



Foot and Mouth Disease Status in LaoPDR

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Outline

- 1. Background information.**
- 2. Structure of public veterinary services in Lao PDR.**
- 3. FMD outbreak status in 2014-2015 in Lao PDR.**
- 4. FMD Control in Upper Mekong Zone.**
- 5. Foot and Mouth Disease pilot immunization in FMD hotspots area Upper Mekong Control zone.**



PR China

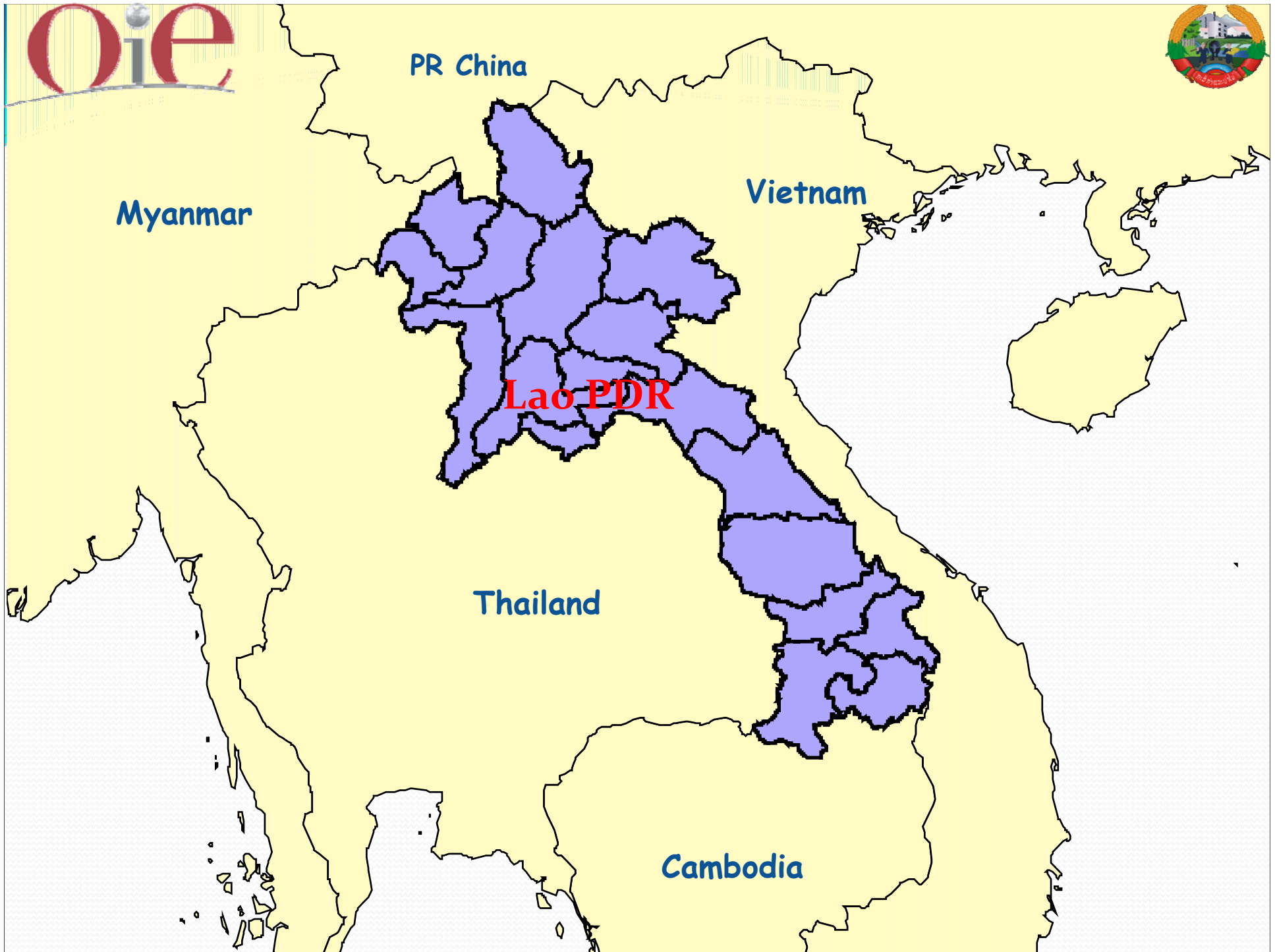
Myanmar

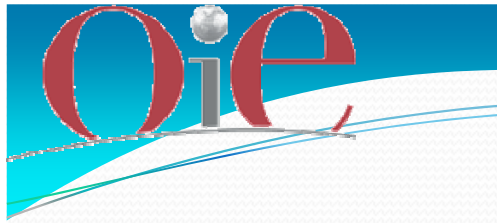
Vietnam

Lao PDR

Thailand

Cambodia





Lao PDR and ASEAN



Lao People's Democratic Republic

landlocked country in SE Asia

- Total Land area: 230,800 Km²
- Population : 6.5 million (*49 ethnic groups*)
- Capital city-Vientiane
(2012 pop. est. 853,000)
- Mekong river is the main waterway
for the country

Lao People's Democratic Republic

Agriculture sector is very important:

- 70 % of the population participate in the agriculture and livestock production.
- contributing about 33% of national GDP and Livestock production contributes about 15% of agricultural GDP.
- Human Consumption per caput per year 50,4 kg
- 80% of the livestock producer is smallholder farmers.

Livestock Population Trend in Lao PDR

(heads)

2013

Cattle	1,830,800
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Buffalo	1,270,700
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Pig	3,232,300
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Goats	619,800
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Poultry	32,450,000
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Structure of public veterinary services

MINISTRY OF AGRICULTURAL AND FORESTRY



DEPARTMENT OF LIVESTOCK AND FISHERIES

- Administration Division
- Legislation Division
- Planning Division
- Veterinary Division
- Livestock Management Division
- Fishery Division
- Animal Health Diagnostic Centre
- Vaccine production centre
- Fishery centre
- Animal Feed standards Centre



Provincial Livestock and Fishery Office



District livestock and Fishery Unit



Village Veterinary Worker

Major infectious diseases of cattle and buffalo in Lao PDR

- Foot and Mouth Disease (FMD)
- Haemorrhagic Septicaemia (HS)
- Anthrax
- Black leg



Major infectious diseases of pigs in Lao PDR

- Foot and Mouth Disease
- Classical Swine Fever
- PRRS

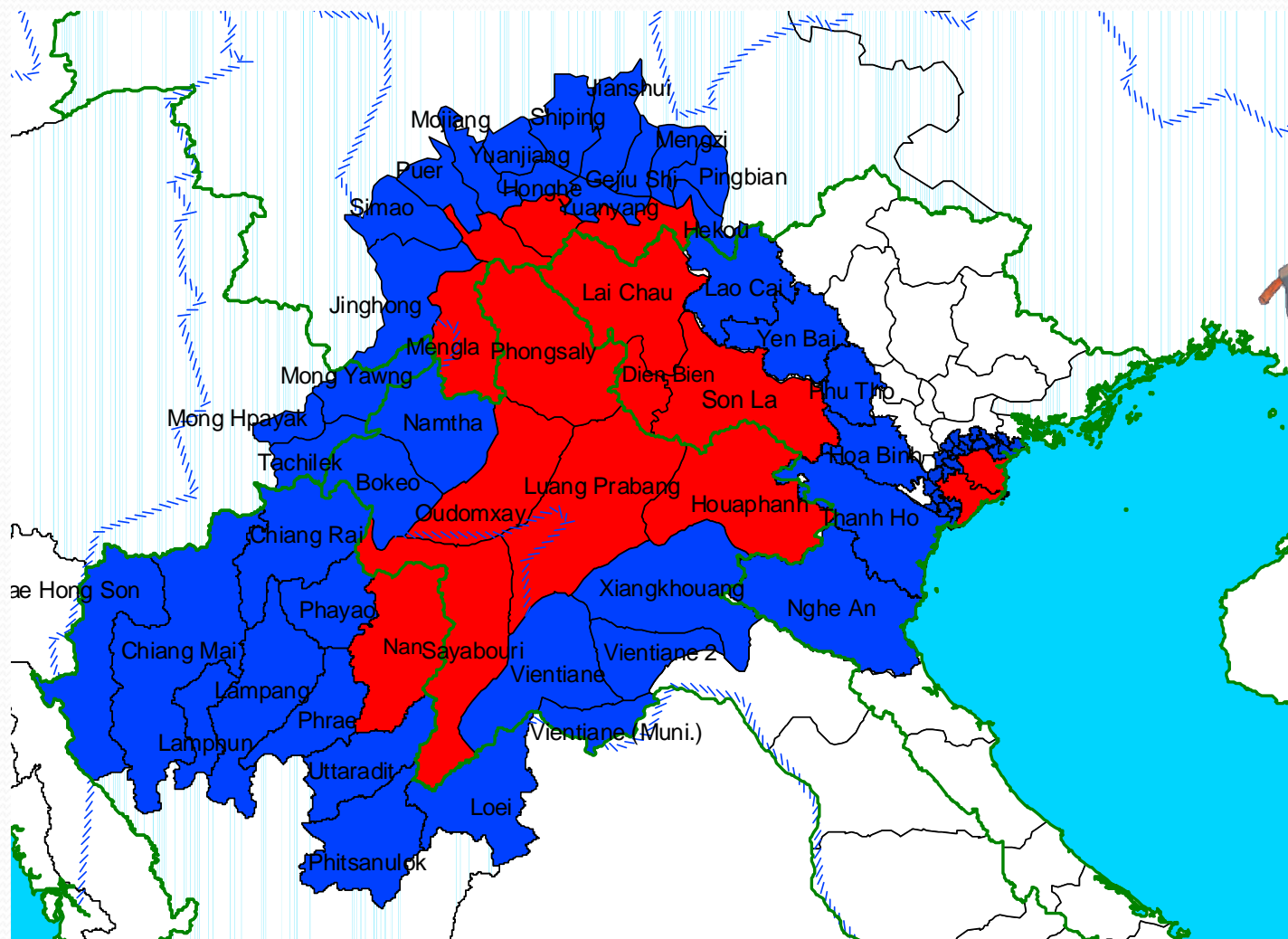


Major infectious diseases of poultry Lao PDR

- HPAI (H₅N₁)
- Newcastle Disease
- Fowl Cholera



SEACFMD Upper Mekong Zoning



FMD zoning approach

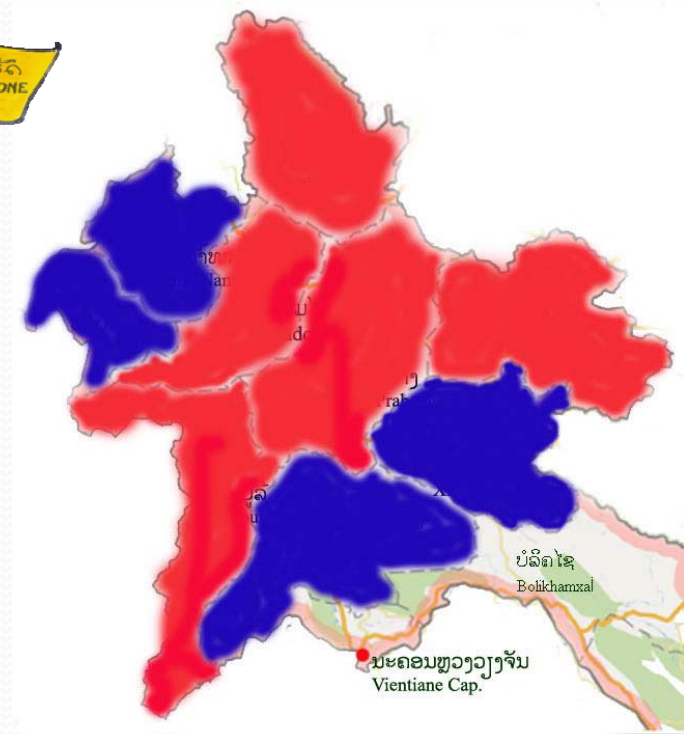
1. Control zone :

- Phongsaly province
- Huaphanh province
- Oudomxay province
- Luang Prabang province
- Xayabouly province



2. Buffer zone :

- Luangnamtha province
- Borkeo province
- Xiengkhuang province
- Vientiane province



- FMD control strategy and sero-surveillance activities have been focused and implemented in these provinces more than other areas of the country

- In 2012 FMD have been reported in 7 districts of 6 provinces namely:

- Champasak
 - Paksong district
- Vientiane Capital
 - Pakngeum district
- Borkeo
 - Huay-sai district
- Luangnamtha
 - Sing district
- Vientiane Capital
 - Pakngeum district)
- Phongsaly
 - Mai & Khua district

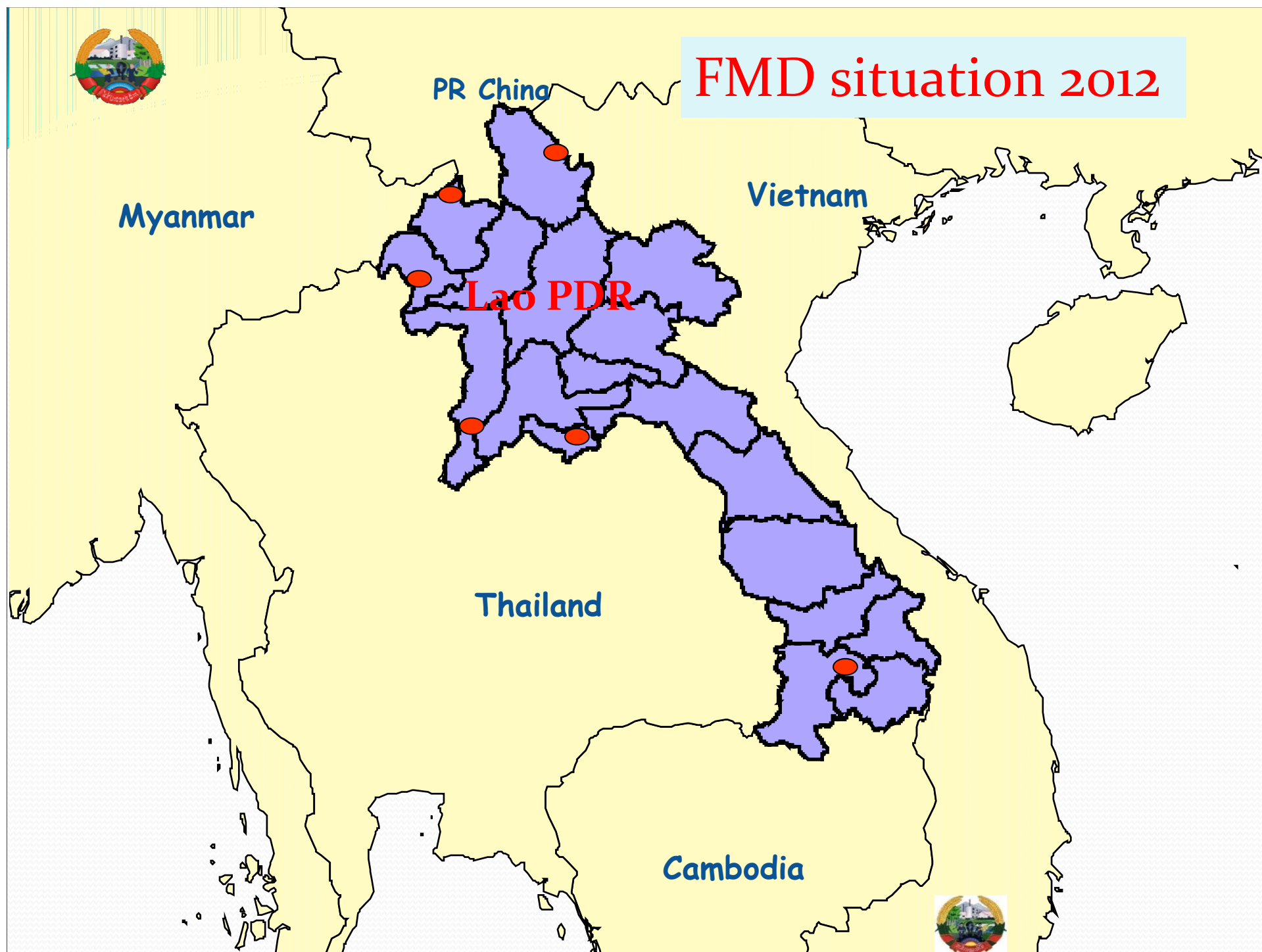
- Infected 1,448 cattle and Buffalo

➤ FMD type O





FMD situation 2012

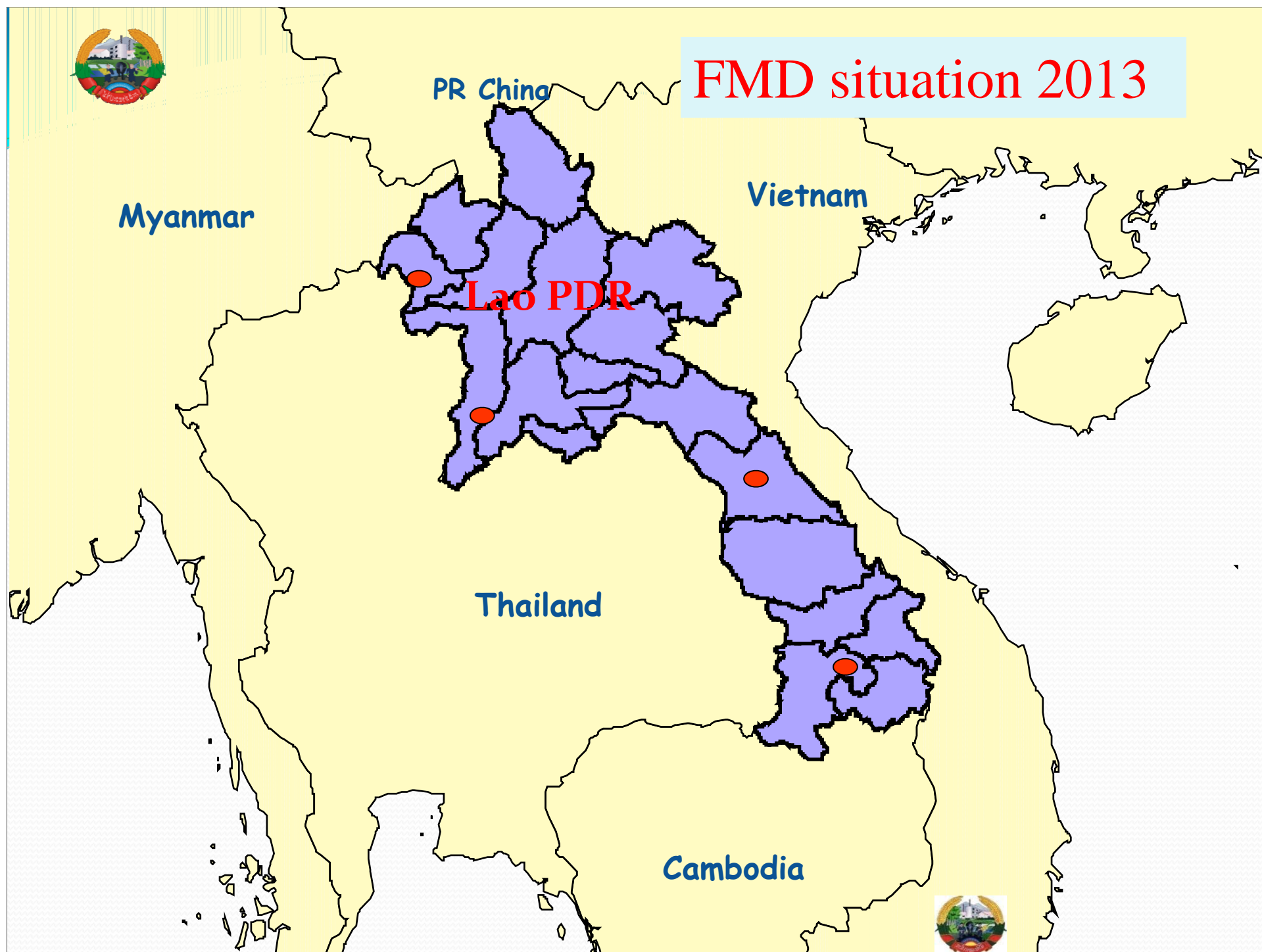


- In 2013 FMD have been reported in 5 districts of 4 provinces namely:
 - Champasak
 - Soukhumma & Champasack district
 - Khammuame
 - Yommalath district
 - Borkeo
 - Huay-sai district
 - Xayabouly
 - Parklay district
- Infected 630 cattle, 416 Buffalo
- FMD type O and A





FMD situation 2013

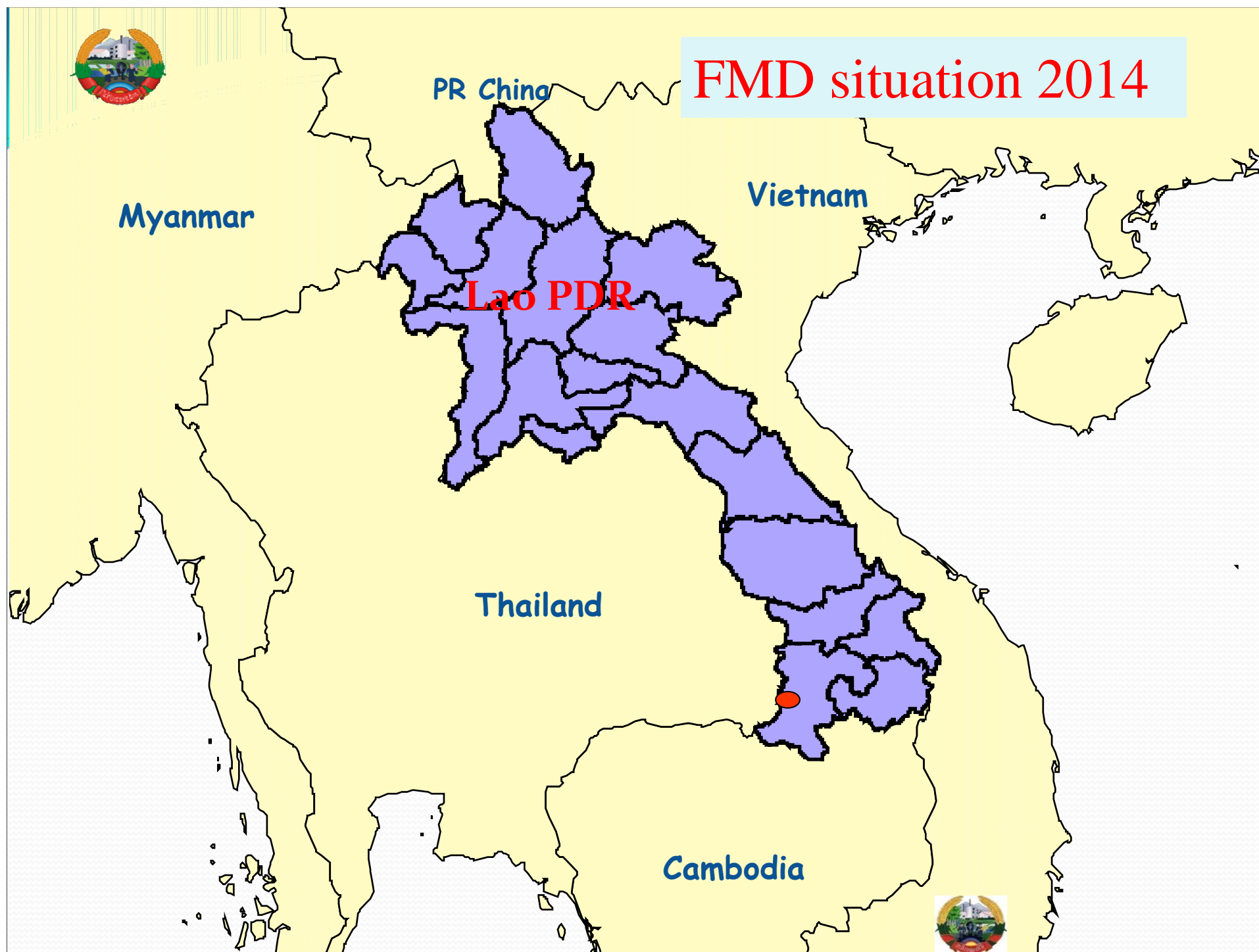


- In 2014 FMD have been reported only 1 outbreak in Champasak province
 - Soukhumma district (2 village)
 - FMD Type O



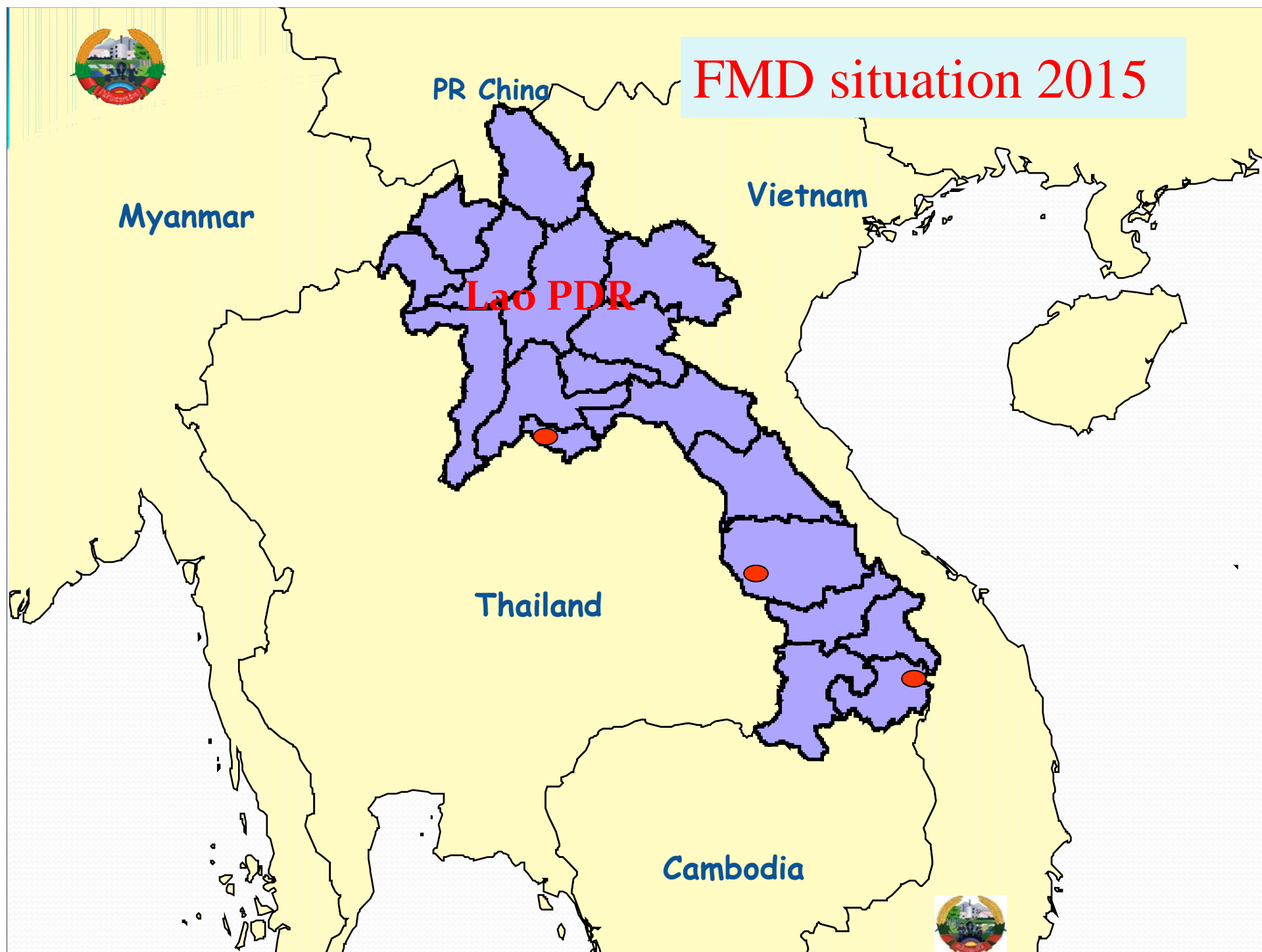


FMD situation 2014





FMD situation 2015



FMD control in Upper Mekong Zone

I. FAO/ADB-GCP/RAS/233/ASB (2010-2011)

II. OIE RCU SEACFMD

- ☐ **STANDZ/SGF/2011-01**
- ☐ **STANDZ/SGF/2012-02**
- ☐ **STANDZ/SGF/2013-03**

**❖ FMD project in Northern provinces of Lao PDR
(2014-2016)**

**III. OIE Regional representation for Asia and the Pacific and
National Animal Health Research Institute of Japan
(2012 and 2013)**

FMD Vaccine Strain

MERIAL - FMDV vaccine:

virus strain O Manisa, O-3039, A 22 Iraq , A Malaysia 97 and Asia1Shamir





Foot and Mouth Disease pilot immunization and field vaccine monitoring in Xiengkhuang province

Supported by:

- **OIE Regional representation for Asia and the Pacific and**
- **National Animal Health Research Institute of Japan**

Project target areas

Xiengkhuang province

- 1) Paek district
- 2) Kham district
- 3) Nonghad district
- 4) Khoun district
- 5) Phoukhouth district
- 6) Phaxay district
- 7) Mok district
- 8) Thathom district



Objectives

- 1) Assessing the likelihood of protection against future FMD outbreak by using FMD vaccines in a FMD hotspot areas upper Mekong control zone Lao PDR
- 2) Providing recommendations for improved management of future outbreaks in regional FMD 'hotspots'
- 3) Enhancing regional and global FMD control



Project target areas

Xiengkhuang province

- 1) Paek district
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- 4) Khoun district
- 5) Phoukhouth district
- 6) Phaxay district
- 7) Mok district
- 8) Thathom district



Summary of target villages, number of animals, number of staffs

No	District	Total villages	Animals population	Target villages	Target animals	Number of DAFO staffs involve
1	Paek	111	47,679	25	23,000	19
2	Kham	98	16,451	47	10,000	5
3	Nonghad	109	27,832	38	9,000	13
4	Khoun	52	22,030	30	8,000	15
5	Phoukhouth	42	28,642	35	19,000	13
6	Phaxay	33	12,217	18	7,000	10
7	Mok	25	13,966	20	7,000	5
8	Thathom	23	5,633	23	3,500	10
	Total	493	174,450	236	86,500	90

Feasibility study mission

- **Mission team from OIE-RR Asia-Pacific visited Laos to finalize implementation plan 17-22 June 2012**
- **Planning workshop 18 June 2012 (Xiengkhuang)**
- 1. **Dr. Kenichi Sakamoto (NIAH, Japan)**
- 2. **Dr. Takehisa Yamamoto (NIAH, Japan)**
- 3. **Dr. Chantanee Bu**



Implementation period

- **August 2012 - March 2013**
- **January 2014- April 2014**

Implementation team

- Regional Office of Department of Livestock and Fisheries
(Luang Prabang) 4 persons
- Xiengkhoung Provincial Agriculture and Forestry office
(PAFO) 12 persons
- District Agriculture and Forestry office (DAFO) - 32persons
- National Animal Health Centre (NAHC) of DLF in Vientiane- 2 persons
- Village veterinary worker (VFW, 1 person per village)
- livestock smallholder farmers



Technical support team

- Department of Livestock and Fisheries
- OIE Regional representation for Asia and the Pacific
- National Animal Health Research Institute of Japan
- OIE RCU SEA CFMD have been consulted to foster partnership and collaboration



Vaccine

- Ministry of Agriculture Forestry and Fisheries donated
in Total 400,000 doses of FMD vaccine
- Vaccine monitoring undertaking by NAHRI of Japan
and Department of Livestock and Fisheries





Prepare equipments, public awareness material and vaccines





Refreshment training

(1 October 012)



Field activities

- ❑ Conduct a pilot FMD immunization and animal identification in 8 district of Xiengkhuang provinces
- ❑ FMV vaccine serology study conducting in 2 village Kham district
(to analyze the efficiency of FMD vaccine by LPB ELISA and Neutralization test)

Blood Collection Team



(OISHI)





Vaccination and Animal identification team



(Beer Lao)









Outcome

- Reduction in outbreaks in Northern Lao PDR
- Not outbreak of FMD in Xiengkhuang province since 2012
- Capacity building for local staff / on-the job refresher training
- Establishment of functional communication with stakeholders
- Demonstrating a good collaboration and friendship



Acknowledgment

- OIE RR Japan trust Fund
- **Ministry of Agriculture Forestry and Fisheries of Japan**
- **National Animal Health Research Institute of Japan (NAHRI)**



Thank you