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OIE Project Officer

Regional FMD situation and activities to improve surveillance

SEACFMD Joint LabNet-EpiNet Meeting
23 February 2021

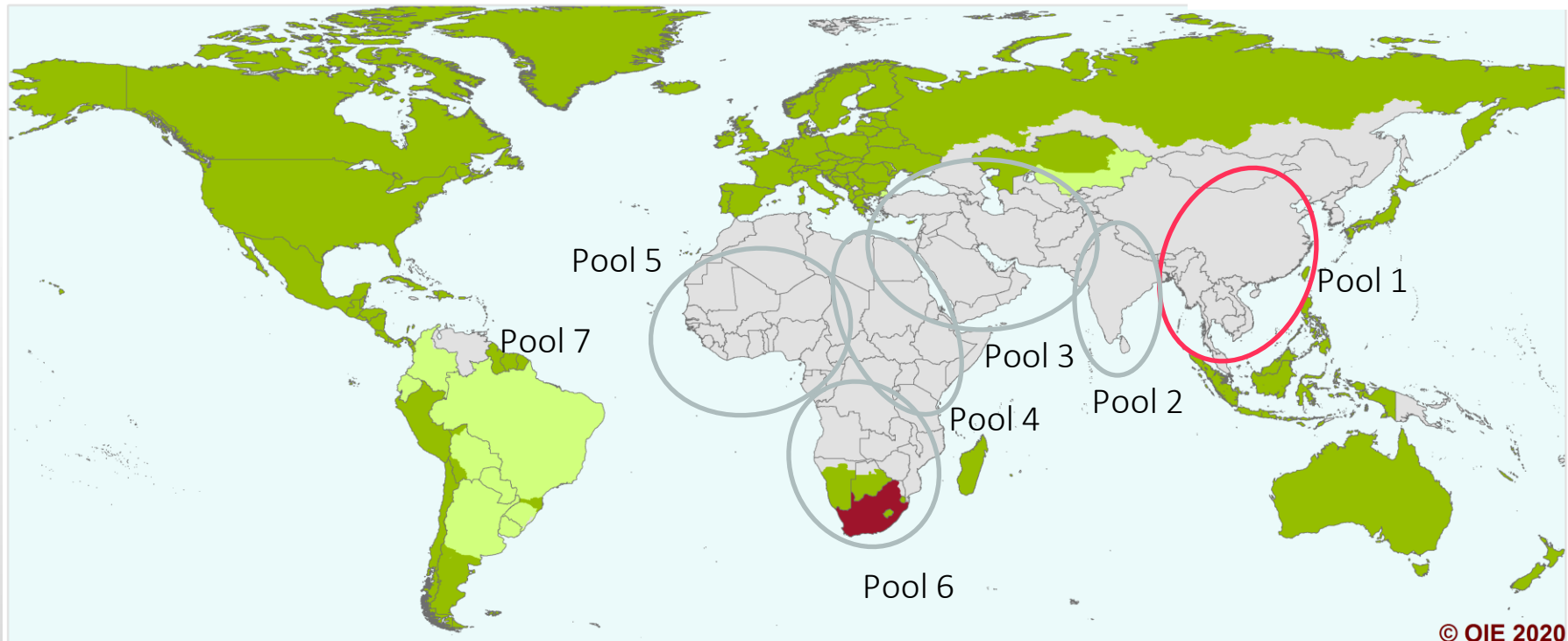


OIE Global status

- O/Mya-98
- O/PanAsia
- O/Ind-2001
- O/Cathay
- A/SEA-97
- Asia 1

OIE Members' official FMD status map

Last update June 2020

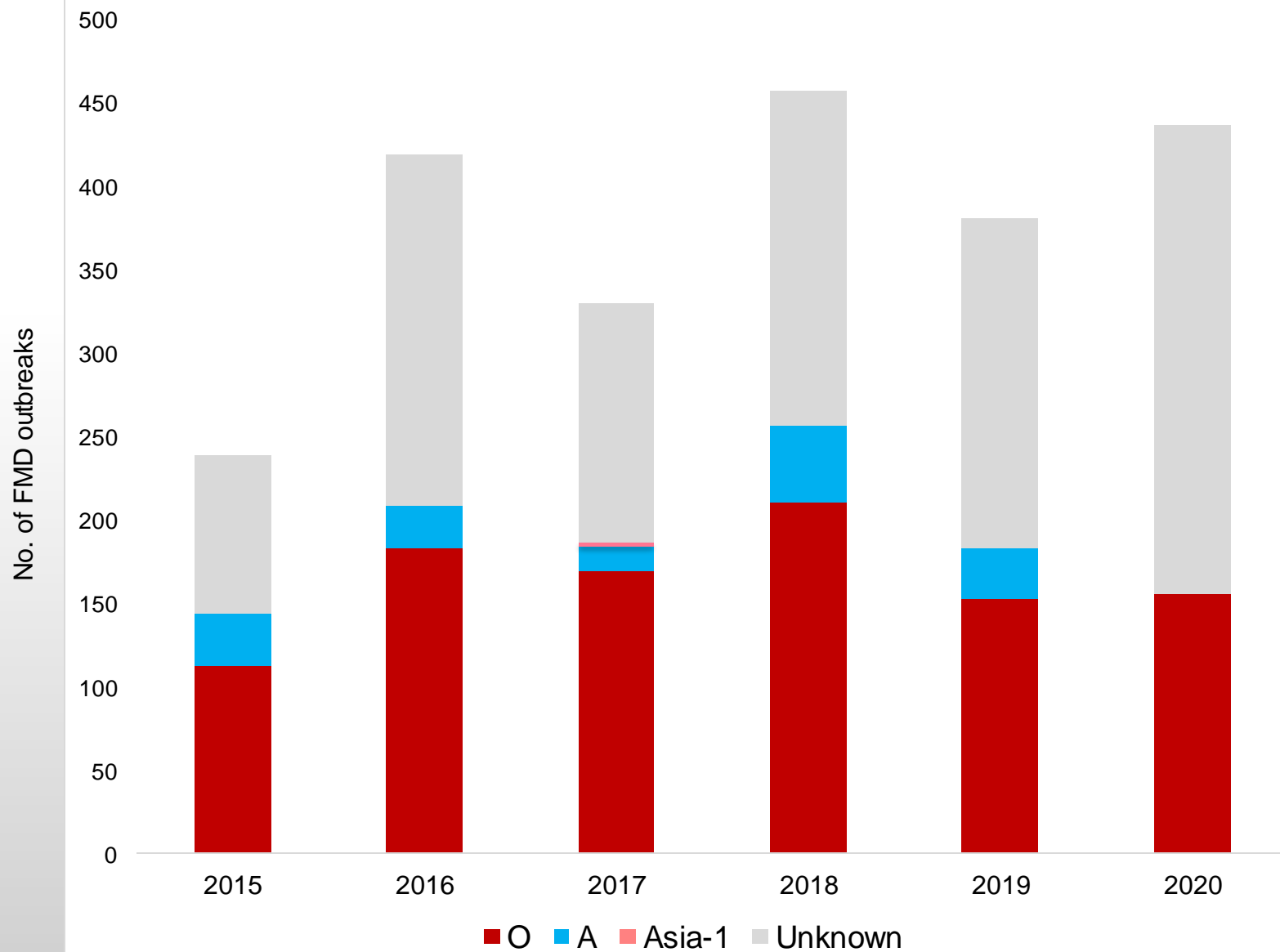


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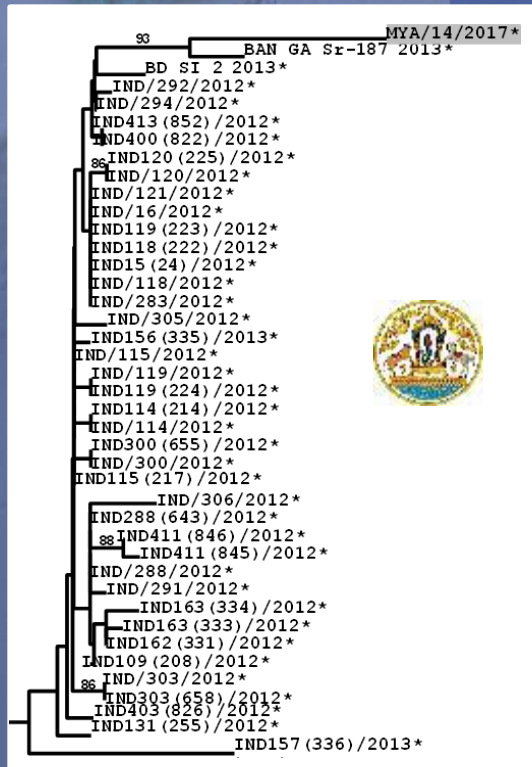
- Members and zones recognised as free from FMD without vaccination
- Members and zones recognised as free from FMD with vaccination

- Suspension of FMD free status
- Countries and zones without an OIE official status for FMD

Reported FMD outbreaks in SEACFMD

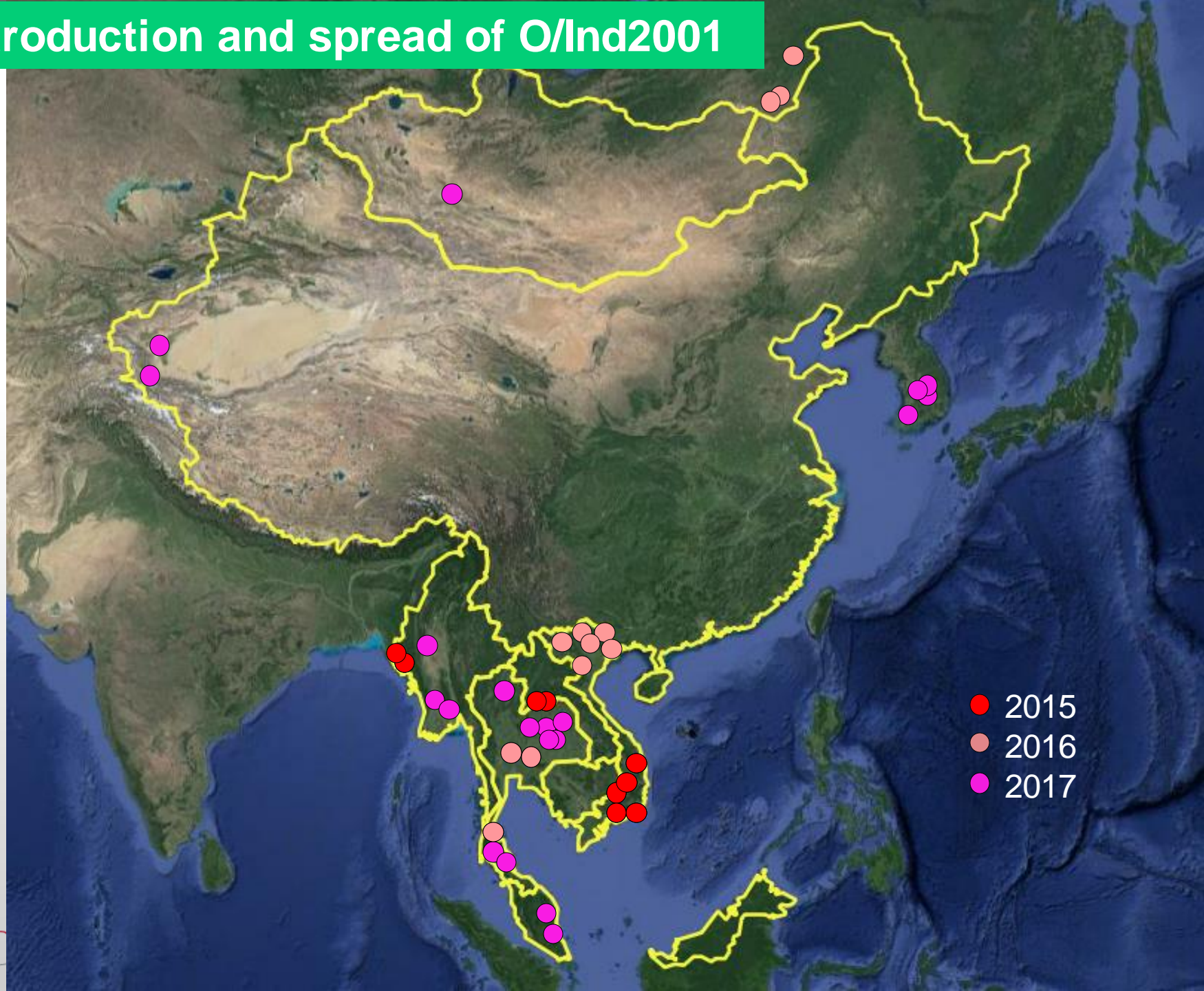


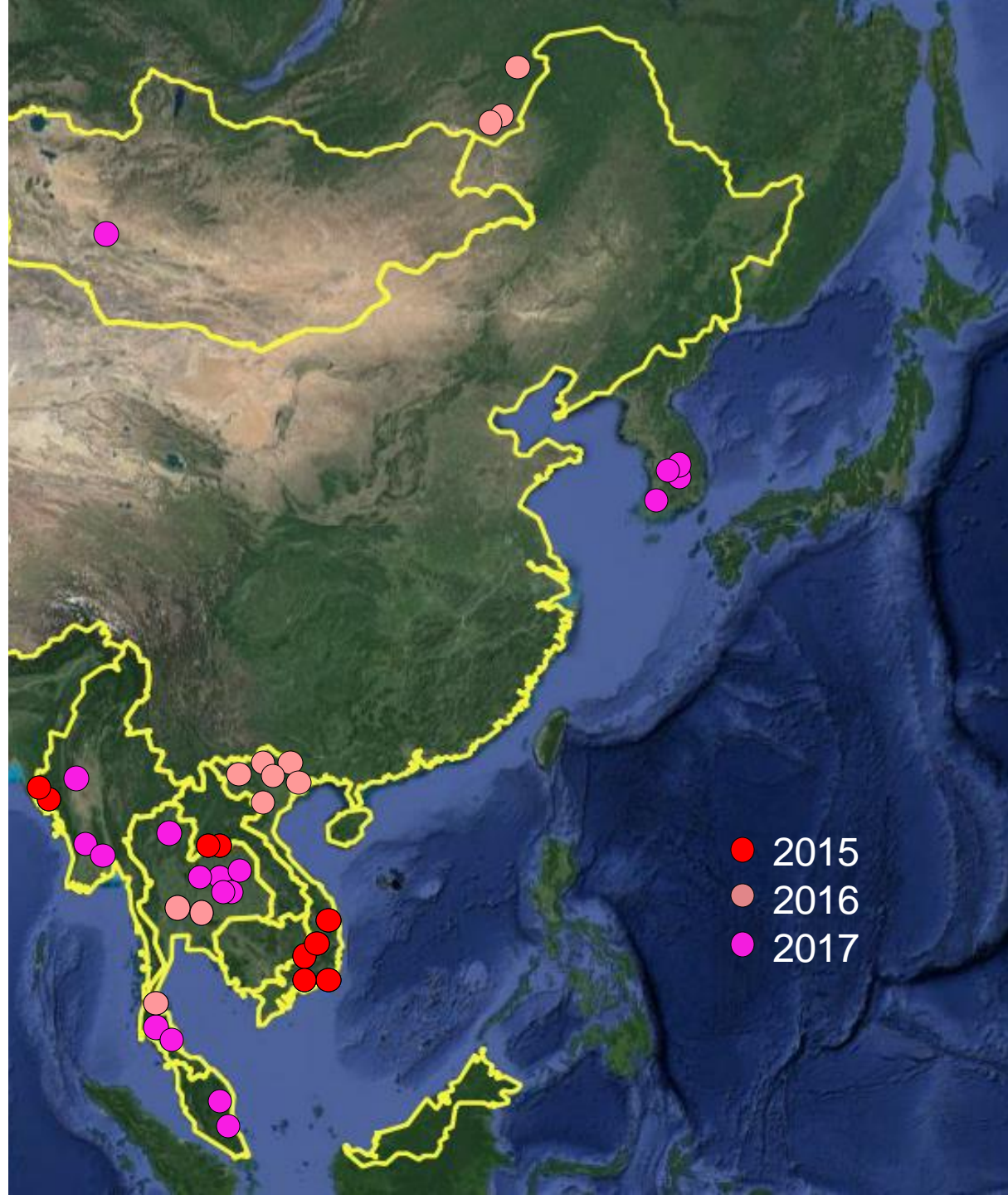
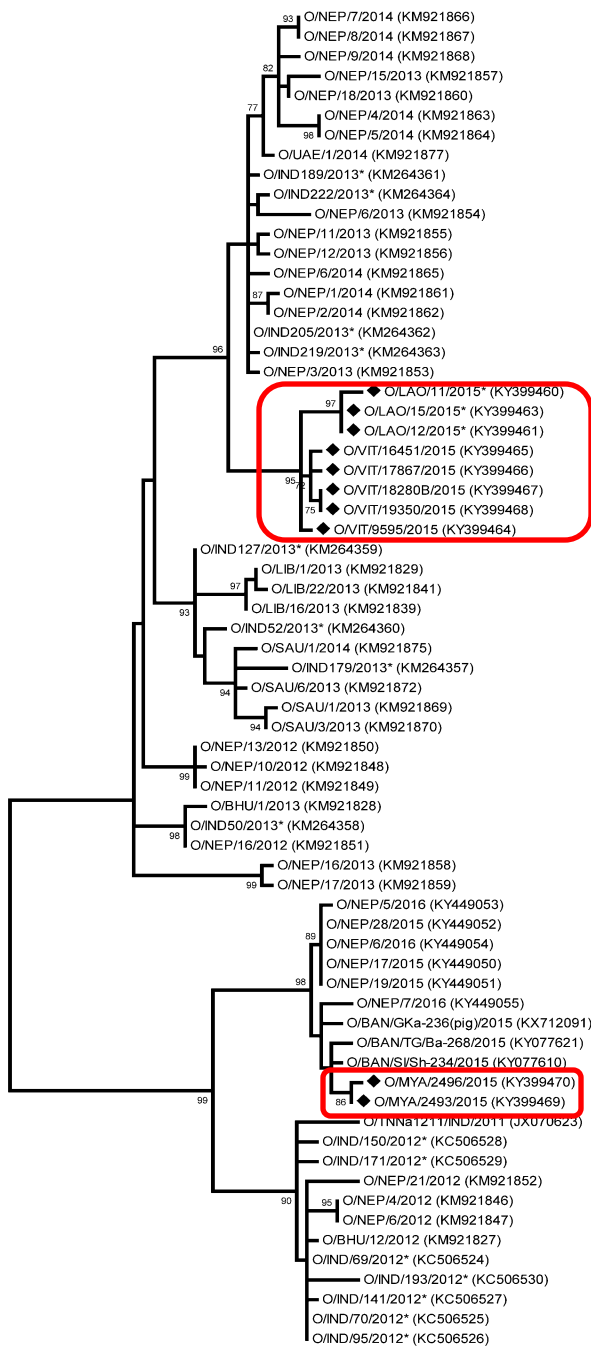
Serotype Asia 1 in Myanmar in January 2017



No further Asia 1 outbreaks reported so far

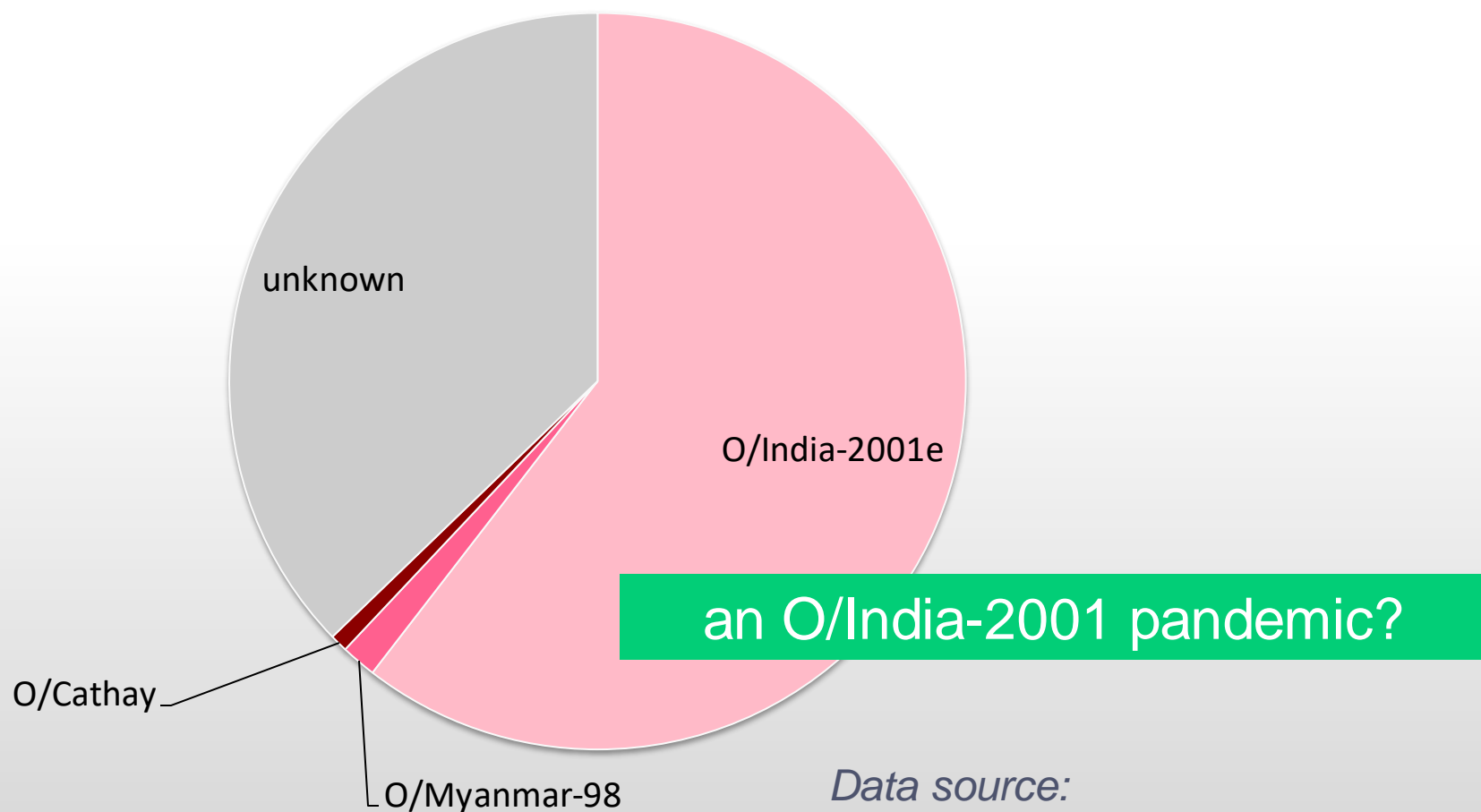
Introduction and spread of O/Ind2001





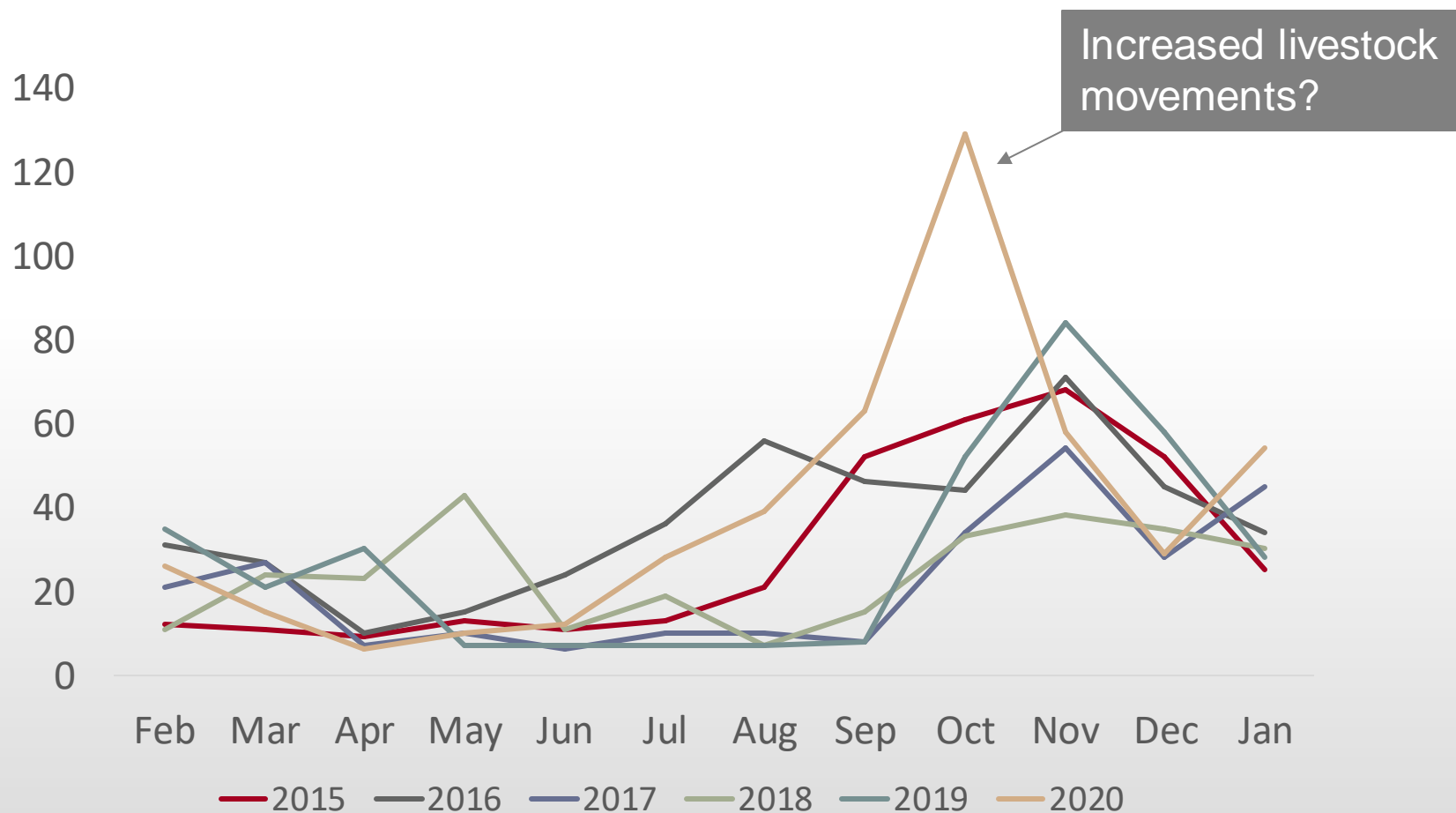
● 2015
● 2016
● 2017

FMDV genotyping, 2020



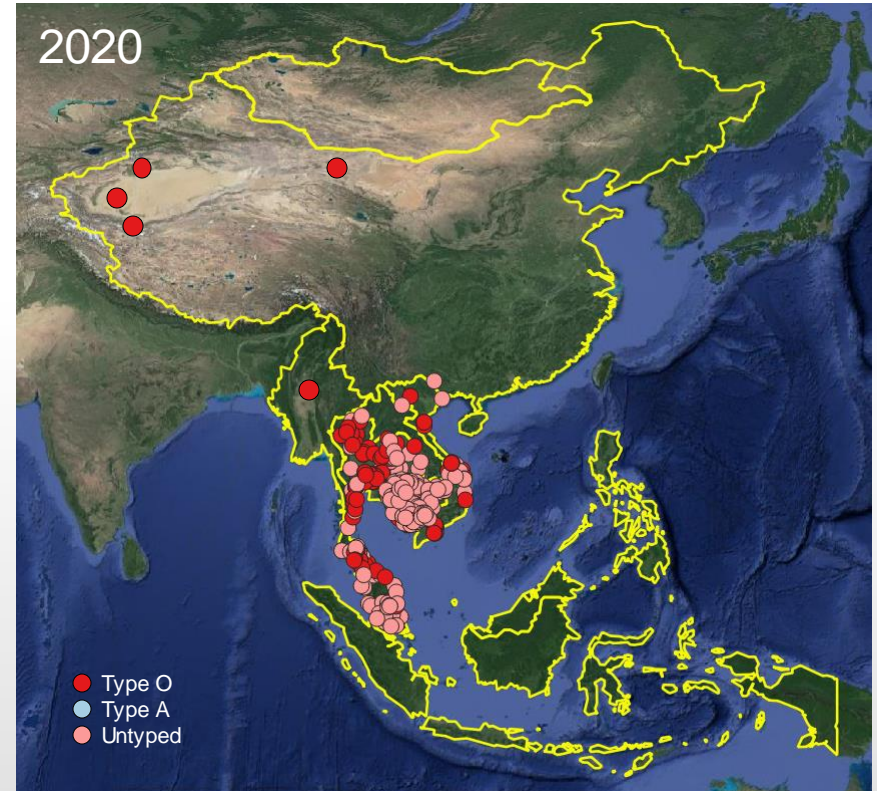
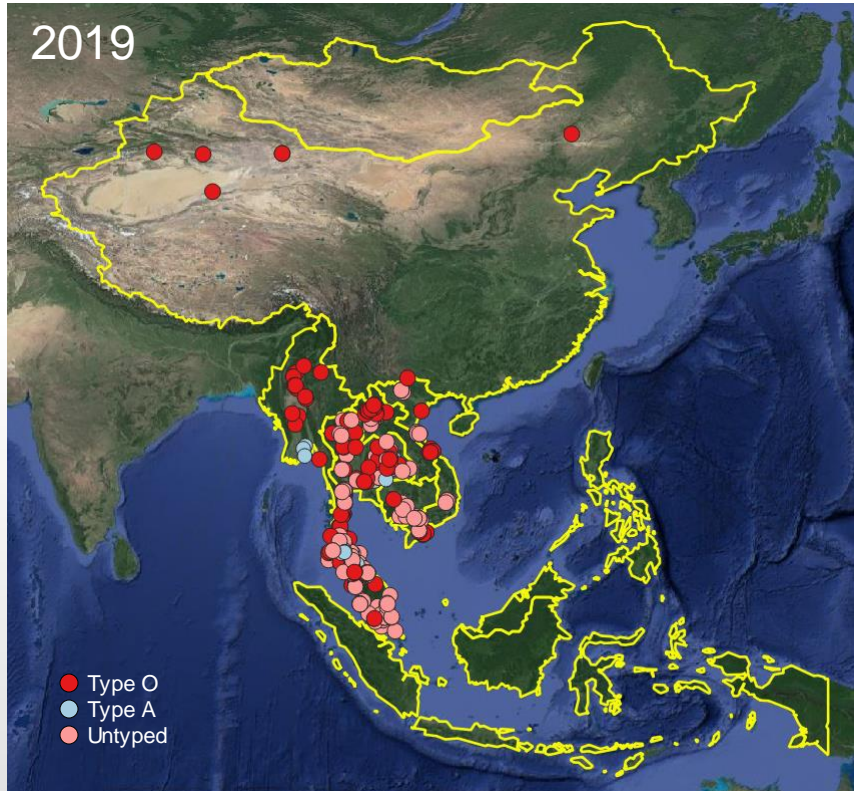
Data source:
*Lanzhou vet res institute, **China***
*Regional ref lab FMD, **Thailand***

Seasonal pattern of FMD outbreaks



Increased FMD outbreaks from September to November

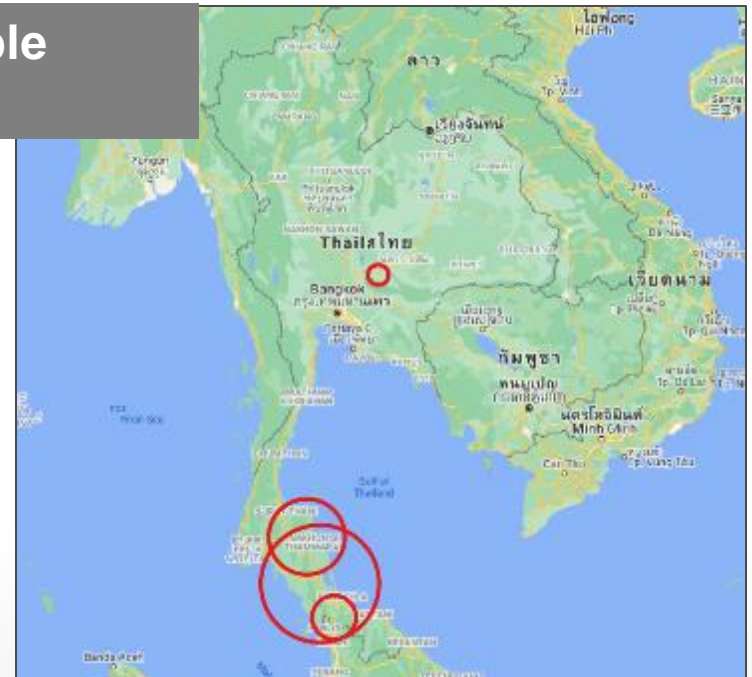
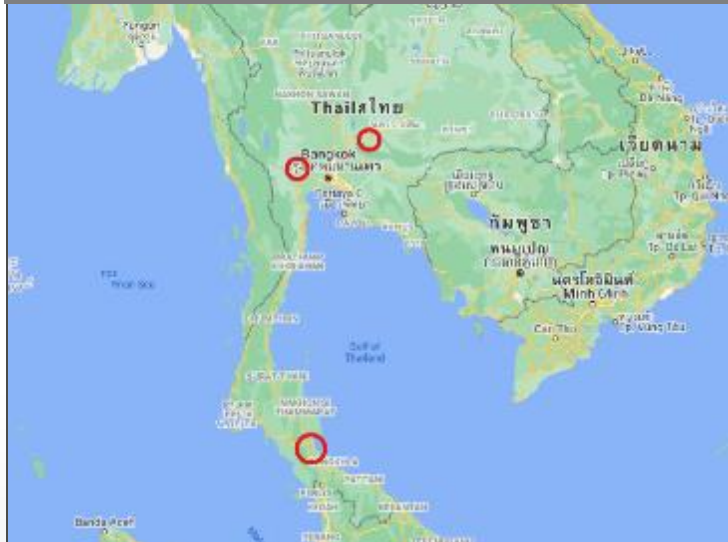
Spatial pattern of FMD outbreaks



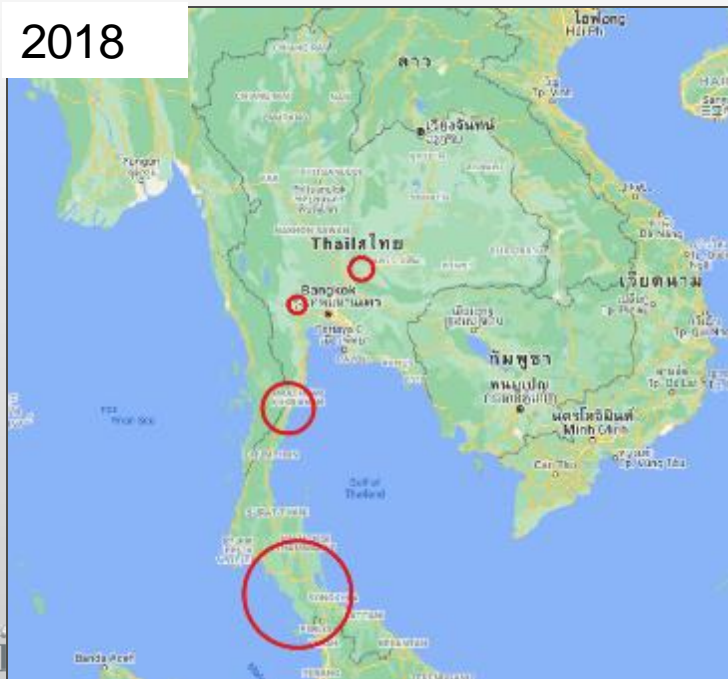
Some persistent FMD hotspots identified

FMD hotspot analysis – Thailand example

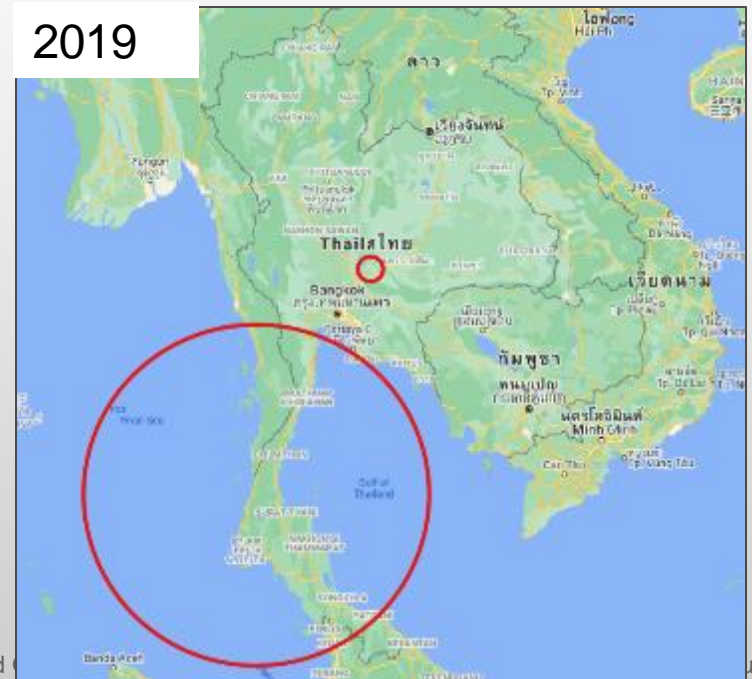
Poisson Model, clusters with $p < 0.05$



2018



2019





How to improve FMDV molecular epidemiological investigation



Surveillance



Reporting



Sampling



Lab diagnosis

OIE study to have a better understanding of farmers' and CAHWs' incentives on FMD reporting





How to improve FMDV molecular epidemiological investigation



Surveillance



Reporting



Sampling



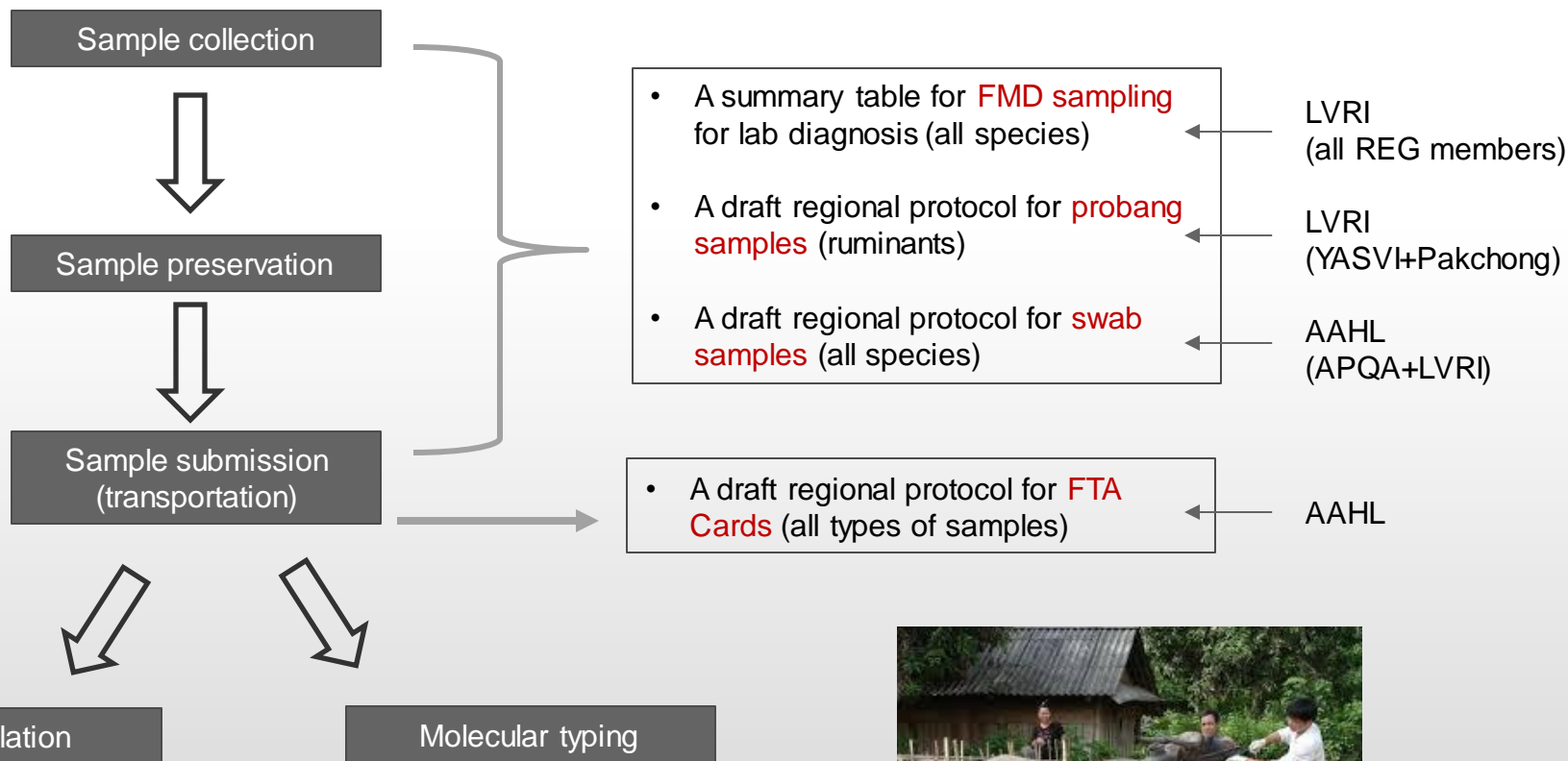
Lab diagnosis

Establishment of FMD Laboratory Regional Expert Group



1st REG-FMD meeting, 14 – 16 May 2019, Bangkok Thailand

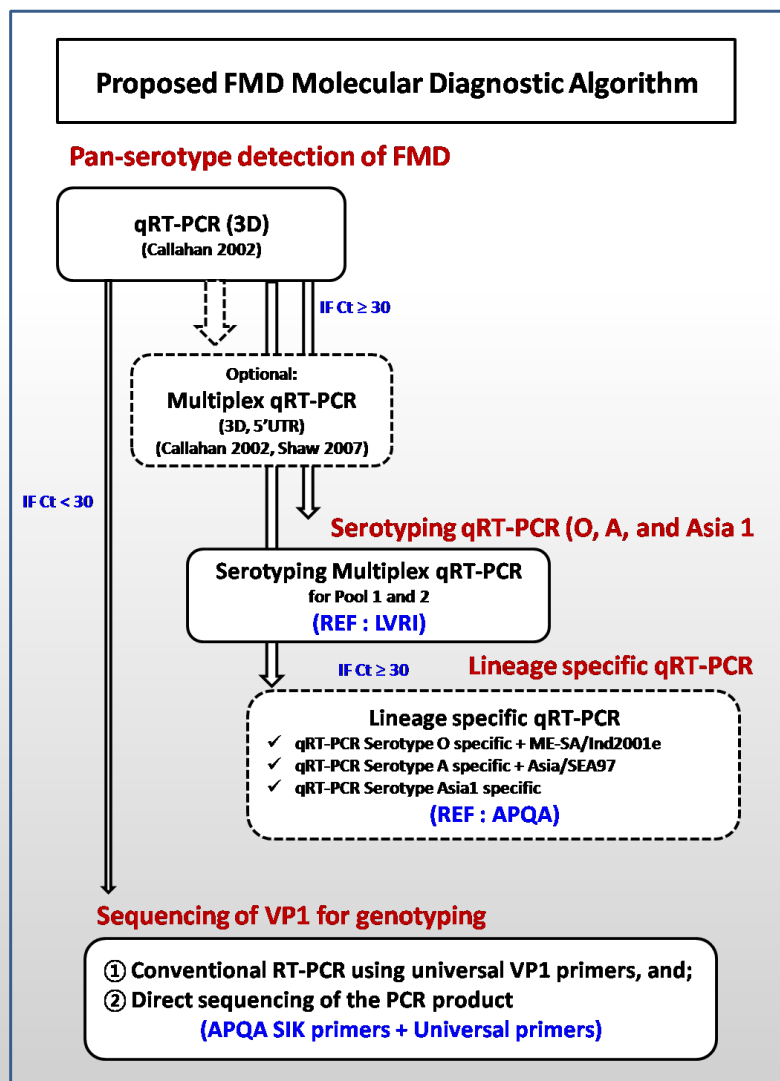
Development of FMD field sampling SOPs to improve lab diagnosis yields



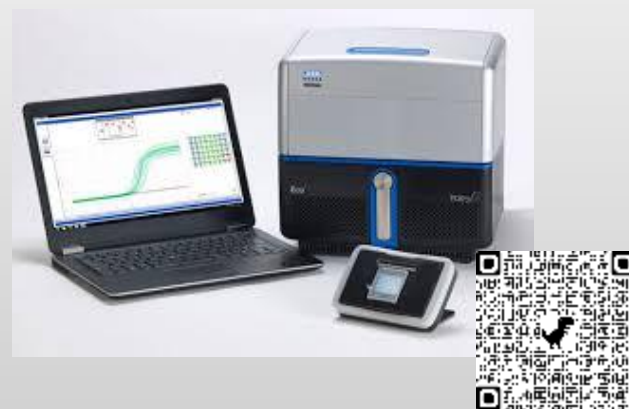
Agree not to explore a regional technical guideline on cell culture and VI

Discussed at Session 1

FMD Molecular Diagnostic Scheme to allow rapid virus identification and characterization

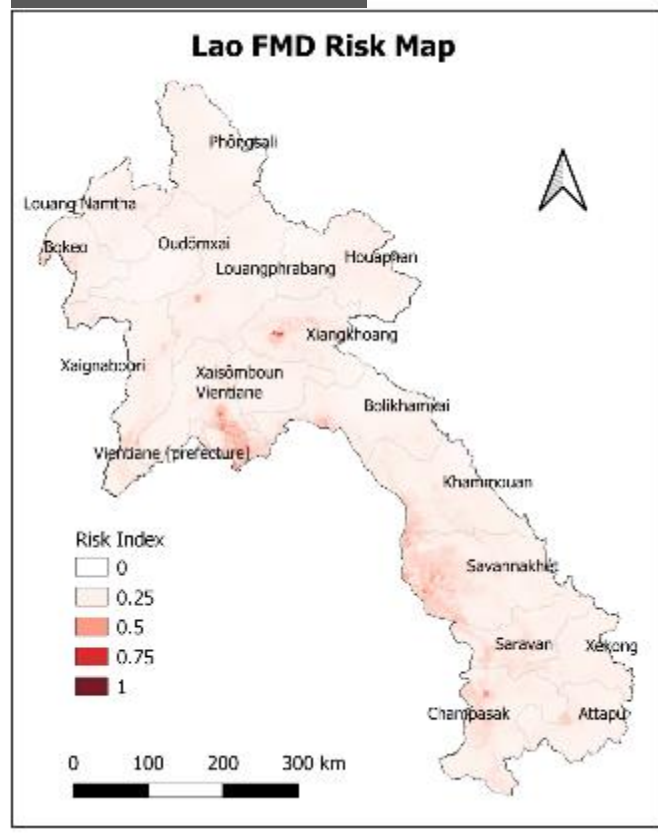


Rapid FMDV serotyping and genotyping within **2 days** based on real-time RT-PCR



Epidemiological tools to improve surveillance

Spatial analysis



TOT on outbreak investigation

stream

Training of Trainers on Outbreak Investigation and Response

Dashboard / My course / Training of Trainers on Outbreak Investigation and Response

Trainers Team

Prof. Carl Heuer
Email: c.heuer@maes.ac.be

Welcome message

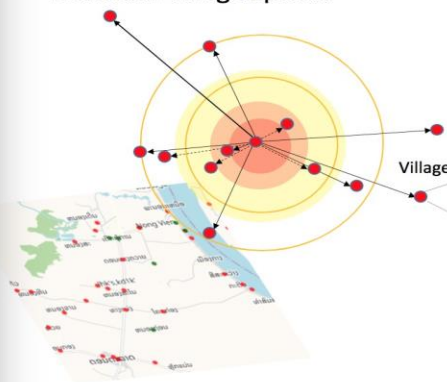
Workshop Schedule

What is the Course organized?
This course will be available for the next five weeks. We will be focusing on a different topic each week.

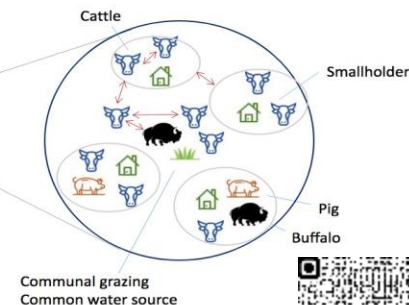
Disease Modeling

InterSpread Plus model design

• Between-village spread



• Within-village spread



THANKS FOR YOUR ATTENTION!



Fit-for-purpose FMD serological tests

2nd REG-FMD meeting, 31 Oct -1 Nov, Bangkok Thailand



When to use? How to use? How to interpret?

- Non-structural protein (NSP) antibody detection tests
- Structural protein antibody detection tests (SP tests):
 - Virus neutralization test
 - Solid-phase competitive ELISA (SPCE)
 - Liquid phase blocking ELISA



Spatial pattern of FMD outbreaks

