World Organisation for Animal Health

Ministry of Agriculture
Republic of Indonesia

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Myanmar

Biothreat Reduction: Situation update

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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 six main ministries:

1. Ministry of agriculture, livestock and Irrigation (MOALI)
   - Animal Health
2. Ministry of Health (MOH)
   - Human Public Health
3. Ministry of Home Affair (MOHA)
   - National Security
4. Ministry of Commerce (MOC)
   - Custom
5. Ministry of Immigration and Population (MOIP)
   - Immigration
6. Ministry of Sciences and Technology (MOST)
   - Sciences and Technology and focal for Bio Weapons

1. Overview of National Mechanisms & Governance

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

Depends on the missions and visions, different task forces are organized

1.Import and export of animal and animal product → MOALI (Livestock Breeding and Veterinary Department) and MOC (custom department)

2.BWC → Multiple Organization such as MOALI, MOH, Ministry of Defense (Military Research), MOHA (Law Department), Ministry of Foreign Affair etc

3. One health → MOALI, MOH, City Development Council, Ministry of Natural Resources and Conservation etc

1. Overview of National Mechanisms & Governance

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

1. Private labs are only focusing on analysis of animal feeds, diagnosis of animal diseases but confirmation are needed for List A diseases endorsed by Animal Health and Development Laws

2. Waste management are under the control of City Development Council and some are under the control and responsibility of labs (e.g Lab supported by IAEA are handling their waste themselves)

1. Overview of National Mechanisms & Governance

D. Establishment of Steering committees, technical working groups

Different workforces have been organized

1. Prevention and Control of Zoonotic Influenza → Multiple departmental organization involved such as Governmental and Non-Governmental Organization included

2. BWC → Multiple departmental organization such as representatives from the MOALI, MOH, MOHA, MONRC etc.

3. Export and Import of animal and animal product → MOALI, MOH, Ministry of Commerce,

2. Legal & Policy Frameworks

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

Policy on Biothreat reduction

Under the Animal Health and Livestock Development Law (2020), Myanmar targets biothreat reduction through compulsory registration of biological assets, mandatory disease reporting, and strict border quarantine controls managed by the LBVD.

Biosafety & biosecurity

Biosafety practices and testing standards are implemented across regional veterinary diagnostic laboratories.

Myanmar promotes Good Animal Husbandry Practices (GAHP) to improve biosecurity measures on targeted poultry and livestock farms.

Biosafety framework has been drafted by the MOALI and it focus on risk of importation of genetic manipulated organism and related issues

2. Legal & Policy Frameworks

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

- **Biological agents/materials control/Agro-crime and agroterrorism**
- **Transport & import/export of biological materials**

Biological agents/materials control

Counter-Terrorism Law (2014): Explicitly prohibits the possession, transfer, and use of biological and toxin weapons.

Agroterrorism

Emergency management for agroterrorism in Myanmar focuses on the “One Health” approach to mitigate the intentional or accidental release of pathogens.

Transport & import/export of biological materials

Import and Export Law(2012)

Regulations for the importation and exportation of animals and animal products

2. Legal & Policy Frameworks

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

The Biological Weapons Convention (BWC) National Authority oversees compliance, biosecurity regulations, and Confidence-Building Measures (CBMs) submitted annually to the UN.

Ministry of Health (MOH) → Monitors and oversees public health, epidemiology, and early warning systems

Ministry of Agriculture, Livestock and Irrigation (MOALI): →LBVD handles animal health surveillance, zoonoses (such as rabies and HPAI), and agricultural biosafety.

Ministry of Natural Resources and Environmental Conservation (MONREC): →Enforces waste management laws and oversees the handling, transport, and disposal of hazardous and toxic biological waste.

Ministry of Science and Technology → The Ministry of Science and Technology (MoST) in Myanmar plays a critical role in biodefense by managing the country's biosafety frameworks, biotechnology research, and international biosecurity agreements

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

- Myanmar has committed to the legally binding International Health Regulations (IHR 2005) and collaborated with the WHO to implement its National Action Plan for Health Security (NAPHS). Myanmar has actively participated in the World Organization for Animal health (WOAH, Founded as OIE) Performance of veterinary services (PVS) Pathway, completing a formal PVS Evaluation in the past and a subsequent PVS evaluation follow-up mission in 2018.
- National One Health Strategic Framework is explicitly aligned with the international guidelines set forth by the Quadripartite (FAO, UNEP, WHO, and WOAH).
- Myanmar participates in the FAO/ASEAN Veterinary Diagnostic Laboratory networks, aligning diagnostic procedures and surveillance for transboundary animal diseases.

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

- **Rabies** remains a major public health and veterinary concern.
- **Highly Pathogenic Avian Influenza (HPAI)** outbreaks also intermittently threaten both poultry and human populations.
- **Foot and Mouth Disease(FMD)** endemic across the country with active strains like O, A, and Asia 1.
- **African Swine Fever (ASF)** which threat to the swine industry.
- **Antimicrobial resistance (AMR)** is a major public health concern in Myanmar.
- **Lumpy Skin Disease (LSD)** is the emerging viral disease severely affects cattle and water buffalo populations.
- still some neglected diseases → Anthrax, Brucellosis, Bovine TB etc

4. Laboratory System: Biosecurity, Biosafety and Biorisk Management

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

LBVD has established two main national level laboratory which are located at Yangon and Mandalay; some regional laboratory, and quarantine labs has been in placed

BSL 2 and enhanced 2 laboratory are located Yangon, Nay Pyi Taw and Mandalay,
Mandalay Laboratory is accredited to iso 17025 last year and the central laboratory and National Assay Laboratory are still struggling to obtain that accreditation status

4. Laboratory System: Biosecurity, Biosafety and Biorisk Management

B. Biosafety & Biosecurity Practices

- SOPs
- risk assessments
- PPE, engineering controls
- Biosecurity (physical, personnel, cybersecurity, supply chain)

SOPs for Laboratory → Tests SOPs, Internal Audit SOPs and SOPs for staff, recordings, Equipment, competency assessment and management reivews etc
Risk assessment → for equipment
PPE, Engineering control → no appointed engineer specialized for laboratory
Biosecurity → lab staff are fully aware of the biosecurity practice, LBVD train lab staff for 3 months training course

5. Laboratory System: Workforce & Training

- Training programs

international training by WOAH and IAEA

Local training by LBVD staff – knowledge sharing etc

- Partnerships for capacity building

no international and domestic partnership so far

6. Preparedness & Response

- Biothreat/laboratory risk assessment → not yet done
- Risk management and risk communication → for TADs has been done for FMD and HPAI
- Simulation exercises/Trainings → outbreak investigation training by local experts
- Modelling, any research studies → not yet done
- Cross-sector surveillance and information / data sharing → not much done with MOH
- Cross-border coordination → not yet done
- Regional/International Engagement → LBVD is actively involved in all regional activities
- Joint activities with other sectors public health, security sector etc.

7.Challenges

Please describe according to these key categories:

- **Multisectoral Coordination** → yes still facing unsatisfactory coordination between partners
- **Biosafety/biosecurity capacity building** → still need to improve capacity building in terms of technology and support
- **Policy and Legal frameworks** → it is a complicated procedures and need to harmonize and comprehensive for all users
- **Governance** → it can not be manageable because of policy changes by policy maker
- **Operational & Resource Constraints** → it is a big constraints for all labs and steps because trained personals are not willing to work for long time and financial support for maintainance of labs building and equipments

8. Key Recommendations

- to overcome the existing challenges on biothreat reduction in Myanmar
  - limited resources (trained personal, lab facilities and financial etc) → government budget is not much sufficient but still seeking international donors and from stakeholders
  - surveillance activities → targeted and high-risk areas but not manageable because of security reasons
  - technical support and training → need more technical support because all labs were not yet accredited and budget for maintenance is a big problem
  - multisectoral cooperation → multiple task forces have been organized but participation and involvement of all task force member and relevant departments are not yet satisfactory

- Priorities or needs to enhance institutional and operational capacities on biothreat reduction including laboratory biosafety and biosecurity

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Thank You