World Organisation for Animal Health

Ministry of Agriculture
Republic of Indonesia

In partnership with Canada

TIMOR-LESTE

Biothreat Reduction: Situation update

Dr. JOANITA JONG

NATIONAL DIRECTOR OF VETERINARY

WOAH Delegate

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

Presentation Outlines

- Overview of National Mechanisms and Governance
- Legal and Policy Frameworks
- Current Situation in Biothreat Landscape
- Laboratory System: Biosecurity, Biosafety and Biorisk Management
- Laboratory System: Workforce and Training
- Challenges
- Key recommendations

1. Overview of National Mechanisms & Governance

A. Governance: Engagement of Animal Health Sector, Public Health Sector and Security Sector: Police, customs, border control/ national security agencies/Defense forces (if applicable) on bio threat reduction

National level governance body include five main ministries:

1. Ministry of Agriculture, Livestock, Fisheries and Forestry
   - National Directorate of Veterinary and Quarantine
2. Ministry of Health (MOH)
   - National Institute of Public Health (INSPTL)
3. Ministry of Foreign Affairs and Cooperation Timor-Leste
   - General Directorate for Multilateral and Regional Affairs
4. Ministry of Finance
   - Custom
5. Ministry of Interior (PNTL, UPF, immigration)

1. Overview of National Mechanism & Governance

B. Mechanisms: Whole of Government, Multi-sectoral framework, One Health Security, One Health

- Under the One Health security and one health platform Timor-Leste engaging multi-sectoral institutions in the implementation of International Health Regulations to evaluate each line Ministries in the planning and the implementation of biological threat through identifying success and gaps across 19 technical areas.

1. Overview of National Mechanisms & Governance

C. Private Sector: Private labs, biotech companies/Waste management and logistics providers

- Laboratory sector is still dominated by the government facilities such as National Health Laboratory and Veterinary Diagnostic Laboratory
- There are also some private healthcare facilities that provides medical services and diagnostic support.
- TL does not yet have a large biotechnology industry. There are some private environmental and technical consulting firm support biosafety, assessment and risk management activities.
- There are some waste management companies providing waste collection, recycling, environmental management and waste transfer station operations

2. Legal & Policy Frameworks

A. Existing laws/regulations /status (review, new development) on bio threat reduction for example:

- DL No 21/2003 on Quarantine and Sanitary Control on Imported and Exported Goods
- General Quarantine Regulations 2006 Government Decree No.1/2006
- DL No. 36/2023 on Plant Health and Quarantine
- DL No. 41/2023 on Animal Health and Quarantine
- National Action Plan for Health Security (NAPHS) 2020-2024
- Law on Pesticides still under revision.

2. Legal & Policy Frameworks

A. Existing laws/regulations /status (review, new development) on bio threat reduction for example:

B. Roles of regulatory authorities

- Ministry of Health
- Ministry of Agriculture, Livestock, Fisheries and Forestry
- Ministry of Finance
- Ministry of Foreign Affairs and Cooperation
- Ministry of Interior

2. Legal & Policy Frameworks

A. Existing laws/regulations /status (review, new development) on bio threat reduction for example:

C. Harmonisation of ..... with ASEAN/WOAH/WHO guidelines

- Timor-Leste is under the discussion on the pandemic fund to review draft Action Plan for Timor-Leste's One Health Strategic Framework 2018-2022 and endorse the One Health Committee for Interministerial and technical working group
- National Action Plan for AMR 2022-2026
- Active participation in the JEE in 2024.
- Conducting the PVS follow up mission specifically for African Swine Fever in 2024
- First time conducting the PVS for Aquatic Animal Health in 2025.
- National Bridging Workshop in 2026.

3. Current Situation in Biothreat Landscape

- Key biological risks (zoonoses, TADs, lab-associated risks or other emerging issues)
- Past emergency outbreaks /events / case study / risk assessments relevant to Lab biosafety/security or agroterrorism
- National priority areas/Strategic plan for biothreat reduction or biosafety and biosecurity

- African Swine Fever continue to be the main issue in small holder across the country
- Rabies continue to spread to the eastern part of the country
- Brucellosis and Bovine Tuberculosis are two diseases that affect both animal and human
- AMR in Human health and animal remains a major public health and veterinary responsibility
- FMD, LSD and Avian Influenza also become a future threat to Timor-Leste

4. Laboratory System: Biosecurity, Biosafety and Biorisk Management

- Laboratory Network Overview
- Current lab capacities
- BSL facilities, accreditation status
- Certification
- Inventory control & pathogen management

The veterinary diagnostic laboratory serve as the national reference laboratory under the MALFF. The laboratory support diagnosis, surveillance, outbreak investigation, and animal health program throughout TL. Samples are received from all municipalities through field veterinarian, veterinary officer and field surveillance team.

4. Laboratory System: Biosecurity, Biosafety and Biorisk Management (Cont)

VDL Currently Performs:

- African Swine Fever diagnosis
- Brucellosis serology
- Foot and Mouth Disease (FMD) surveillance
- Lumpy Skin Disease (LSD) surveillance
- Parasitology
- Bacteriology
- Basic Pathology and Necropsy
- Sample collection and preservation for referral testing
- Refer to our national priorities list of animal diseases

4. Laboratory System: Biosecurity, Biosafety and Biorisk Management (Cont)

- **BSL Facilities and Accreditation Status**
- Laboratory infrastructure is operational.
- Most routine diagnostic activities are conducted under **BSL-2 conditions.**
- Biosafety procedures are partially implemented.
- No formal BSL-3 facility currently exists.
- ISO 17025 accreditation has not yet been achieved.
- Quality Management System (QMS) implementation is in progress.

4. Laboratory System: Biosecurity, Biosafety and Biorisk Management (Cont)

Certification

Current certifications may include:

- National laboratory authorization by Government of Timor-Leste.
- Participation in WOAH and FAO-supported laboratory strengthening initiatives.
- Staff trained in biosafety, biosecurity, and disease diagnostics.

Inventory Control and Pathogen Management

- Current status:
- Basic inventory management system in place.
- Sample registration and storage records maintained.
- Biological materials stored in refrigerators and freezers.
- Further strengthening needed for:
    - Electronic inventory management
    - Pathogen tracking system
    - Reagent stock monitoring
    - Biosecurity documentation
    - Waste management procedures

5. Laboratory System: Workforce & Training

VDL currently consists of:

- Veterinarians
- Laboratory technicians
- Animal health officers
- Administrative personnel

Training Programs

- Staff have participated in:
- WOAH laboratory training
- FAO laboratory strengthening programs
- IAEA-supported diagnostic training
- Rabies diagnostic training
- Brucellosis testing training
- ASF molecular diagnostic training
- Biosafety and biosecurity training with ACDP long period of online training and face to face training (Usually Free online courses

5. Laboratory System: Workforce & Training (Cont)

Further Training Required in:

- Molecular diagnostics (PCR and RT-PCR
- Sequencing technologies
- Quality management system
- ISO 17025 implementation
- Epidemiology and surveillance
- Data management
- Food safety testing
- Antimicrobial resistance (AMR)

6. Preparedness and Response

Current Status:

- Partial risk assessments conducted for priority diseases.
- Comprehensive laboratory biorisk assessment not yet completed.

Risk Management and Risk Communication

Implemented for:

- Rabies
- African Swine Fever
- Foot-and-Mouth Disease
- Lumpy Skin Disease

6. Preparedness and Response

Simulation Exercises and Training

- ASF outbreak investigations
- Rabies outbreak response
- Field surveillance exercises

Needs:

- National simulation exercises
- Multi-sector emergency response drills
- Laboratory emergency preparedness exercises particularly ASF, Rabies

7. Challenges

- Lack of coordination among government institutions on the implementation of legal instruments
- Instability in the government structure

- Limited diagnostic equipment
- Limited trained laboratory personnel
- Absence of ISO accreditation.
- Limited biosafety and biosecurity documentation.
- Limited cold-chain backup systems.

8. Key Recommendations

- Strengthen the One Health Coordination Mechanism
- Enhance Surveillance and Early Warning System
- Strengthen Laboratory Capacity and Biosafety
- Strengthen Border Biosecurity and Quarantine System
- Sustain International Partnerships and Financing
- Align donor support with national priorities and the NAPHS
- Increase domestic investment in health security and biosecurity
- Improve coordination among development partners to reduce duplication
- Establish annual laboratory training plans.
- Develop staff competency assessment programs.
- Create twinning arrangements with accredited laboratories.
- Introduce mentorship programs.

World Organisation for Animal Health

Ministry of Agriculture
Republic of Indonesia

In partnership with Canada

Thank You
Muito Obrigada