











#### **Sith Premashthira**

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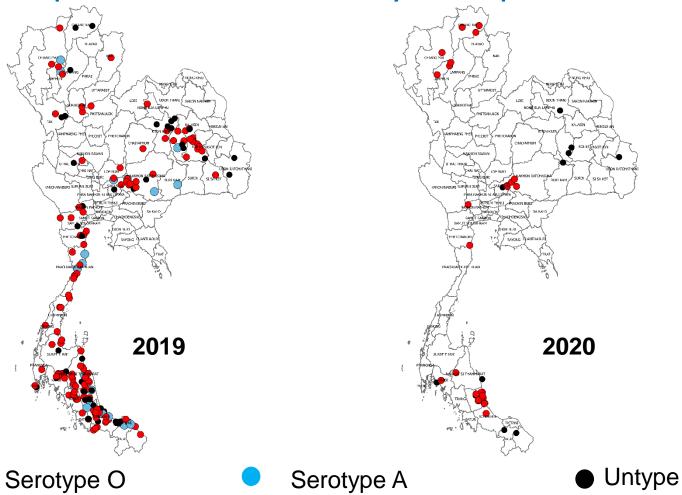






### **FMD Situation**

### **Spatial distribution from January 2019 - April 2020**



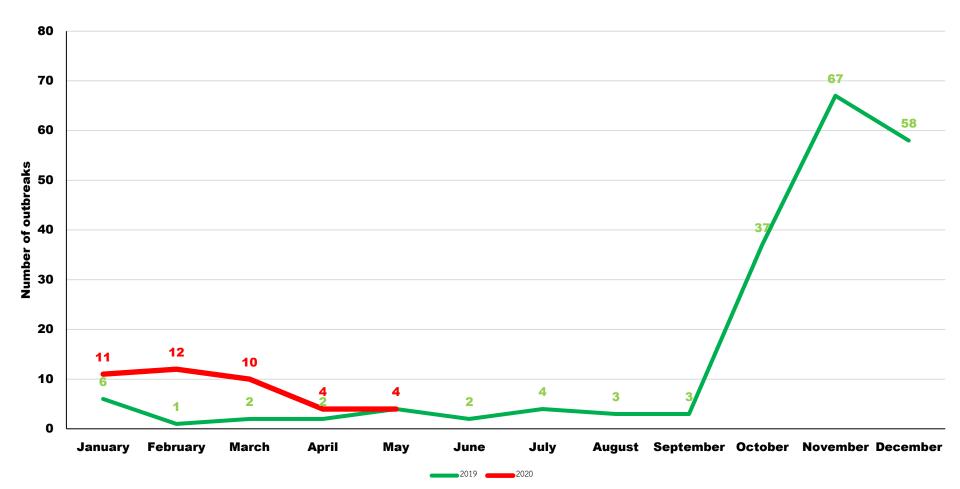






### **FMD Situation**

### **Temporal distribution from Jan 2019- April 2020**









## FMD outbreaks by serotypes/genotypes

Year	<b>2019</b> (No. of outbreaks)	<b>2020</b> (No. of outbreaks)	Remarks  (e.g. is there clustering; reported first time in the country or part of the country, etc.)
Serotype O	114	27	
• Mya/98	-	-	
• India/2001/d	-	-	
• India/2001/e	39	19	
• PanAsia	4	-	
<ul> <li>Cathay</li> </ul>	-		
Serotype A	22	-	
Serotype Asia 1	-	-	
Untyped	47	11	







# 5-year FMD trends (2015-2019)

- Historical FMD outbreaks data from 2015-2019
  - The trend is persistent with the highest number of outbreaks in the last trimester of the year.
  - The area with the highest density of outbreaks was in the south where there are high number of beef cattle and frequent animal movement throughout the year.
  - Due to the issuance of internal performance indicator regarding FMD control and report for Provincial livestock officers in the past few years, the number of disease reporting especially in Northeastern was increased compared to other area.
  - O/Mya 98 was decreasing and it seems to have been gradually replaced by O/Ind2001e with sporadic cases of O/PanAsia.

#### • Data Limitations

- Vaccination history and underlying health conditions of infected animals
- History on animal movement especially the origin of the infected animals
- Virulence of FMDV in the past 5 years in Thailand

#### Further Analysis

- The study on the influence of changing in vaccination campaign on FMD Outbreak between October and December
- The relationship between underlying health condition and immunity against FMD in each previous FMD outbreak → Targeted data and sample collection divided into 2 groups for beef and dairy cattle
- Animal testing for FMDV virulence on existing collected wild type virus







## 5-year FMD trends (2015-2019)

- Needed technical support from OIE
  - Modelling on FMD domestic transmission regarding animal movement
  - Network analysis on illegal animal movement
  - Study on small ruminant movement and their role on FMD transmission in Thailand
- Method of data collection (e.g. participatory retrospective data collection at subnational level, etc.)
  - Participatory retrospective data collection in provincial level
  - Online questionnaire for livestock officers and/or livestock cooperatives
- Future plans to improve FMD data collection and analysis
  - Improve the existing database: e-Smart Surveillance in 2021
    - Data sharing between databases
    - Improve the exportation of output for further data analysis
  - Develop the database and disease control & reporting manual specifically for FMD
  - Establishment of a working group to specifically and closely monitor the data input for each FMD outbreak







## **Impact of COVID-19 on FMD Activities**

impact of covid-13 of Five Activities					
Activities	Positive Impact	Negative Impact			
- Curfew and restriction on the establishment of movement control check points	<ul> <li>The police and military officers could support the local DLD officers when they tighten their inspection during the curfew. → Less illegal and legal movement</li> </ul>	<ul> <li>The strategy during the FMD outbreak has been changed to establishment of mobile unit. How ever, it may not be able to survey the entire area especially during the night time due to the curfew.</li> </ul>			
- Social Distancing	<ul> <li>Closing of fresh market and higher demand on premium-grade beef in the supermarket/ delivery industry → higher opportunity for beef from standard farms and FMD-free farms to enter the food chain.</li> </ul>	<ul> <li>Less public awareness activities and capacity building/simulation exercises → Online PR?</li> <li>Closing of public facilities especially livestock markets and bullfighting arena → less legal activities and higher illegal activities? (especially trading via social media, so the amendment on legislations regarding this type of livestock trade might be needed to prevent the spread of FMD.)</li> </ul>			
- Restriction on international livestock trade	- Restriction on international livestock trade now → lower risk of FMD in the short run	- Restriction on international trade now and economic recession in the future might cause the higher influx of cheaper beef cattle and beef product from neighboring country in the long run → higher risk of FMD in ASEAN. → Need more collaboration			