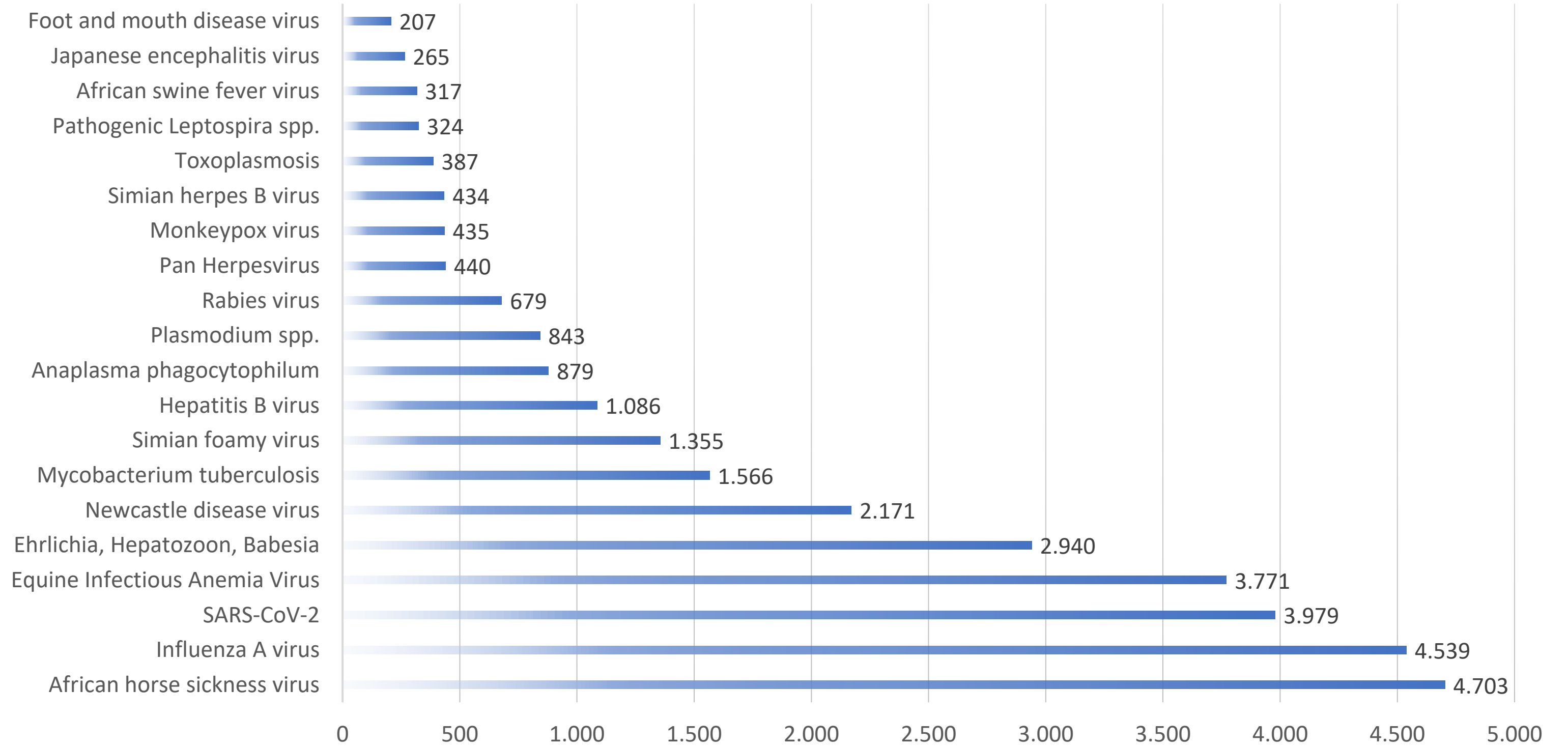


Trend of sample submission between January 1, 2019, and July 31, 2024.



The total number of samples was 66,875; 70.71%, 47,273, were wildlife and exotic.

Disease diagnosis between January 1, 2019, and July 31, 2024.



Disease investigation



Outbreaks of *Chlamydophila crocodili* and Herpes virus in Siamese crocodile



Canine distemper virus outbreak in captive tigers

Research

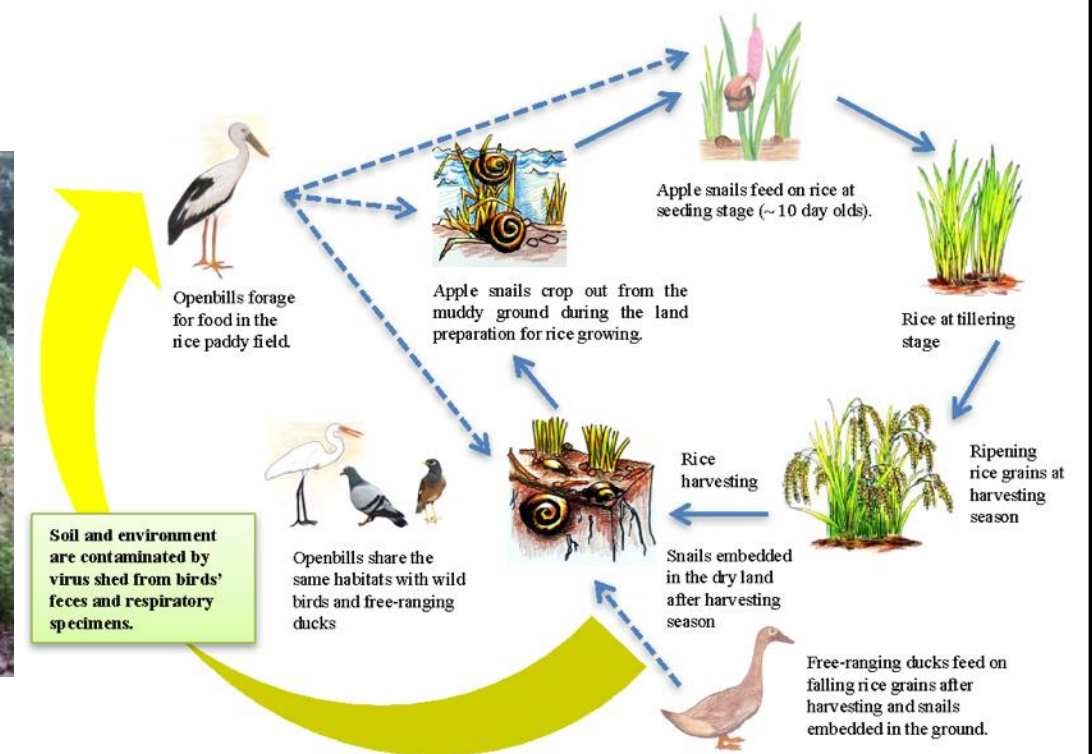
Human-wildlife interfaces



SARS-CoV-2 in pest species and exotic pets



Interaction between humans, domestic animals, and wild boar in local communities



Disease transmission of Avian influenza H5N1 at habitat sharing between domestic animals and wild birds

Research

Wildlife diseases and environmental contamination

Leptospirosis

Chamydophilosis

Elephant endotheliotropic herpesviruses (EEHV)



กระจ๊อบ
(Berdmore's ground squirrel)
Menetes berdmorei



ค้างคาวสามง่าม
(Stoliczka's Asian Trident Bat)
Aselliscus stoliczkanus



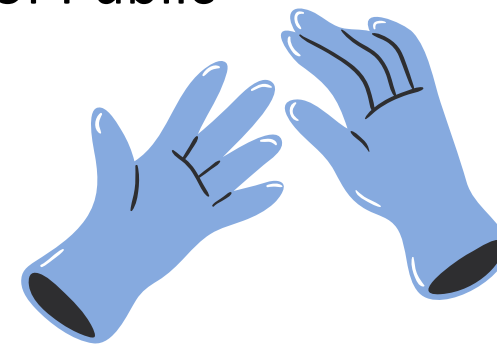
Education and training



Developing the guideline for EIDs in companion and exotic pets



Biosafety training for DLD and Ministry of Public Health



International training, student exchanges, and education supports

- Training international researchers and students for wildlife diagnosis
- Biosafety training
- Supervision wildlife epidemiology and laboratory practices for undergraduate and graduate students for Thai and international students

Laboratory facilities

Biosafety laboratory level 3



Antigen detection

- Viral Isolation
- Viral load
- Real-time RT-PCR

Antibody detection

- Neutralization assay; plaque reduction neutralization test (PRNT)

ABSL-3

Experimental studies in lab animals

- Vaccination tests
- Pathogen Inoculation in animals & pathogenesis



ABSL-3



Capacity enhancement: Wildlife health surveillance

Need assessment



- 1) Development and implementation of a diagnostic and surveillance data and information management system
- 2) Establishment of a general (morbidity and mortality) wildlife disease surveillance system and partner network.

Capacity enhancement: Wildlife health surveillance

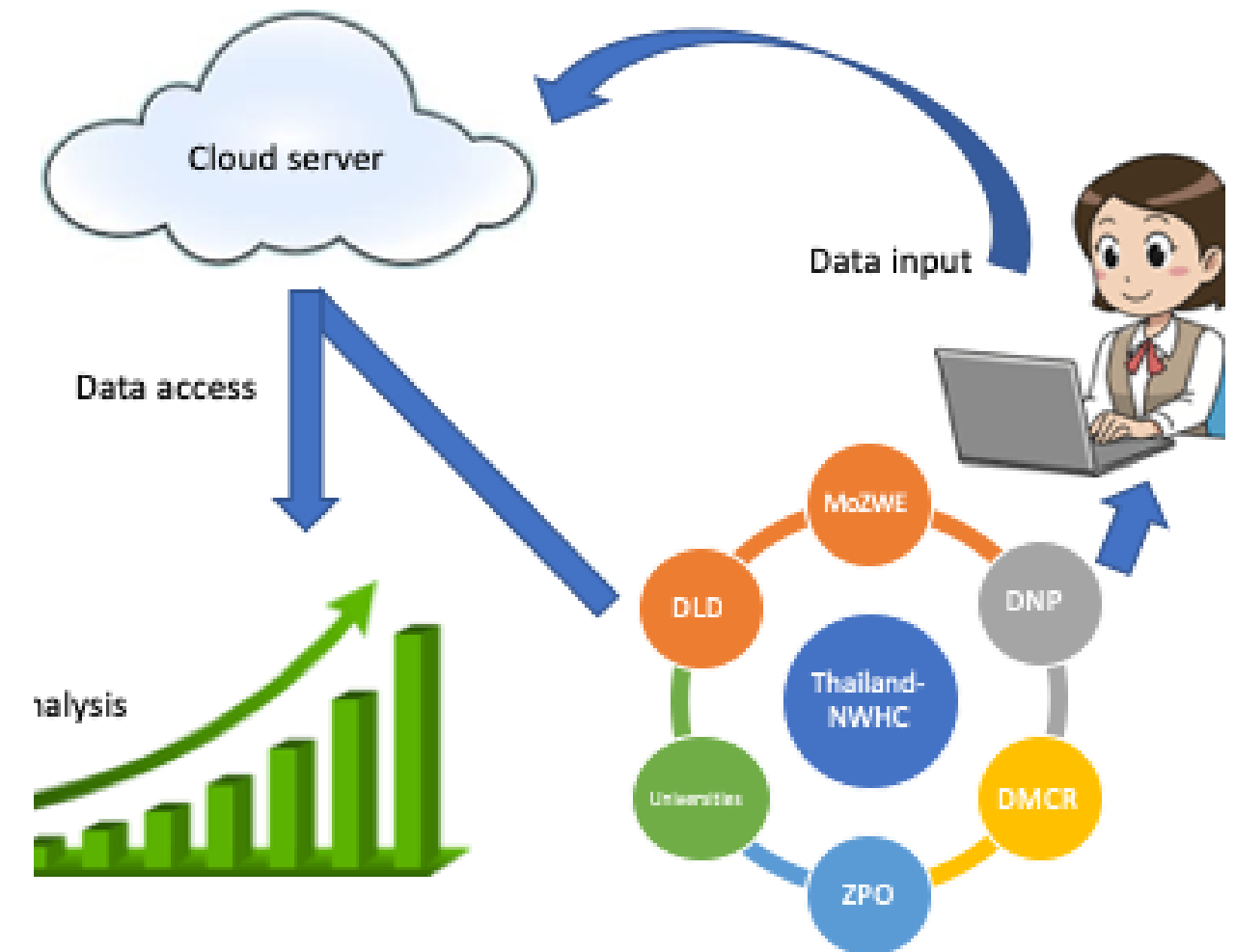
General Wildlife Disease Surveillance workshop



Capacity enhancement: Wildlife health surveillance

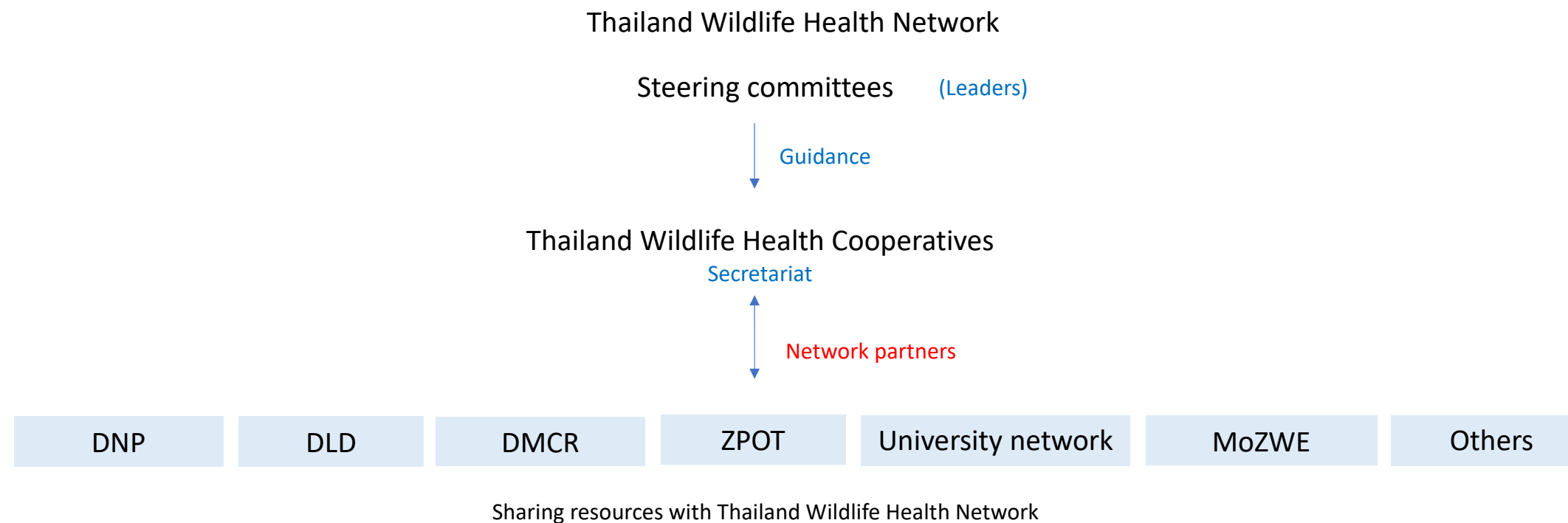
Wildlife Health Information System

Development of Thailand's Wildlife Health Database System for Wildlife Health and Emerging Infectious Diseases Surveillance



Capacity enhancement: Wildlife health surveillance

Best practice model: Thailand Wildlife Health Network



Example: Thailand Wildlife Health Network: Wildlife conservation unit

Capacity enhancement: Laboratory



Bioinformatic training



Training on producing monoclonal antibodies



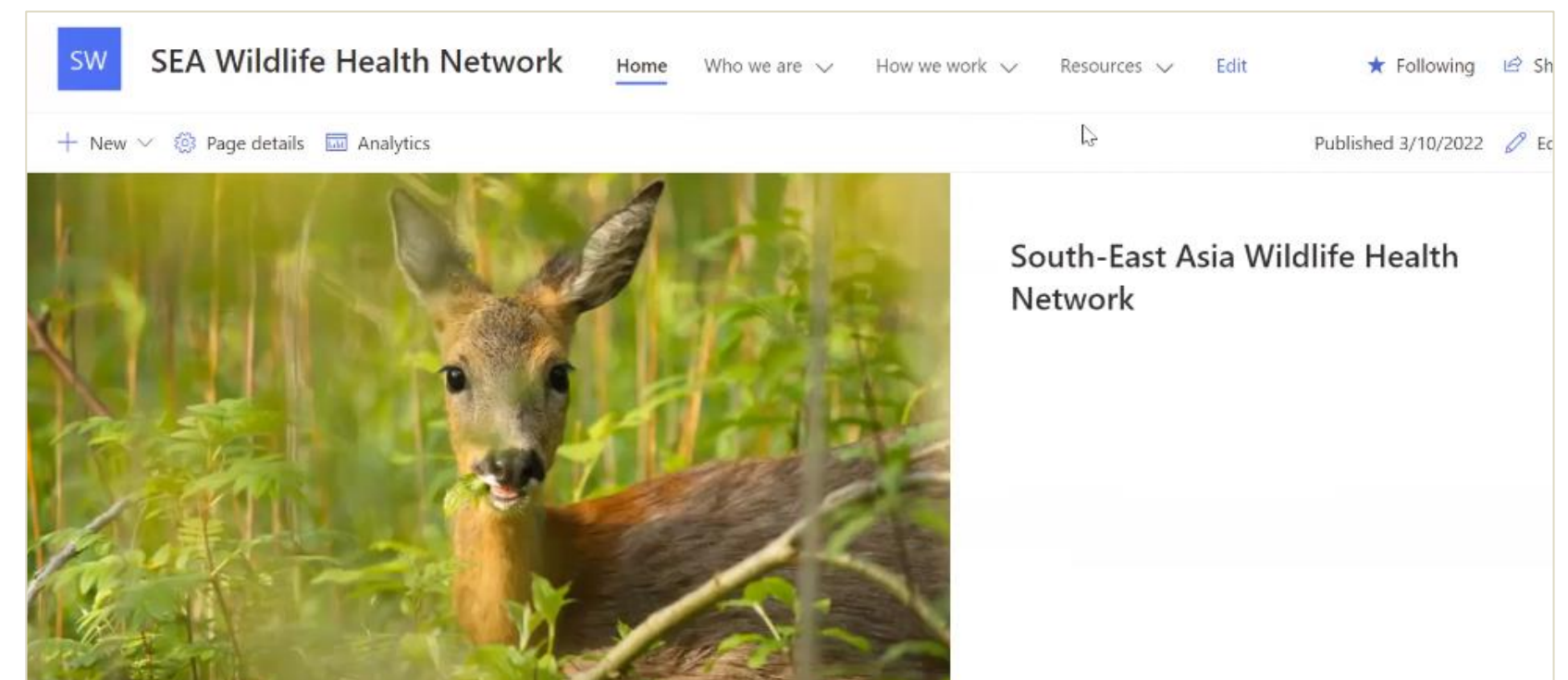


SEA Wildlife Health Network

Purpose: To provide a platform to facilitate effective sharing of information and advocacy to promote wildlife health agenda in Southeast Asia

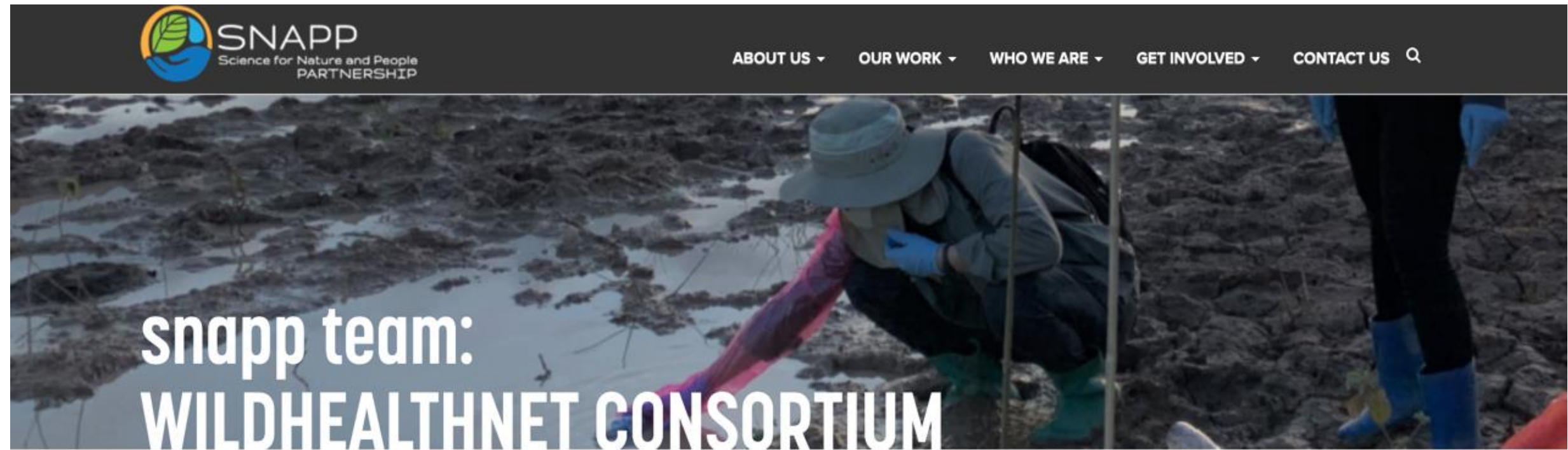
Objectives:

1. To provide a platform for timely sharing of information
2. To facilitate in building capacity for wildlife disease surveillance and other technical assistance to members
3. To build a database of wildlife experts of various fields and facilitate exchange of expertise in capacity building, and conduct of scientific research
4. To undertake collaborative and joint activities to advance the wildlife health agenda



Thailand-NWHC/MoZWE are the secretariat of SEA Wildlife Health Network from 2022 to 2024.

SNAPP WORKING GROUP: WildHealthNet Consortium



[« View All SNAPP Teams](#)

Can we effectively strengthen wildlife health surveillance globally through a collaborative and evidence-based consortium of local, national, and international organizations?

Objective:

To bridge disciplines and scales to identify collaborative and evidence-based solutions.

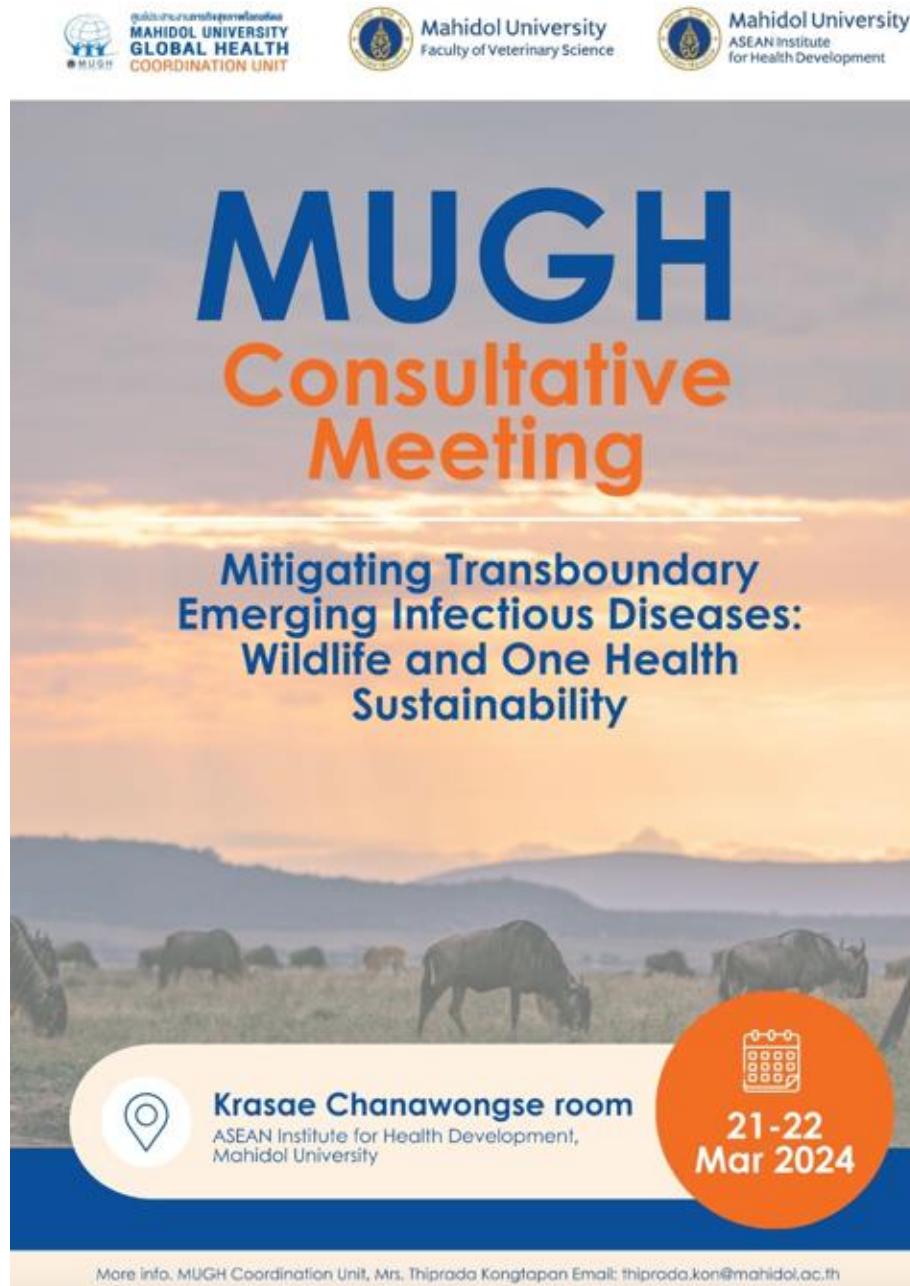
- A consortium will be formalized to design a coherent framework for the regulation and implementation of wildlife health surveillance systems globally.
- Available data will be synthesized to create a strong evidence base for the efficient scaling of wildlife health surveillance systems.

Mitigating Transboundary Emerging Infectious Diseases: Wildlife and One Health Sustainability

21 - 22 March 2024

Objectives

To develop policy recommendations against transboundary emerging infectious diseases (TEIDs) in Southeast Asia.



MUGH
Consultative Meeting

Mitigating Transboundary Emerging Infectious Diseases:
Wildlife and One Health Sustainability

Krasae Chanawongse room
ASEAN Institute for Health Development,
Mahidol University

21-22 Mar 2024

More info: MUGH Coordination Unit, Mrs. Thiprada Kongtapan Email: thiprada.kon@mahidol.ac.th



Need assessment on laboratory capacity



Need assessment on laboratory capacity to support wildlife health surveillance



Theme/Function	Infrastructure and Capabilities	Current State (Describes the program as it currently exists)	Future Desired State (Describes the future program as directed by institutional and national programmatic goals and objectives)	Gaps and Needs
<p>Diagnostic:</p> <ul style="list-style-type: none"> • Cause of death determination • Pathogen discovery • General disease surveillance 	<p>Diagnostic Laboratory System:</p> <ul style="list-style-type: none"> • Pathology • Diagnostic Microbiology, Virology, Parasitology, Toxicology • Biological Support • Biosafety • Quality Management 			



World Health Organization Laboratory Assessment Tool

World Health Organization Laboratory Assessment Tool Facility Questionnaire (WHO Laboratory Tool)

Indicators

- Coordination and management
- Structure and organization
- Regulations
- Quality of laboratory system
- Laboratory information management
- Infrastructure
- Human resources
- Biorisk management

Using questionnaires

Annex 1: Laboratory Assessment Tool/System Questionnaire

Annex 2: Laboratory Assessment Tool/Facility Questionnaire



Worksheets of the LAT/Facility



STRENGTHENING VETERINARY DIAGNOSTIC CAPACITIES:
THE **FAO LABORATORY MAPPING TOOL**

FAO LABORATORY MAPPING TOOL

To aid laboratory assessment, and in particular, to assess the functionality and capacities of veterinary laboratories.

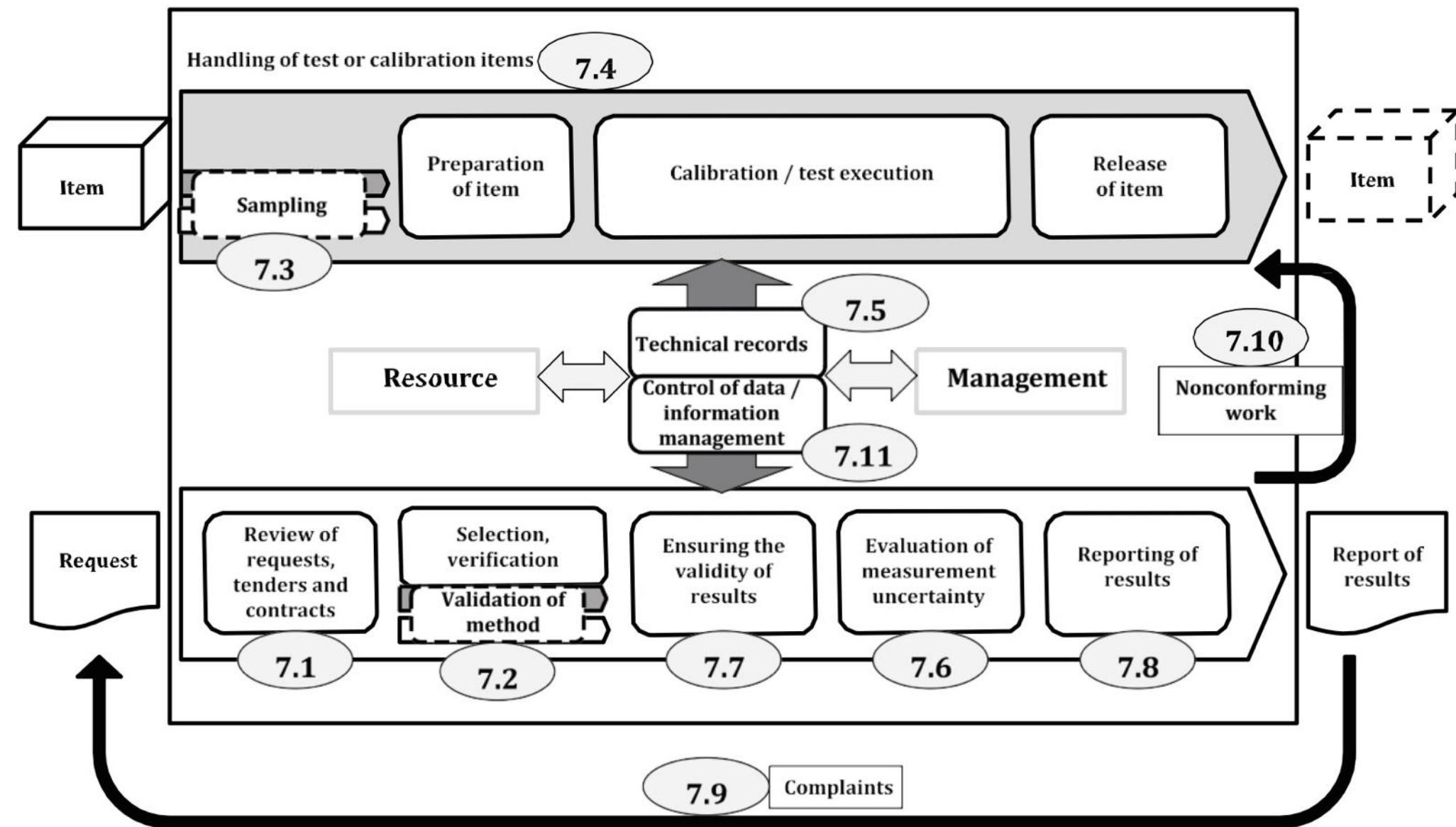
Assessing five areas of the laboratory:

1. general profile
2. infrastructure, equipment and Supplies
3. Performance
4. Quality assurance, biosafety, and biosecurity
5. collaboration and networking.

ISO/IEC 17025

International standard for testing and calibration laboratories

- Quality management system
- Proficiency testing (PTP) / interlaboratory comparison (ILC)
- Risk evaluation



Possible schematic representation of the operational processes of a laboratory

THANK YOU!

I hope you learn something
new today!

