FMD Control in South East Asia: science based approach to development of roadmaps and PVS Tools to support capacity building

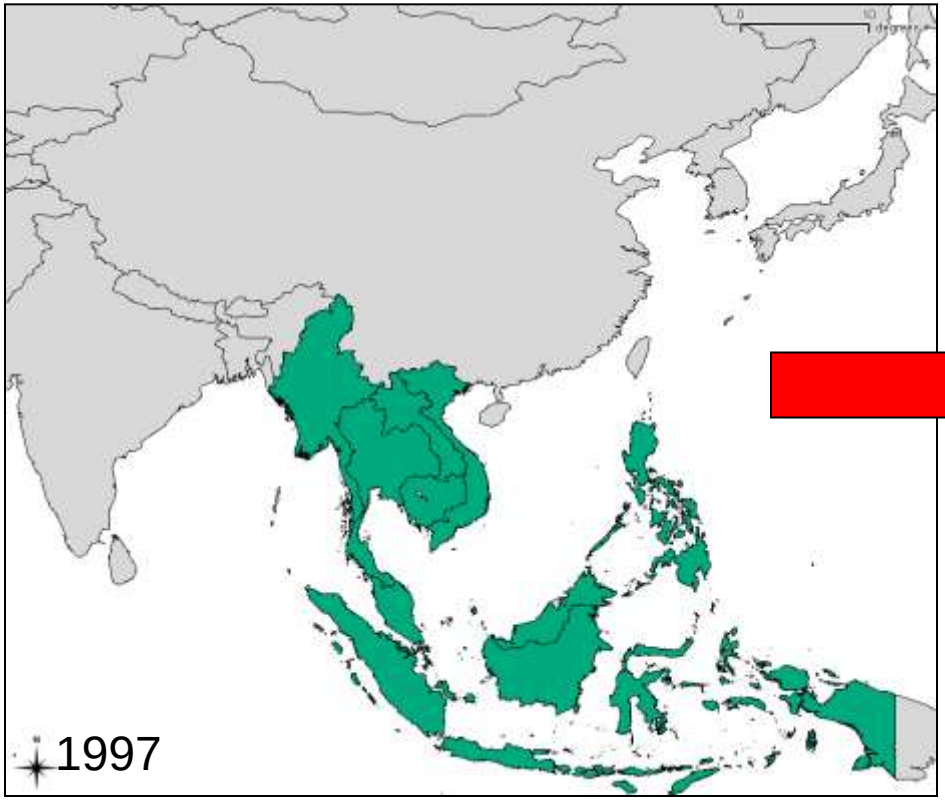
Ronello Abila

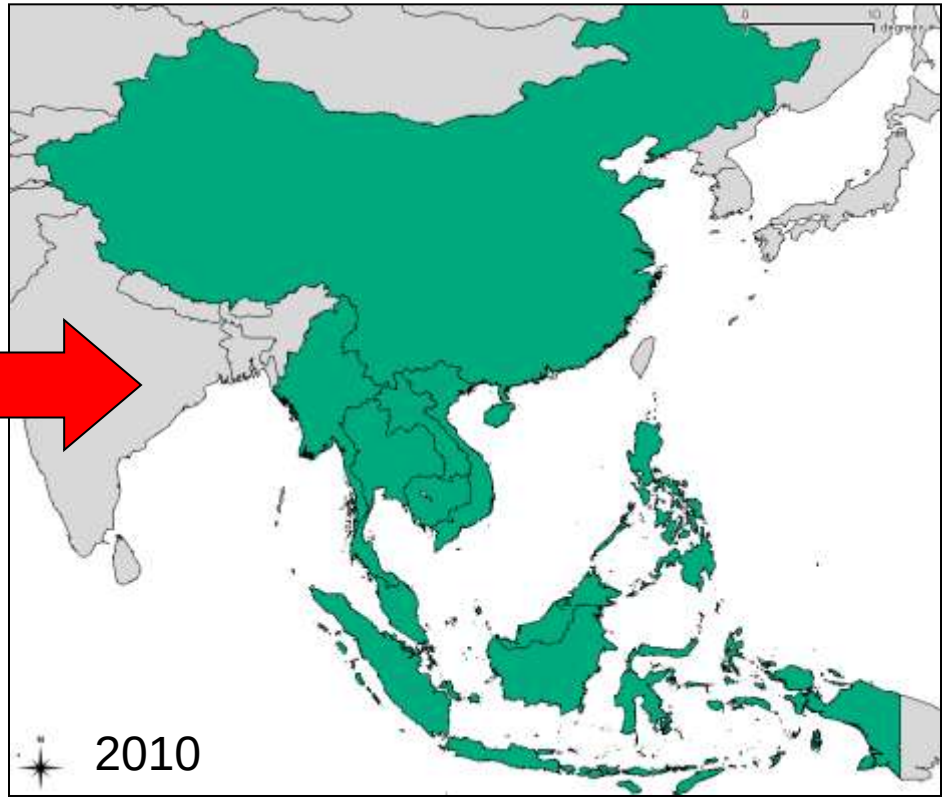
Sub-Regional Representative for SE Asia

OUTLINE

- SEACFMD Campaign
- SEACFMD 2020 Roadmap
- PVS Pathway

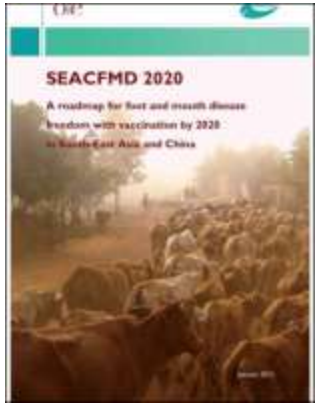
The South East Asia and China Foot and Mouth Diseases (SEACFMD) Campaign





Approved by the OIE General Assembly in May 25, 2010, PARIS

Program Management



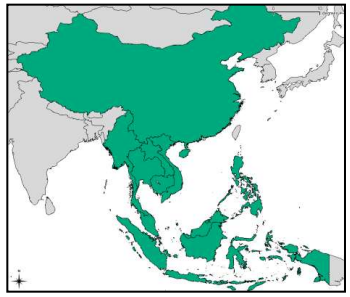
International Coordination

Public Awareness

Surveillance, Diagnosis and Control

SEAFMD Campaign

Policy, Legislation, Zoning

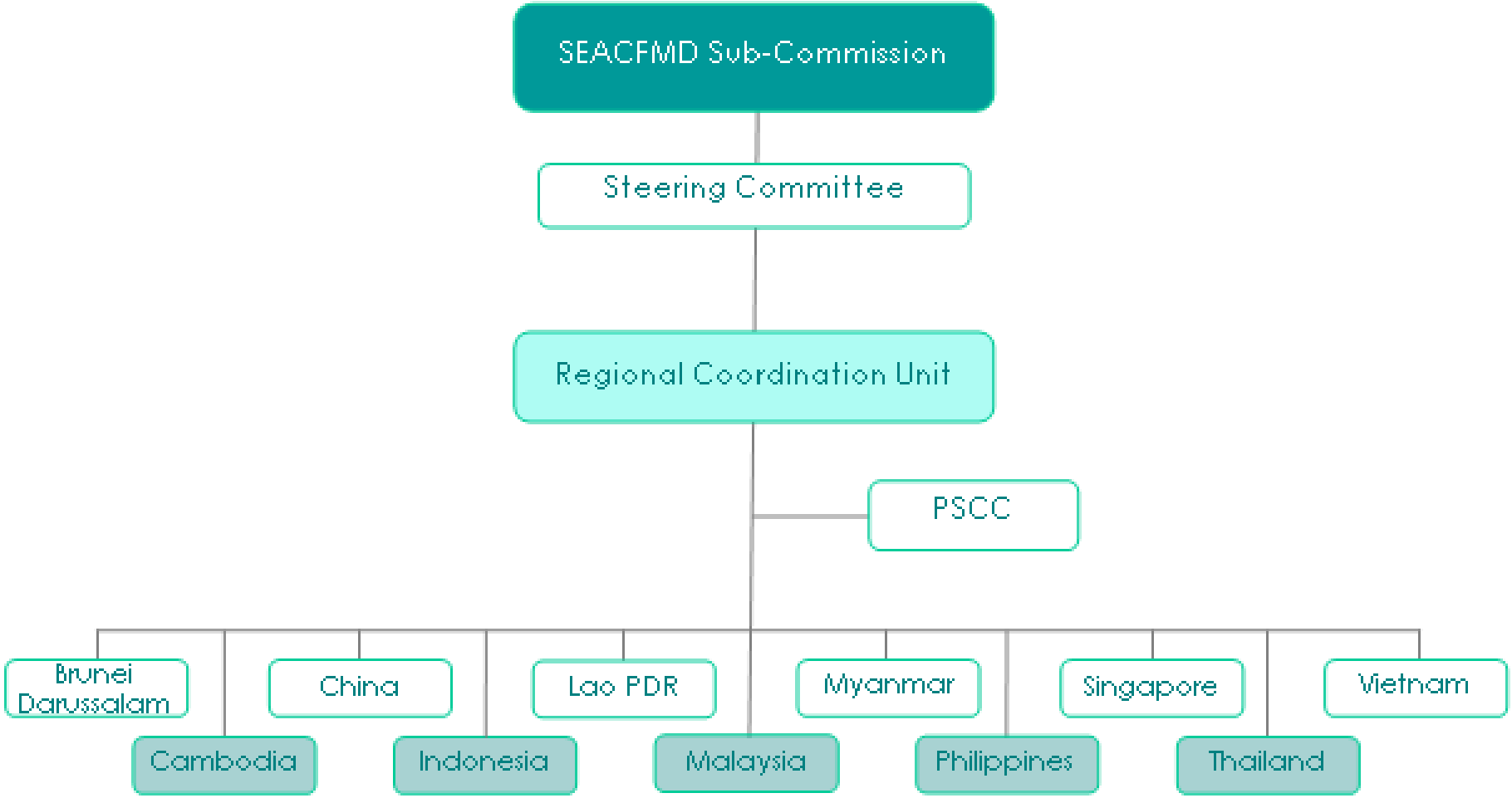


Regional Research

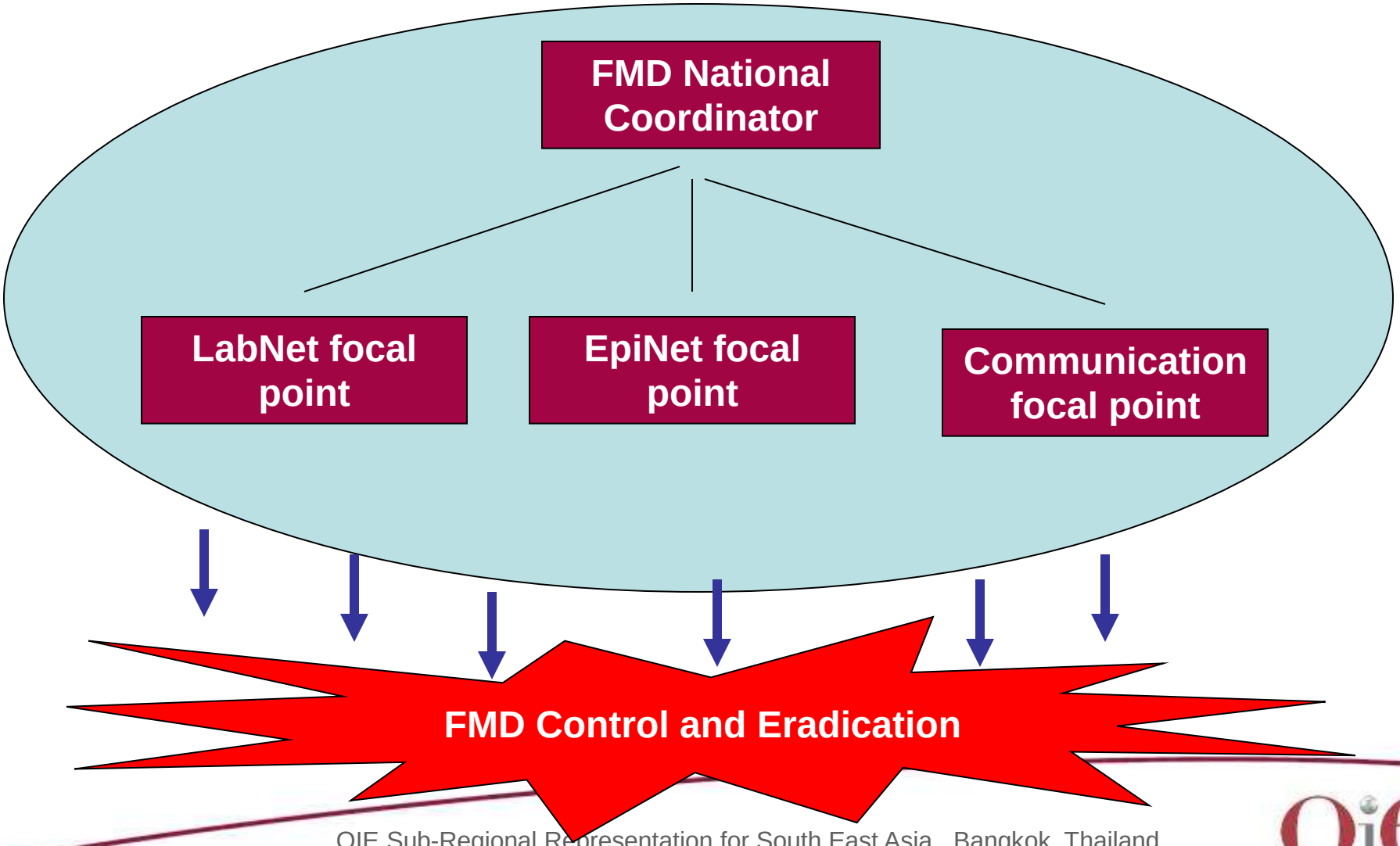
Private Sector

Monitoring & Evaluation

Coordination and Governance



National Coordination



SEACFMD LabNet

- Sub-Commission recommended Pakchoing to be come FMD RRL
- Opening of RRL in 2004
- 2010 recoginsed by OIE as FMD Reference Laboratory
- Harmonise diagnostic procedures in line with OIE standards
- Proficiency testing and quality assurance

Role of LabNet

- Rapid diagnosis of FMD viruses
  - Early detection and confirmation of FMD virus serotypes
  - Use of appropriate vaccine strain
- Facilitate sending of field isolates to Regional Reference Laboratory
- Strengthen surveillance
  - Molecular epidemiology
  - Mapping on the evolution of FMDV serotypes

Role of LabNet

- Capacity building on FMD diagnosis
  - Exchange visits of experts
  - Regular training programs
- Harmonization of diagnostic protocols
- Quality assurance system
- Facilitate research activities
  - Prioritize areas for research (eg. role of carrier)
  - Joint research studies
  - Develop proposals for possible funding

Role of EpiNet

- develop a standardised set of protocols for FMD surveillance in the SEAFMD campaign
- a definition of an outbreak for SEAFMD and a case definition
- suggested minimum requirements for regional reporting

Role of EpiNet

- FMD reporting to SEAFMD RCU
- Analysis FMD data in the sub-region
- Design and facilitate implementation of surveillance activities
- Training on outbreak investigation, disease, information systems, surveillance and other epidemiological tools

SEAFMD Reporting System

OIE SEAFMD Regional Foot and Mouth Disease Monthly Outbreak Report

Country	Month	Year	Name of Sender	Position	Telephone	Fax	Email

Outbreak ID.	Admin I (e.g. Province)	Admin II (e.g. District)	Admin III (Subdistrict)	Village	Longitude	Latitude	Date of first case	New / Ongoing	Resolved?	Type of Diagnosis	Number of Samples Submitted	Virus serotype	Epidemiological findings	Control Measures Implemented	Species	Susceptible	Cases	Deaths	Destroyed	Slaughtered
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
														Total animals by species	BOV					
															BUF					
															SUI					
															OVI					
															CAP					
															FAU					

Signature of Sender

Total outbreaks
Total new outbreaks
Total ongoing outbreaks
Total resolved outbreaks

Notes:

SEAFMD Reporting System

OIE SEAFMD Monthly Outbreak Report

Report

Country: Myanmar

Report Month / Year: 9 2004

Coordinates

Longitude: 95

Latitude: 18

☐ No Outbreaks? OutbreakID: 04/035

Outbreak Location

Province: Ayeyarwaddy

Admin2: Hinthada

Admin3: Myan Aung

Village: 2

Outbreak Details

Date of First Case: 10/9/2004

☐ New outbreak? ☑ Resolved?

Diagnosis Type: CD

Serotype: Not Sampled

Epi

☐ UN
☐ ML
☐ MI
☐ MT
☑ G
☐ S
☐ F

Maps

FTP

Quit

Control

☑ Q
☐ REG
☐ PA
☑ AD
☑ DIS
☐ RF
☑ MOV
☐ DF
☐ RV
☐ PS
☐ DC
☐ MV
☐ RA
☐ DEP
☐ DI
☐ DR
☐ INV

Livestock Numbers

Species	Suceptible	Cases	Deaths	Destroyed	Slaughtered	Samples
BOV	74	56	0	0	0	0

RCU - Outbreak Reports - Mozilla Firefox

File Edit View Go Bookmarks Yahoo! Tools Help

http://www.seafmd-rcu.oie.int/fmd_se_asia.php

Started 2002

SEAFMD Campaign

SEAFMD

OIE

Organisation Mondiale de la Santé Animale
World Organisation for Animal Health
Organización Mundial de Sanidad Animal

FMD Outbreak Reports

Select Report Type and Period

Report Type: ○ Table ◉ Map | Country: Region | Month: 12 | Year: 2005 | Show Data

[Home | Contacts | Help | Links | Disclaimer]

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- Photo Gallery
- Regional FMD Discussion Forum
- Monthly FMD maps and country reports
- Regional Resources
- RCU activities and reports
- Searchable FMD research register
- MTM Peninsular Campaign
- Private Sector Consultation
- Useful Links
- Site administration (password needed)

Some of the documents on this site are in Adobe Acrobat (.pdf) format. To view them you will need Acrobat Reader. For a free download, click on the link below.

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ARAHIS - ASEAN Regional Animal Health Information System - Home Page - Microsoft Internet Explorer

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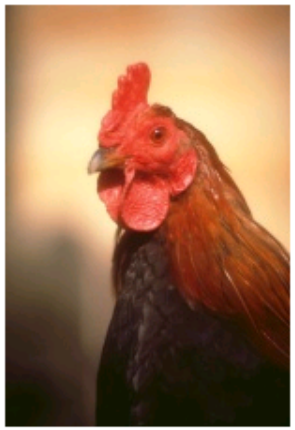
Back Search Favorites

Started 2007

ASEAN Regional Animal Health Information System (ARAHIS)

OIE Home Page

Language: English



Username:

Password:

Login

Forgot password?

ASEAN Regional Animal Health Information System

ARAHIS

Welcome to the ARAHIS system

This system is intended for the use of authorised representatives of members of ASEAN countries, for the purpose of sharing timely information on livestock diseases, to improve regional disease control.

To ensure the integrity of the disease information managed by the system, access is restricted by password.

This system has been developed with the cooperation of the ASEAN sectoral working group on livestock, and with support from the Australian Government (AusAID), OIE (head office in Paris, regional office in Tokyo, and regional coordination unit in Bangkok) and ACIL. The system builds on and extends the functions of existing regional animal health information systems, including the OIE's South East Asian Foot and Mouth Disease campaign and the Animal Health and Production Information System for ASEAN (AHPISA)

User Feedback Email the development team if you have a comment on this system.

ASEAN Regional Animal Health Information System (ARAHIS)
Developed by AusVet Animal Health Services
As part of the AusAID funded "Strengthening Animal Health Management and Biosecurity in ASEAN" (SAHMBA) project
With the participation of ASEAN SWGL, OIE, SEAFMD, AHPISA, Cardno-Acil, and the OIE Tokyo Regional Office.

Internet

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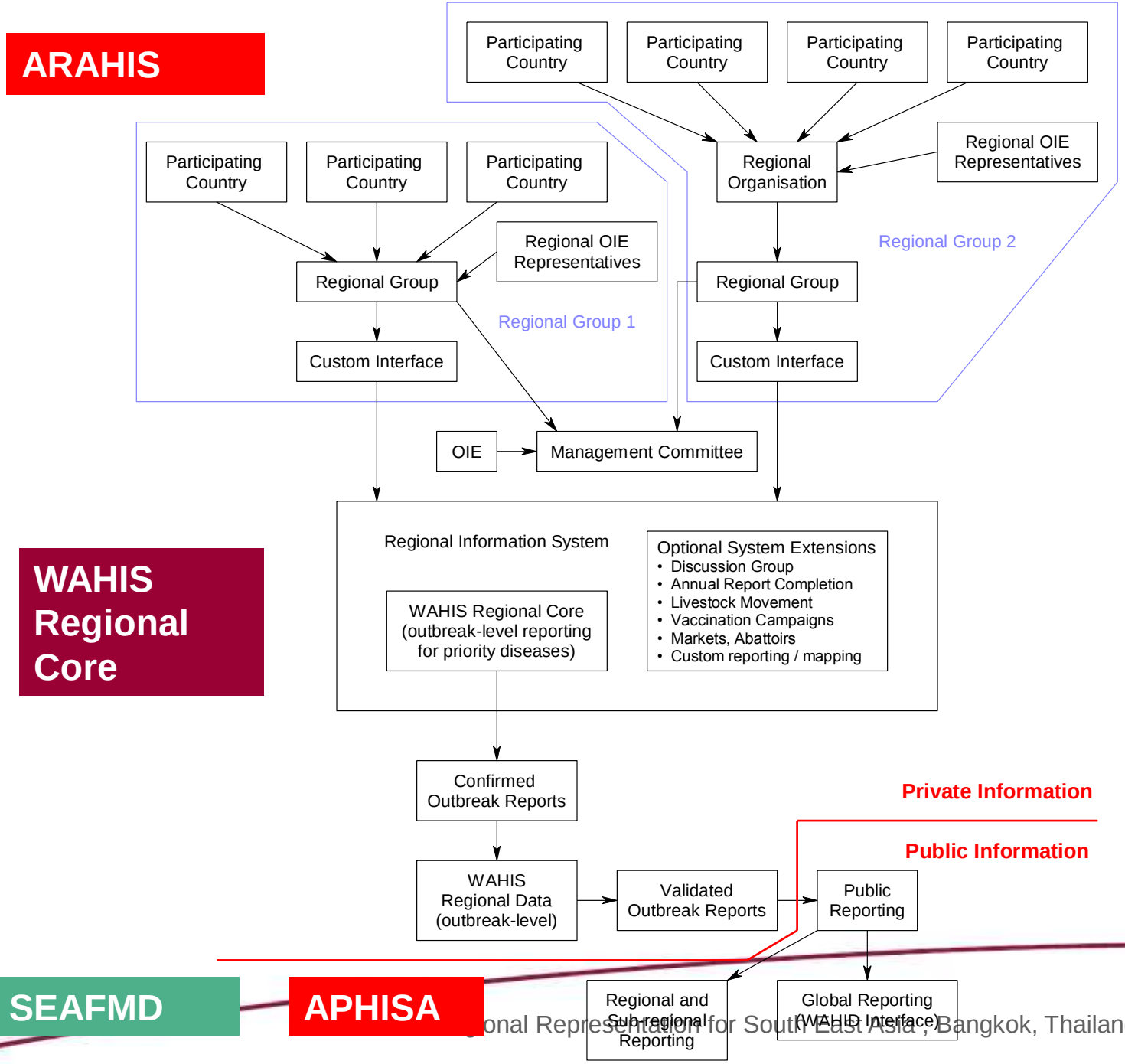
ARAHIS
Participating Country
Participating Country
Participating Country
Participating Country
Regional Organisation
Regional OIE Representatives
Regional Group 2
Participating Country
Participating Country
Participating Country
Regional OIE Representatives
Regional Group
Regional Group 1
Regional Group
Custom Interface
Custom Interface
OIE
Management Committee
WAHIS Regional Core
Regional Information System
WAHIS Regional Core (outbreak-level reporting for priority diseases)
Optional System Extensions
• Discussion Group
• Annual Report Completion
• Livestock Movement
• Vaccination Campaigns
• Markets, Abattoirs
• Custom reporting / mapping
Confirmed Outbreak Reports
Private Information
Public Information
WAHIS Regional Data (outbreak-level)
Validated Outbreak Reports
Public Reporting
SEAFMD
APHISA
Regional and Sub-regional Reporting
Global Reporting (WAHID Interface)

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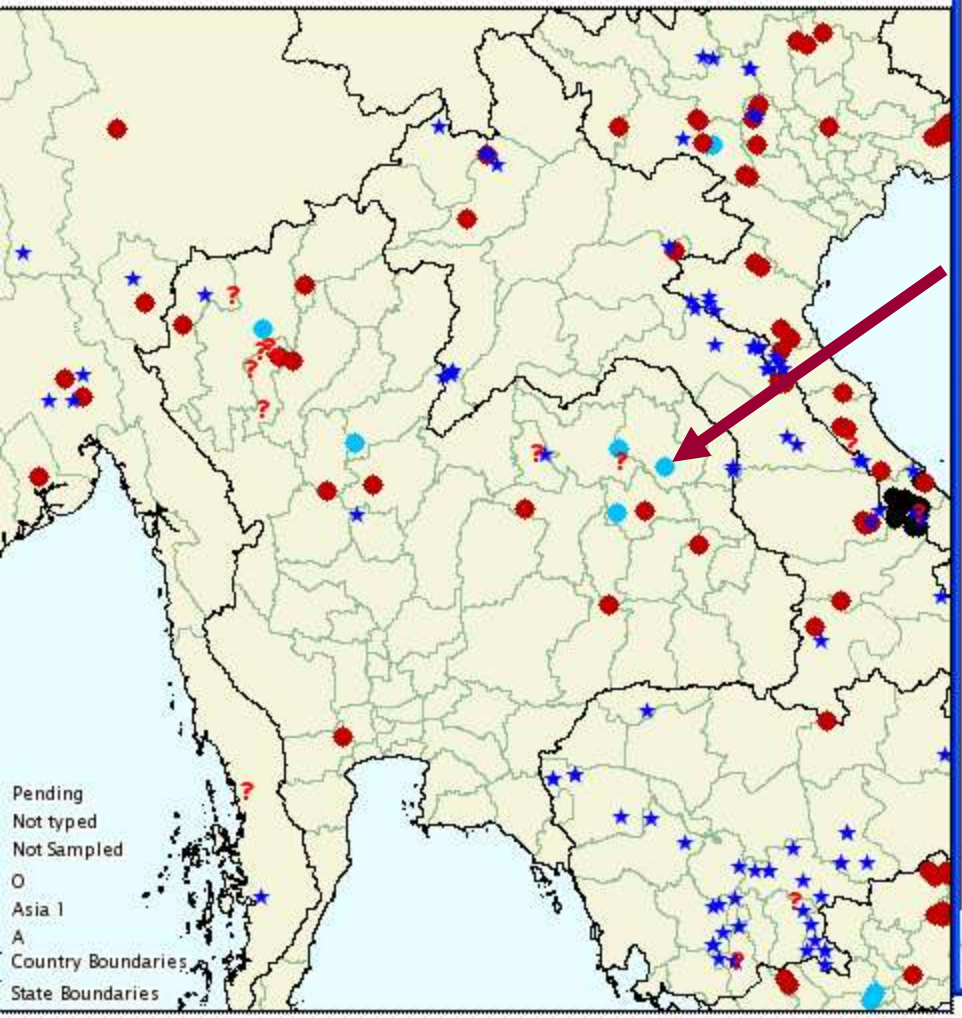
http://www.arahis.oie.int/reports.php

ost Visited Getting Started Latest Headlines

OIE Regional Coordination Unit Bang...



OIE Regional Coordination Unit Bangkok - Report detail - Mozilla ...

http://www.arahis.oie.int/reports.php

SEAFMD Campaign

SEAFMD

OIE

Organisation Mondiale de la Santé Animale
World Organisation for Animal Health
Organización Mundial de Sanidad Animal

Thailand, Kingdom of

1) Outbreak ID: 09/020 (44465)

Location	BanJead, KuKaeo, UDON THANI	Serotype	A
Epidemiological Unit	Village no.5 (Village)	Epidemiological Comments	
Start Date	16/02/2009	Affected Population	The affec native cat
End Date	03/03/2009		

Diagnosis	Current Control Measures	Future Control Measures	So
No information available	• Movement control inside the country • Screening • Vaccination in response to the outbreak (s) • Disinfection of infected premises/establishment(s) • Dipping / Spraying • Zoning		

Species	Susceptible	Cases	Died	Destroyed	S
Cattle	243	3	0	0	0

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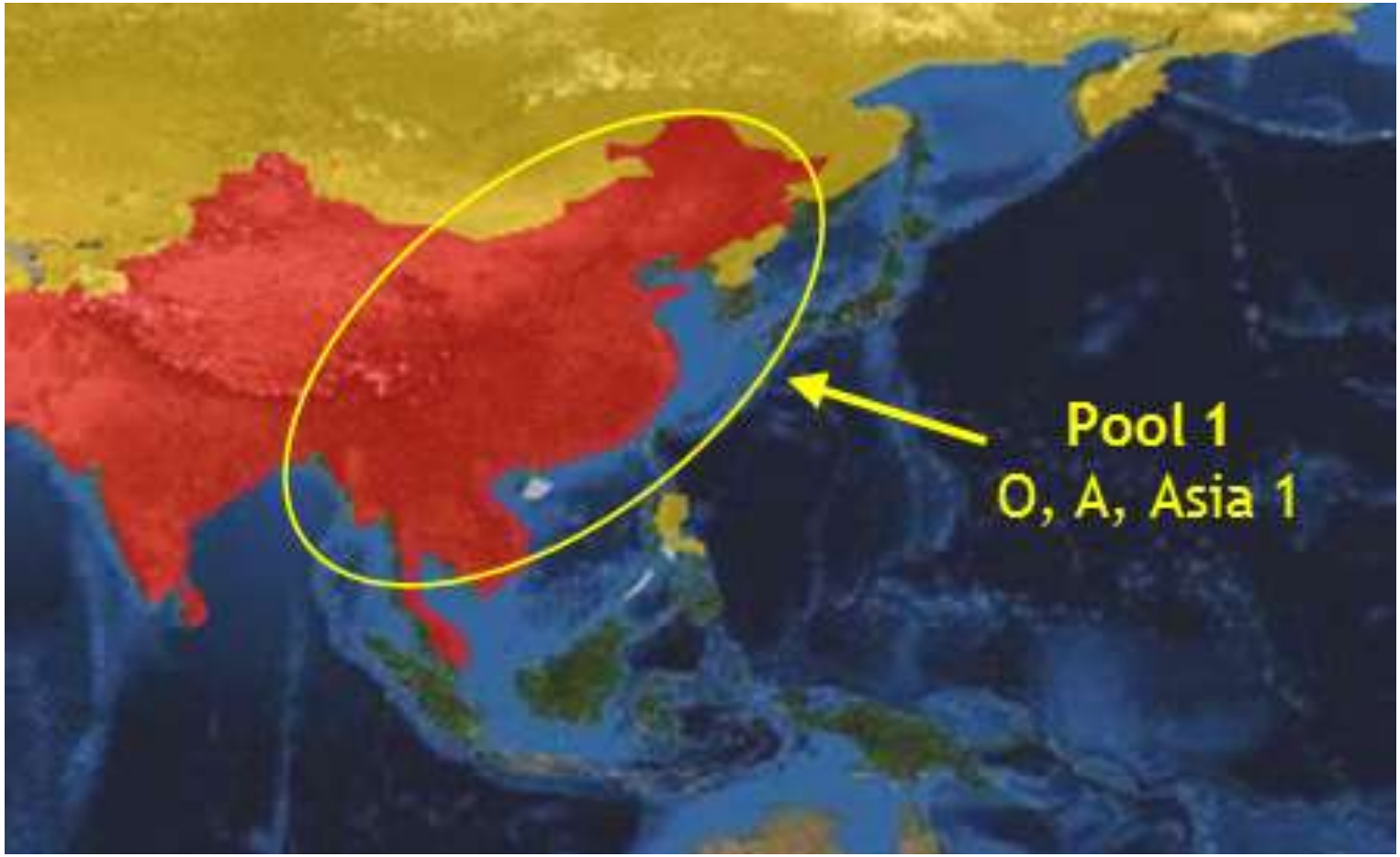
Done

FMDV in Pool 1



FMD viruses in Pool 1

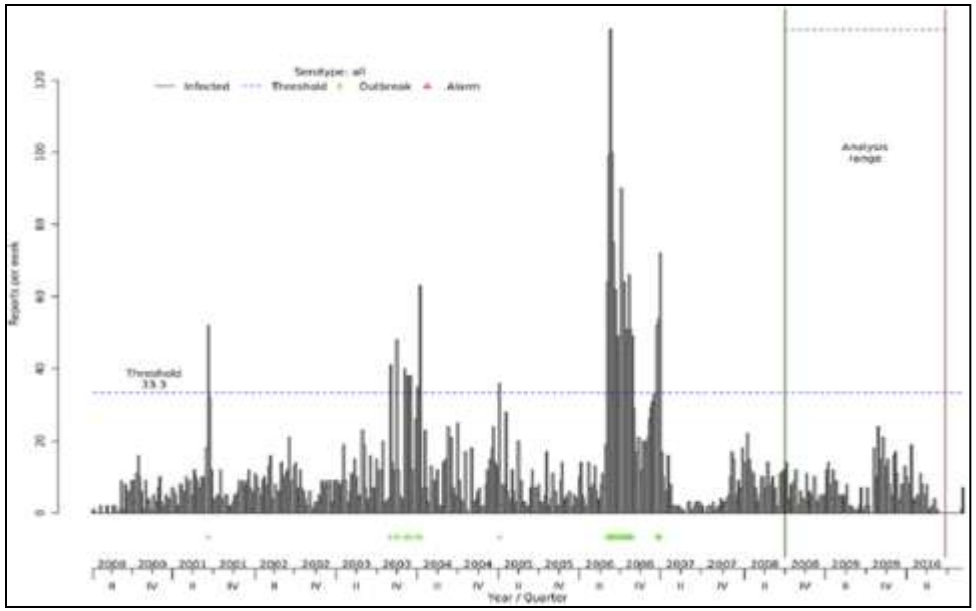
Serotype	Topotype	Remarks
O	South East Asia	Myanmar 98 and Cambodia 94; endemic in SE Asia: reported in China, Korea and Japan in 2010
	Pan Asia	detected SE Asia in late 1990s
	Cathay	1st detected in Hong Kong in early 1990s
A	Asian	Indigenous in SE Asia; reported in China and Korea in 2010
Asia 1	Asian	Last reported in 2007

FMD serotypes in Southeast Asia

Country	2004	2005	2006	2007	2008	2009	2010	2011
Brunei Indonesia Singapore	NO OUTBREAK							
Cambodia	O	O	O, A	O, A	O, A	???	O	O
Lao PDR	O	O	A	O, A	O	O	O	O
Malaysia	O, A	O, A	O	O, A	O	O, A	O	O
Myanmar	O	O, Asia 1	O	O	O	O	O, A	O
Philippines	O	O	NO OUTBREAK					
Thailand	O, A	O, A	O, A	O, A	O, A	O, A	O, A	O, A
Viet Nam	O	O, A Asia 1	O, A	O, A Asia 1	O	O, A,	O, A	O, A

Reference: SEACFMD Monthly Outbreak Report

FMD Distribution



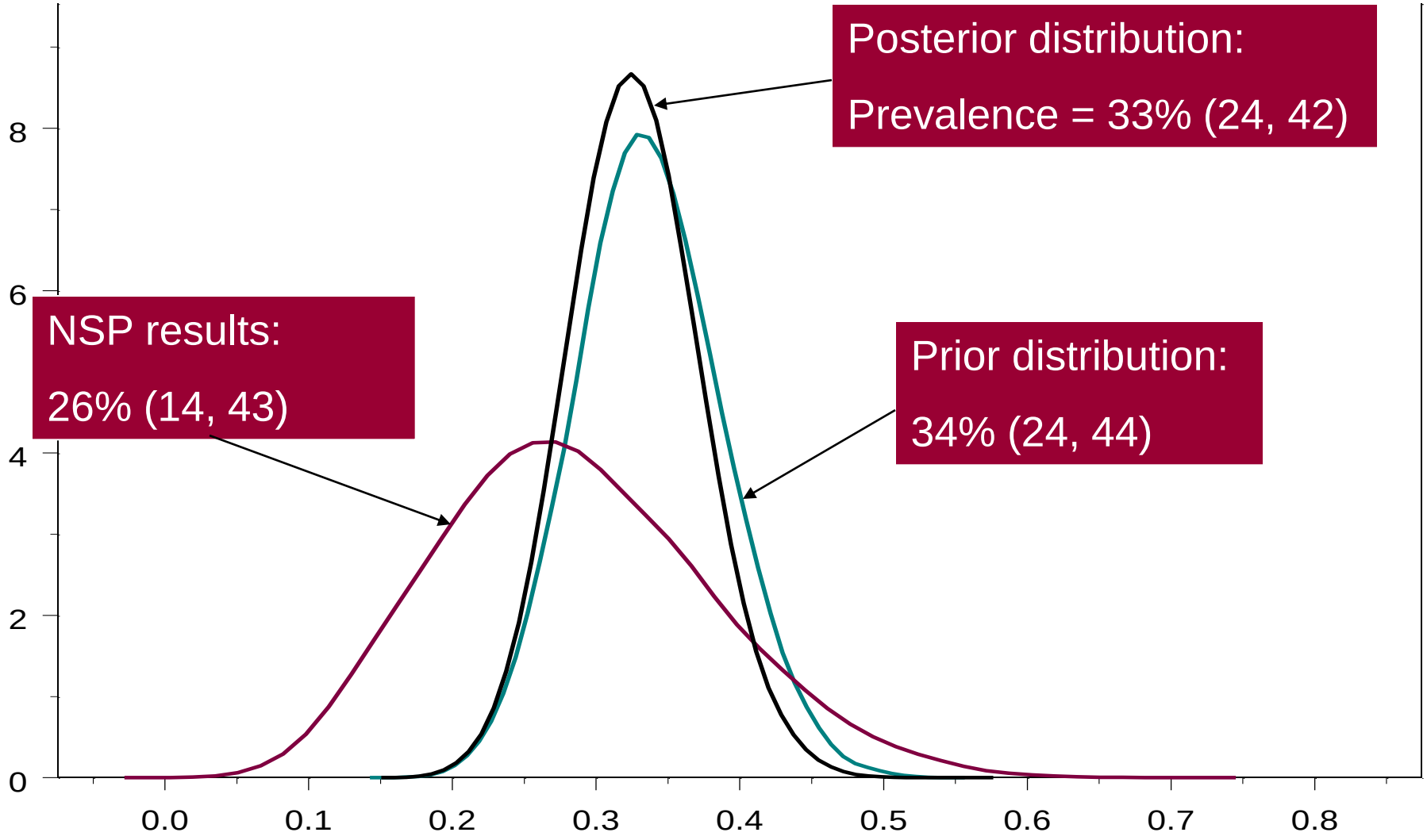
Research Agenda

- Understanding the market chains of different species and livestock products
- Understanding the spatial and temporal distribution of FMD serotypes and its determinants
- Define effective vaccination strategy and examine cost effectiveness of different vaccination strategies
- Investigating the roles of different species in the epidemiology and transmission of FMD in SE Asia
- Comparative studies on disease control management strategies (including policies, regulation) from different countries in SE Asia

Use of FMD history as an indicator of FMD-affected village

- Significant association between the FMD history in the village and NSP results
- Cost-effective tool for prevalence estimation of FMD-affected villages in large area/zone
- Dependent on disease recognition by farmers and animal health workers or good database records
- Sensitive to information/recall bias

UM control zone: Prevalence of FMD-affected villages



FMD Case study Lao PDR: XK Province

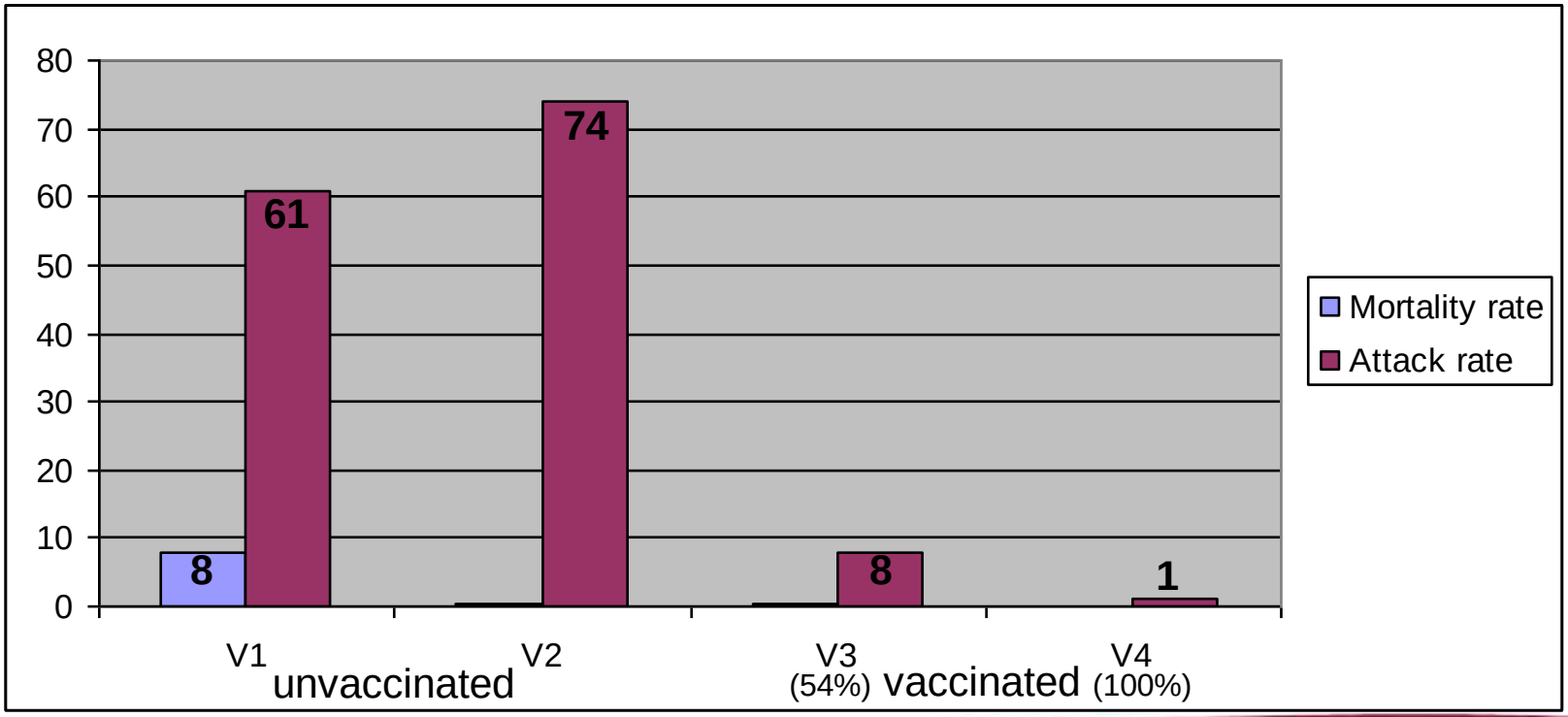
BACKGROUND:

- FMD Vaccination as part of ACIAR project in Dec. 2008 in 2 project villages (type O,A, Asia1)
- FMD outbreak in XK province in Jan 2009 (O-SEA)
- Reduced mortality and morbidity reported in vaccinated villages
- Retrospective case study in February/March 2009

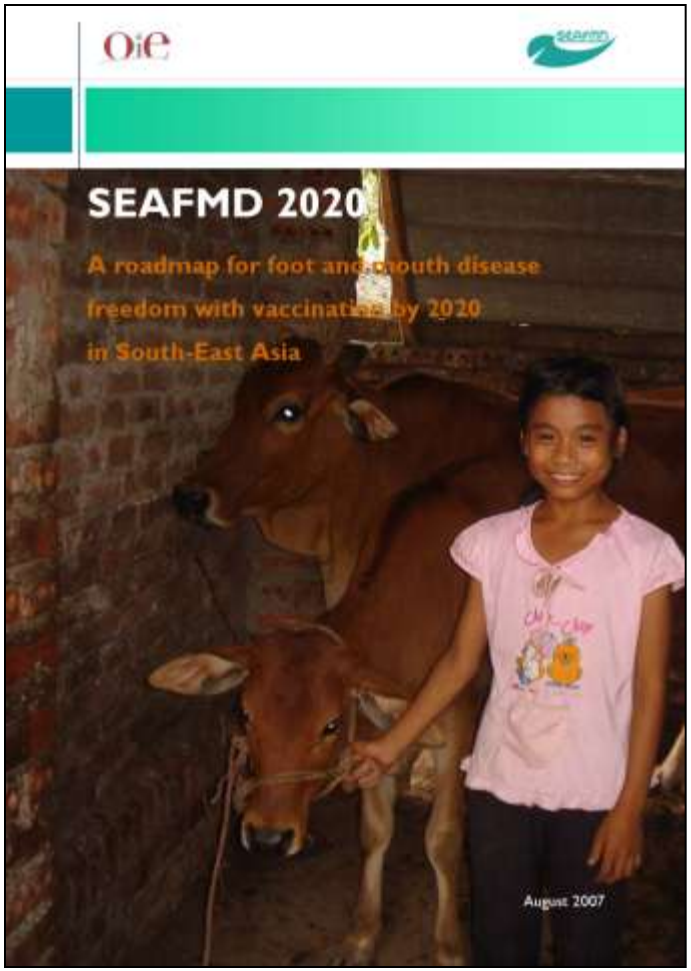
Limiting the impacts of FMD in lrg. Ruminants in northern Lao PDR by vaccination: a case study

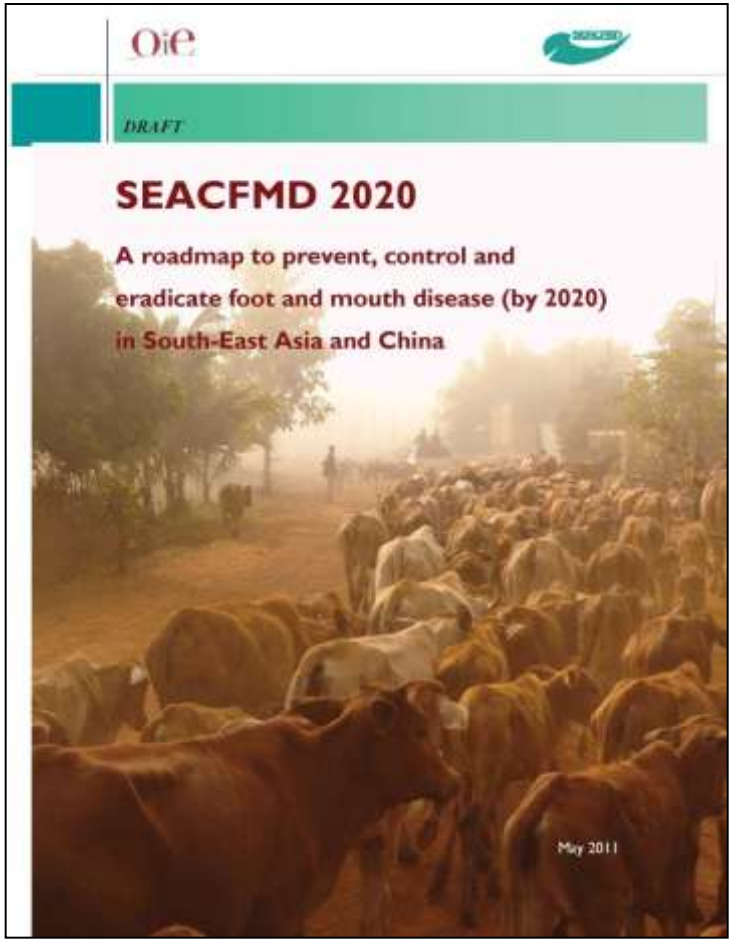
RESULTS:

- Mortality & Morbidity rates in 4 case study villages



SEACFMD 2020 Roadmap

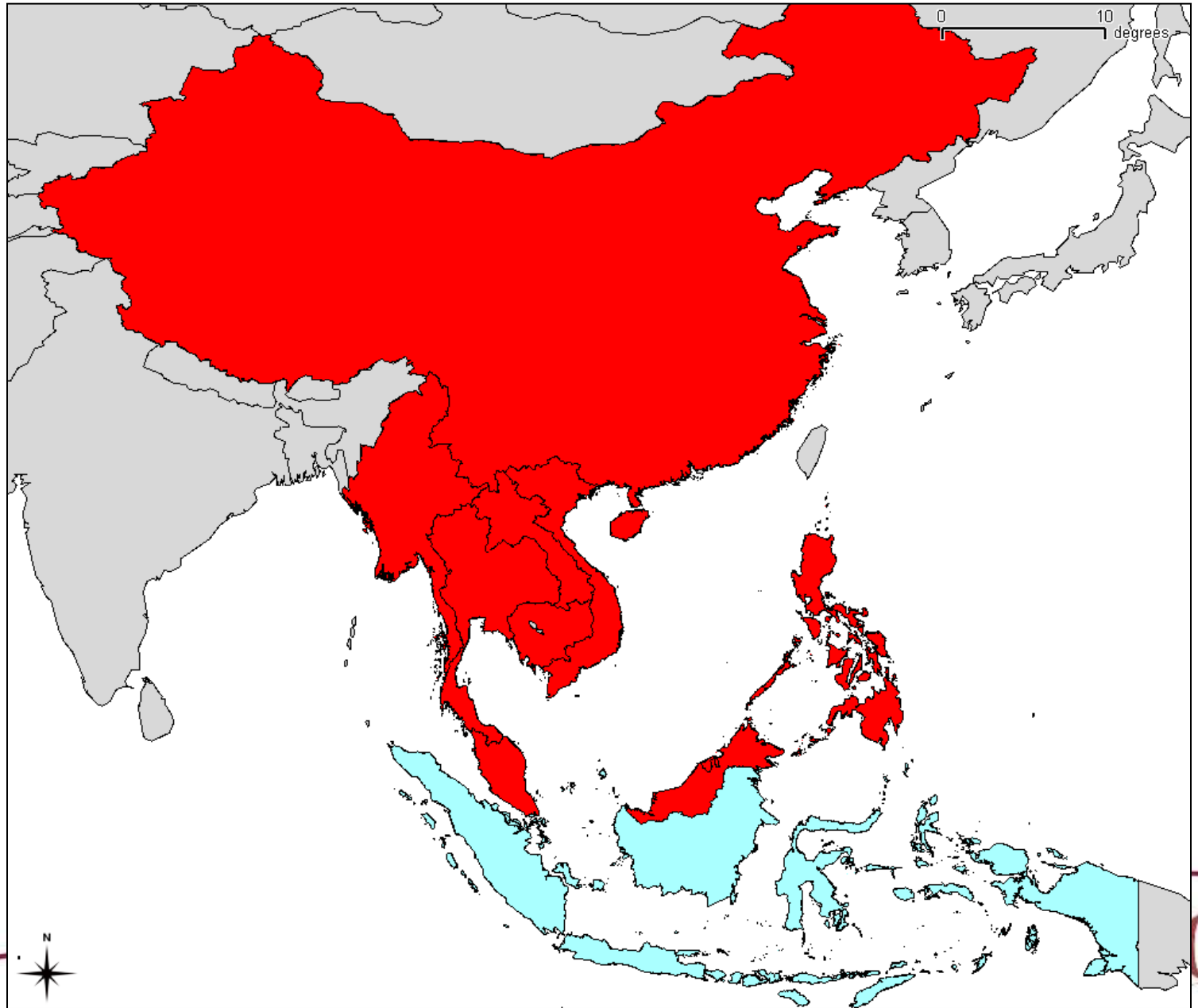




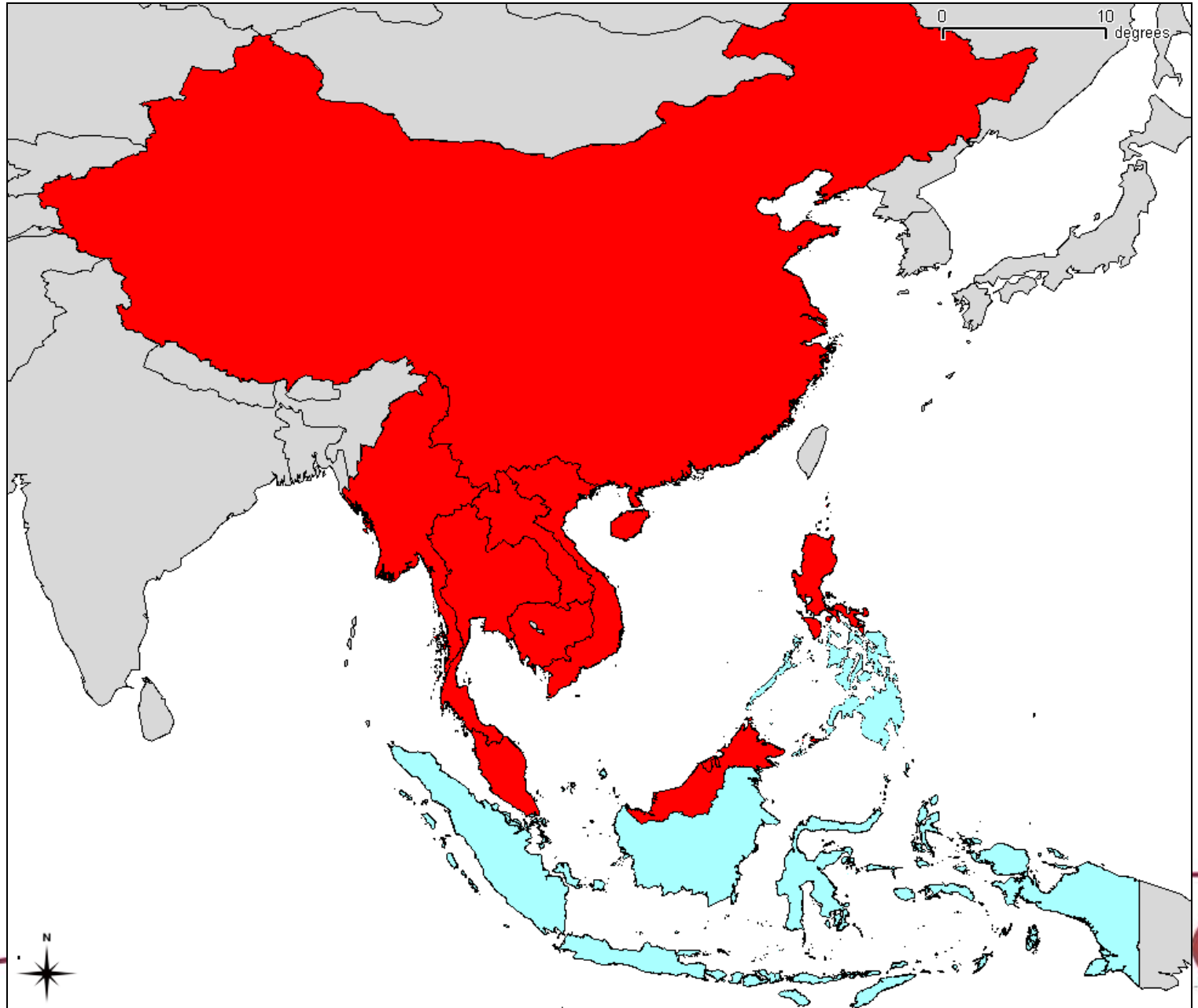
Background

- Changes in the epidemiology of FMD viruses
  - Predominant outbreaks of type O (Myanmar 98)
  - Need to closely monitor other strains (absence of Asia 1)
- New developments of the socio-economic dimensions
  - Increasing demands in China, Malaysia and Vietnam
  - More roads, faster transport
- Changes of animal production systems

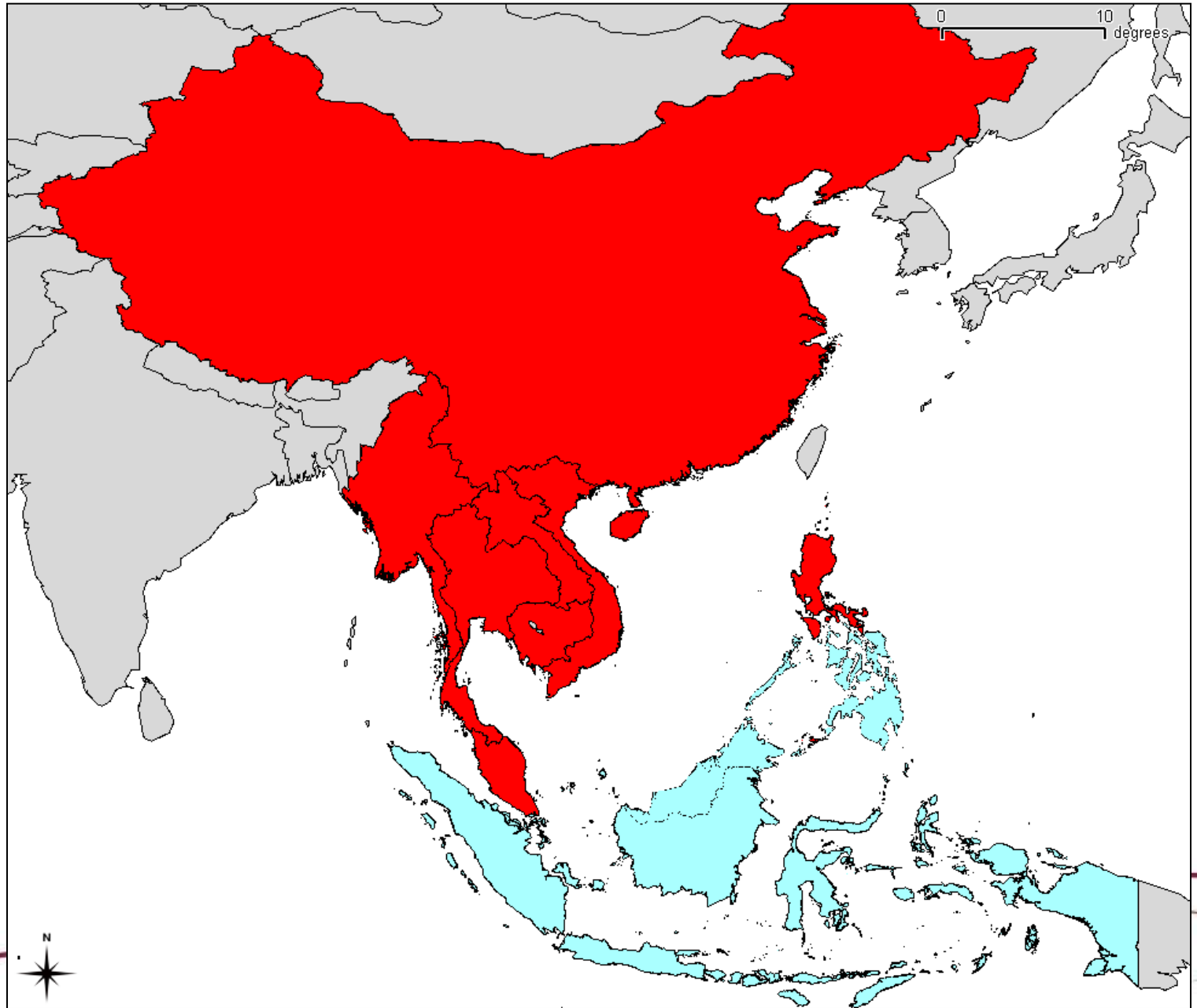
SEACFMD 1997



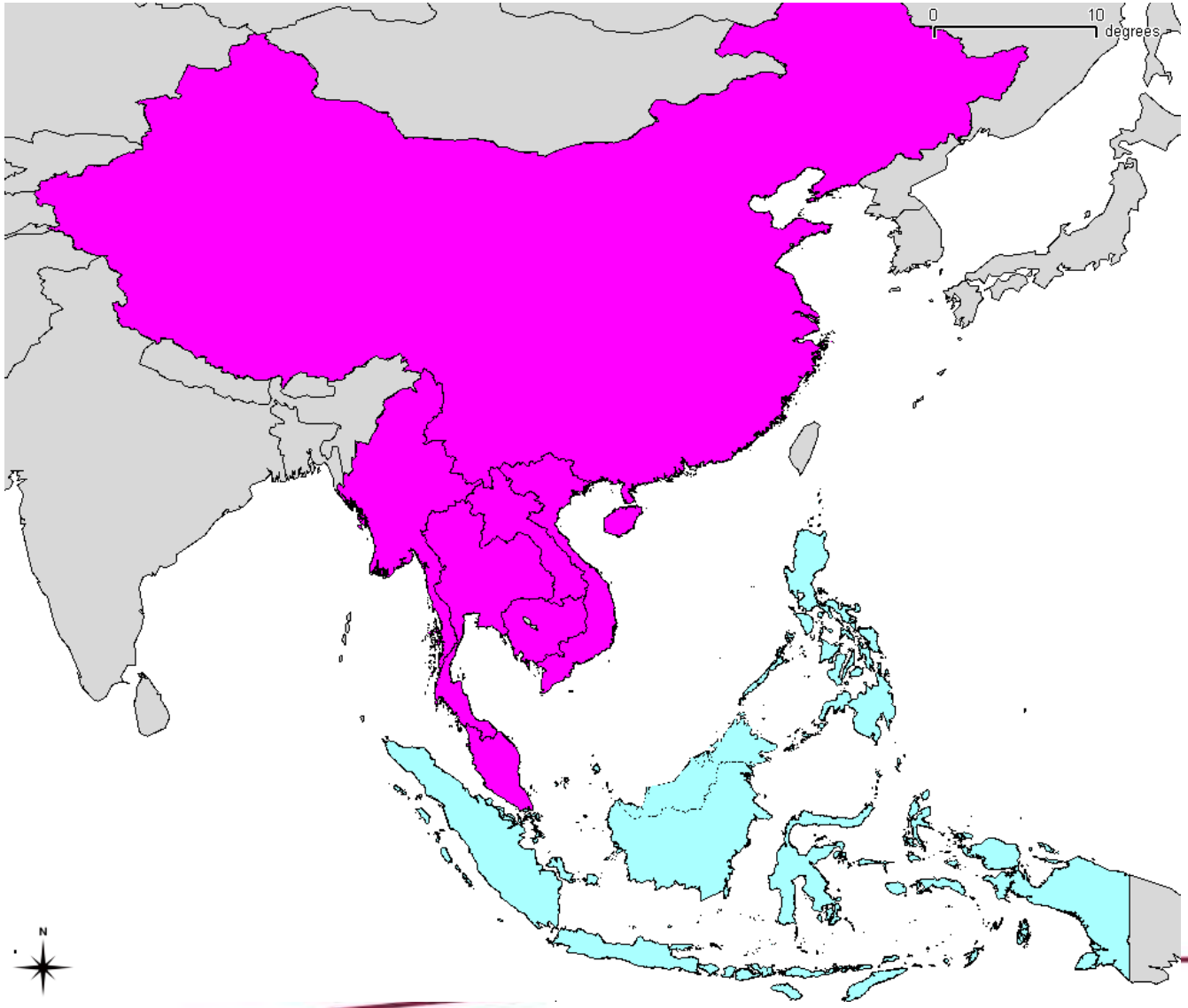
SEACFMD 2002



SEACFMD 2004



SEACFMD 2011

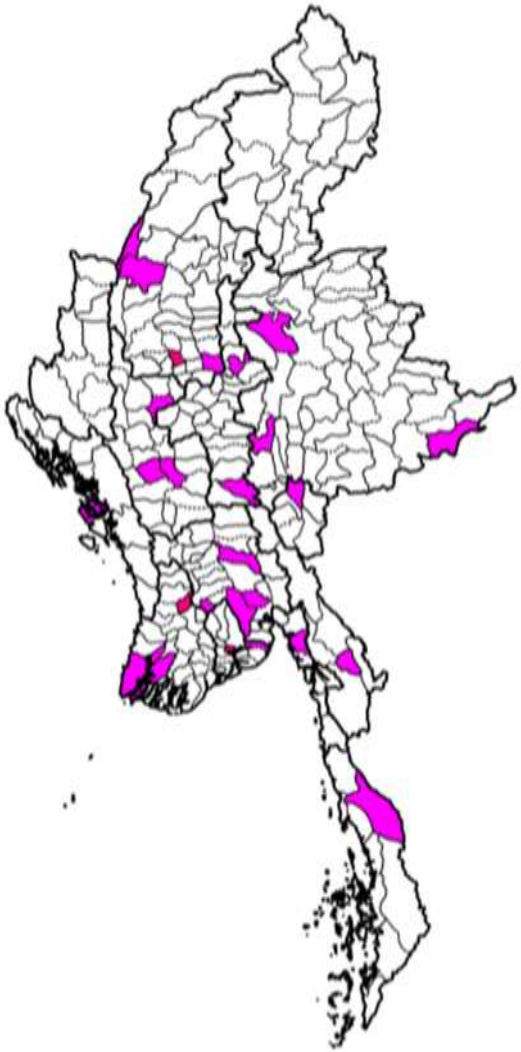


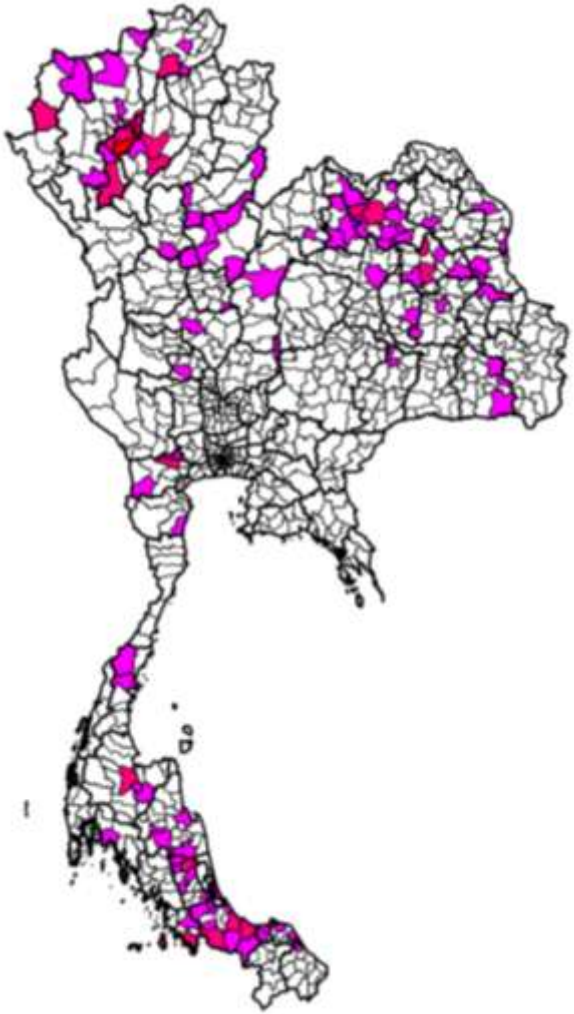
New SEACFMD Roadmap 2020 Strategies

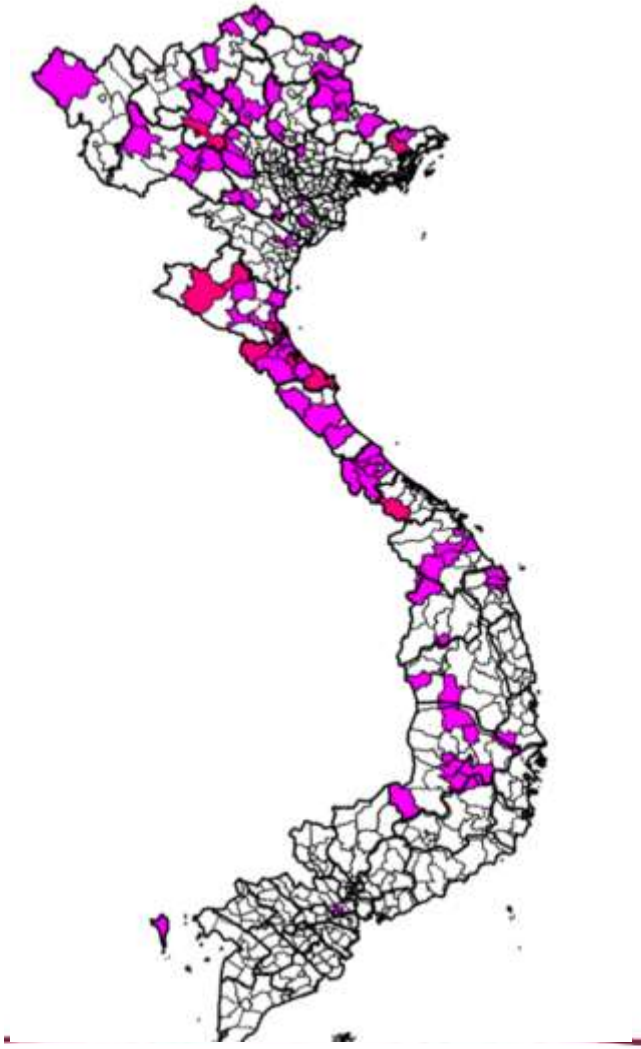
First Strategy

- Reduce FMD prevalence by targeting hotspots and critical points
  - Decreasing the prevalence ‘at source` and critical points along the animal movement pathways
- Hotspots = foci, endemic source
- Critical points = amplification point

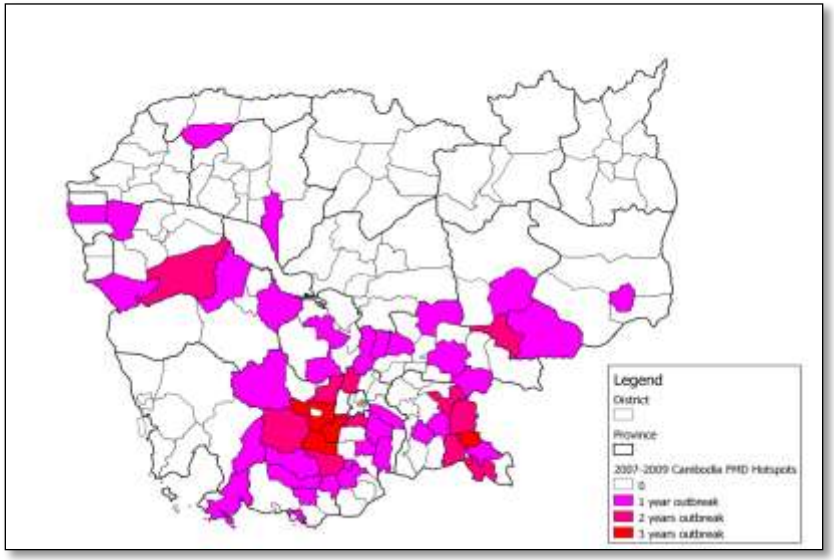
Districts with FMD outbreaks 2007-2009

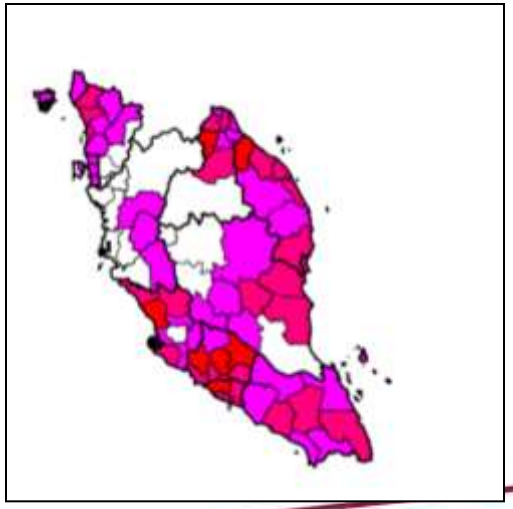


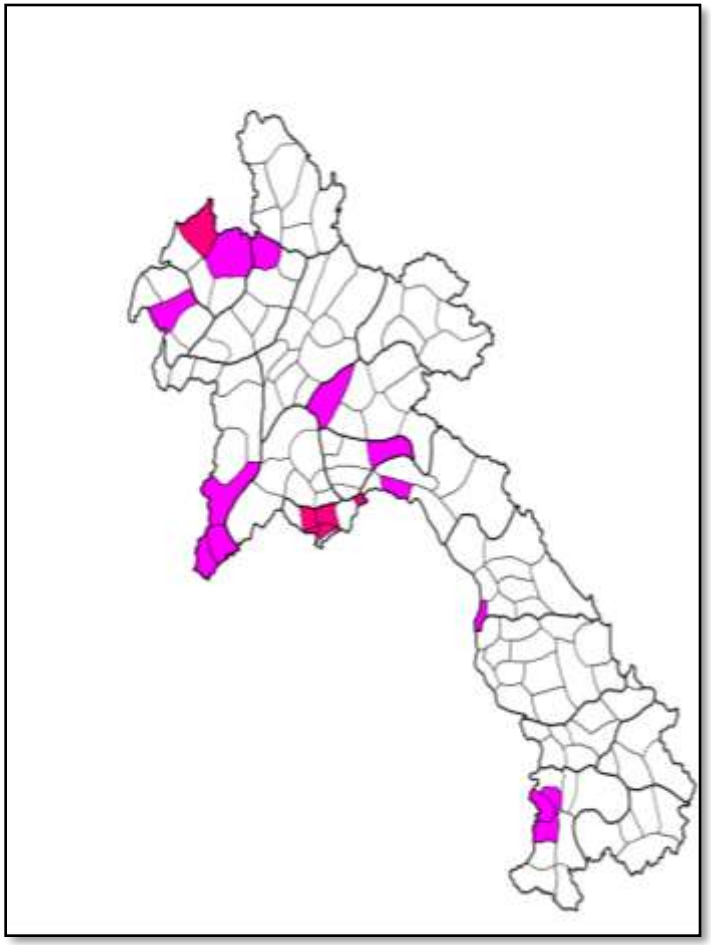




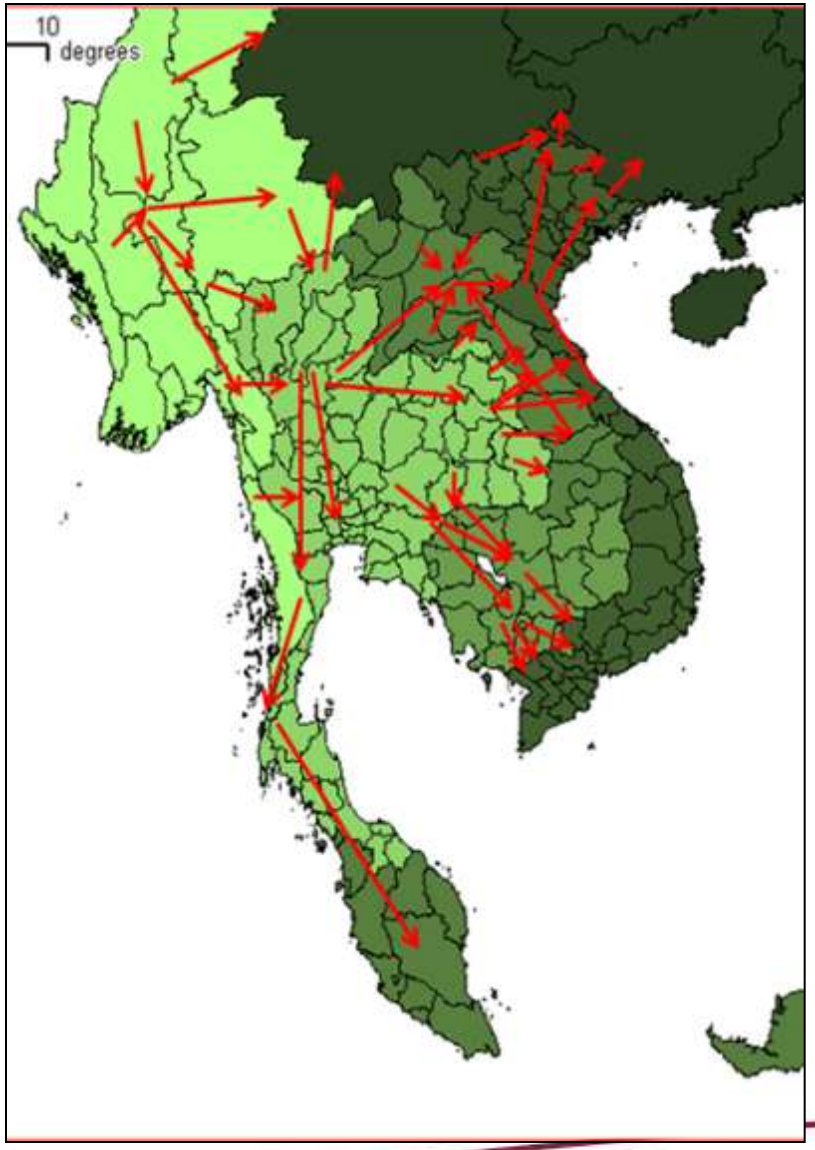
Districts with FMD outbreaks 2007-2009

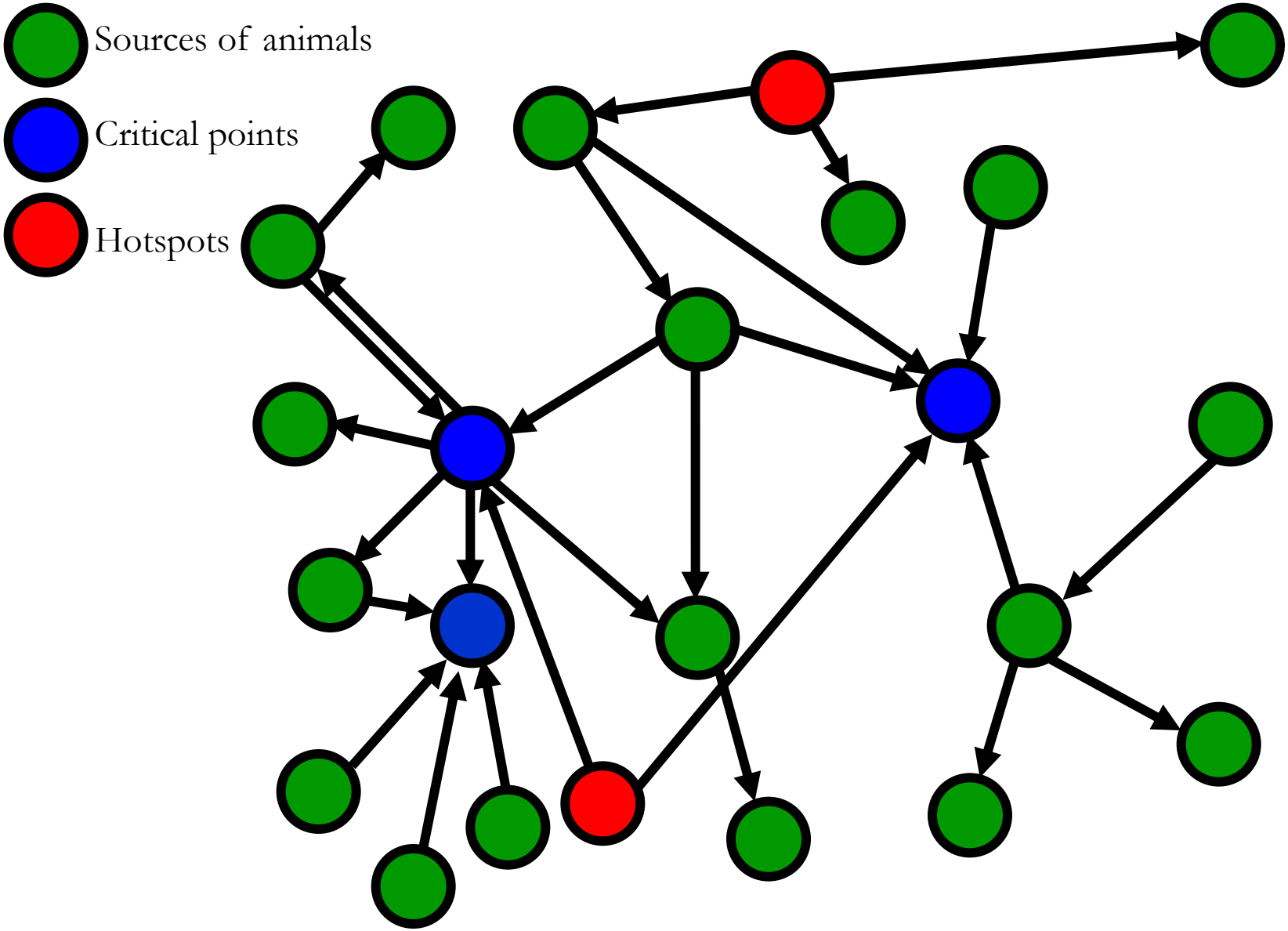




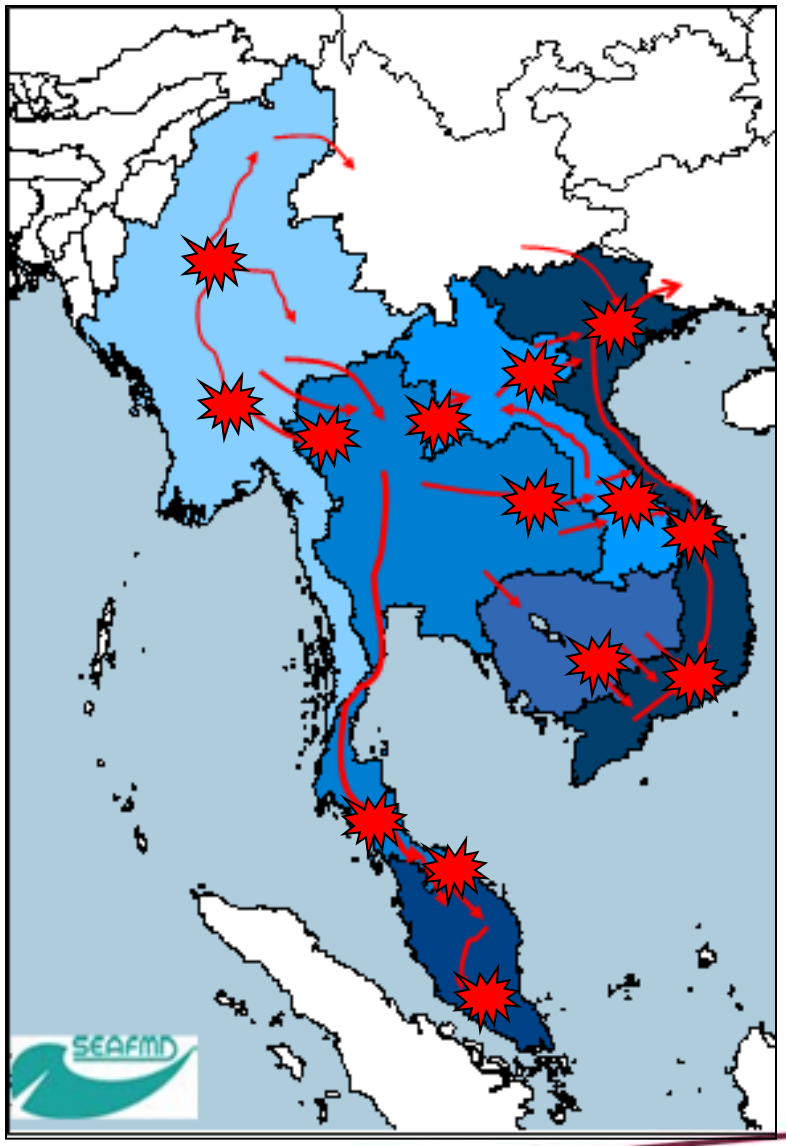


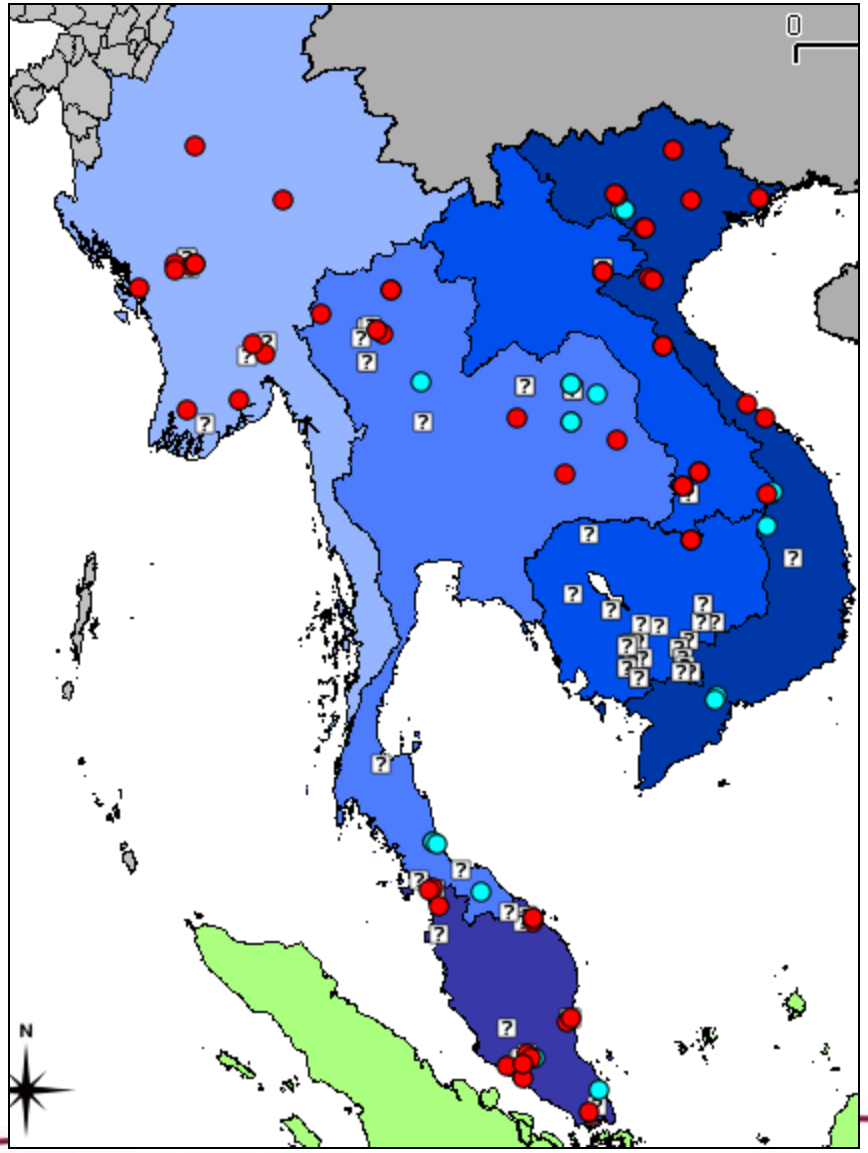
Animal movement pattern




Sources of animals
Critical points
Hotspots

Animal movement critical points and FMD Hotspots



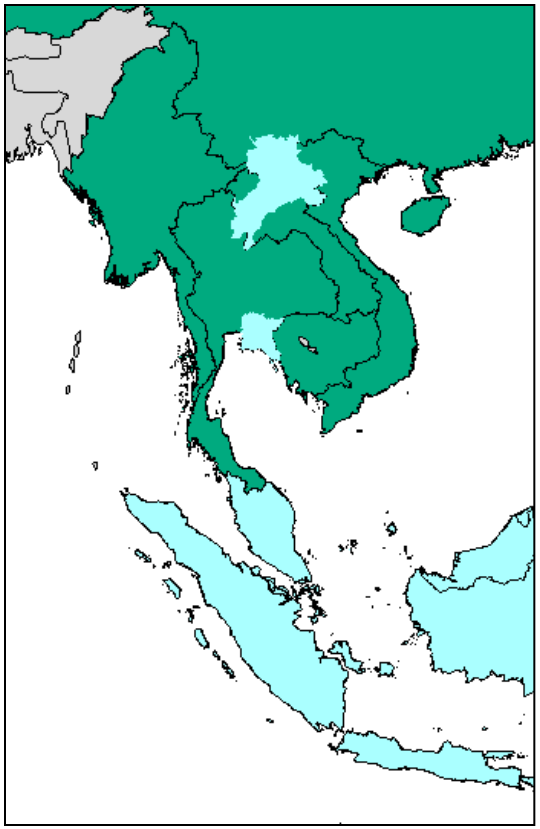


New SEACFMD Roadmap 2020 Strategies

Second Strategy

- Pursue zoning in the most advanced area of FMD control
  - Set up control/eradication zones in priority areas once disease incidence decreased to low levels and the likelihood of recurrence is reduced.

FMD Zones in SE Asia and China

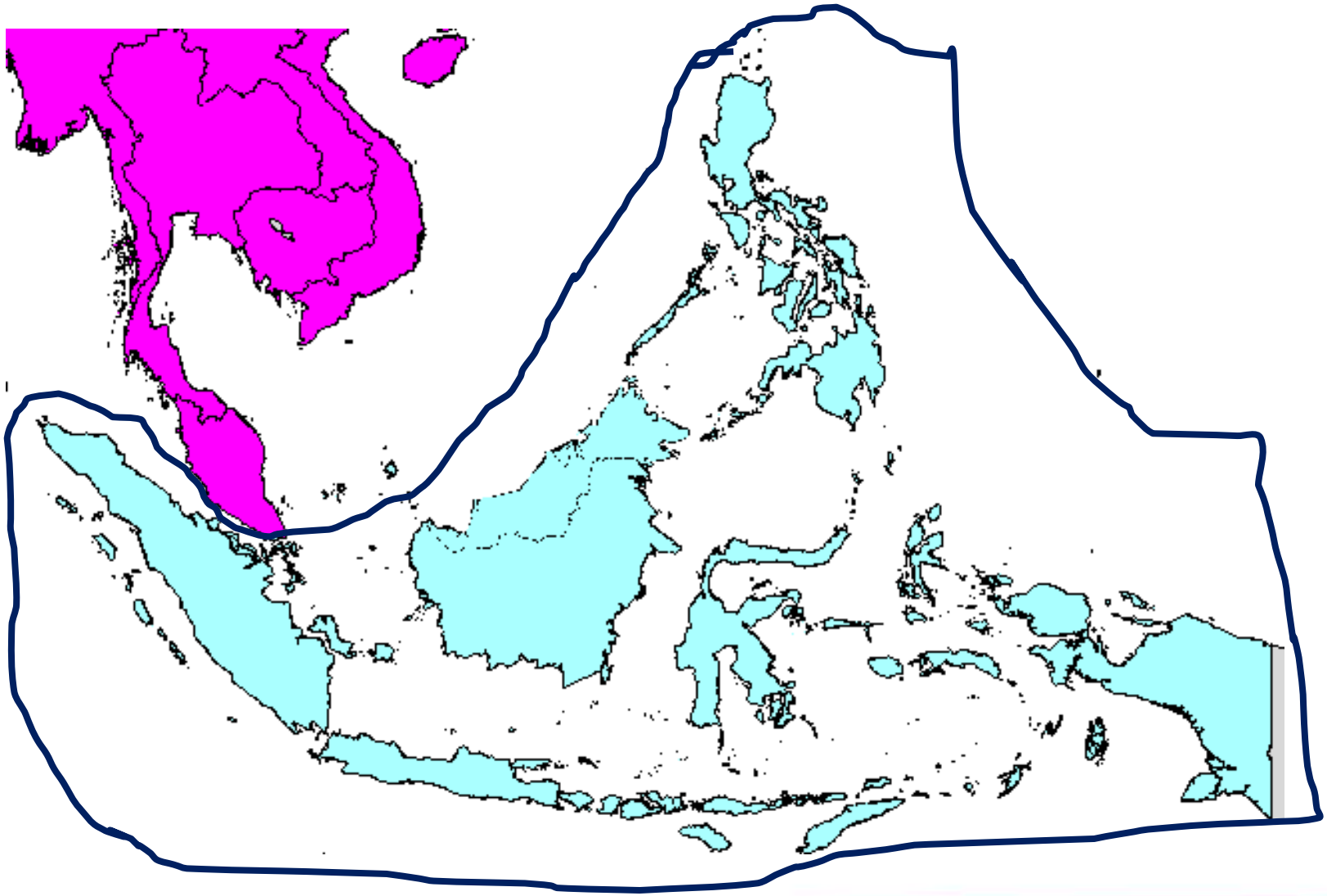


New SEACFMD Roadmap 2020 Strategies

Third Strategy

- Maintain and expand FMD free zones
  - Zones which are currently free will be protected by increasing the focus on quarantine and movement management at zone or countries borders.

Maintenance and Expansion of FMD Free zones



Roadmap Tools

- Risk based approach
- Vaccination as a primary means to reduce prevalence and cut-down transmission
- Surveillance network enhancing early detection
- Laboratory support for rapid diagnosis
- Animal movement management
- Communication and public awareness
- Support of private sector and other stakeholder
- Policy advocacy

Minimum Standards, definition and Rules (SDR)

MINIMUM STANDARD DEFINITIONS AND RULES FOR CONTROL AND ERADICATION OF FOOT AND MOUTH DISEASE IN THE MTM PENINSULAR CAMPAIGN FOR FOOT AND MOUTH DISEASE FREEDOM

OIE SEAFMD Regional Coordination Unit
Bangkok, Thailand
June 2008

- First endorsed in 2004, revised in 2008
- Provide step by step approach to achieve progressive zoning in the MTM

Appendix 2:
ZONE PROGRESSION

CONTROL ZONE

↓ No FMD outbreaks at time of application

ERADICATION ZONE

↓ No FMD outbreaks for 2 years
No FMDV infection for 12 months

FREE ZONE WITH VACCINATION

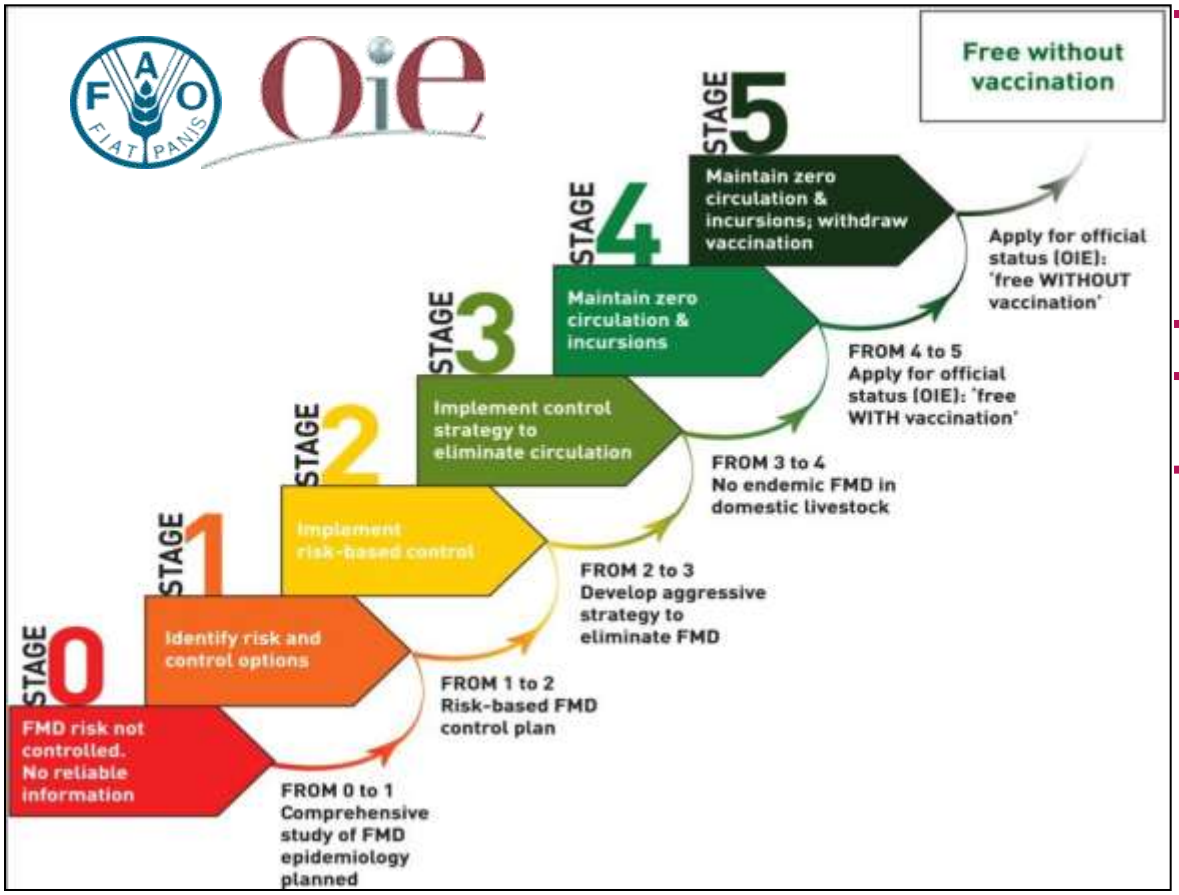
↓ No FMDV infection for 12 months
No vaccination for 12 months OR
No FMD outbreak for 12 months
No introduction of vaccinated animals for 12 months

FREE ZONE WITHOUT VACCINATION

Not in the OIE Code, The SDR provide guidance to achieve FMD freedom

OIE Recognition for the whole country or zone

PCP and OIE Endorsement of Official FMD Control Programmes



OIE Recognition of FMD free with or without vaccination

OIE Endorsement of Official FMD control programmes

PCP and SEACFMD 2020

3rd Strategy: Maintenance and expansion of FMD free zones

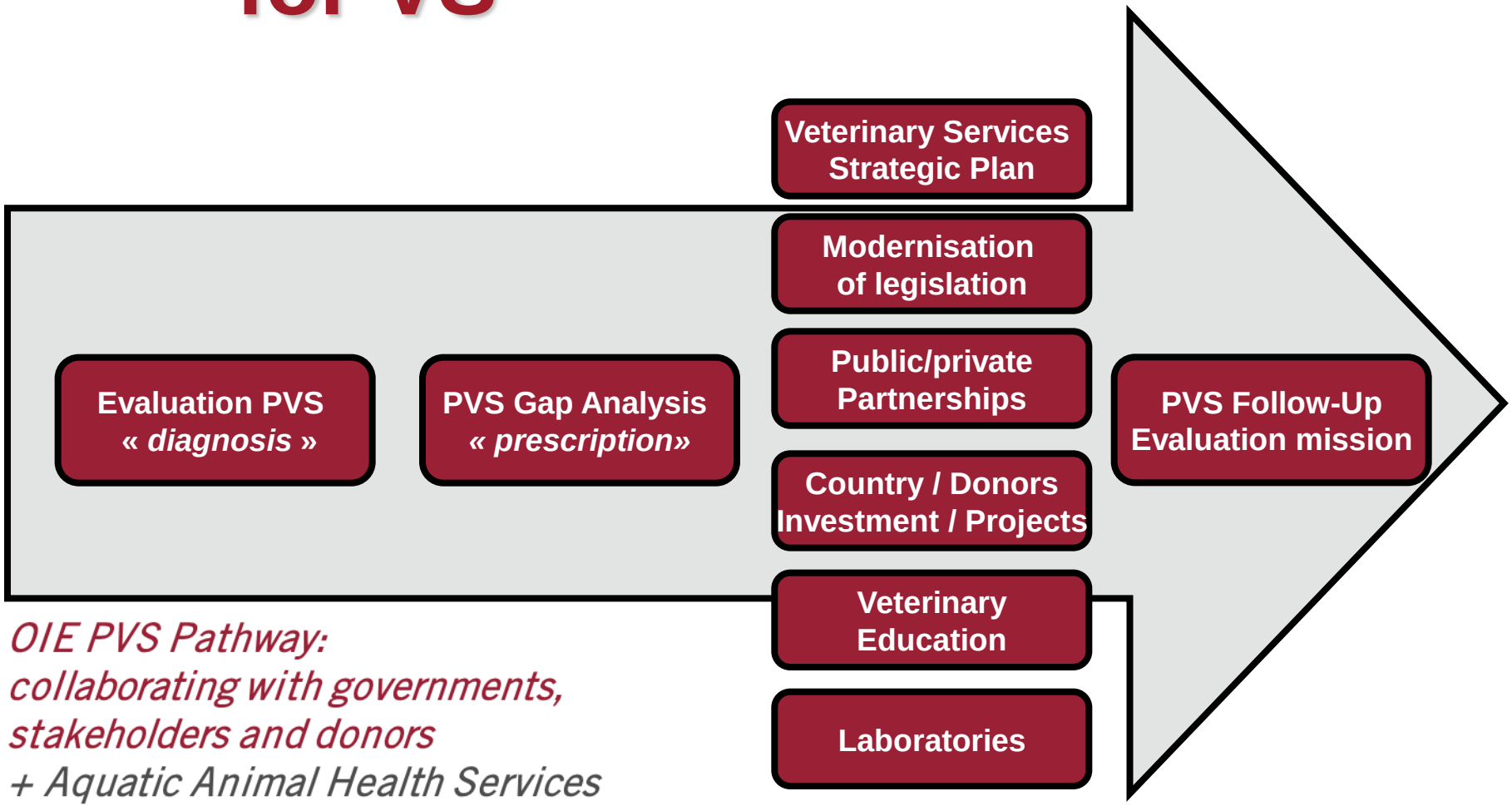
2nd Strategy: Progressive zoning

1st Strategy: Reduction of FMD prevalence by targetting hotspots and critical points

Indicative PCP stages of SEACFMD Members

Country		2012	2013	2014	2015	2016	2017	2018	2020
China									
Thailand									
Malaysia									
Myanmar									
Lao PDR									
Vietnam									

Capacity building for VS



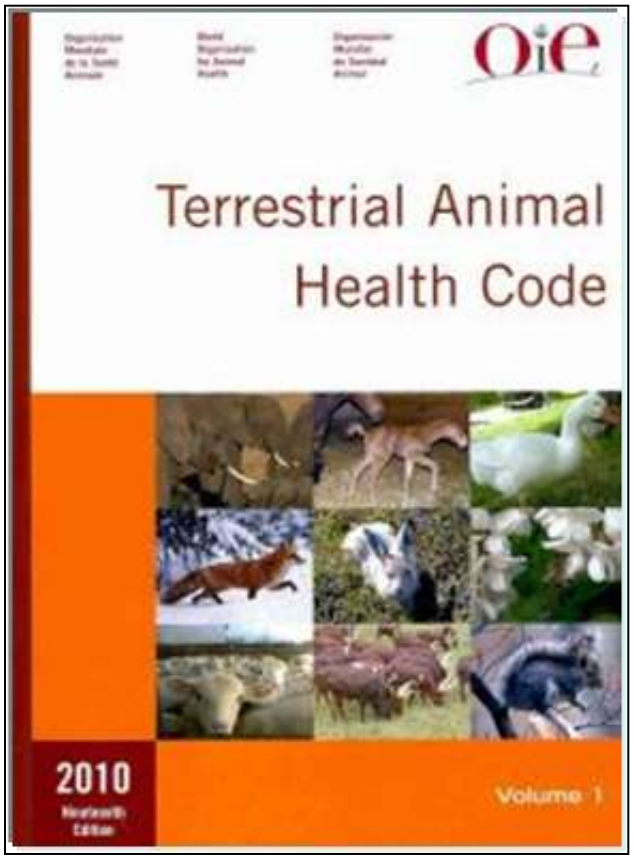
OIE PVS Pathway:
collaborating with governments, stakeholders and donors
+ Aquatic Animal Health Services

http://www.oie.int/eng/oie/organisation/en_vet_eval_tool.htm?e1d2

OIE PVS Tool

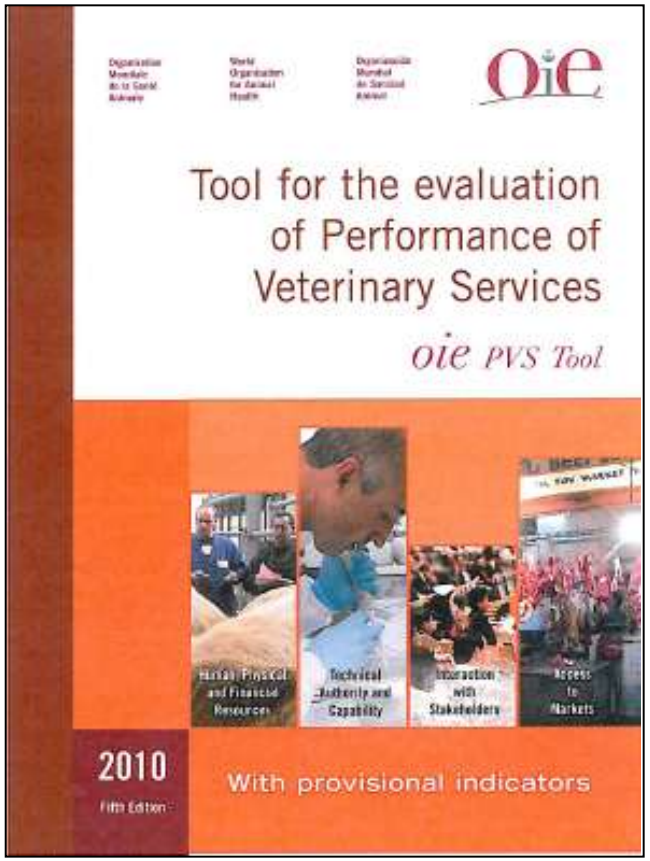
PVS Pathway

a tool for Good Governance of Veterinary Services



Chapter 3.1. – Veterinary Services

Chapter 3.2. – Evaluation of Veterinary Services



OIE PVS Tool

- Several critical competencies in each fundamental component
- The fifth edition (released in 2010) includes critical competencies for:
  - management systems;
  - animal welfare; and
  - evaluation of the performance of Aquatic Animal Health Services (as part of a PVS evaluation of Veterinary Services, or as an independent exercise).
- Now 46 critical competencies in total

OIE PVS Tool

- ✓ 5 levels of advancement (qualitative) for each critical competency
- ✓ A higher level assumes compliance with all preceding levels

Level 1
no compliance

↓

Level 5
full compliance with OIE standards

In the 2010 - 5th edition: suggested indicators and sources of verification were updated throughout

The OIE PVS Tool

4 Fundamental Components

- Human, physical and financial resources
- Technical authority and capability
- Interaction with stakeholders
- Access to markets

CHAPTER II - Technical authority and capability

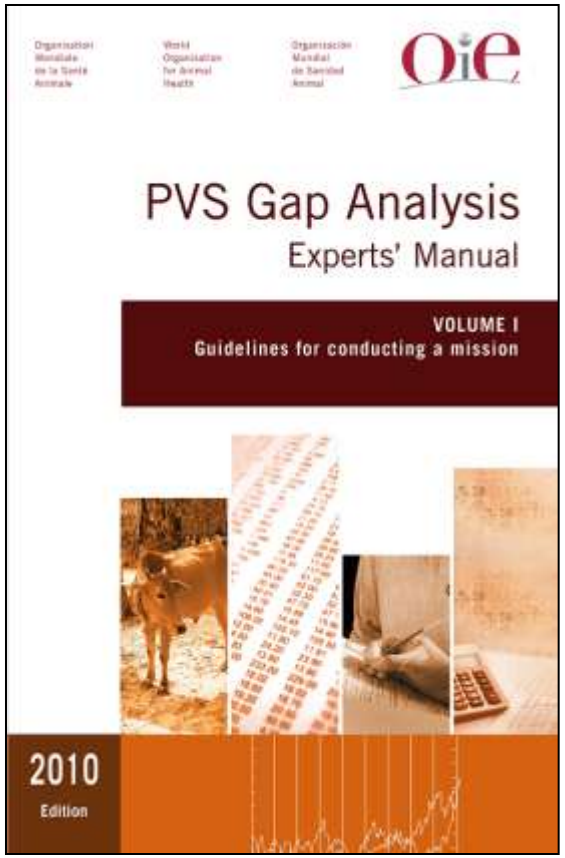
Section II-1	Veterinary laboratory diagnosis
Section II-2	Laboratory quality assurance
Section II-3	**Risk analysis**
Section II-4	**Quarantine and border security**
Section II-5	**Epidemiological surveillance**
Section II-6	**Early detection and emergency response**
Section II-7	**Disease prevention, control and eradication**
Section II-8	Food safety
Section II-9	Veterinary medicines and biologicals
Section II-10	Residue testing
Section II-11	Emerging issues
Section II-12	Technical innovation
Section II-13	Identification and traceability
Section II-14	Animal welfare

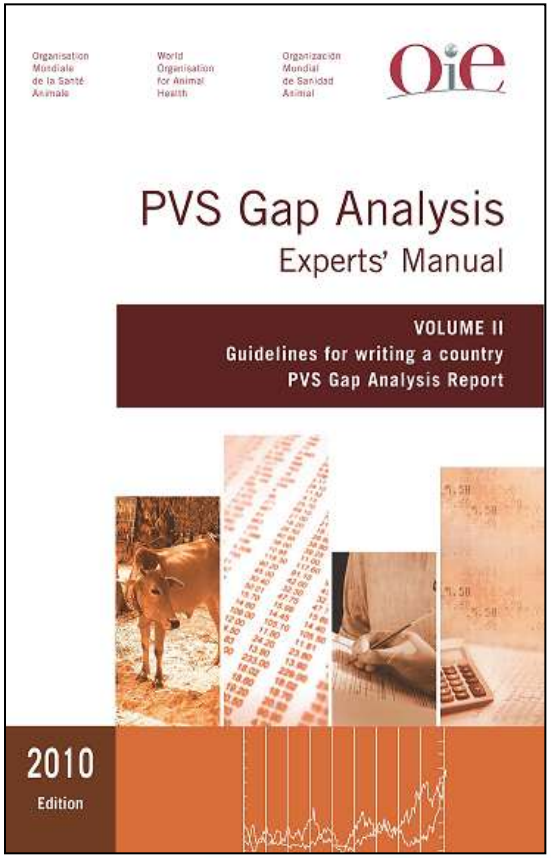
II-5 Epidemiological surveillance	Levels of advancement
The authority and capability of the VS to determine, verify and report on the sanitary status of the animal populations under their mandate. **A. Passive epidemiological surveillance**	1. The VS have no passive surveillance programme.
	2. The VS conduct passive surveillance for some relevant diseases and have the capacity to produce national reports on some diseases.
	3. The VS conduct passive surveillance in compliance with OIE standards for some relevant diseases at the national level through appropriate networks in the field, whereby samples from suspect cases are collected and sent for laboratory diagnosis with evidence of correct results obtained. The VS have a basic national disease reporting system.
	4. The VS conduct passive surveillance and report at the national level in compliance with OIE standards for most relevant diseases. Appropriate field networks are established for the collection of samples and submission for laboratory diagnosis of suspect cases with evidence of correct results obtained. Stakeholders are aware of and comply wth their obligation to report the suspicion and occurrence of notifiable diseases to the VS.
	5. The VS regularly report to stakeholders and the international community (where applicable) on the findings of passive surveillance programmes.

II-6 Early detection and emergency response	Levels of advancement
The authority and capability of the VS to detect and respond rapidly to a sanitary emergency (such as a significant disease outbreak or food safety emergency).	1. The VS have no field network or established procedure to determine whether a sanitary emergency exists or the authority to declare such an emergency and respond appropriately.
	2. The VS have a field network and an established procedure to determine whether or not a sanitary emergency exists, but lack the necessary legal and financial support to respond appropriately.
	3. The VS have the legal framework and financial support to respond rapidly to sanitary emergencies, but the response is not coordinated through a chain of command.
	4. The VS have an established procedure to make timely decisions on whether or not a sanitary emergency exists. The VS have the legal framework and financial support to respond rapidly to sanitary emergencies through a chain of command. They have national contingency plans for some exotic diseases.
	5. The VS have national contingency plans for all diseases of concern through coordinated actions with all stakeholders through a chain of command.

II-7 Disease prevention, control and eradication	Levels of advancement
The authority and capability of the VS to actively perform actions to prevent, control or eradicate OIE listed diseases and/or to demonstrate that the country or a zone are free of relevant diseases.	1. The VS have no authority or capability to prevent, control or eradicate animal diseases.
	2. The VS implement prevention, control and eradication programmes for some diseases and/or in some areas with little or no scientific evaluation of their efficacy and efficiency.
	3. The VS implement prevention, control and eradication programmes for some diseases and/or in some areas with scientific evaluation of their efficacy and efficiency.
	4. The VS implement prevention, control and eradication programmes for all relevant diseases but with scientific evaluation of their efficacy and efficiency of some programmes.
	5. The VS implement prevention, control and eradication programmes for all relevant diseases with scientific evaluation of their efficacy and efficiency consistent with relevant OIE international standards.

The PVS Gap Analysis





A PVS Gap Analysis mission

- A PVS Gap Analysis mission facilitates the definition of country's Veterinary Services' objectives in terms of compliance with OIE quality standards, suitably adapted to national constraints and priorities.
- The country PVS Gap Analysis report includes an **indicative operational budget for 5 years** and an **exceptional budget** (necessary investments) when relevant.

Outputs
Total budget
Analysis of the budget

PVS Gap Analysis
- Budget -

Trade	Animal Health	Veterinary Public Health	Veterinary Laboratories	Management and Services
(8 cards)	(5 cards)	(4 cards)	(2 cards)	(21 cards)

Cost Estimation Cards

Trade1 / Trade8 | AH1 / AH5 | VPH1 / VPH4 | Lab1 / Lab2 | MVS1 / MVS21

Inputs
Unit costs

PVS Gap Analysis

- To determine and confirm **country priorities**
- To identify specific activities, tasks and resources required to address “gaps” identified through the country PVS evaluation
- Estimation of costs / Preparation of a 5-year budget
- Review of Veterinary Services Strategic Plan
- Support to preparation of investment programmes

Using the PVS Gap Analysis

- **How and What to finance** is a sovereign decision of the country
- The Country's Government decides if this is kept for internal use (governement funding) or shared with Donors and relevant International Organisations to prepare investment programmes

Using the PVS Gap Analysis

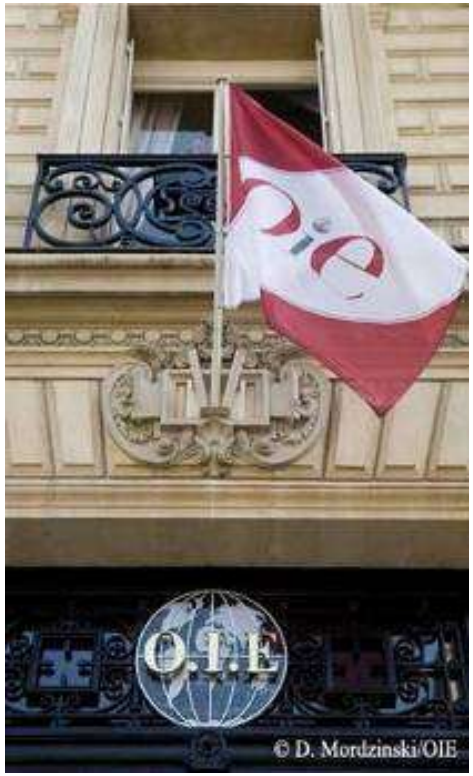
- **In country discussions** with line Minister, other Ministries, Ministry of Finance, Prime Minister Office, Head of State, National Parliament, depending on country context
- **Round tables,** in the country, with Donor Agencies and International Organizations, incl. FAO
- **Preparation of country Veterinary Services Budget; and of national or international investments**

The OIE PVS Pathway
is a ***continuous process*** *aiming to* ***sustainably*** *improve the compliance of Veterinary Services with* ***international standards***

IMPORTANT

- Keep track of the process
- Plan new steps on previous missions outputs

Thank you for your attention



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