Foot and Mouth Disease

The Impact on Livestock, Livelihoods, Trade and Opportunities for Conservation

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SEAFMD Campaign

Presentation

- FAO –OIE GF-TADS
- SEAFMD Model
- FMD the disease and situation
- Impact of FMD (from two case studies)

FAO - Mission and Priorities

- Encouragement of sustainable agriculture and rural development
- Long term strategy to increase food production and food security while conserving and managing natural resources
- Provide a neutral forum where all nations can discuss and formulate policy on major food and agriculture issues

FAO's Strategic Framework recalled in the FAO Medium Term Plan 2004-2009

A. Contribution to the eradication of food insecurity and rural poverty;

B. Promotion, development and reinforcing policy and regulatory frameworks for food, agriculture, fisheries and forestry;

C. Creating sustainable increases in the supply and availability of food and other products from the crop, livestock, fisheries and forestry sectors;

D. Supporting the conservation, improvement and sustainable use of natural resources for food and agriculture; and

E. Improving decision making through the provision of information and assessments and fostering of knowledge management for food and agriculture.

Global Framework for the Progressive Control of Foot-and-Mouth Disease and Other Transboundary Animal Diseases

GOAL of GF-TADs = Vision Development Objective

- To improve the protein **food security** and incomes of developing countries

- **Safeguard** the world livestock industry (of developed as well as developing countries) from repeat shocks of infectious disease epidemics

- **Promoting safe** and globalised trade in livestock and animal products

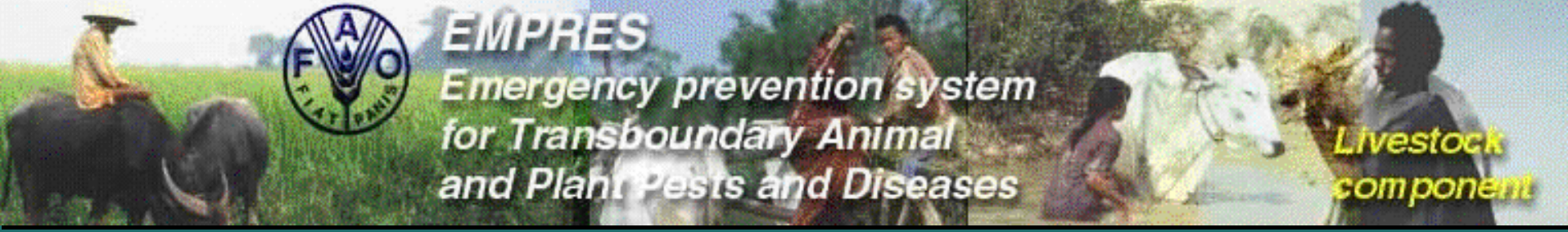
CONCEPT

Progressive control of transboundary animal diseases

AT SOURCE

as

an International Public Good and within the Millennium Goals.



What are we aiming for ?

A strong and working close partnership with Countries and Regional Organizations

- Strengthening Veterinary Services
- Paradigm shift in disease control by sound epidemiological knowledge
- Progressive control of disease

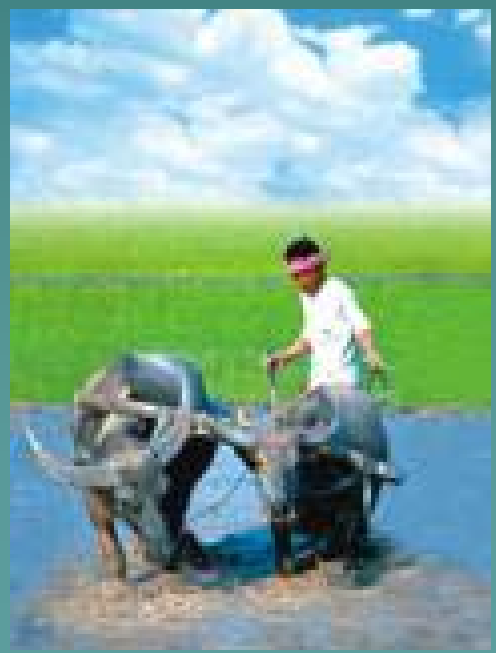
Programme Thrusts

- Global Strategy driven by the FMD Model
- Global Strategy taking lessons from the GREP experience
- Regional strategies owned and implemented by regional organisations and **Countries**

SEAFMD Model

SEAFMD Campaign

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



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 Switzerland, 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

FMD, the disease and situation

Foot and Mouth Disease

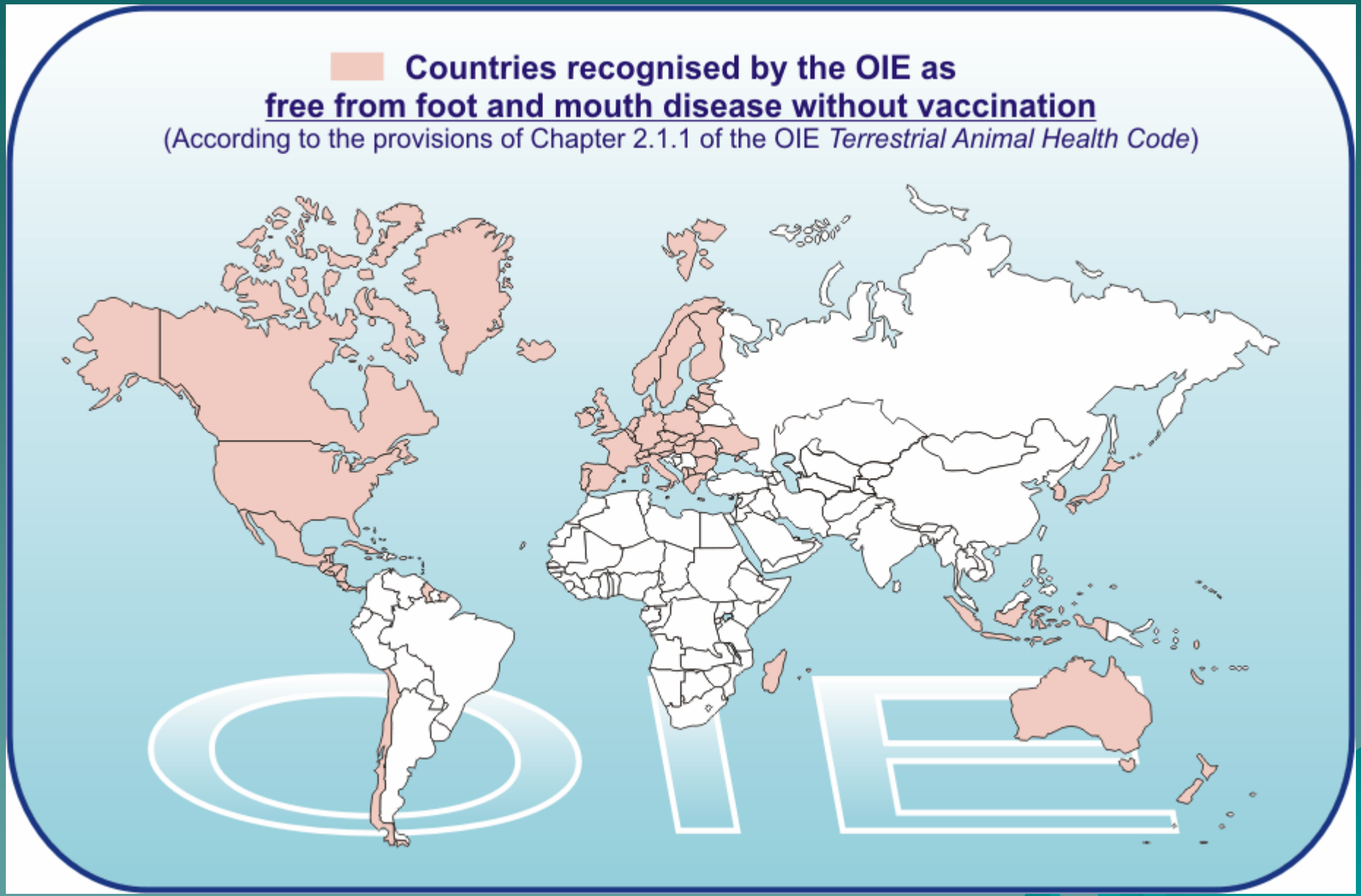
- caused by a virus of the genus Aphthovirus, family Picornaviridae.
- seven serotypes of FMD virus
- O, A, C, SAT 1, SAT 2, SAT 3, and Asia 1,
- Disease of cloven-footed animals
- No public health importance

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

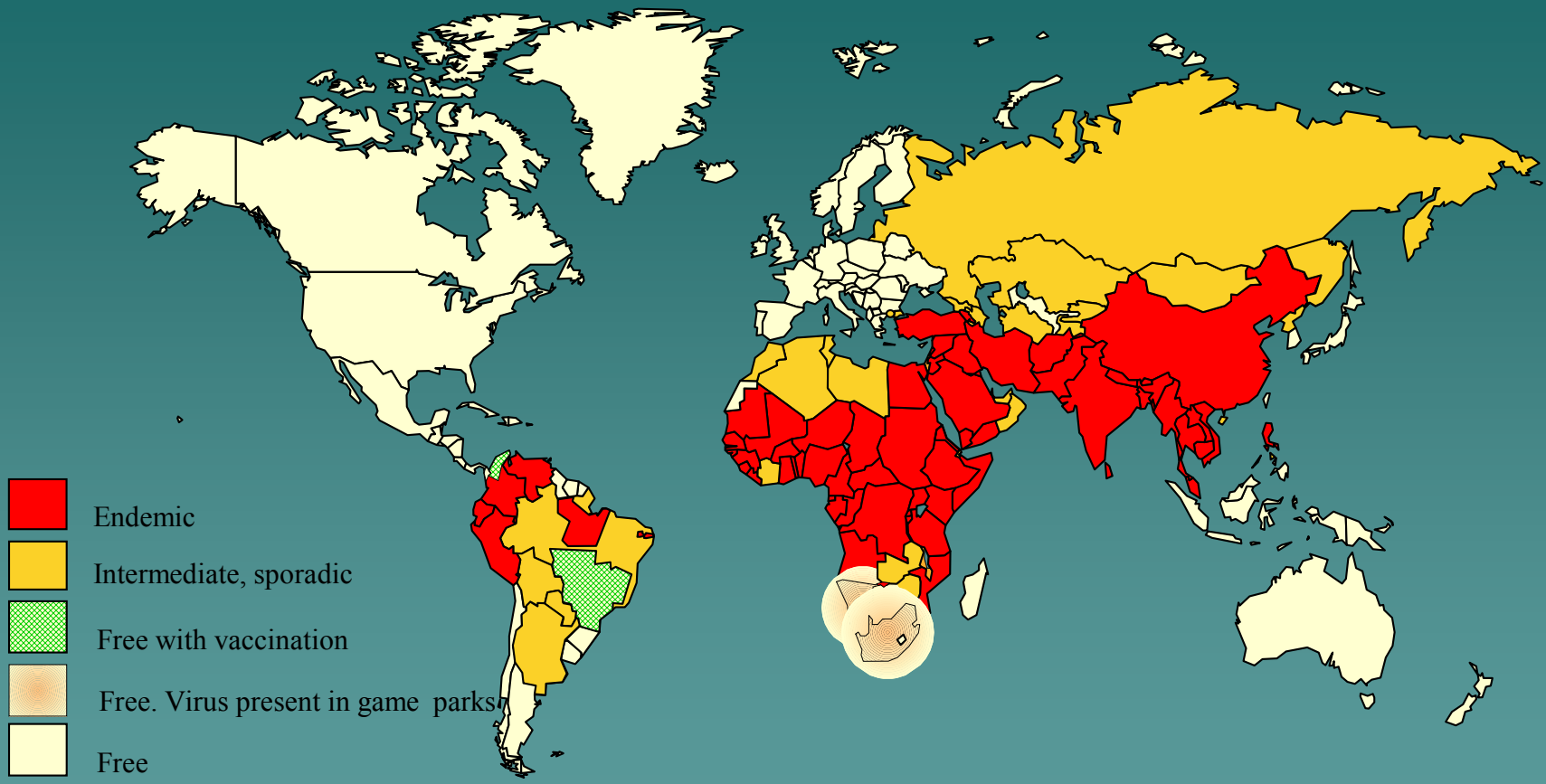
Clinical signs

- 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



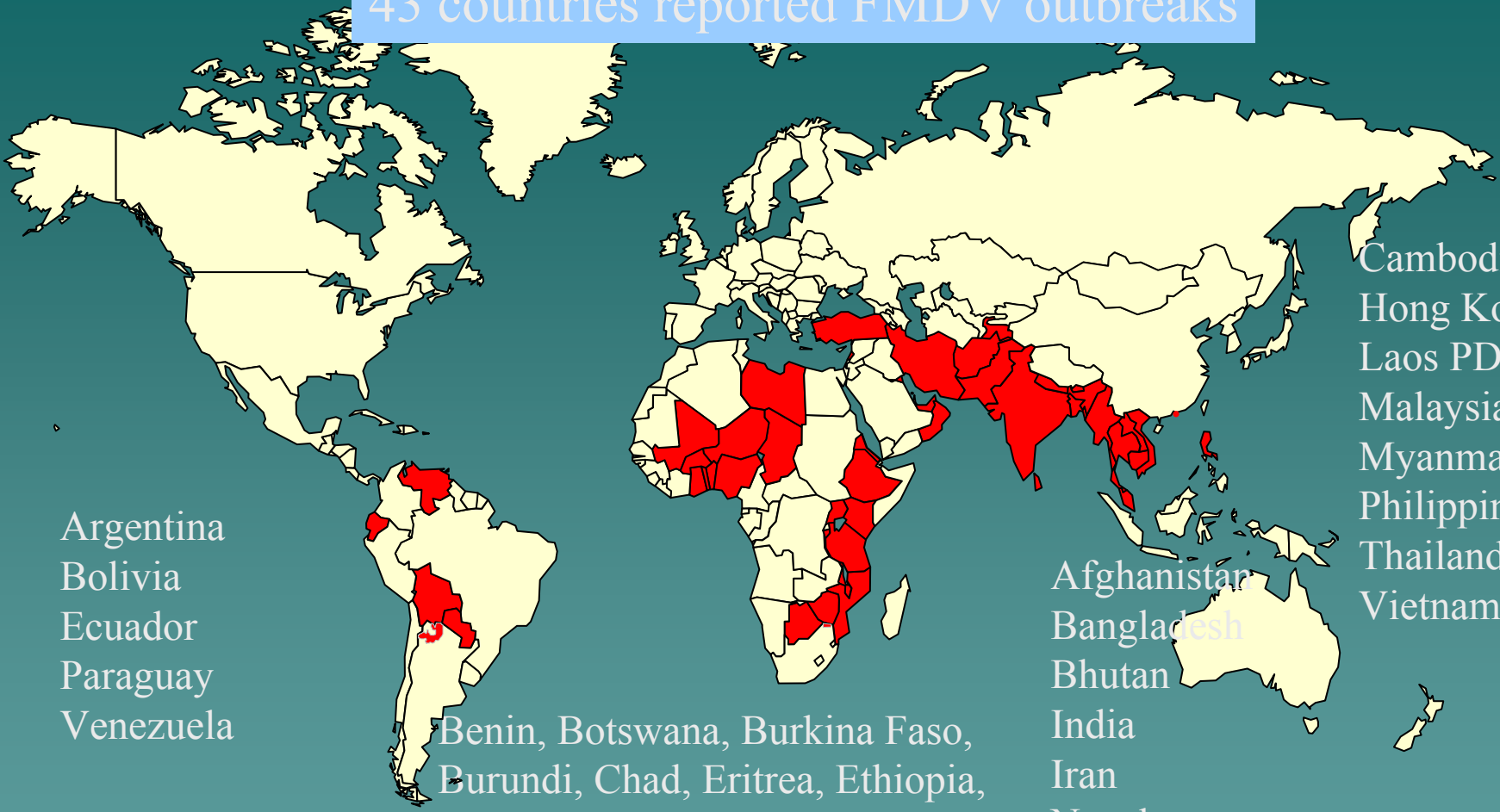
OIE Website - January 2004

Conjectured Status of FMD 2003



Countries in which FMD was reported, 2003

43 countries reported FMDV outbreaks



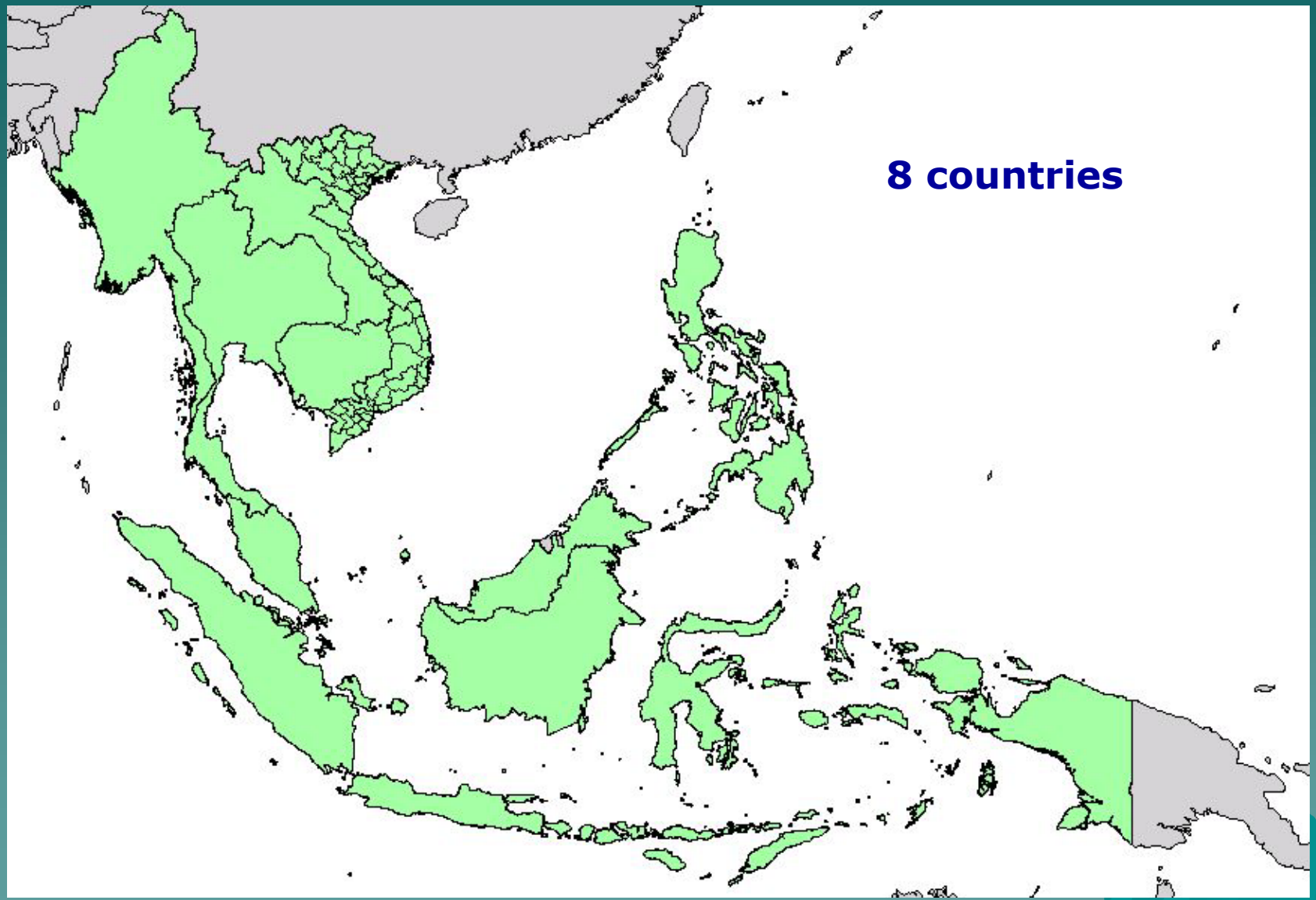
Argentina
Bolivia
Ecuador
Paraguay
Venezuela

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

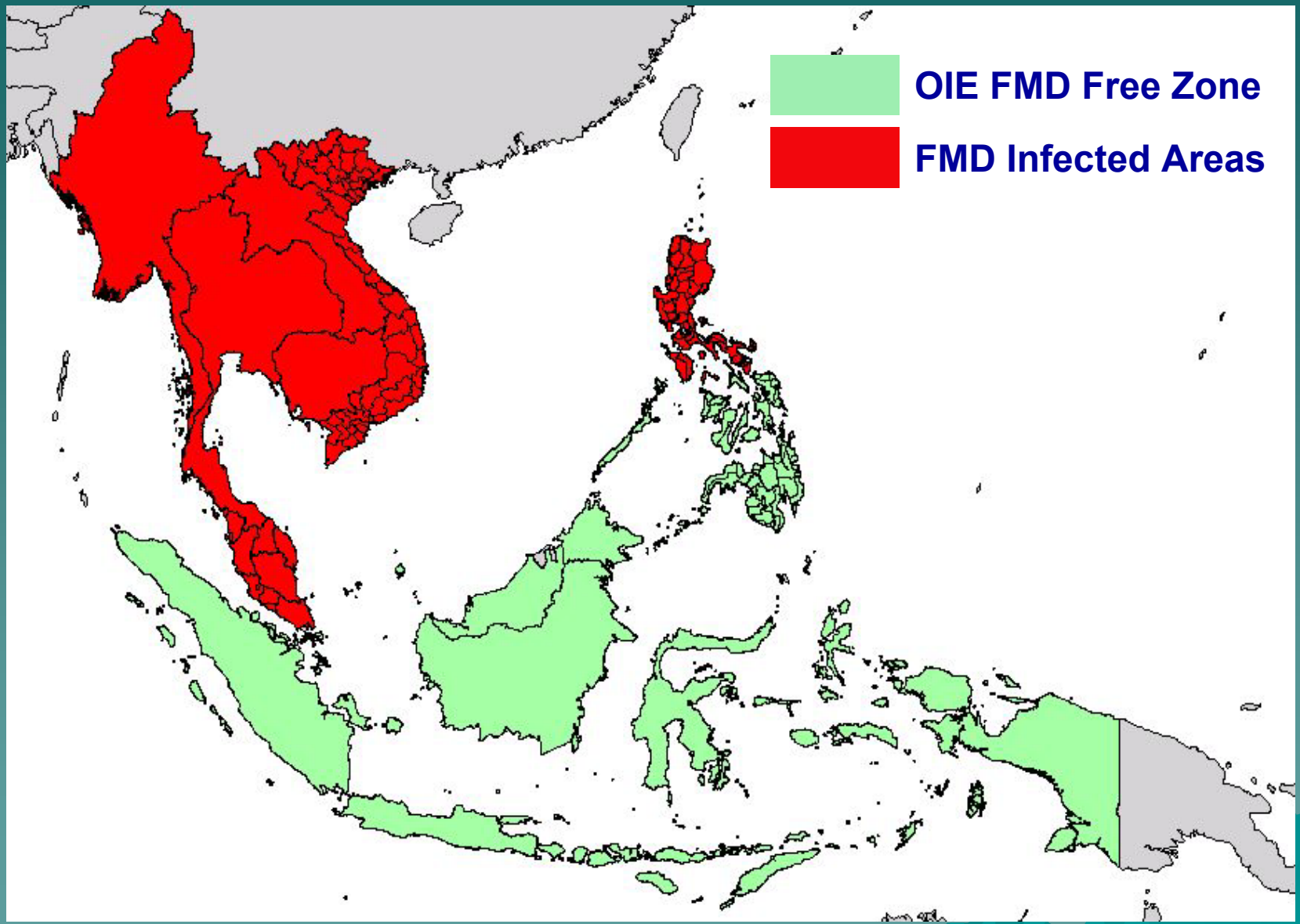
Afghanistan
Bangladesh
Bhutan
India
Iran
Nepal
Pakistan
Tajikistan
Turkey
UEA

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

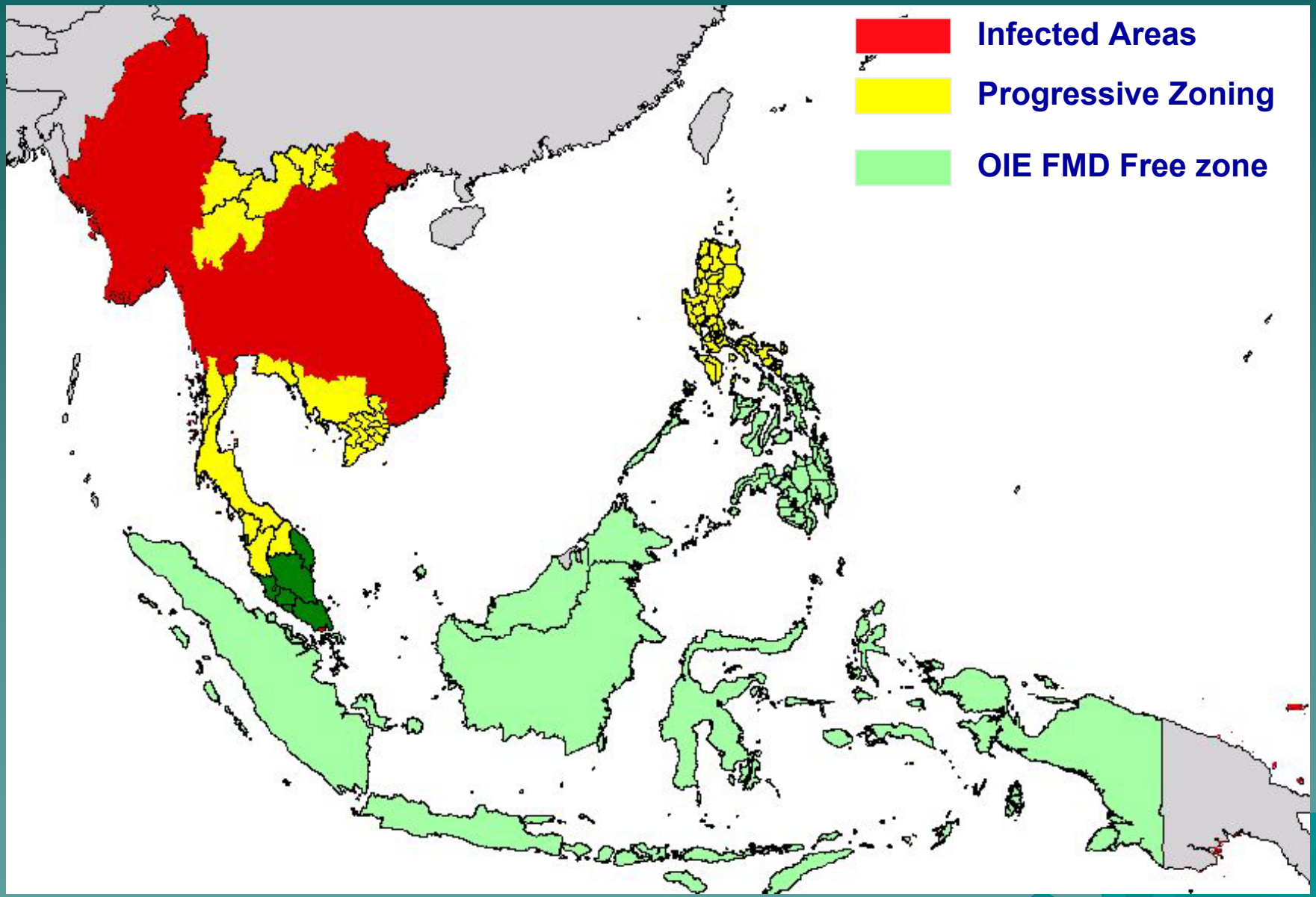
Southeast Asia FMD Campaign



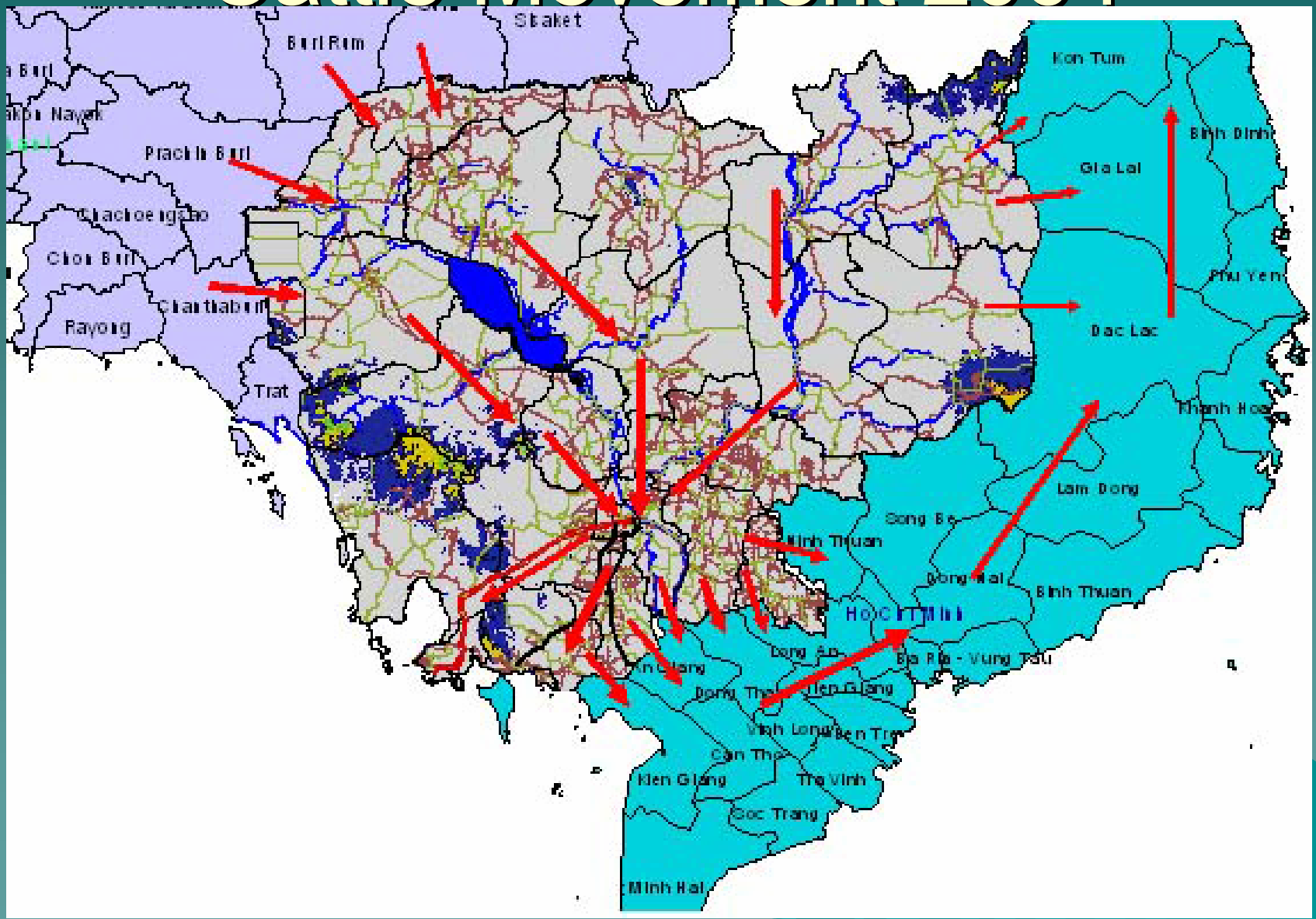
Southeast Asia FMD Status



Southeast Asia FMD Progressive Zoning



Cattle Movement 2004



Pig Movement 2004

Impact of FMD

Overview of the Regional Impacts of FMD and Control

- Massive expenditures by the government sector on FMD control
- Productivity losses in more developed livestock industries ie pig and beef industries of the Philippines and Malaysia and dairy industry of Thailand
- Heavy losses in small scale mixed farming when outbreaks occur in buffalo during the planting season – Myanmar, Lao, Cambodia, Vietnam
- High costs of vaccination borne by the commercial pig producer
- Considerable losses of milk yield

"The economic impact of FMD and its control in SEA: a preliminary assessment with special reference to Thailand" B.D. Perry, W. Kalpravidh, G.G. Coleman, H.S.Horst, J.J.McDermott, T.F.Randolph and L.F. Gleeson

Impact on Farmer's livelihood

- Loss draught power – Myanmar, Cambodia, Indonesia, Lao, Vietnam
- Low productivity
- Added cost on treatment
- Reduced value of their livestock
- Reduced farmer's income

Philippines Case Study

The economic impact of FMD control and eradication in the Philippines
Randolph, Perry, Benigno, Santos, Agbayani, Coleman Webb, Gleeson

- 1997 annual economic impact of FMD – USD14 M
- Baseline scenario (from historical trends) :
  - USD 1.1 M government costs on surviellance an d monitoring activities
  - USD0.3 M to contain persistent outbreaks
  - USD1.7 M commercial support for vaccination
- Eradication Scenarios
  - Cost of FMD increases
  - Once eradicated, private and government sectors no longer incur control costs
  - Total costs at USD 2.4 M constant per year for emergency preparedness

Benefits associated with FMD eradication

- Reduction of the control costs
- Containment costs eliminated
- Improved productivity at farm level
- Eliminate direct impact of outbreaks on markets for livestock and meat products
- Access to new export markets
- Generation of additional foreign currency
- Improvement of control of other livestock diseases

- Protection of the susceptible wildlife population
  - Tamaraws (Bubalus mindorensis), wild pigs, deer

Wildlife Population in the Philippines

- Tamaraw, wild boars and deer
- Located in FMD free areas
- 2002, FMD outbreak in pigs in an island province where there is a tamaraw conservation area
  - Immediate stamping out of the pigs
  - To preserve its FMD free status
  - Disastrous if FMD hits the susceptible wildlife population

Challenges

- Key epidemiological aspects to be noted
  - Where is the disease -Disease at the SOURCE
  - Infection at the source
  - Hunting for the antigen rather than following the antibody
  - Epidemiology~Laboratory Networks
  - Knowledge on animal production, susceptible population, land usage, marketing schemes, movement patterns …

Challenges

- Socio-political Issues
  - Political Will and Grass Roots initiatives?!
  - Limited investment from the Private Sector / Mobilisation of resources …
  - Collaboration with disease control partners
  - Weak recognition of the importance of livestock sector


thank you