World Organisation for Animal Health

Ministry of Agriculture
Republic of Indonesia

In partnership with Canada

Bridging Animal Health, Public Health and Security Sectors for Effective Biological Threat Reduction

Dr Nicholas Thomson, One Health and Security Sector Advisor,
Australian National University

Workshop on Biothreat Reduction in South-East Asia, June 2 - 3, 2026

Presentation covers

- Background: Biological threat reduction and interface of animal public health, public health and security
- Why Biological threats require coordinated multisectoral action across animal health, public health, and security sectors ?
- Areas of collaboration for Prevention, early detection, preparedness, and coordinated response
- Key barriers include institutional silos, unclear mandates, limited information sharing, and resource constraints.
- How could be enhance the operationalization of Animal Health–Public Health–Security Interface for biological threat reduction?
- *Recommendations and Next Steps*
- *Summary*

What does biological threat reduction and the interface of animal public health, public health and security actually look like in Asia?



April 4 2026: The Quang Tri Provincial Veterinary Department has just destroyed 100 pigs infected with African swine fever that were being transported illegally



The Mekong Cattle Hustle



Informal Cattle Hustling Trade Snap Shots

- A researcher from the Yunnan Animal Science and Veterinary Institute, published by the World Organisation for Animal Health in April, reveals that 220,000 cattle are smuggled annually across the Yunnan border, which connets to Myanmar, Laos and Viet Nam (April 2024)

- One broker from the Magway region, one of the major cattle production hubs, explained in anonymity that he typically pays about 3 million kyats (US$1,400) per military checkpoint to move between 100 and 150 heads of cattle from inland Myanmar to the border – an amount that maximizes profits by reducing the number of trips.

- “We do not ask the origins of the animals here,” said a Chinese cattle trader at Mangshi, a major livestock market in Yunnan near the Myanmar border. “It’s not necessary to worry about disease. If the cattle are sick, they would not be able to journey that far.”

- Interviews with local farmers and livestock officers revealed references to an "influential group" of individuals, including various political players, who are involved in the illegal cattle trade at the expense of both animal and human health.

Additional Drivers

- Climate change, ecosystem destruction/degradation, conflict, transnational crime pose such major challenges to animal health, human security, biosecurity and economic prosperity that they constitute national security issues.

- All levels of government face challenges relating to resourcing, capabilities and information sharing.

We often have enabling policy and legislative environments (ASEAN Declaration for example) but.....we don't seem willing or able to engage with the illegal markets to the level we need to AND we don't seem to be able to tangibly consider One Health and Ecosystem Destruction within National Security Strategies

Despite policies, campaigns and increased surveillance.....

- As of 12 Mar 2026, 261 outbreaks of ASF have been reported across 24 provinces and municipalities this year, resulting in the destruction of over 14 700 pigs. Compared to the same period last year, the number of outbreaks has increased (in Vietnamese) by 2.96 times; the number of dead and destroyed pigs has more than doubled.

- This current event shows that the illegal trade in live pigs still helps spread disease despite years of control efforts.

Why Biological threats require coordinated multisectoral action across animal health, public health, and security sectors ?

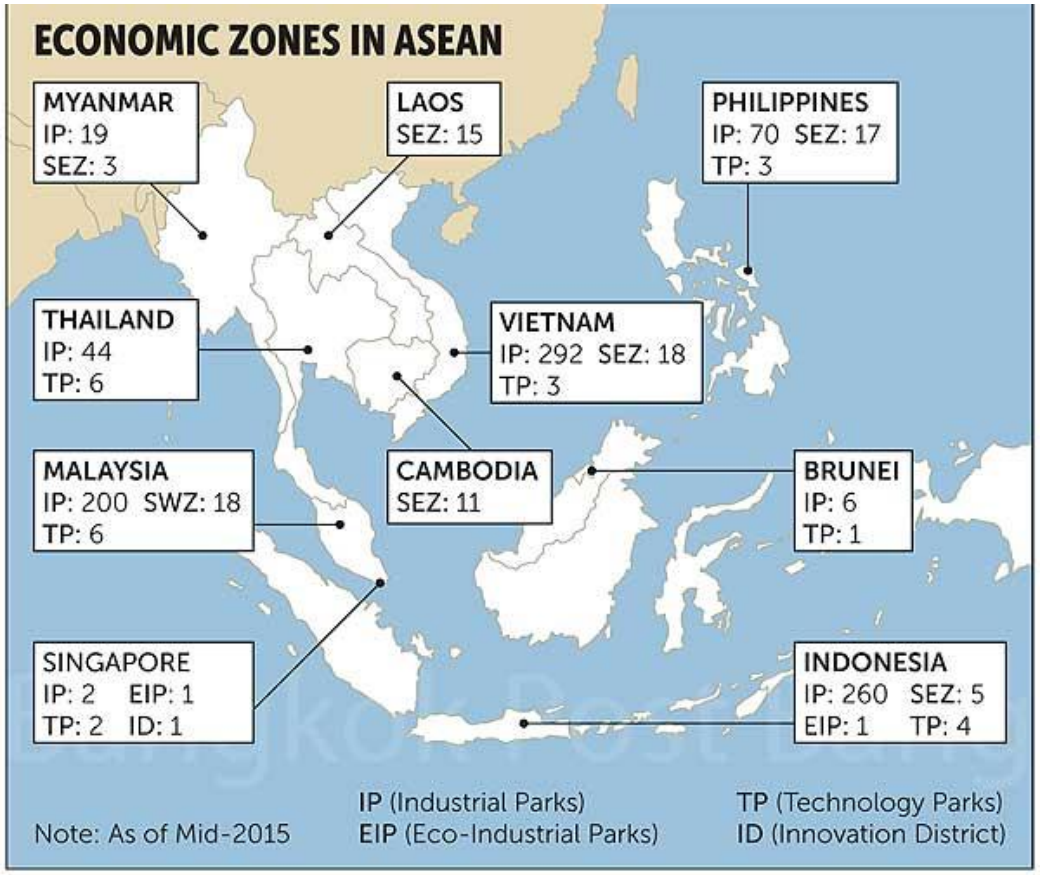
- Not enough vets, biosecurity personnel, field based public health epidemiologists

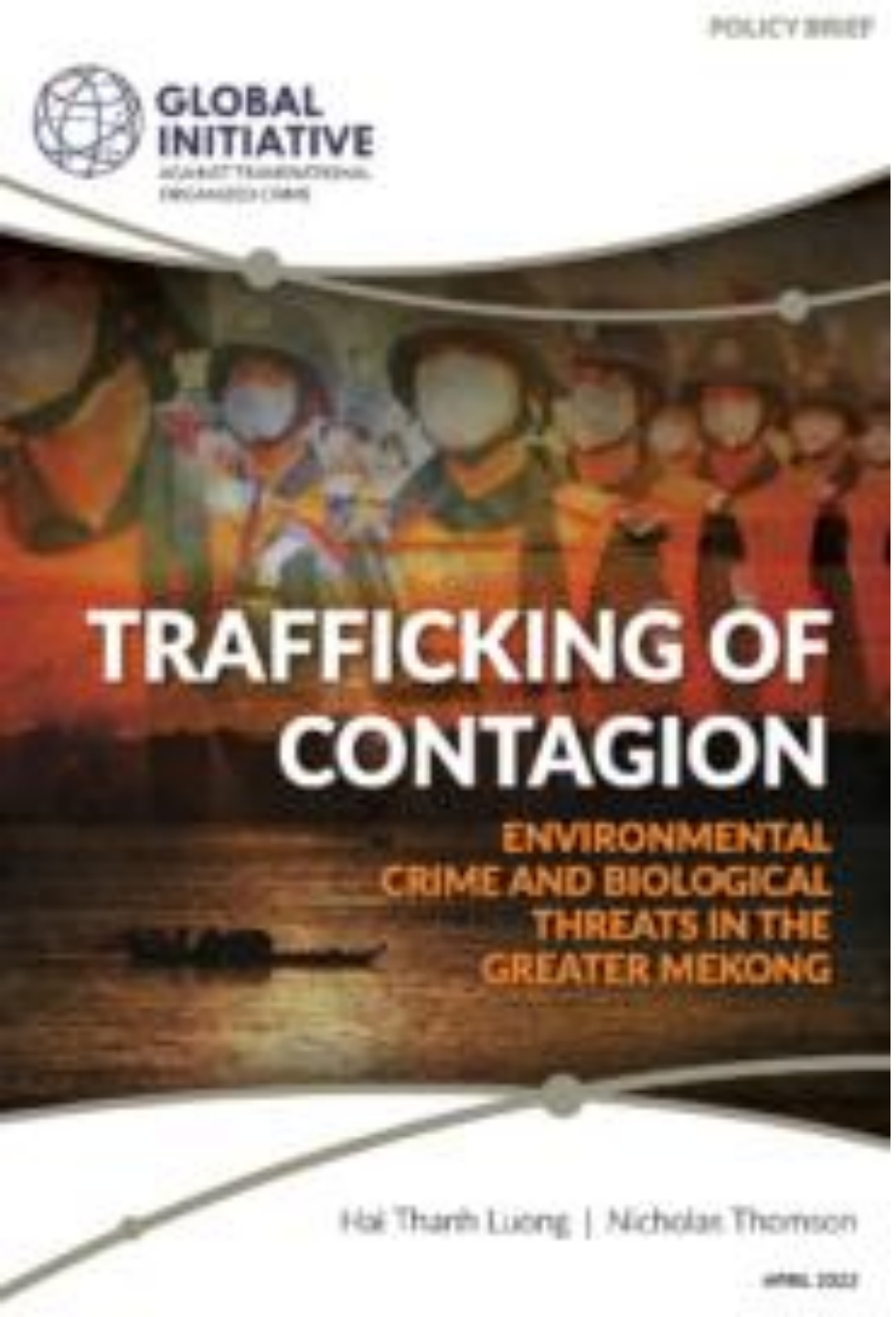
- Malaysia: Veterinary Services Department director-general Dr Mohd Noor Hisham Mohd Haron says Malaysia is facing a shortage of more than 5,900 veterinary professionals, with only about 2,600 active practitioners currently serving the country

However, we do have plenty of security sector personnel in border hotspots



We need collaboration, particularly in cross border, special economic zones and indeed intra-country atolls and archipelagos and inter-country sea border





Case Study: The illegal markets – implications for human security and national security?

Very little evidence that responses to enviro-crimes are informed or strengthened in any way by their associations with biological threats

Cross border points in the GMS are essentially are chokepoints where transboundary corridors funnel migration, trade, and transport and increasingly are becoming known as hotspots of emerging infectious disease

Biological threats are also exacerbated by the informal and formal flow of livestock and plant materials across the borders yet biosecurity responses to these flows are also often conducted in silos with limited interaction between the health and security agencies

In advancing the health and security sector interface there are opportunities to foreground health as a driver of national security imperatives. Yet that requires national authorities to give much greater consideration to biological threat potential of environmental crimes when developing national security strategies

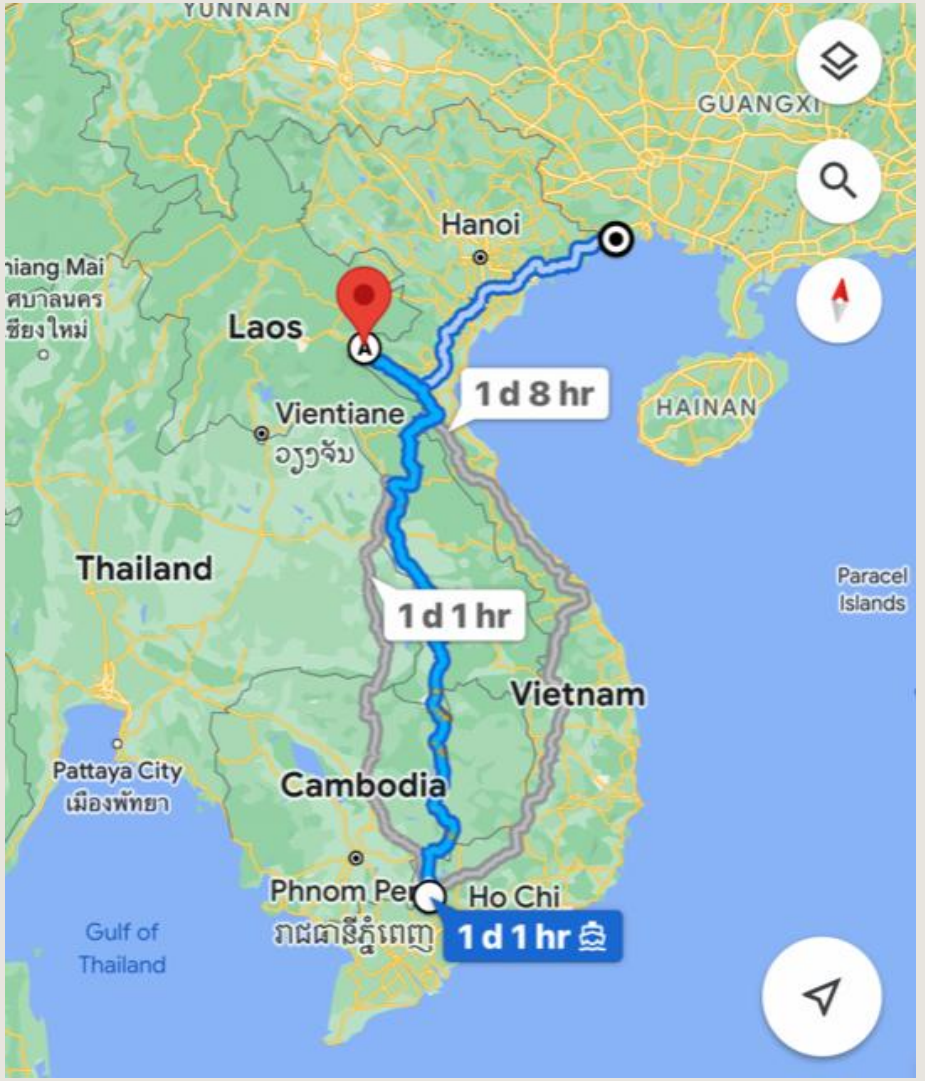
Mekong Case Study

Conducted three cases studies at three specific cross-border locations

- Vietnam-China (Northern site): Quang Ninh, Lang Son, Lao Cai
- Vietnam-Laos (Central site): Ha Tinh, Quang Tri, Nghe An
- Vietnam-Cambodia (Southern site): An Giang, Kon Tum

Deployed research team to conduct baseline survey and Key informant interviews – team included researchers from Peoples Police Academy

128 participants involved the survey questionnaires and 47 KI conducted

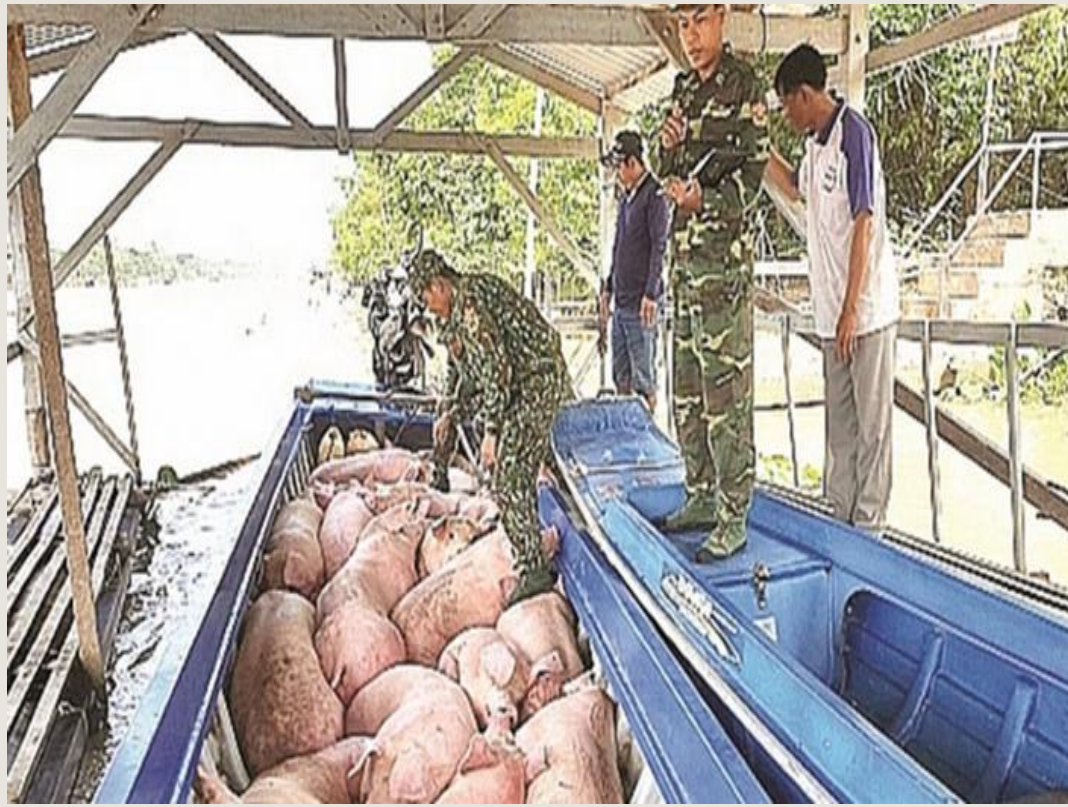


Key Lines of Inquiry

- Knowledge, attitudes, practices and risk perceptions of security sector personnel to biological threats as it related to their role in disrupting TOC

- Exposure to relevant training and preparedness in the context of biological threat and TOC

- Experience of working cross sector with health, agriculture and natural resources in relation to the nexus



Findings

1. Only a third of law enforcement personnel report some basic knowledge of biological threats in relation to cross border commodity movement (illegal and legal)

2. Almost none are concerned that in disrupting crime they could be exposed to biological threat

3. Almost none report active collaborations with health or agriculture in relation to perception of disease threat or early surveillance



Major Points

1. Security sector actors in Vietnam are unprepared and untrained in anything to do with biological threats at the border

2. Human and Animal health sector people are marginalized and not engaged in border agencies work in relation to crime and biological risk

3. National security actors are not quite ready for conceptualizing biological threats as national security issues

4. Donors continue to fund in silos unaware of the huge gaps in global health security

5. Security sectors continue to be ignored in biological threat landscape funding and training

Agency Silos

- In Cambodia, Malaysia, the Philippines and Thailand, one gap identified by biosecurity experts is the varying level of awareness of security sector bodies, public health agencies and other civilian agencies on biosecurity threats as they view such threats from different angles – from a CBRN perspective, WMD/non-proliferation perspective or a health security perspective.

But we know partnerships can work….

COVID 19 highlighted to all of us that law enforcement can play very significant and helpful roles in the context of biological threats



One Health as a framework?

Definition:

One Health is a collaborative, multisectoral, and transdisciplinary approach — working at the local, regional, national, and global levels — with the goal of achieving optimal health outcomes recognizing the interconnection between people, animals, plants, and their shared environment.

Framing and Application:

Tends to focus on the interface between animals, plants and humans in the context of emerging infectious (zoonotic) disease

Who is missing?

Police, customs, immigration, border security, corrections, interior ministry AND ultimately NATIONAL SECURITY

Next Steps in the Mekong/ASEAN –

A March 2023 (ADB-DFAT) meeting of executive leadership personnel from police, immigration, customs together with health, agriculture and natural resources discussed challenges and next steps that remain pertinent to today

- Explore innovative multi-agency projects to improve enforcement and improve early warning disease surveillance
- Produce a White Paper under the auspice of the Mekong MOU and
- Support a broader One Health lens within National Security

Opportunities in Health, Animal and Security Surveillance, Prevention, Preparedness, Response

Shared Language, Different Meanings

-Surveillance: What does it mean for different sectors?

- Prevention: Animal and Health sectors understand things like vaccine coverage
- Police don't often get praised for Preventing a crime but rather responding to an event
- Preparedness in police terms often means having the right 'hardware' rather than the training required in context of

Opportunities

- A regional network for information exchange would also facilitate knowledge sharing between and across the animal sector, health sector and the security sector.

- Through joint research initiatives, regional experts can collaborate on understanding pathogens, developing vaccines and creating strategies to mitigate biosecurity risks.

- It is also important to engage all ASEAN pillars (political-security, economic and socio-cultural) to further improve biosecurity governance in Southeast Asia.

What else can we do to enhance national and regional collaboration across animal health, human health and security sectors?

Building preparedness through joint action will strengthen prevention, early detection and responses to transboundary and emerging zoonotic threats /biothreat reduction – But what does that look like?

1. Sector Specific Training AND multi-sector joint training

2. TTX and Simulation exercises

3. Cross-border collaboration, pilot innovation and research sites at cross border Locations

4. Laboratory and Surveillance and Forensic Networks

Linking Public Health and Animal Health and Public Security in Prevention of and in Response to a Biological Event - Governance Frameworks

The International Health Regulations 2005 of the World Health Organisation – Core Capacities, The Global Health Security Agenda and the Joint External Evaluations

Create formal agreements to improve coordination/collaboration among all stakeholders. Outputs should be service and multisectoral MoUs/SOPs, which clearly outline logistics and support for each role

Establish an inter-services health security platform for stakeholders.

Conduct simulations and table-top exercises regularly to explore and strengthen the existing relationships.

Way forward for One Health as a Construct of National Security?

Challenge the operational definition of One Health and foreground strategies within a national security priority framework

A networked response across agencies and sectors, i.e. collaboration between law enforcement, customs, border and coast guards with practitioners in health, agriculture and biosecurity sectors.

Increase levels of biological threat preparedness among law enforcement sectors in terms of both occupational health and safety and contagion risk to populations/countries

Bring security sector surveillance into disease surveillance

But is it enough?

World Organisation for Animal Health

Ministry of Agriculture
Republic of Indonesia

In partnership with Canada

Thankyou