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# Progressive Management Pathway for Terrestrial Animal Biosecurity (PMP-TAB)

Towards a sustainable and resilient livestock sector



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## Biosecurity- the need

Considering:

- Importance of livestock for food security and livelihoods
- Burden of endemic diseases and spread of transboundary animal diseases
  - ASF, HPAI, FMD, LSD...
- Complex value chains that connect regions and countries globally
- Growing threat of AMR
- Shifting to upstream prevention

**Mainstreaming prevention!**



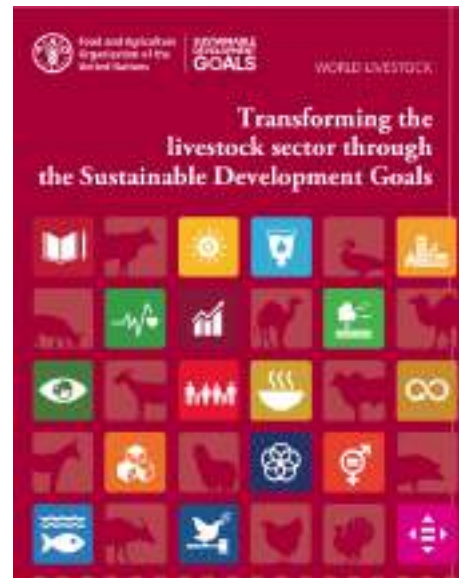
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**alert**

FAO ALERT FOR THE AMERICAS: H5 HIGHLY PATHOGENIC AVIAN INFLUENZA – RISK FOR INTRODUCTION AND SPREAD  
13 March 2022

High risk of African swine fever spread due to Lunar New Year holiday season

FAO ALERTS COUNTRIES IN THE MIDDLE EAST AND WEST EURASIA TO ENHANCE PREPAREDNESS FOR FOOT-AND-MOUTH DISEASE  
10 February 2023



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WORLD LIVESTOCK

Transforming the  
livestock sector through  
the Sustainable Development Goals

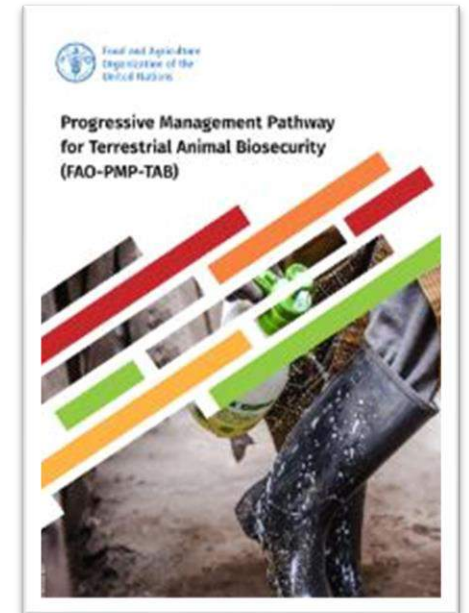
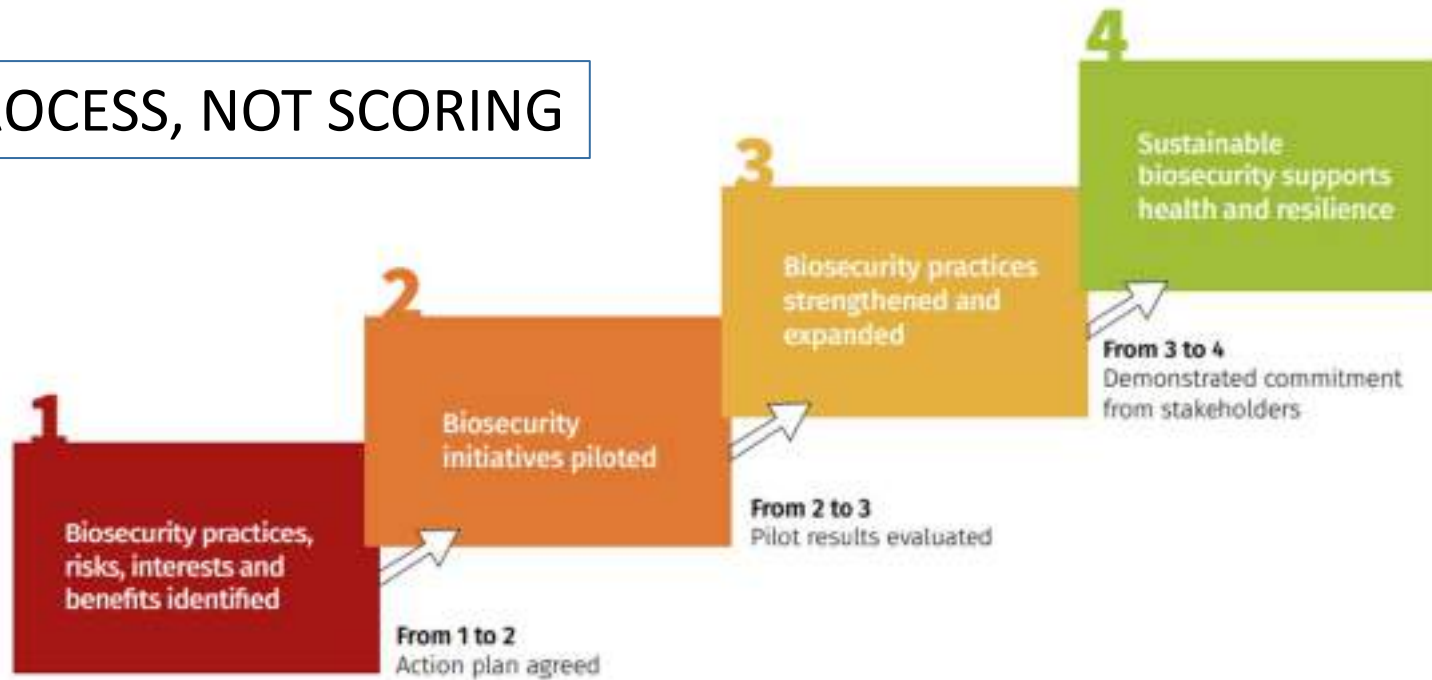


Source: FAO available at: <https://www.fao.org/3/ca7660en/CA7660EN.pdf>

## PMP-TAB: Progressive Management Pathway for Terrestrial Animal Biosecurity

FAO defines biosecurity as a **strategic** and **integrated** approach that encompasses the policy and regulatory frameworks for **analysing and managing relevant risks** to **human, animal and plant life and health**, and associated risks to the environment

PROCESS, NOT SCORING





## PMP-TAB: Progressive Management Pathway for Terrestrial Animal Biosecurity

**Principles** guide **PMP-TAB** approaches and actions

Collaborative, inclusive

Stakeholder led

Consensus building approach

Sustainable

One Health and PPP approaches

Business and economic incentives at each step

Facilitate replicability/uptake

**Core components:** consider at every step of improving biosecurity

Knowledge and information

Understanding of the risk situation

Enabling Environment

The broader context within which individuals and organizations function (governance, policies, etc)

Infrastructure and capacity

Human, physical and financial resources

Practices

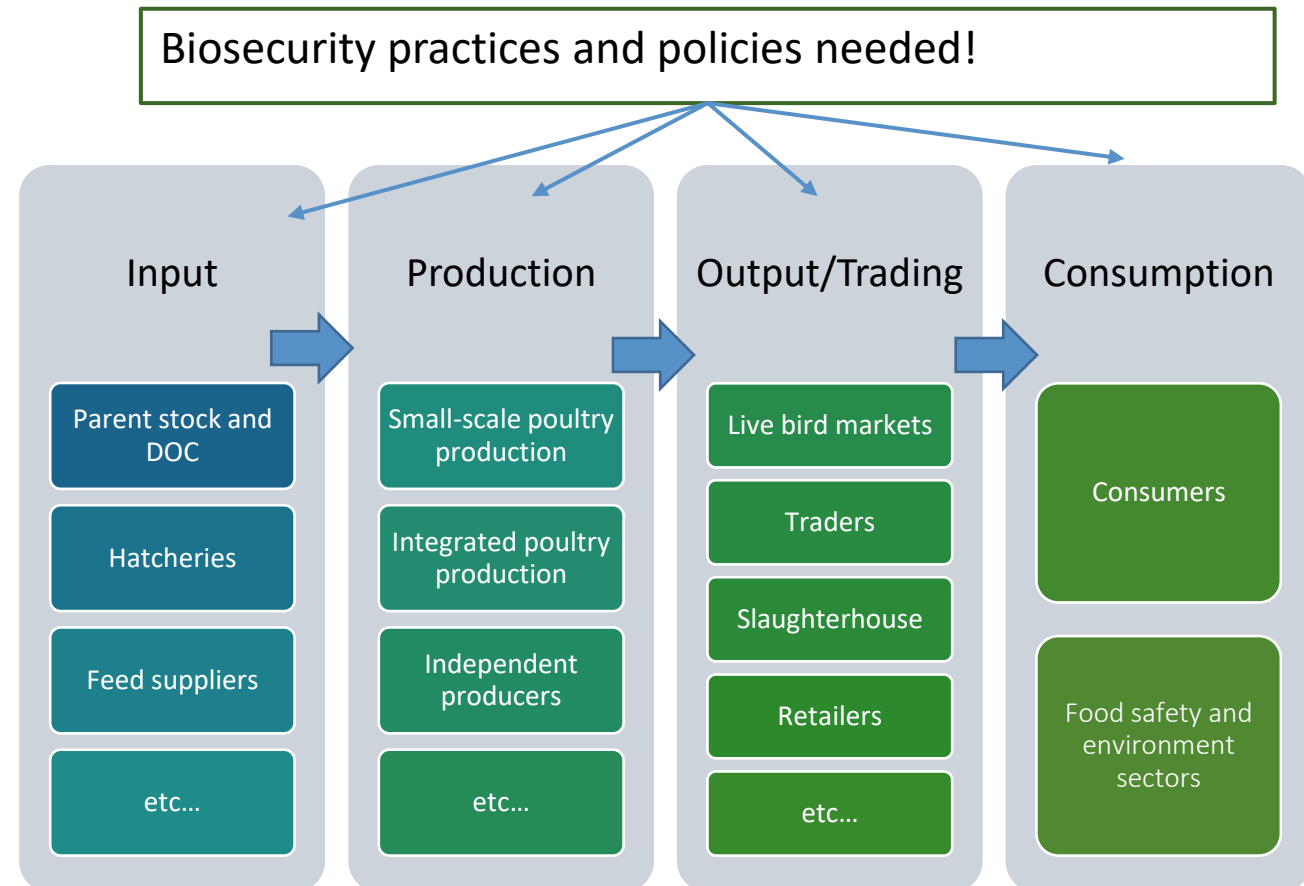
Actions and activities that influence and impact biological risks





## Biosecurity and value chains

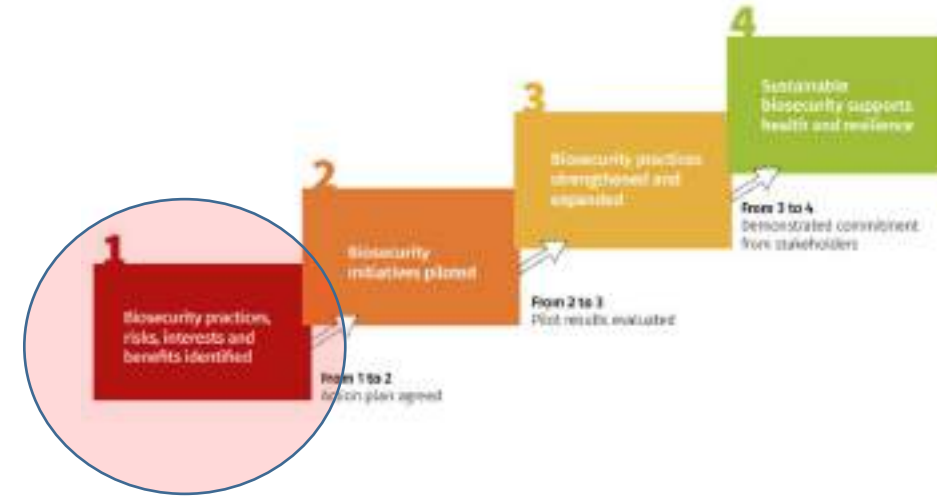
- Biosecurity is relevant at all points along the value chain
- The Progressive Management Pathway for Terrestrial Animal Biosecurity (PMP-TAB) is a framework to make sustainable improvements
  - At value chain level (practices)
  - AND
  - At public sector/national level (policies, capacities)



# PMP-TAB: Progressive Management Pathway for Terrestrial Animal Biosecurity

## Getting Started with the PMP-TAB

1. Situation assessment and Stakeholder consultation:
  - a. Identify priority sector(s) for biosecurity pilot
  - b. Situation assessment: map stakeholders, compile information and results from past/current activities
  - c. Assess the policy environment
  - d. Set up PMP-TAB taskforce with public and private stakeholders
  - e. Co-create Pilot project
    - a. Private sector improve agreed practices
    - b. Public sector audit compliance
  - f. Monitor, evaluate and expand based on lessons learned
  - g. PMP-TAB tracking tool available to support (beta version)



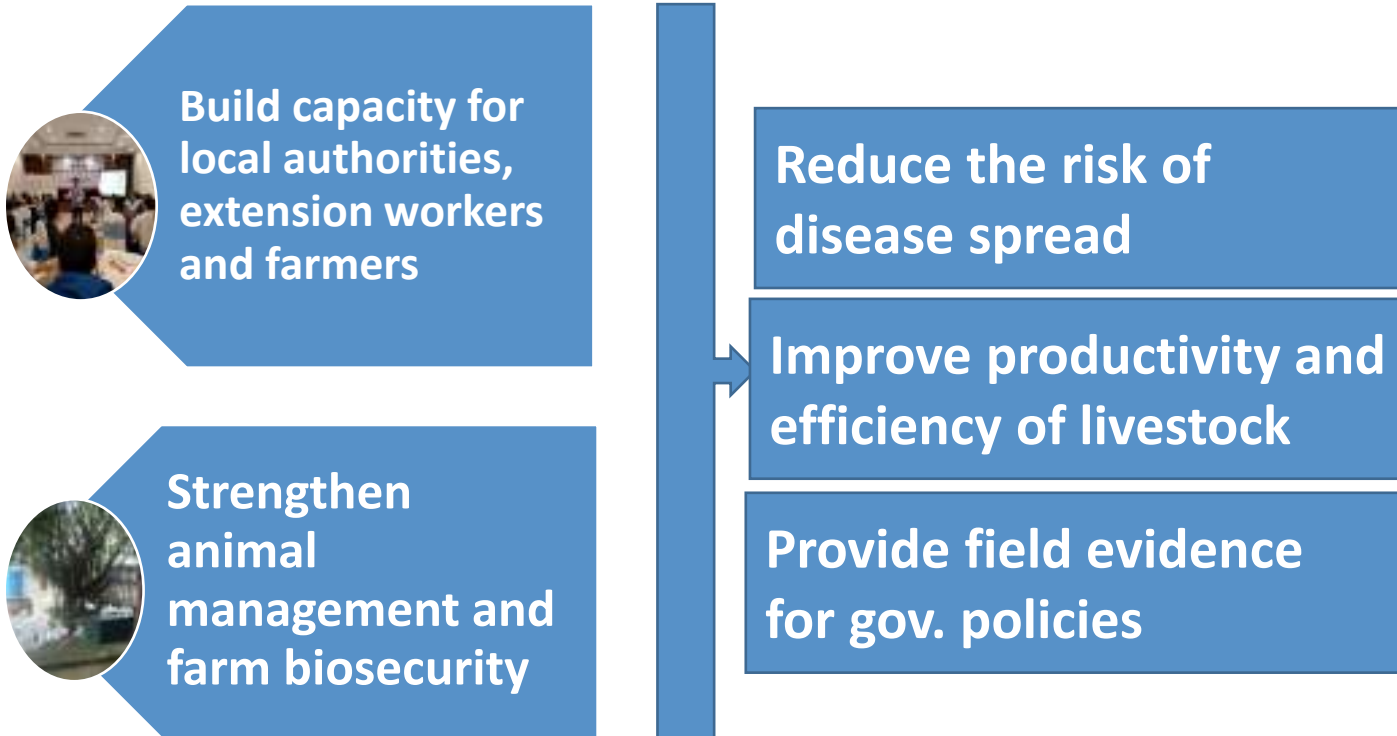


## Case Studies: Biosecurity management along the value chain- Viet Nam

The program has been implemented since 2012 in all provinces of Viet Nam through 5 projects supported by USAID and WPF



### Objectives



### Key stakeholders

- Department of Liv. Production
- Prov. Depart. of Liv. Production
- Central and local ext. centers
- Medium and small-scale liv. producers
- Livestock-veterinary education institutions
- Livestock-related associations

## Case Studies: Biosecurity management along the value chain- Viet Nam

- 110 biosecurity model poultry farms, hatcheries, pig farms enrolled in 8 provinces
- Profit markup of model farms was higher than control :
  - Poultry: 3.9%- 48.7%;
  - Pig farms by 15.4%;
- Vet. medicine costs reduced by 20-50% in model poultry farms
- Improved farm prestige and market access
- Model farm practices recognized and applied by neighboring farmers

Read More: <https://www.fao.org/3/ca5516en/CA5516EN.pdf>



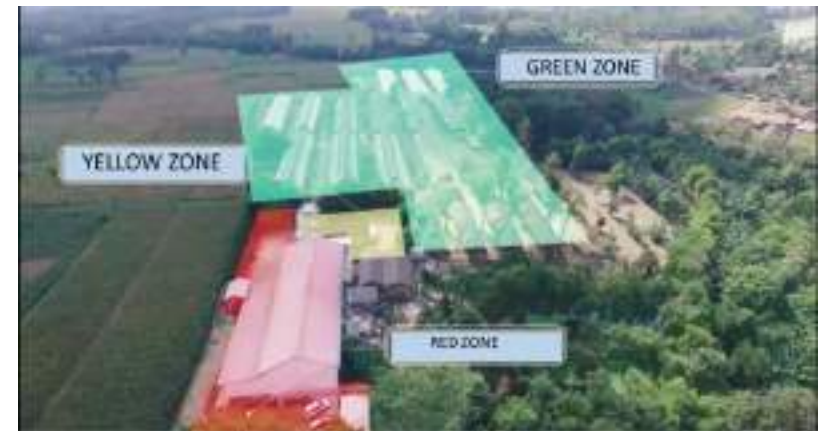
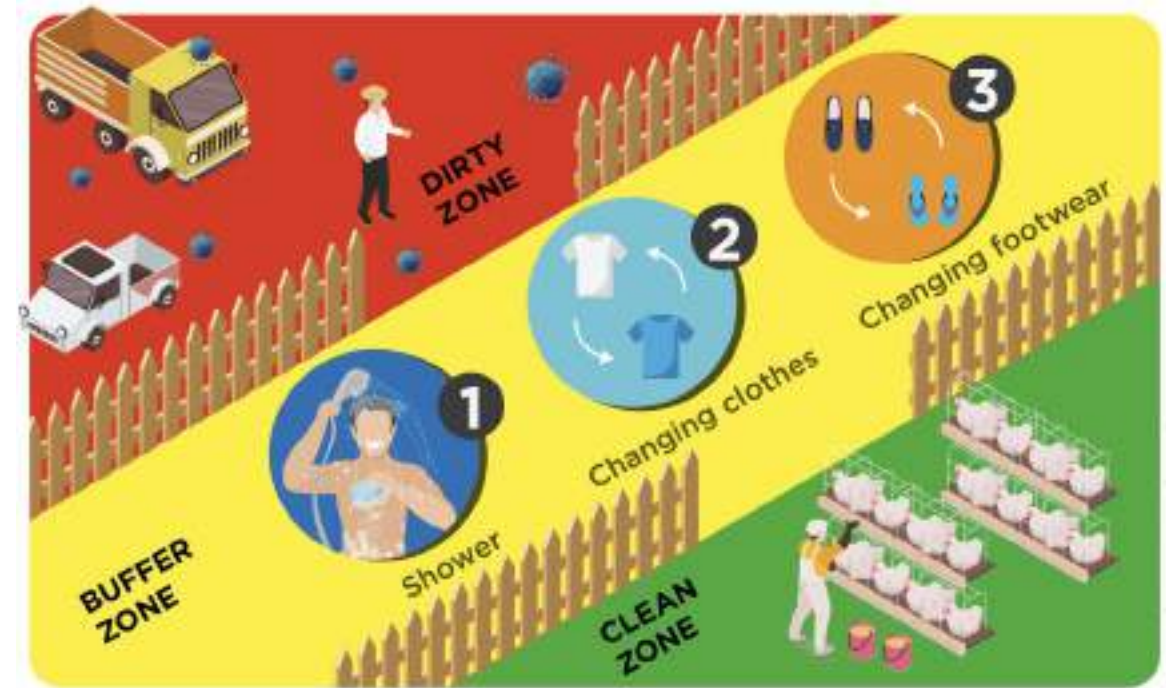


## Case Study: 3-zone biosecurity - Indonesia

- The concept was introduced in 2013 to prevent and control HPAI on poultry farms

### Involves:

- Map farm and identify 3 zones:
  - Dirty peripheral zone (high risk)**
  - Buffer zone (moderate risk)**
  - Central production zone (low risk)**
- List all possible biosecurity risks
- Rank risks according to the level of danger that they pose to farm biosecurity
- Plan to control the risks by using the 3-elements of the 3-zone biosecurity practice:
  - Isolation, Traffic control, Sanitation
- Produce informational materials
- Ensure all farm employees are committed





## Case Study: 3-zone biosecurity - Indonesia

- The Government of Indonesia (GOI) adopted the 3-zone biosecurity practice for infection prevention and control of diseases on poultry farms. **They used it to enrich three regulations**
- More than 160 poultry farmers implemented the 3-zone biosecurity practice (assisted by trained VSO)
  - Of these, 55 poultry farms gained **certification from GOI**

### 1. Layer farms

- **Decrease in:** antibiotic use by 40%, disinfectant use by 30%
- **Increase in** day production of hens by 4%, profit by 12%

### 2. Broiler farms

- Economic benefits of USD 78/1,000 birds/cycle

### 3. Duck farms

- Savings on feed costs for broiler and laying ducks
- Broiler duck farms experienced increase in profit of USD 122/1,000 birds/year





## Community of Practice (CoP) for Terrestrial Animal Biosecurity

- **Co-create** and **share knowledge** about terrestrial animal biosecurity
- Promote **collaboration** amongst members and experts
- Membership inclusive, everyone welcome (public/private sectors, academia)
- Hosted on FAO's Virtual Learning Center (VLC) Platform
- Include monthly webinars, knowledge repository/toolkit, member-driven activities and outputs
- **Subgroups** foreseen for in-depth discussion of topics of interest
  - Monitoring biosecurity; Behaviour change; Benefit-cost of biosecurity
  - **Looking for co-leaders for Subgroups from Community**

**Join us!**

Visit <https://virtual-learning-center.fao.org/mod/page/view.php?id=8724&forceview=1>  
or contact us at [PMP-TAB@fao.org](mailto:PMP-TAB@fao.org)





## Conclusion



## Sustainable, inclusive, resilient livestock sector

### Health improvements and resilience

- Reduced burden of disease and AMR
- Improved production
- Improved socio-economic benefits in the livestock sector
- Improved One Health outcomes

### Three dimensions of sustainability

- Economic
- Social
- Environmental

**Remember:** FAO defines biosecurity as a *strategic and integrated* approach that encompasses the policy and regulatory frameworks for *analysing and managing relevant risks to human, animal and plant life and health, and associated risks to the environment*



## Acknowledgements

*Vietnam Case study:* Minh Nguyen Thi Tuyet, Pawin Padungtod and FAO Vietnam ECTAD

*Indonesia case study:* Alfred Kompudu and FAO Indonesia ECTAD

*PMP-TAB team:* Madhur Dhingra, Aashima Auplish, Martin Heilmann, Shija Jacob, Koen Mintiens, Yushan Li, Nina Miltzer, Andriy Rozstalnyy, Mirzet Sabirovic, Ismaila Seck, Daniel Toro, Melissa McLaws & FAO PMP-TAB taskforce



*Protecting people, animals, and the environment every day*