



Foot and Mouth Disease in Southeast Asia

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Foot and Mouth Disease

- caused by a virus of the genus Aphthovirus, family Picornaviridae.
- seven serotypes of FMD virus
- O, A, C, SAT 1, SAT 2, SAT 3, and Asia 1,
- Disease of cloven-footed animals
- No public health importance



Species affected

- Domestic animals - Cattle, pigs, sheep, goats and buffalo
- many species of cloven-hoofed wildlife, such as African buffalo, deer, antelope and wild pigs may become infected
- apart from the African buffalo wildlife involvement in the epidemiology of FMD in the domesticated species is not certain
- strains of FMD virus that infect cattle have been isolated from wild pigs and deer



Clinical signs

- Vesicular diseases
- vesicles (blisters) and erosions of the epithelium of the mouth, nares, muzzle, feet, and teats
- fever, lameness, inappetence
- Highly contagious
- High Morbidity, low mortality

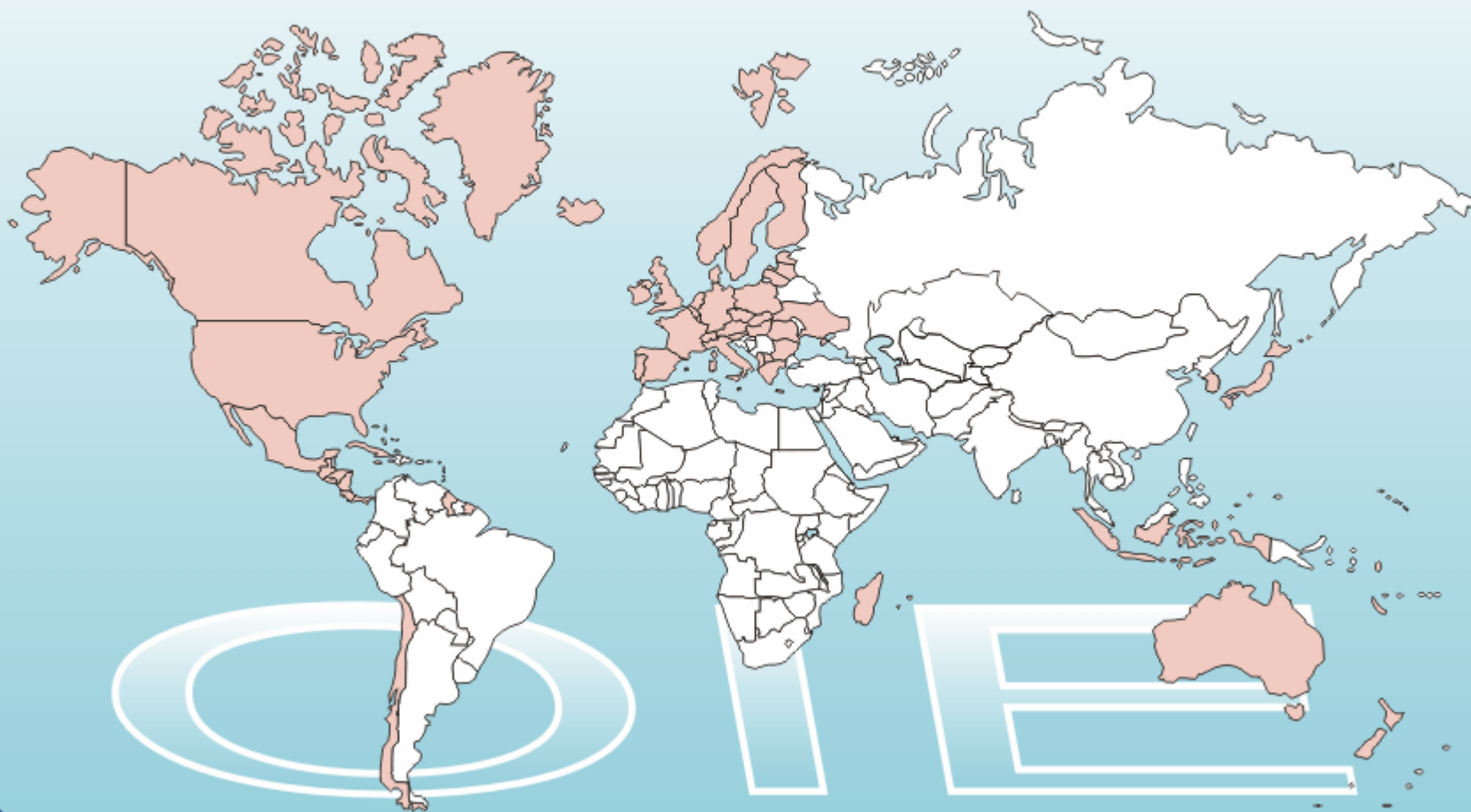


Impact on Farmer's livelihood

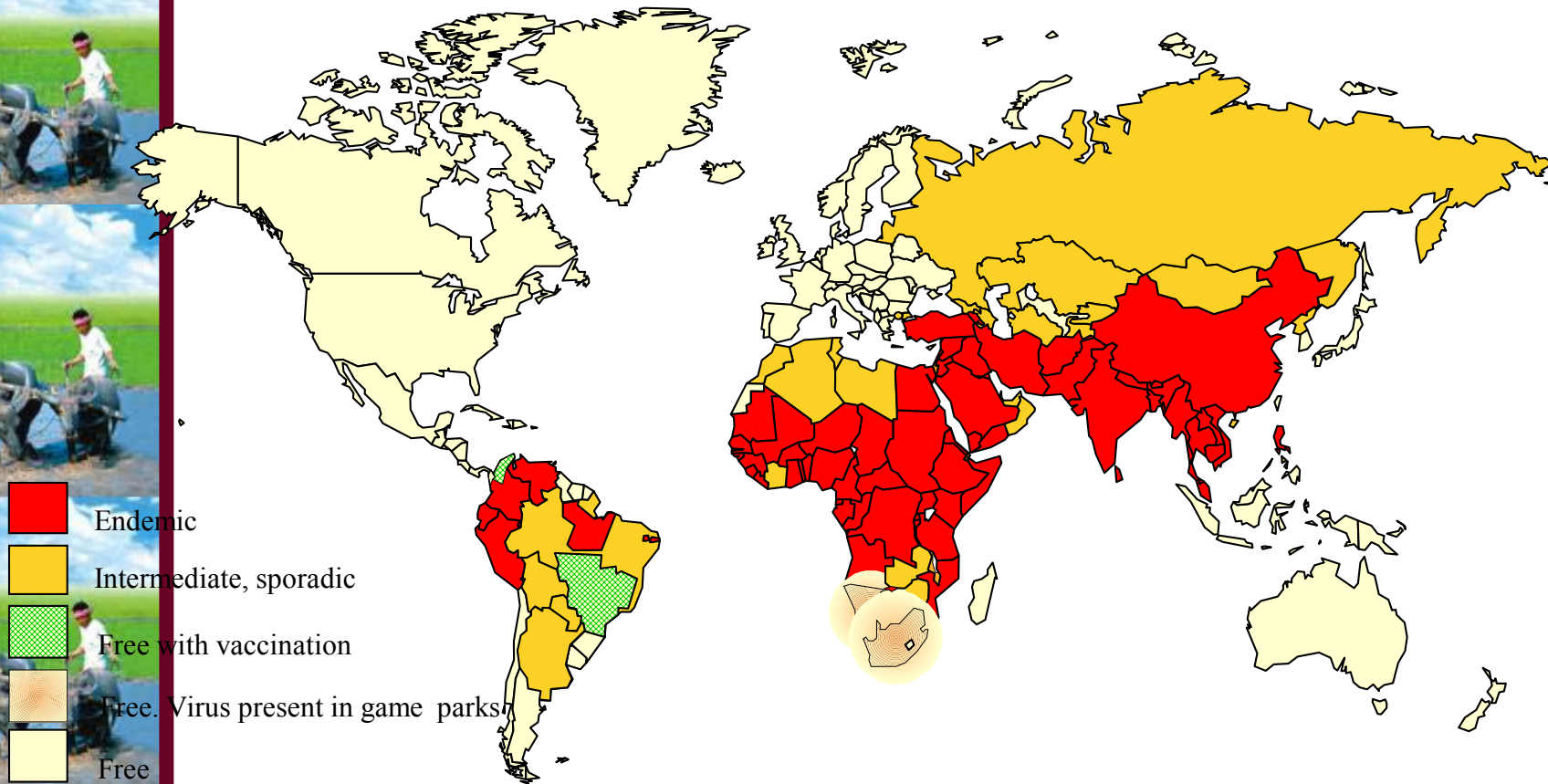
- Loss draft power
- Low productivity
- Added cost on treatment
- Reduced value of their livestock
- Reduced farmer's income



**Countries recognised by the OIE as
free from foot and mouth disease without vaccination**
 (According to the provisions of Chapter 2.1.1 of the OIE *Terrestrial Animal Health Code*)

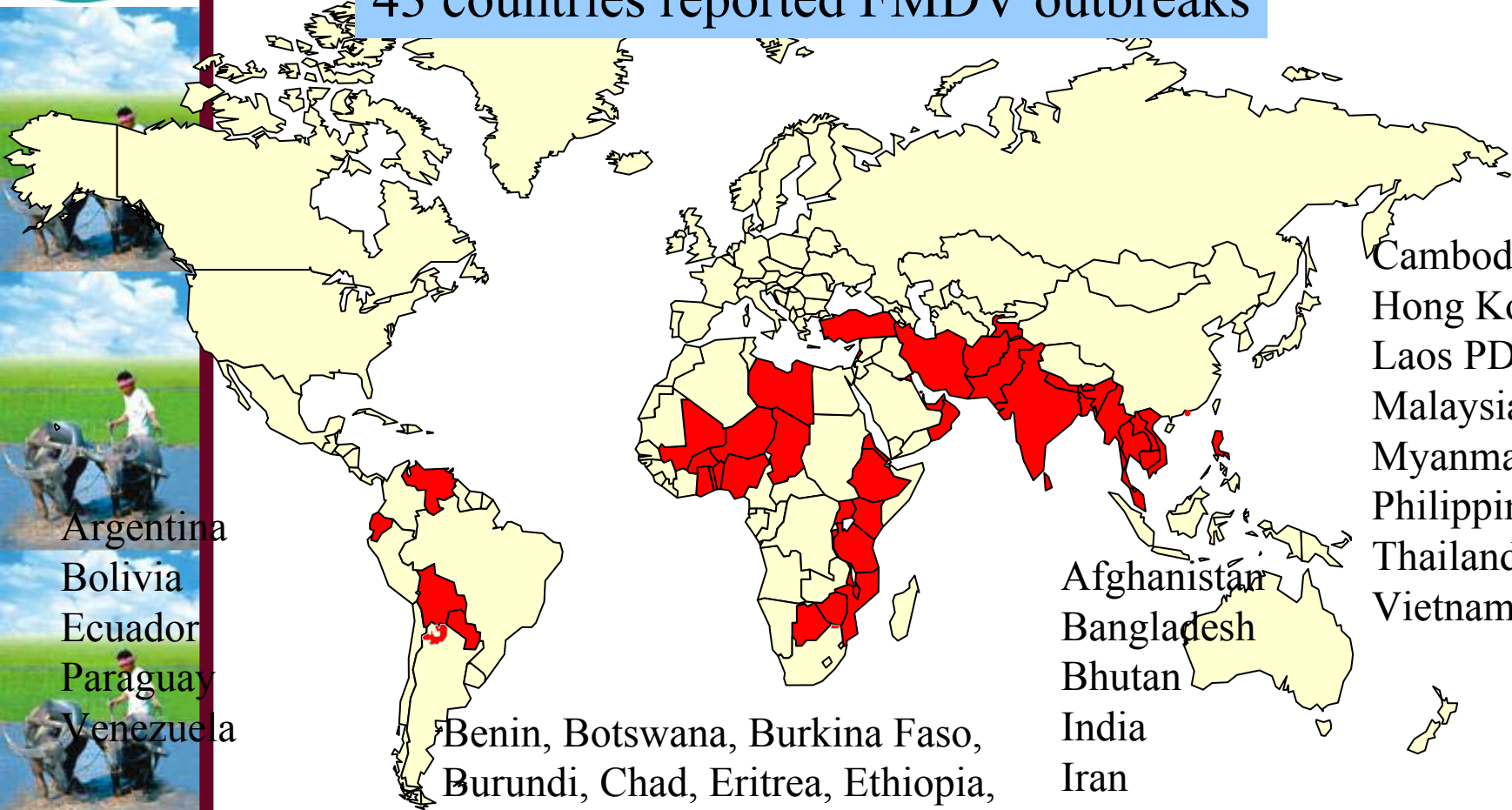


Conjectured Status of FMD 2003



Countries in which FMD was reported, 2003

43 countries reported FMDV outbreaks



Argentina
 Bolivia
 Ecuador
 Paraguay
 Venezuela

Benin, Botswana, Burkina Faso,
 Burundi, Chad, Eritrea, Ethiopia,
 Ghana, Kenya, Libya, Malawi,
 Mali, Mozambique, Niger, Nigeria,
 South Africa, Tanzania, Togo,
 Uganda, Zimbabwe

Afghanistan
 Bangladesh
 Bhutan
 India
 Iran
 Nepal
 Pakistan
 Tajikistan
 Turkey
 UEA

Cambodia (?)
 Hong Kong (O)
 Laos PDR (O)
 Malaysia (A&O)
 Myanmar (O)
 Philippines (O)
 Thailand (A&O)
 Vietnam (O)

Distribution of FMD type O 2003

24 countries



Countries in which FMD was reported

15 countries which submitted FMD type O isolates to the OIE/FAO World Reference Laboratory in 2003



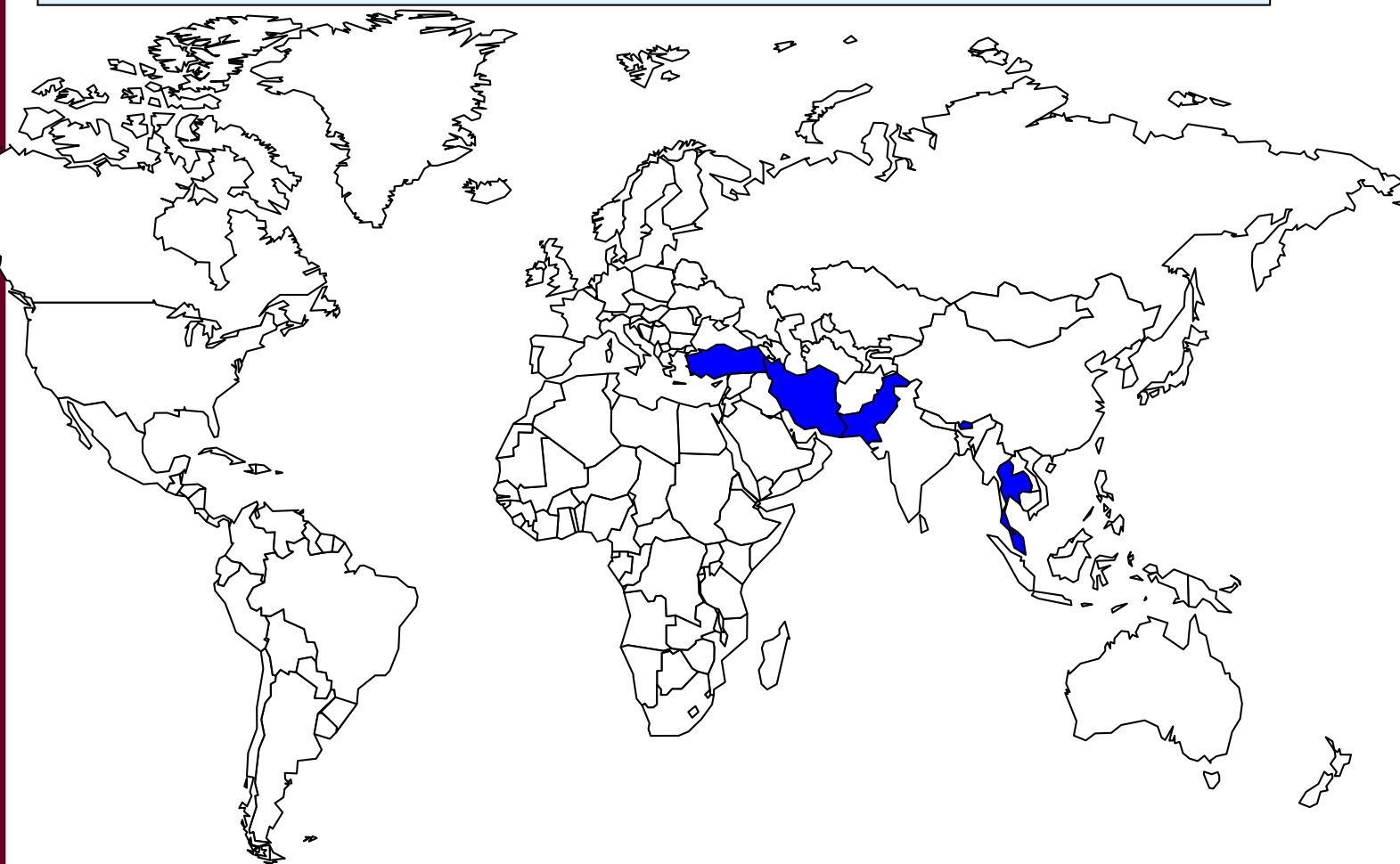
Distribution of FMD type A 2003

12 countries



Countries in which FMD was reported

**6 countries which submitted FMD type A isolates to
the
OIE/FAO World Reference Laboratory in 2003**



Distribution of FMD type Asia 1 2003

3 countries



Countries in which FMD was reported



**1 countries which submitted FMD type Asia 1
isolates to the
OIE/FAO World Reference Laboratory in 2003**



Distribution of FMD type SAT 1 2003

2 countries



Countries in which FMD was reported

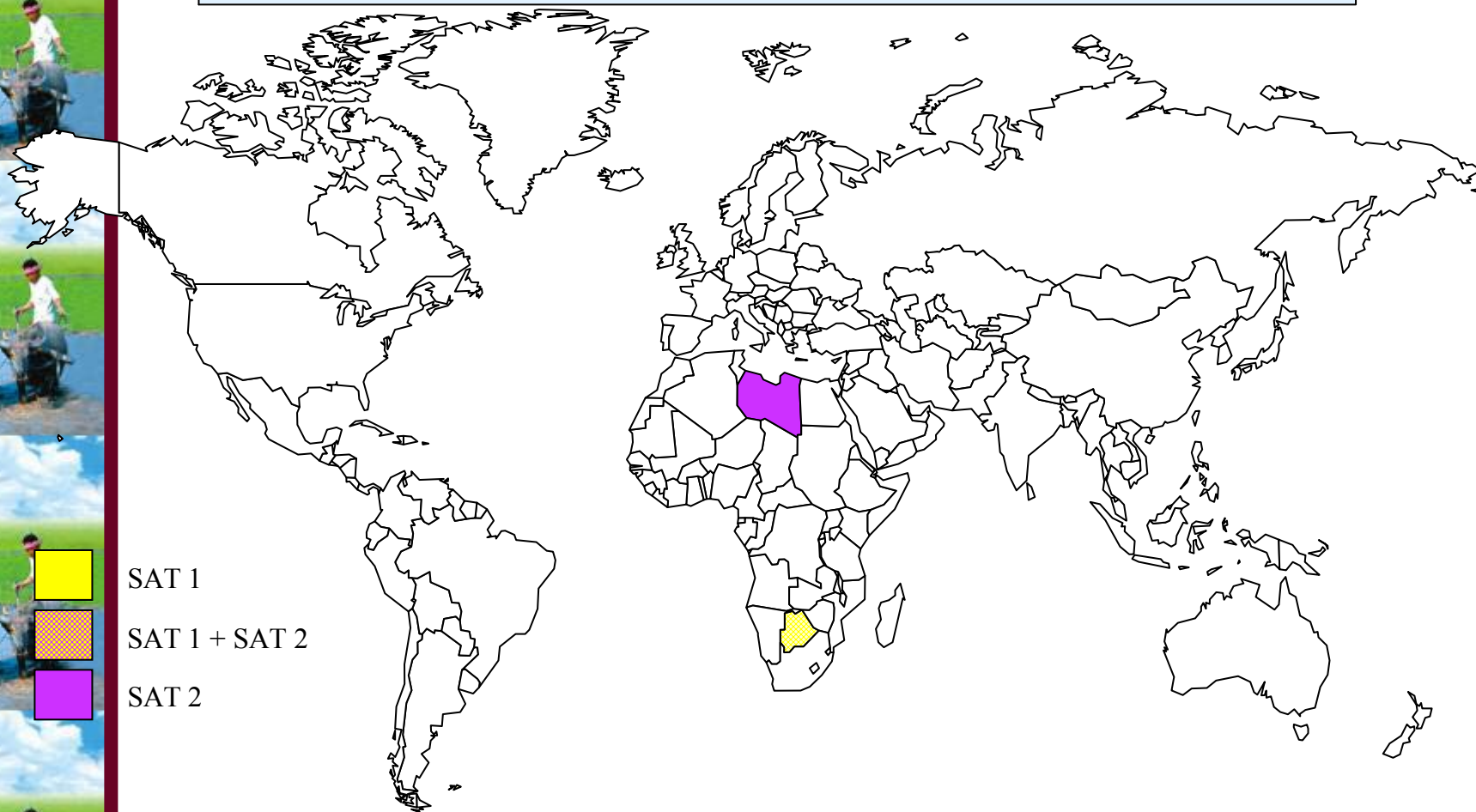
Distribution of FMD type SAT 2 2003

7 countries



Countries in which FMD was reported

2 countries which submitted FMD type SAT isolates to the OIE/FAO World Reference Laboratory in 2003



SAT 1

SAT 1 + SAT 2

SAT 2



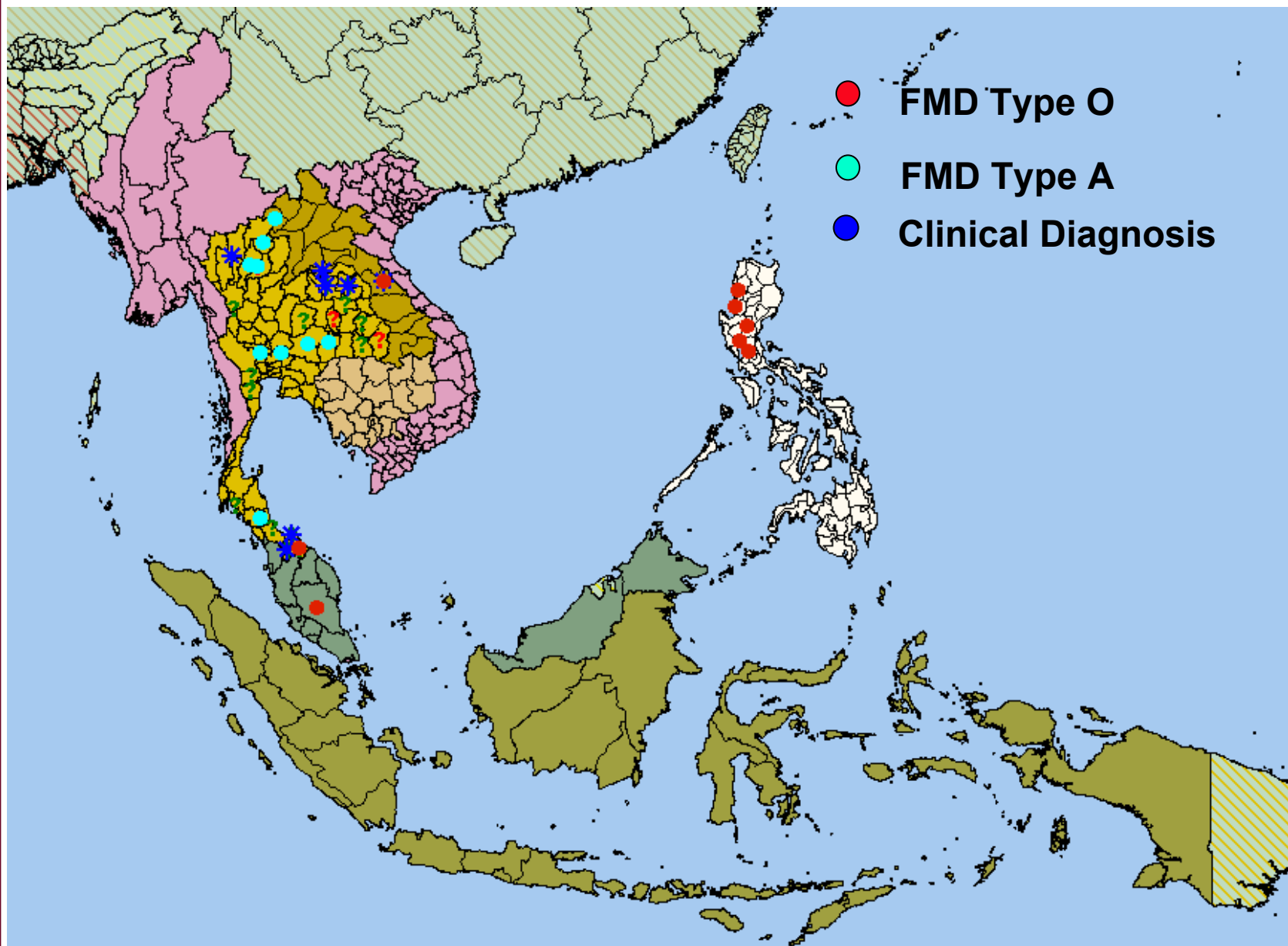
SAT 1 FMD Ab was reported



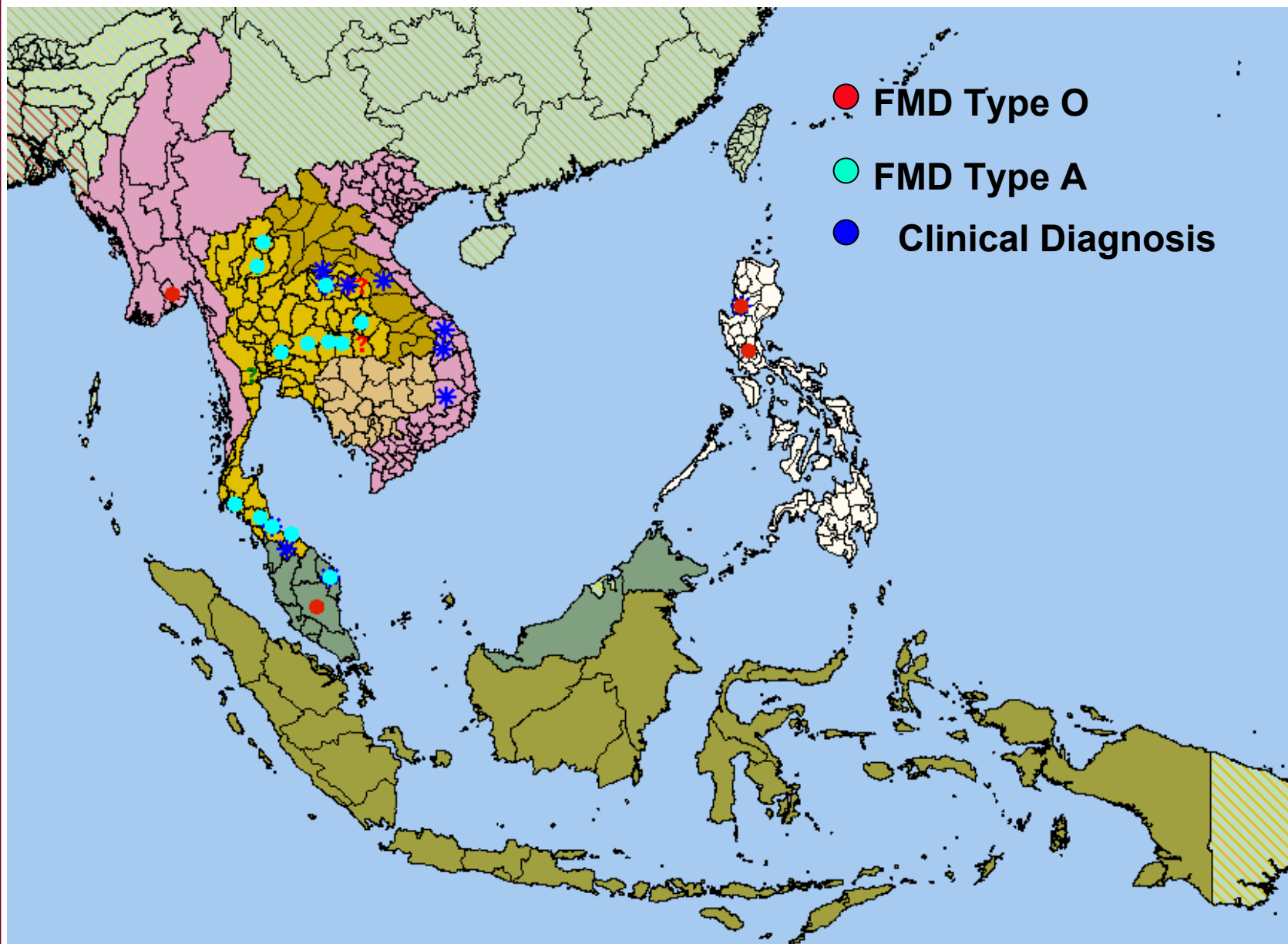
2 countries which submitted SVD isolates to the OIE/FAO World Reference Laboratory in 2003



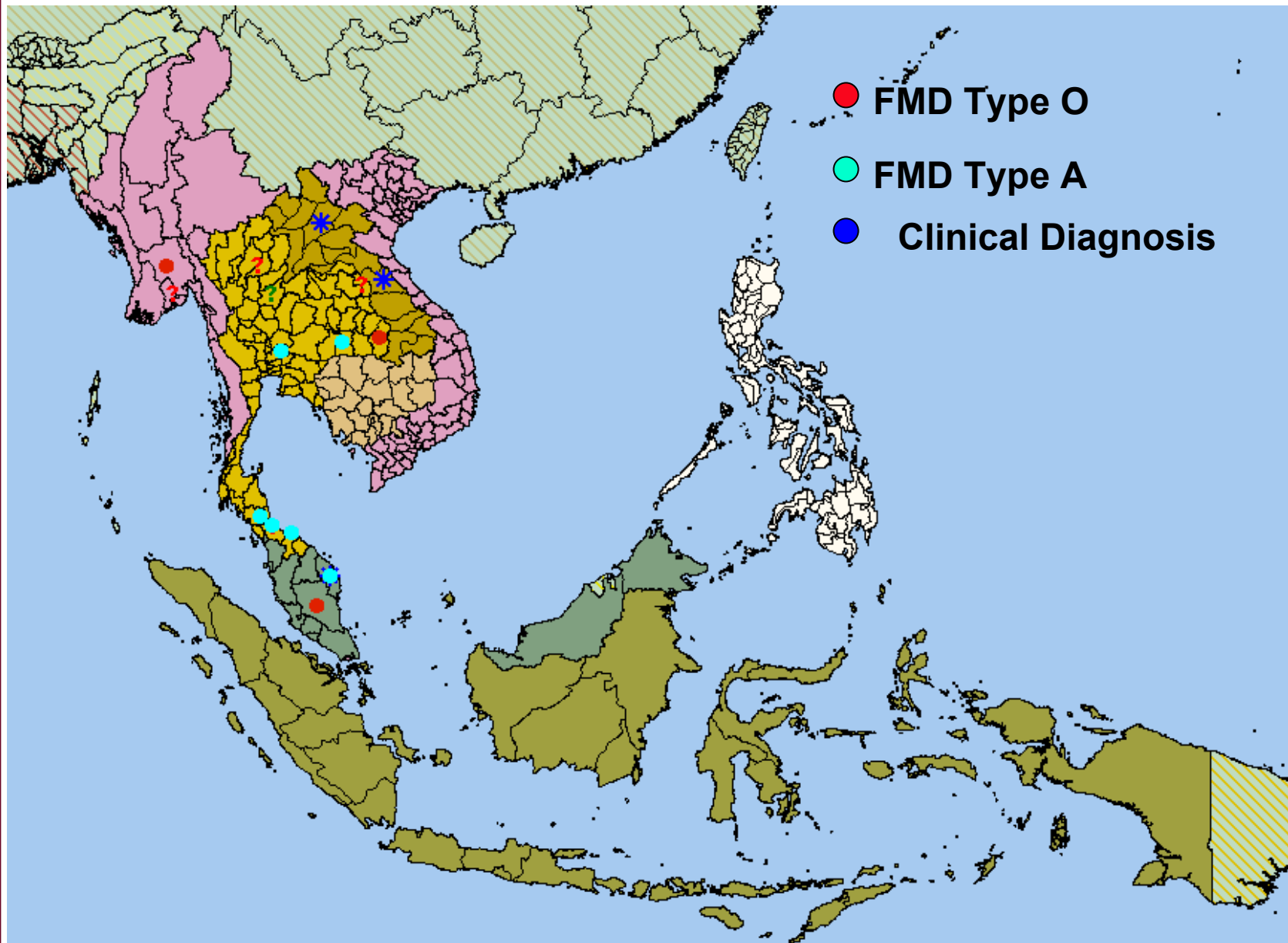
January 2004



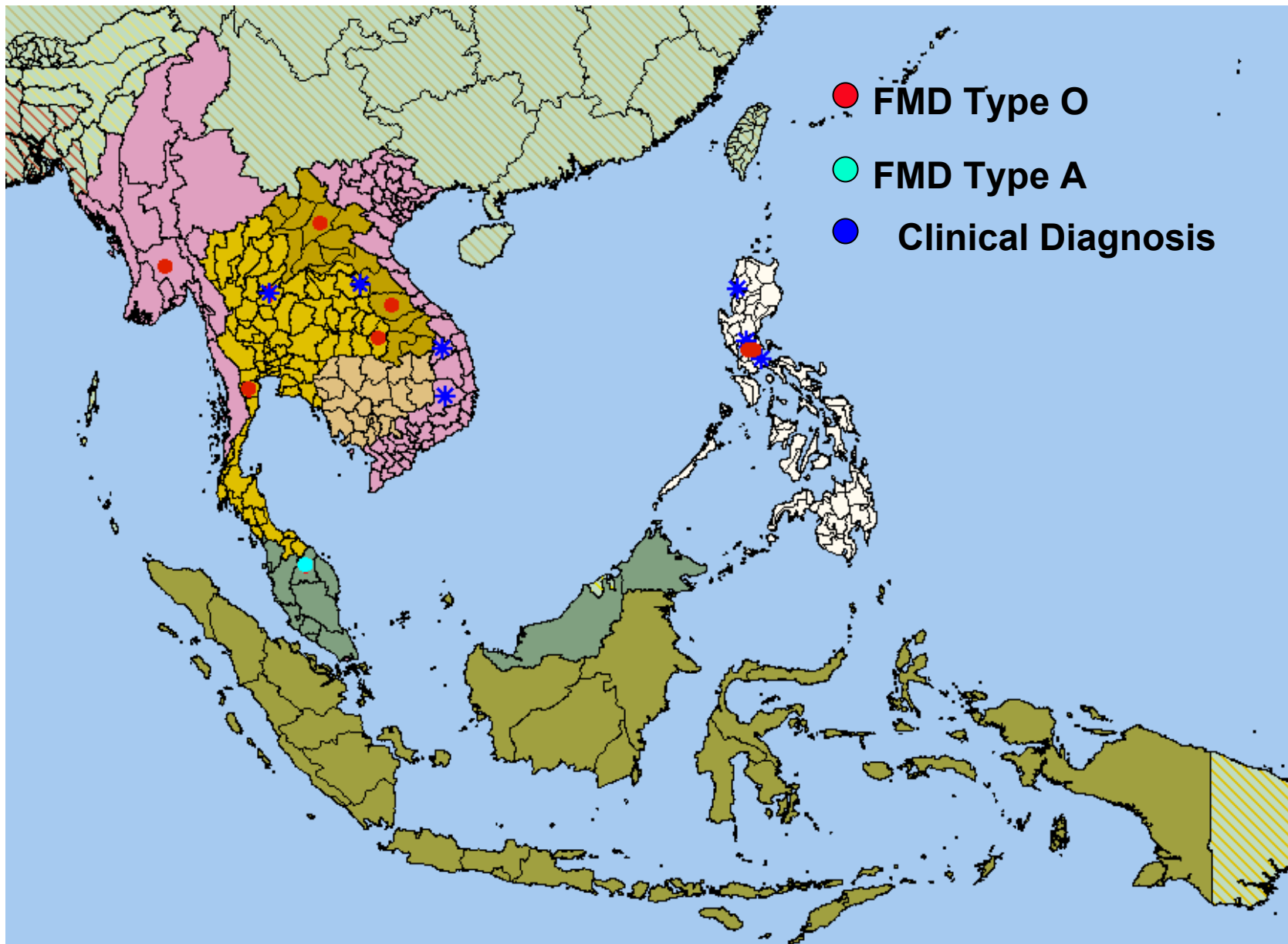
February 2004



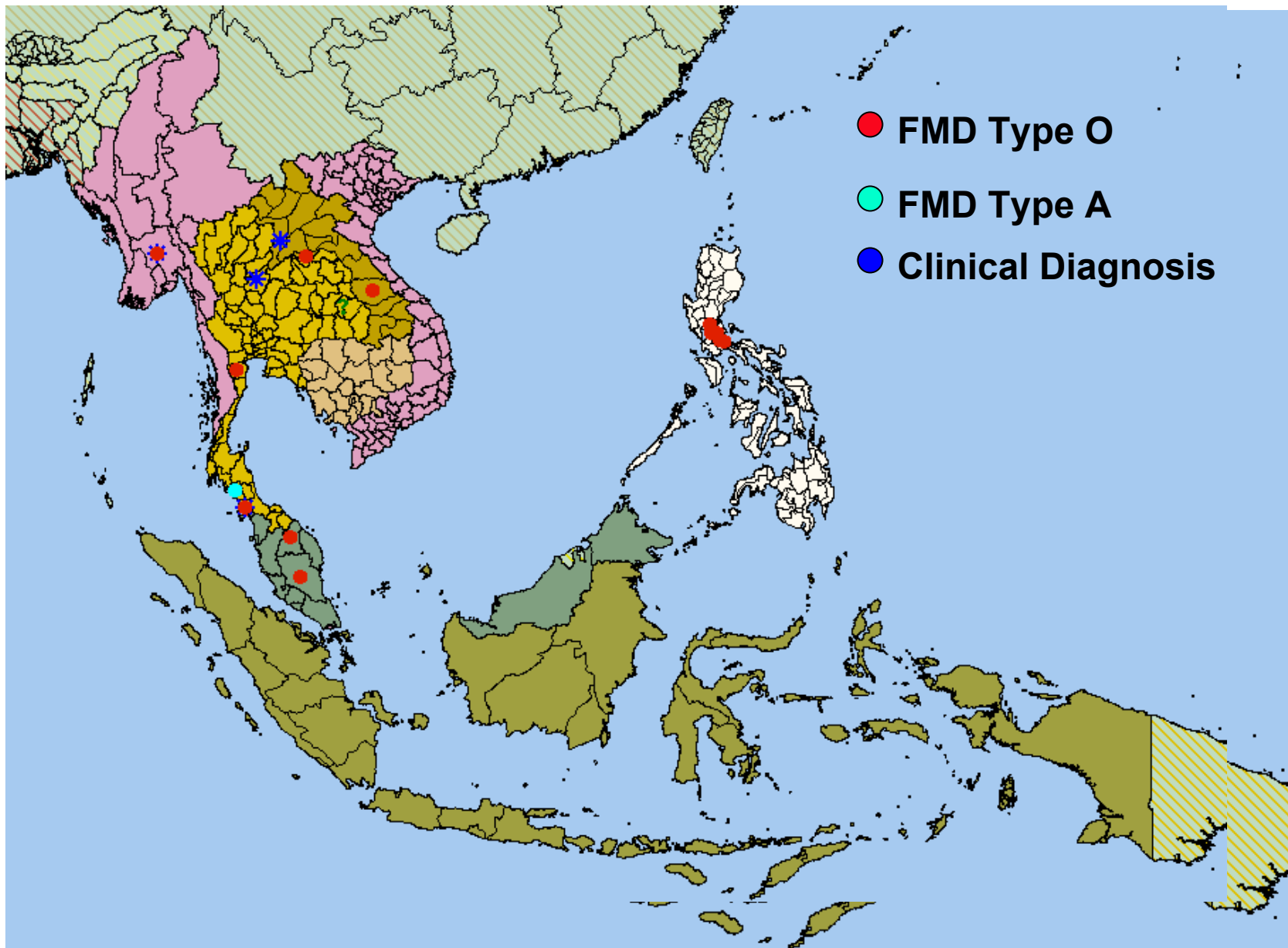
March 2004



April 2004

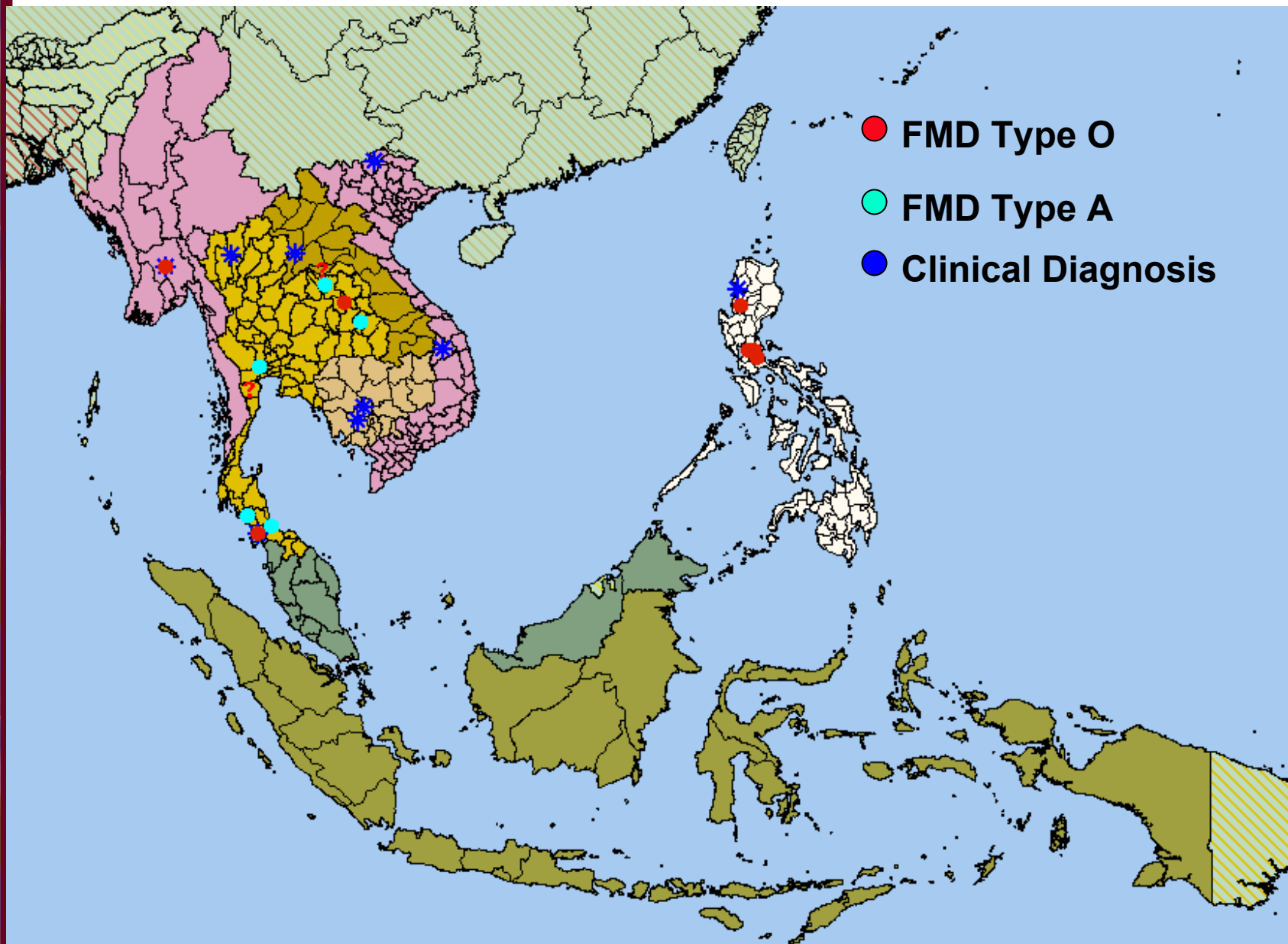


May 2004

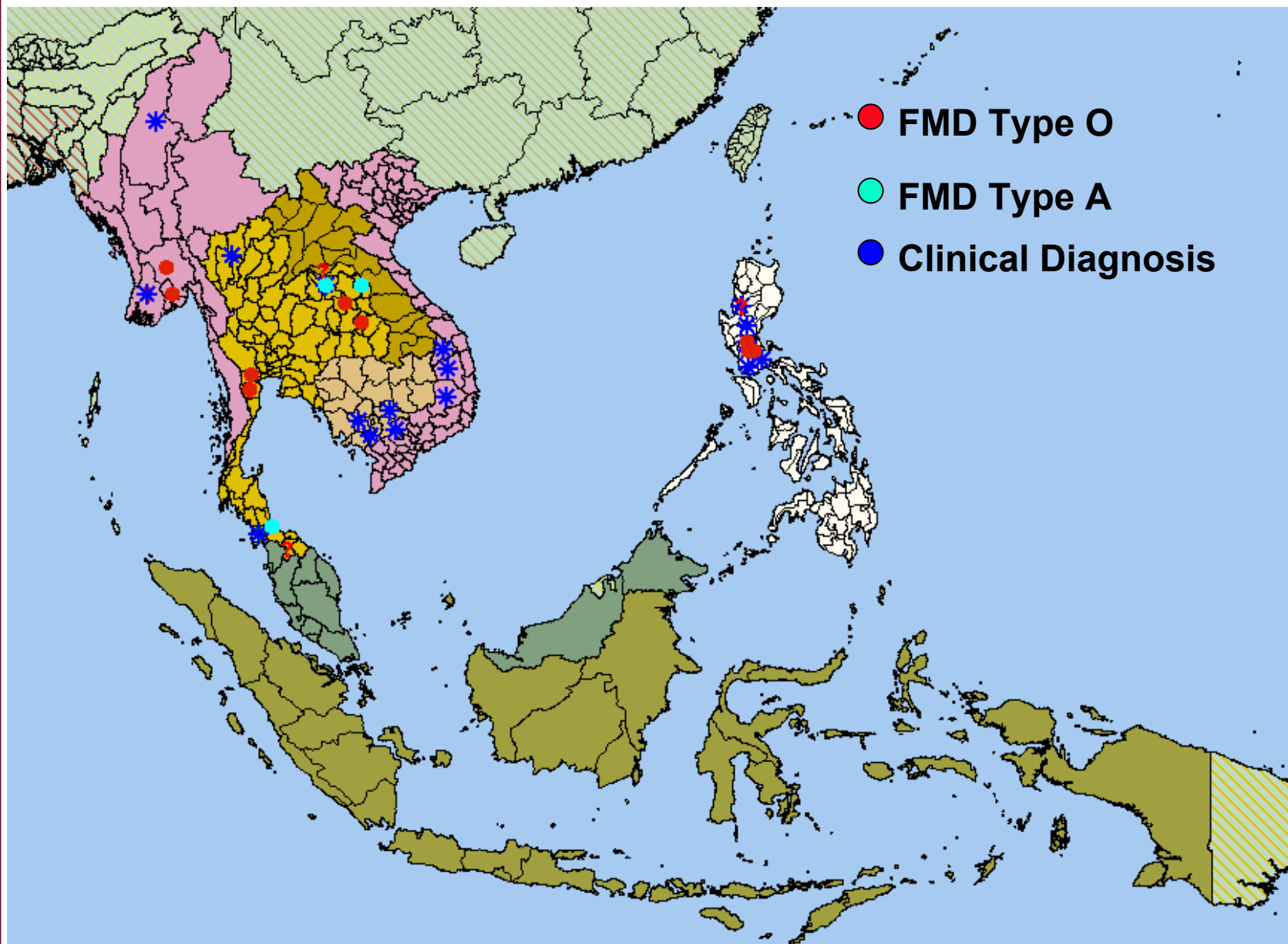


- FMD Type O
- FMD Type A
- Clinical Diagnosis

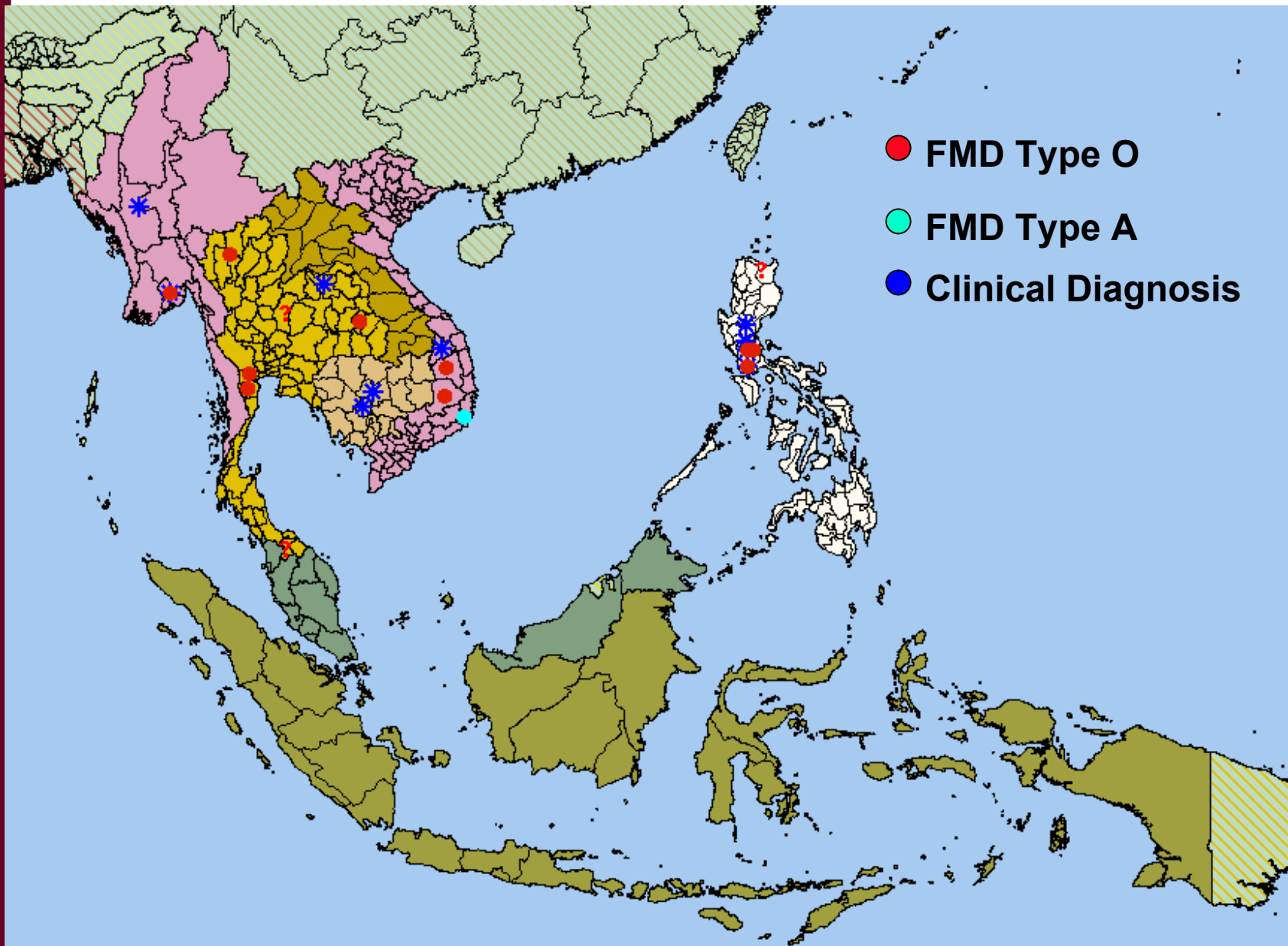
June 2004



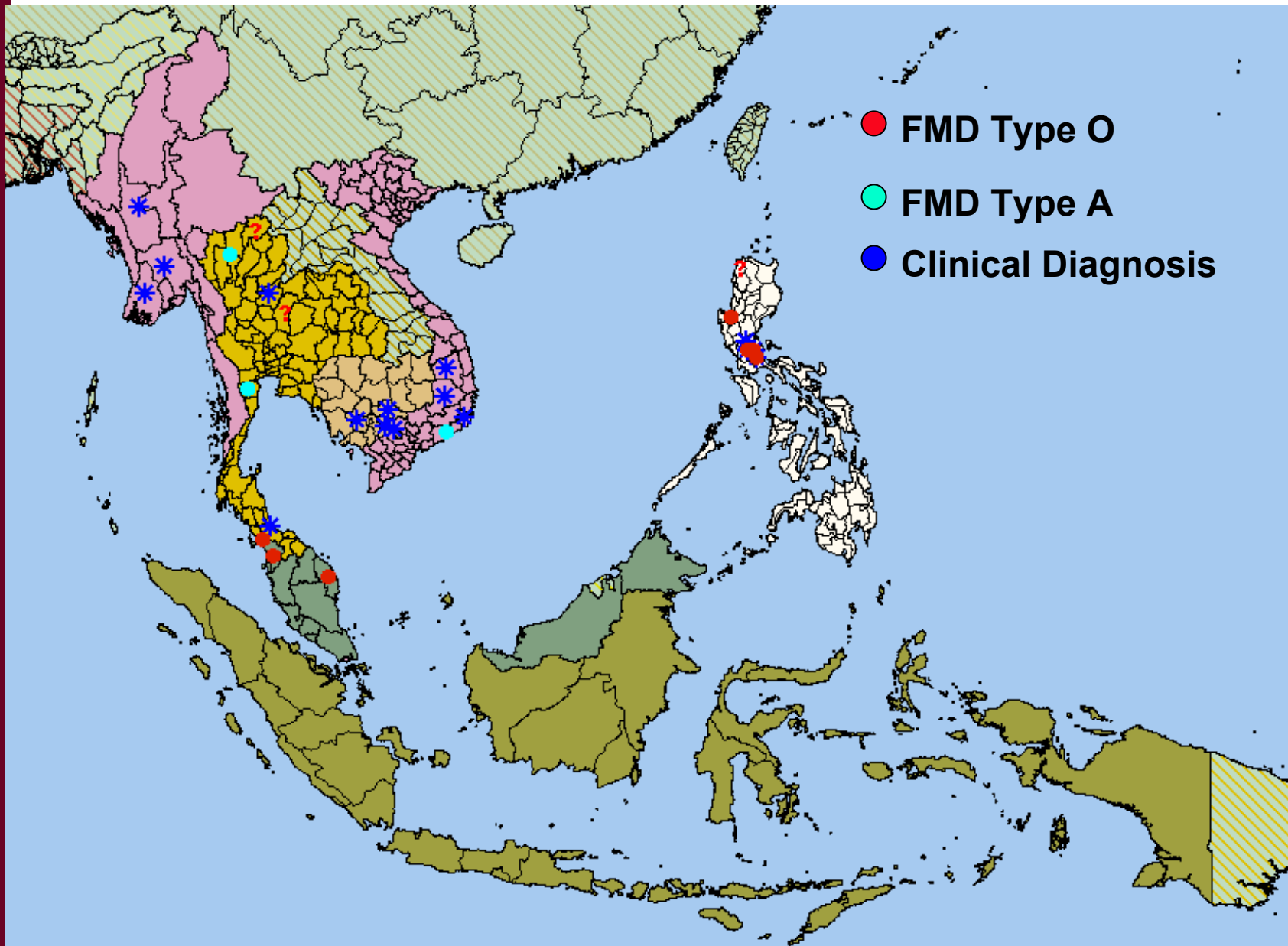
July 2004



August 2004

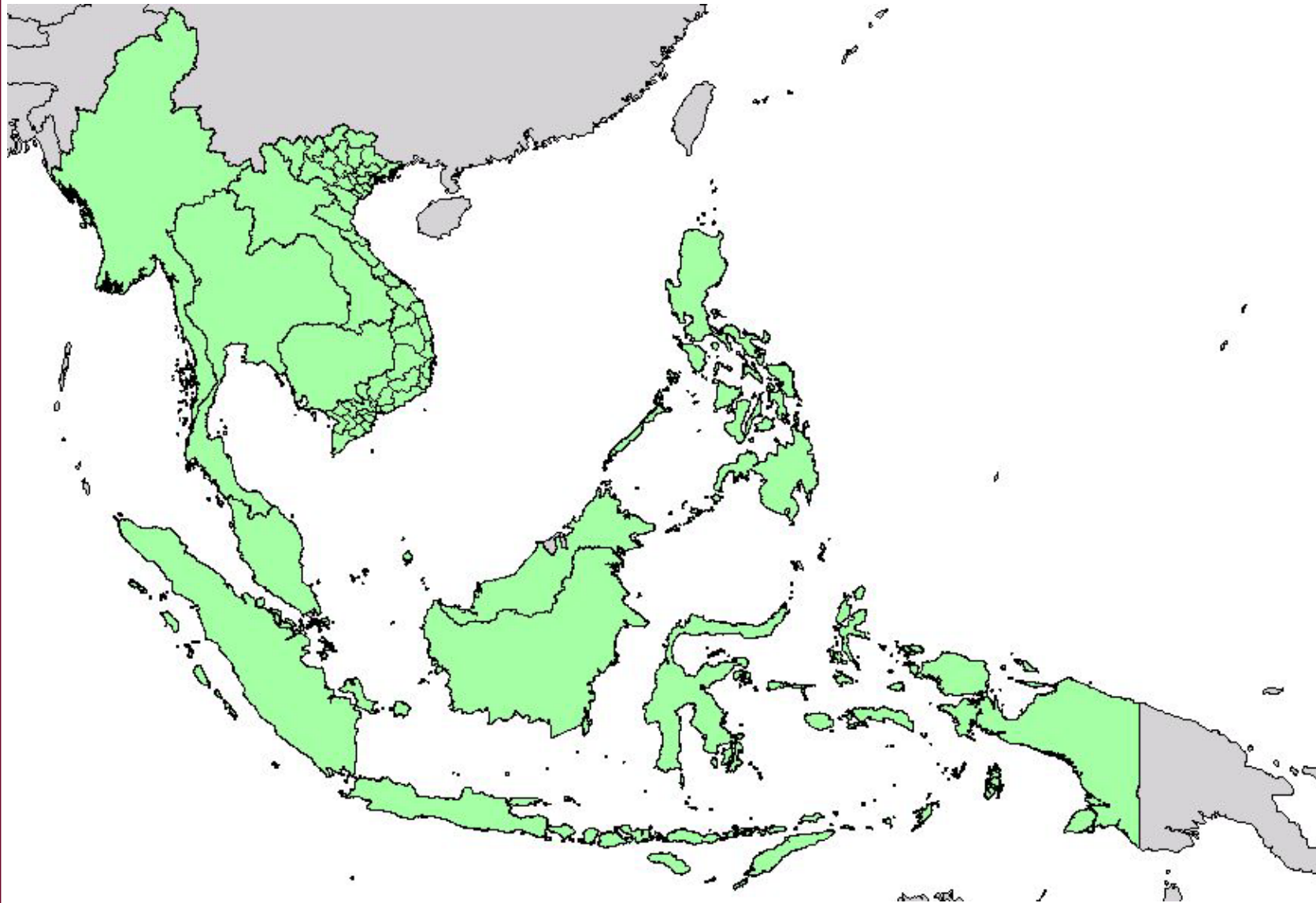


September 2004





Southeast Asia FMD Campaign



OIE SEAFMD Campaign

**Office International des Epizooties (OIE)
Southeast Asia Foot and Mouth
Disease (SEAFMD) Campaign**



OIE SEAFMD Campaign

- 1994 - **OIE Sub-Commission for FMD Control in Southeast Asia**
- 1995 - **1st Meeting**
- 1997 - **OIE Regional Coordinating Unit (RCU) for SEAFMD was established in Bangkok**



OIE SEAFMD Campaign

- Phase I (1997 to 2000)
- Funding from Sweden , Australia, OIE Tokyo,
- Support from Thailand and member countries (in Kind)



OIE SEAFMD Campaign

- Phase II (2001 to 2004)
- Funding mainly from Australia
- Support from OIE Tokyo and in kind contribution from Thailand and member countries



OIE SEAFMD Campaign

- **Goal**

- to increase food security and alleviate poverty amongst the rural small holder producers of livestock.

- **Purpose**

- to increase the productivity and economic output of the livestock sector by controlling and eradicating FMD.

- **Objective**

- to add value to the regional control program through SEAFMDC by employing a series of integrated and harmonised approaches to disease control

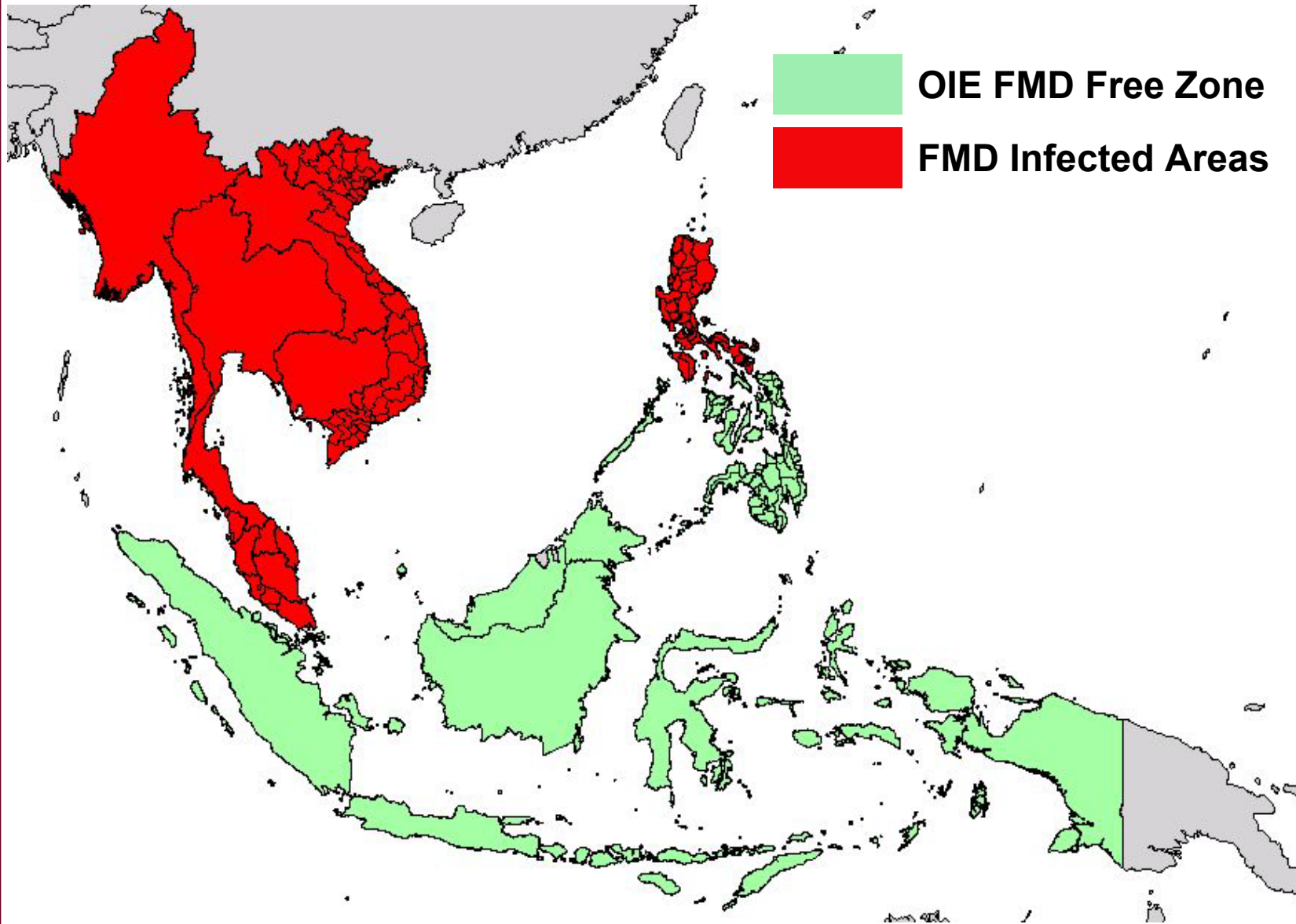


Components of SEAFMD

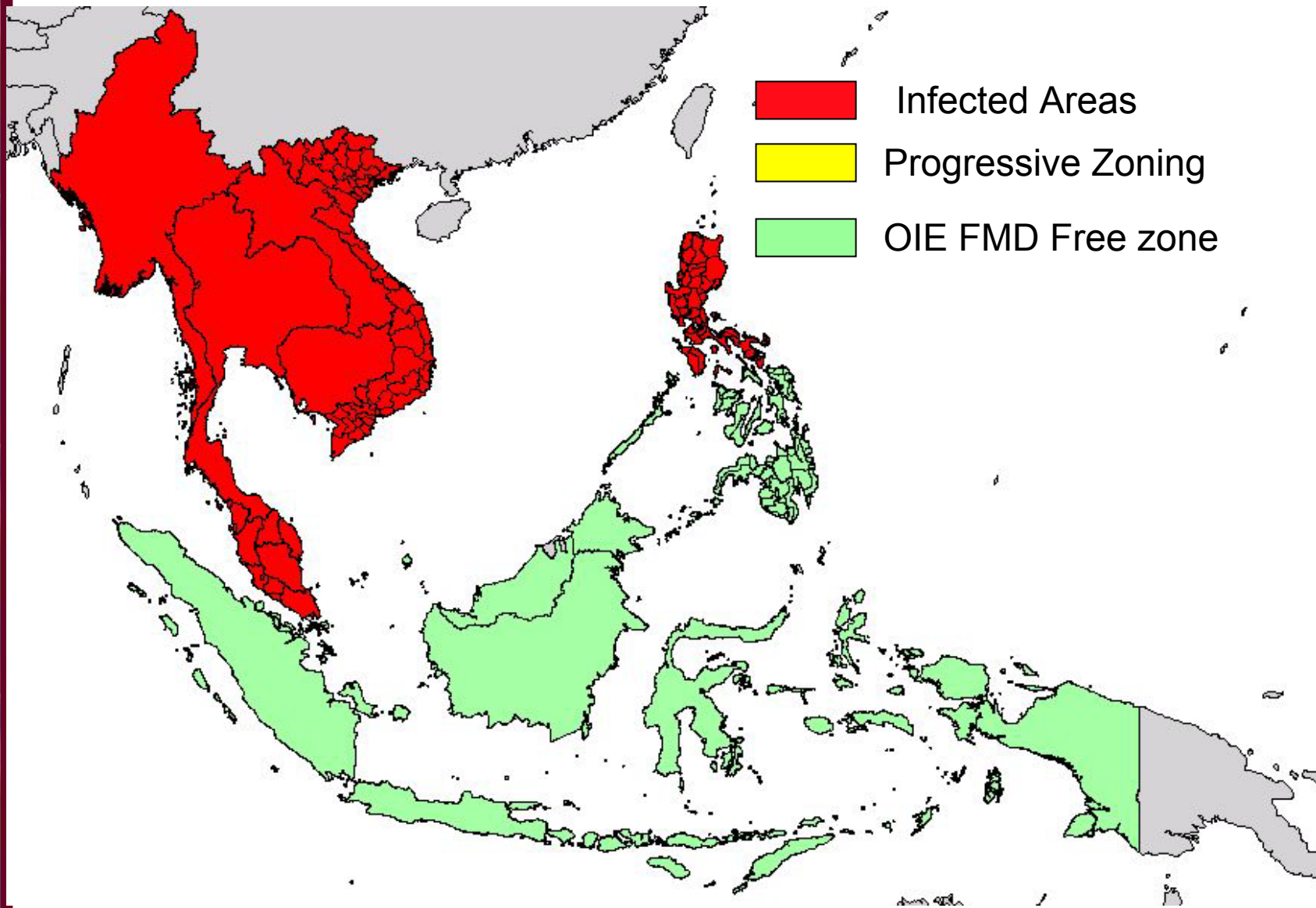
- International Coordination and Support
- Program management, resources and funding
- Public Awareness and Communication
- Disease surveillance, diagnosis, reporting and control
- Policy, legislation and standards to support disease control and zone establishment
- Regional research and technology transfer
- Livestock sector development including private sector integration
- Monitoring and evaluation



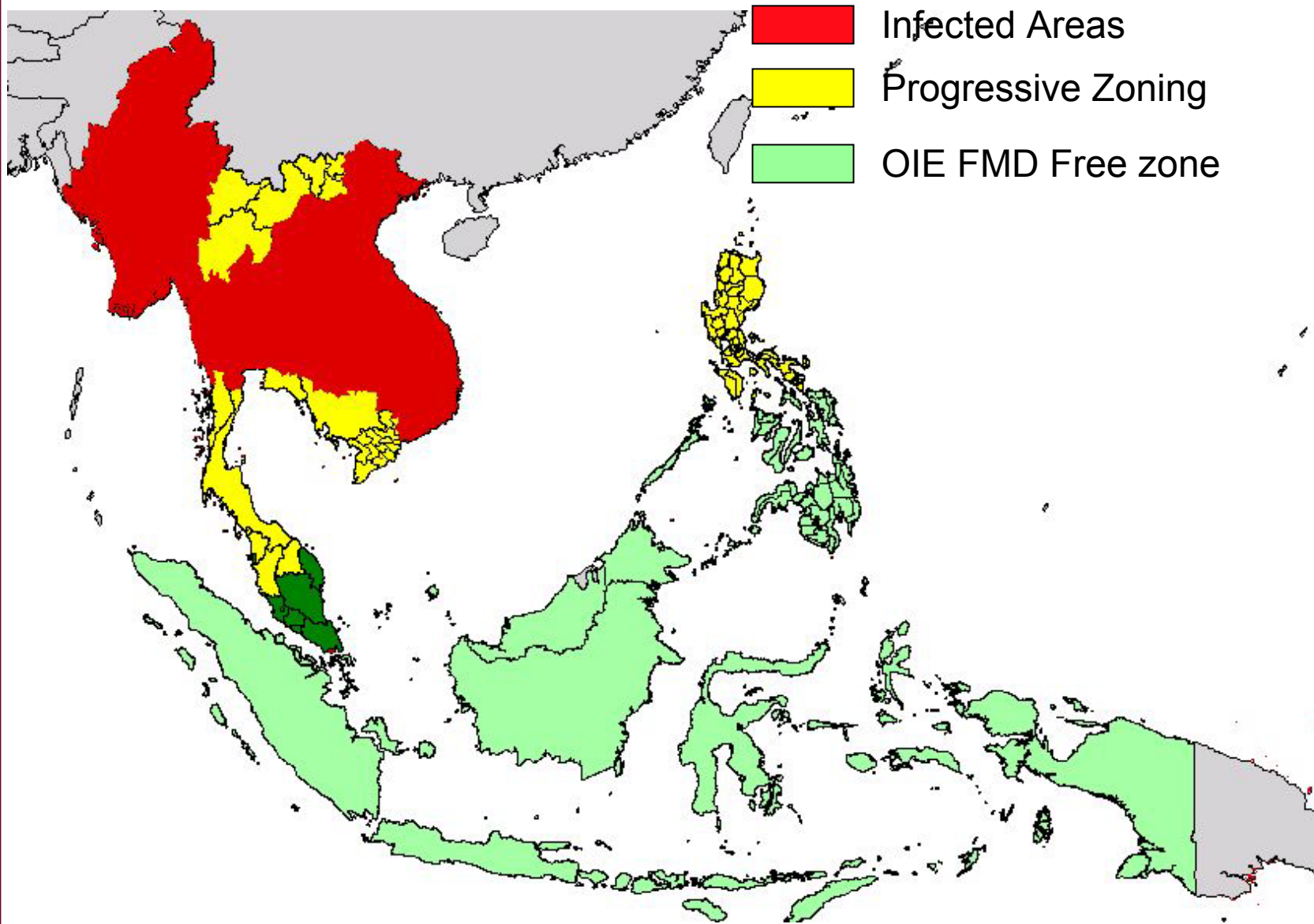
Southeast Asia FMD Status



Southeast Asia FMD Progressive Zoning



Southeast Asia FMD Progressive Zoning

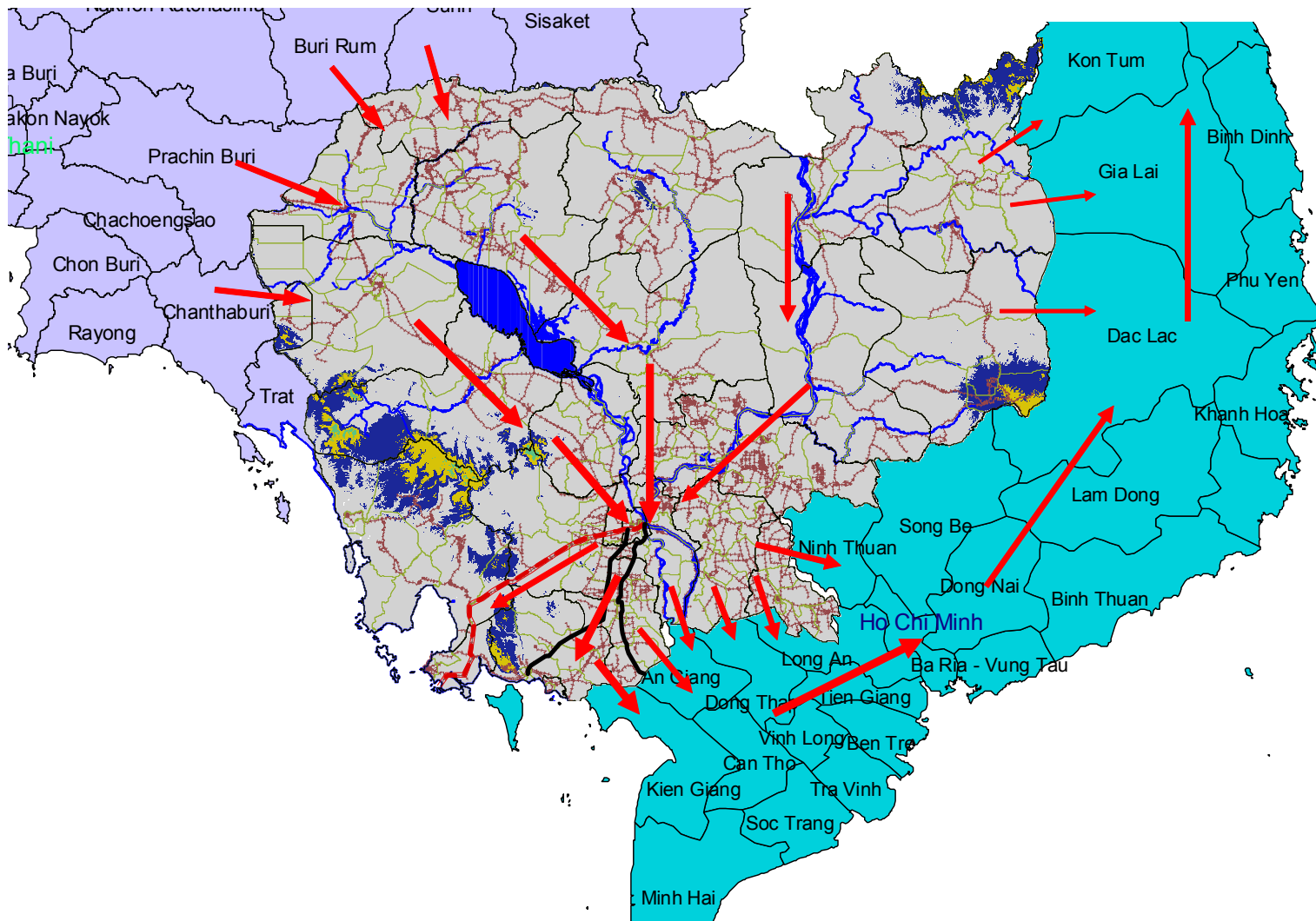


Progressive Zoning

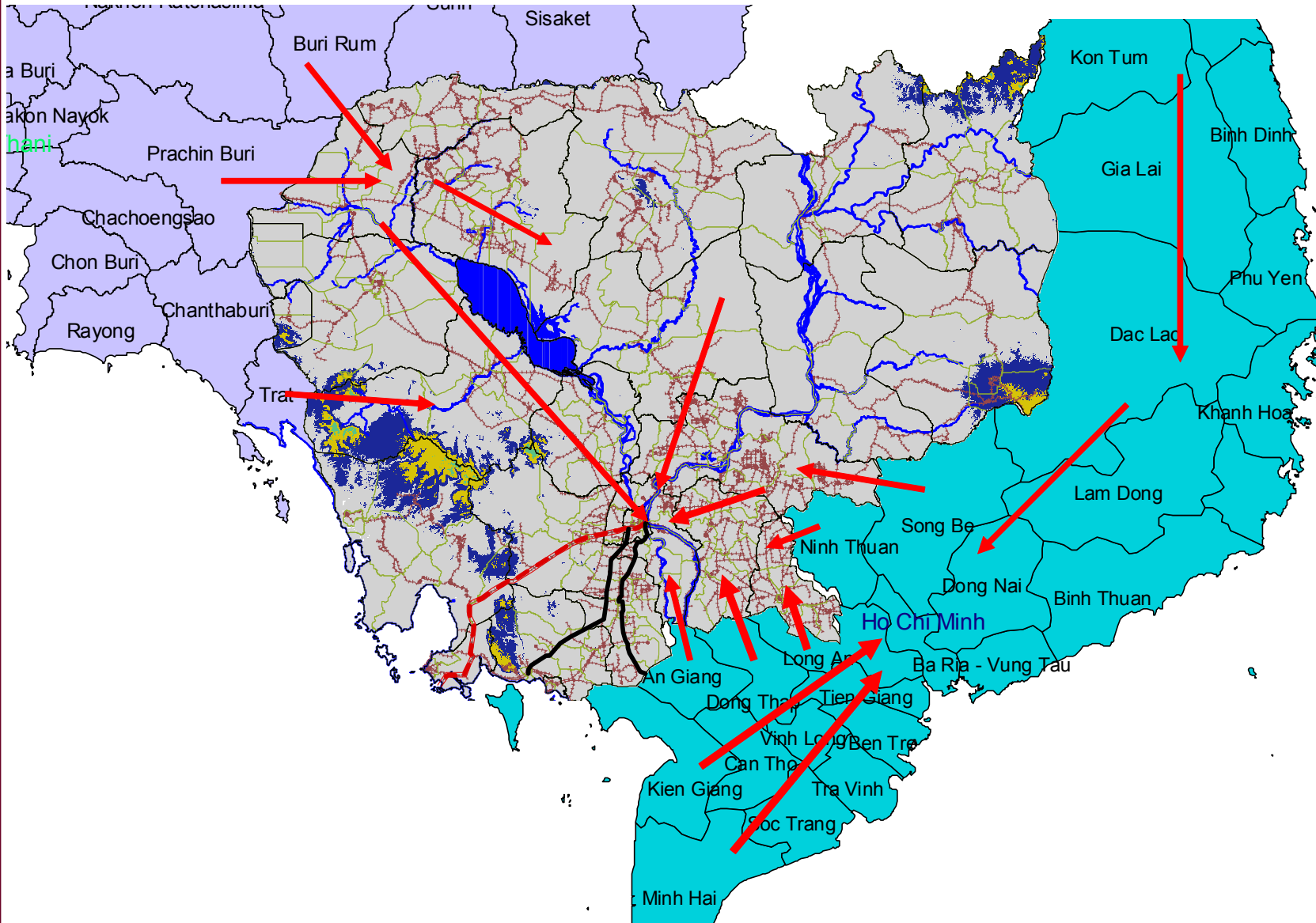
- Focus on zoning and animal movement management
- Study the feasibility – technical and economic
- Epidemiological and economic studies
- Leadership by the countries
- Support by RCU and other agencies
- Participation and practical training
- Proposal for members and international donors



Cattle Movement 2004



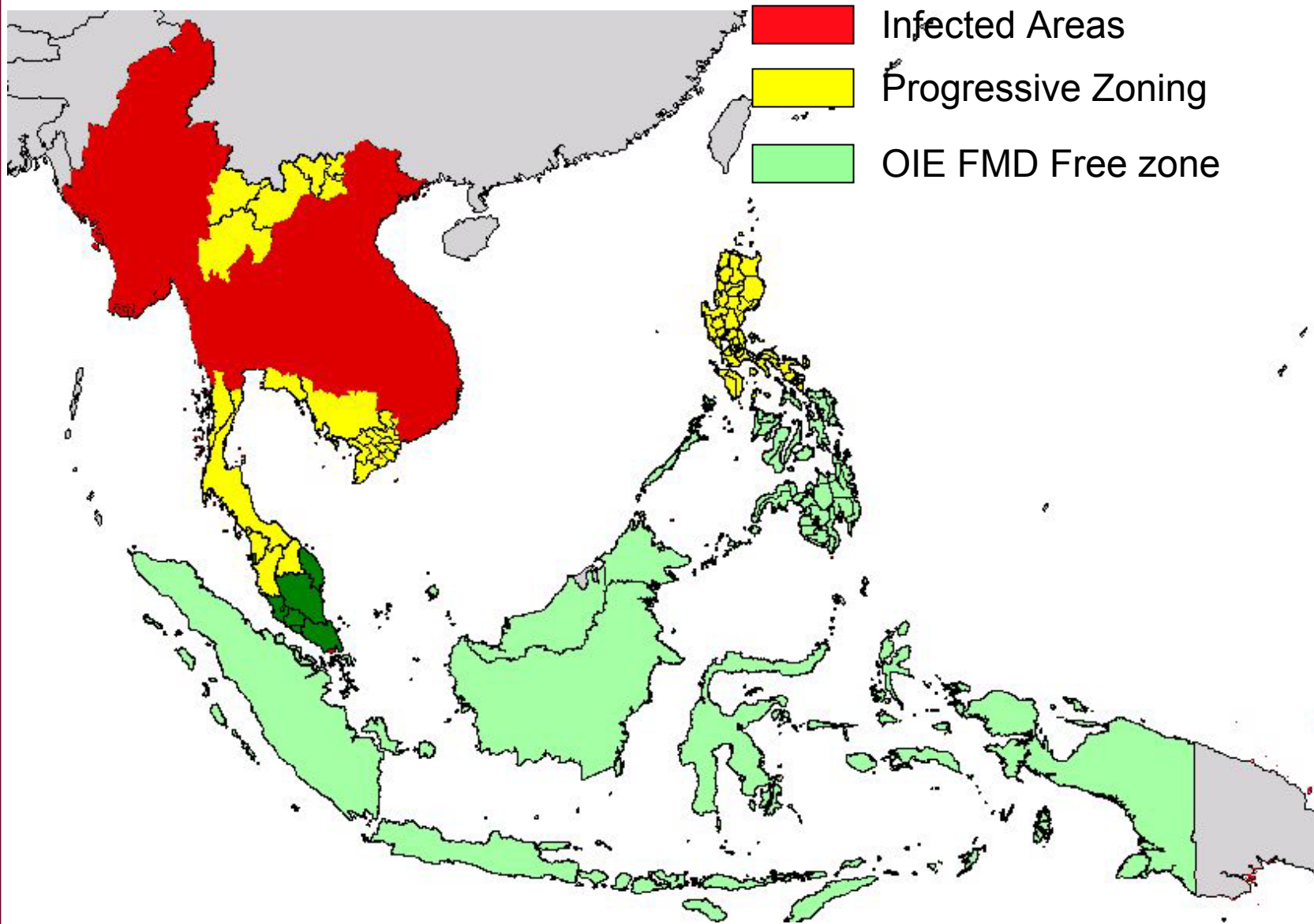
Pig Movement 2004



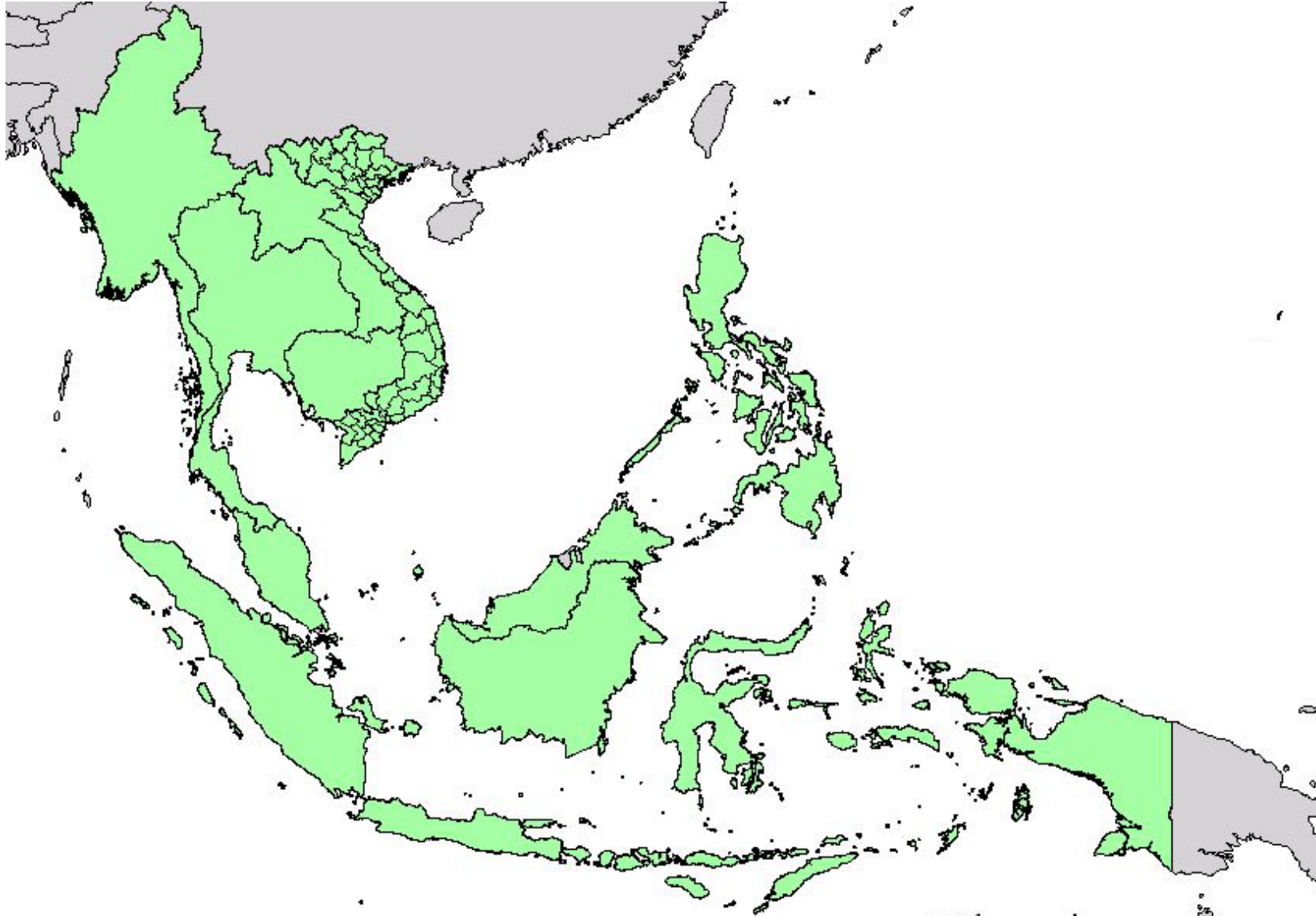
Zoning for Lower Mekong



Southeast Asia FMD Progressive Zoning



Southeast Asia FMD Campaign



Onward to an FMD Free Southeast Asia