



PREZODE in action  
in the global South

## **Report of the expert workshop**

# ***Evaluating knowledge and gaps in preventing the emergence and spread of viral zoonotic diseases***

**May 2025  
Bangkok, Thailand**

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## **Report of the expert workshop**

### **Evaluating knowledge and gaps in preventing the emergence and spread of viral zoonotic diseases**

#### **ASAMCO LaoThai (IRD - Afd)**

Date: 15 May 2025

Location: Faculty of Veterinary Medicine, Mahidol University

Soawapak Hinjoy<sup>1</sup>, Sarin Suwanpakdee<sup>2</sup>, Anuwat Wiratsudakul<sup>2</sup>, Rodolphe Hamel<sup>3</sup>, Serge Morand<sup>4</sup>

with support of Areeya Kriengudom<sup>4,5</sup>, Inpreeya Choknakhawaro<sup>4,5</sup>, Piyapoom Chongchimpee<sup>4,5</sup>, Apiladee Soonngam<sup>1</sup>

<sup>1</sup> Department of Disease Control (Ministry of Public Health) and DDC-F, Bangkok, Thailand

<sup>2</sup> Faculty of Veterinary Medicine Mahidol University, Bangkok, Thailand

<sup>3</sup> MIVEGEC – IRD, Montpellier, France

<sup>4</sup> IRL HealthDEEP, CNRS – Kasetsart University – Mahidol University, Bangkok, Thailand

<sup>5</sup> IRD, representation Bangkok, Thailand

## **1. Background: ASAMCO**

The PREZODE (PREventing Zoonotic Diseases Emergence) initiative, which the ASAMCO project is tied to, aimed to build resilient socio-ecological systems in order to prevent zoonotic disease emergence while preserving biodiversity and combatting poverty, social injustice and food insecurity. The ASAMCO project is the second phase of PREACTS (PREzode in Action in the global South) project, led by IRD and funded by the French Development Agency (AFD), as the first operational component of the PREZODE initiative.

ASAMCO Laos & Thailand will implement the activities at the border provinces, which will help to prevent zoonotic transboundary diseases, aiming to:

1. Analyze wildlife interfaces: Identify wildlife interaction points and analyze gaps in zoonotic disease prevention, focusing on ecosystems, land use changes, livestock proximity to protected areas, urbanization, and economic activities.
2. Synthesize existing knowledge: Map past and ongoing projects to understand their objectives, methods, outcomes, and geographic focus.

3. Strengthen policies and legislation: Highlight policy and legislative gaps related to wildlife and zoonotic disease management.
4. Develop a comprehensive framework: Create a Theory of Change (ToC) to address zoonotic risks at the ecosystem level with clear targets, strategies, and indicators.
- 5 Foster local innovation: Implement innovative, site-specific actions to prevent, mitigate, and monitor zoonotic diseases in collaboration with local communities and administrations.

To effectively prevent the emergence of infectious diseases with high epidemic potential, a holistic approach in terms of prevention needs to be adopted, using the ‘One Health’ approach (defined by OHHLEP) and the definition of upstream prevention (also defined by OHHLEP).

## **2. Aims of the workshop**

By gathering experts, the workshop contributed to the “synthesize existing knowledge” by evaluating knowledge, gaps, and risk of viral zoonoses in order to improve the prevention of their emergence and spread at the source.

## **3. Main outputs of the workshop**

### **3.1. Challenges in preventing viral zoonotic diseases**

The experts present at the workshop and those who shared a video highlighted several challenges related to their areas of expertise and experience.

1. Laboratory diagnosis and research: lack of intersectoral and interdisciplinary collaboration
2. Surveillance: trade-offs between disease prioritization (known pathogens) and spillover detection (potentially unknown pathogens, reservoirs, and relay hosts). The surveillance system operates under the Communicable Disease Act, which limits reporting to listed diseases. Emerging or vector-borne diseases not covered by the Act lack formal reporting pathways from researchers to surveillance officers, hindering early detection.
3. One Health approach: lack of engagement from the environmental sector and disciplines
4. Ecology and environment: difficulties in identifying environmental drivers of the emergence and spread of viral zoonoses
5. Social sciences: still low engagement and participation of social scientists
6. Data: Data gaps stem from policy constraints balancing sensitivity and impact. Enhancing data sharing is key to deeper insights and more robust analysis.
7. Literacy: Health literacy strongly influences health behaviors and requires multidisciplinary collaboration regarding the One Health approach to be effectively addressed.
8. Misinformation: related to low literacy.

### **3.2. Identification of pathways**

The experts then identify several avenues for addressing these challenges.

1. Strengthening One Health collaboration by sharing laboratory practices, methodologies, and protocols. Standard operating procedures (SOPs) in laboratory as well for field collection need to be harmonized.
2. *“From the lab to the real world”*: SOPs for field studies and laboratories, including biobanks.
3. Social science engagement: Develop research using participatory approaches and leveraging behavioral change.
4. Literacy: Improving health literacy in the One Health context can be effectively addressed through multidisciplinary training workshops. These workshops enhance collaboration across sectors and build practical skills in risk communication and community engagement, enabling more informed health behaviors and stronger public response.
6. Disease ecology training can be organized at the Mahidol University Kanchanaburi (MUKA) campus, including field genomics.
6. Data: Develop local data platforms by involving communities and local governments. Importance of setting up reliable Data Managing Plans (DMPs).

### 3.3. Way forward

The experts suggested some activities to put in place.

1. Gathering and sharing SOPs from *“lab to the real world”*
2. Local data platform development engaging local communities and stakeholders (champion village) by integrating social science methods to draw data into the platform.
4. Training disease ecology and field genomics at MUKA
5. Risk assessment workshop at local level (boarder provinces of ASAMCO)

## 4. Glossary and useful links

### *One Health approach*

One Health High-Level Expert Panel (OHHLEP), Adisasmito WB, Almuhairei S, et al. (2022) One Health: A new definition for a sustainable and healthy future. PLoS Pathogens 18(6): e1010537. <https://doi.org/10.1371/journal.ppat.1010537>

### *Upstream prevention*

According to OHHLEP: *“Prevention of pathogen spillover from animals to humans; shifting the infectious disease control paradigm from reactive to proactive (primary prevention). Prevention includes addressing the drivers of disease emergence, namely ecological, meteorological, and anthropogenic factors and activities that increase spillover risk, in order to reduce the risk of human infection. It is informed by, among other actions, biosurveillance in domestic and wild animals, people and the environment, understanding pathogen infection dynamics, and implementing intervention activities.”*

One Health High-Level Expert Panel (OHHLEP), Markotter W., Mettenleiter T.C., et al. (2023). Prevention of Zoonotic Spillover: From relying on response to reducing the risk at source. PLoS Pathogens 19(10), e1011504. <https://doi.org/10.1371/journal.ppat.1011504>

### *Misinformation*

NASEM (2025) defined: “*Misinformation about science is information that asserts or implies claims that are inconsistent with the weight of accepted scientific evidence at the time (reflecting both quality and quantity of evidence). Understanding and Addressing Misinformation About Science. Which claims are determined to be misinformation about science can evolve over time as new evidence accumulates and scientific knowledge regarding those claims advances.*”

National Academies of Sciences, Engineering, and Medicine. 2025. Understanding and Addressing Misinformation About Science. Washington, DC: The National Academies Press. <https://doi.org/10.17226/27894>.

### *Genomic surveillance*

Genomic surveillance is the process of constantly monitoring pathogens and analyzing their genetic similarities and differences (WHO).

<https://www.who.int/initiatives/genomic-surveillance-strategy>

see also Duke-NUS “Asia Pathogen Genomics Initiative”

<https://www.duke-nus.edu.sg/cop/asia-pathogen-genomics-initiative>

### *Data Managing Plan (DMP)*

A Data Management Plan (DMP) outlines the ways in which data is collected, generated and/or processed throughout the lifespan of a research project. A DMP should briefly cover the type of data/research outputs, the compliance with the FAIR data principles (Findable, Accessible, Interoperable, Reusable), and the way in which data will be stored and preserved (Enspire Science).

<https://enspire.science/data-management-plan-in-horizon-europe/>

### *FAIR principles*

Findability, Accessibility, Interoperability, and Reuse of digital assets.

<https://www.go-fair.org/fair-principles/>

### *Standard Operating Procedures (SOP)*

SOPs are detailed instructions that outline the steps for performing a specific laboratory task, an experiment, a sampling in field work. SOPs ensure consistency, accuracy, and safety in operations, while maintaining compliance with legal regulations. SOPs are crucial for training personnel.

<https://www.efsa.europa.eu/en/corporate/pub/sops>

## List of participants

Name	Organisation
Soawapak Hinjoy	Department of Disease Control, Ministry of Public Health
Sarin Suwanpakdee	Faculty of Veterinary Science, Mahidol University
Anuwat Wiratsudakul	Faculty of Veterinary Science, Mahidol University
Sineewanlaya Wichit	Faculty of Medical Technology, Mahidol University
Rodolphe Hamel	IRD, MIVEGEC, Montpellier University
Peerada Siriwatcharawong	National Institute of Animal Health (NIAH), Department of Livestock Development
Thanawadee Phaichana	Department of National Parks, Wildlife and Plant Conservation
Weena Paungpin	The Monitoring and Surveillance Center for Zoonotic Diseases in Wildlife and Exotic Animals (MoZWE), Mahidol University
Metawee Thongdee	The Monitoring and Surveillance Center for Zoonotic Diseases in Wildlife and Exotic Animals (MoZWE), Mahidol University
Onphirul Yurachai	Department of Disease Control, Ministry of Public Health
Pusana Rodsom	Department of Disease Control, Ministry of Public Health
Kridsada Chaichoun	Faculty of Veterinary Science, Mahidol University
Anamika Kritiyakan	Faculty of Veterinary Technology, Kasetsart University
Serge Morand	HealthDEEP, CNRS - Kasetsart University- Mahidol University
Areeya Kriengudom	TICA, HealthDEEP, CNRS - Kasetsart University- Mahidol University
Inpreeya Choknakhawaro	IRD, HealthDEEP, CNRS - Kasetsart University- Mahidol University
Piyapoom Chongchimprea	IRD, HealthDEEP, CNRS - Kasetsart University- Mahidol University
Chayanan Arahmkong	HealthDEEP, CNRS - Kasetsart University- Mahidol University