

## Oral Presentation (JSPS-1)

### Overview of Foot and Mouth Disease Control in Thailand and Southeast Asia

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#### INTRODUCTION

Foot and mouth disease (FMD) is endemic in many countries of Africa, the Middle East and Asia, and FMD-free countries face greater risk of incursions due to increased global movement and trade of livestock and animal [1]. In the Southeast Asia and China (SEACFMD) roadmap, the framework supports member countries to consider and improve their Progressive Control Pathway (PCP-FMD) stages (0-5) of FMD control and applies the FMD Official Control Programme recognized by OIE (World Organisation for Animal Health).

#### FOOT AND MOUTH DISEASE IN THAILAND AND SOUTHEAST ASIA

- Thailand is FMD endemic country. FMD outbreaks occur in all part of Thailand except FMD free zone established in eastern region. In 2017, there were 126 FMD outbreaks reported.
- FMD remains endemic in most of South-East Asia. Only Brunei Darussalam, Singapore, Indonesia, the Philippines, and East Malaysia are free of the disease [1].
- FMD in the mainland Southeast Asia is due to several factors, including waning immunity from previous outbreaks and/or antigenic drift of the circulating FMD.
- In the region, 330 outbreaks (including China and Mongolia) were reported in 2017.
- The endemic serotypes found in the region are serotype O and A in virus pool 1. Epidemiological studies have detected shifts in serotype dominance between Type O and Type A viruses in China, Thailand, and Vietnam.
- There are evidences of transpool FMD virus spreading from other region such as O Ind2001d in Laos, Vietnam, Myanmar and Thailand and Asia-1 Asia G-VIII in Myanmar.
- The main affected species in 2017 were cattle (66%) and buffaloes (14%). The rest was sheep, goats, and pigs (8, 7 and 5 percent respectively).
- Animal movement in the region plays potential role for FMD spread. The animal movement study found significant and recent changes in the movement pathways of large ruminants in

the region, with a notable shift towards strong markets in China [2].

#### FOOT AND MOUTH DISEASE CONTROL IN THAILAND

- The current version of National FMD strategic plan is for the year 2016-2023.
- FMD Official Control Programme of Thailand has recognized by OIE in 2016.
- There are 4 FMD zones set up in order to control the disease specifically for different epidemiological factors and for their success opportunity to eradicate FMD. The eastern region has the first priority to establish FMD free zone.
- Mass vaccination has been doing in target regions 2-3 rounds per year. Vaccination campaign for ruminant is fully supported by government. Pig farms are supported by subsidy reasonable price vaccine produced by DLD.
- Clinical, serological and border surveillance have been continuously conducted.
- About the compartmentalization initiative, as part of the requirements, risk assessment in pilot pig farms are in progress to the extent of identifying all the potential pathways and mitigation measures to control all the critical points.
- Livestock News, pamphlets, DLD website, infographic, video clips and face-to-face meeting are media to communicate with farmers and stake holders to aware FMD.
- DLD initiated biosecurity requirements for small holder farms so called as GFM or Good farming management which can be easily implemented to prevent the introduction of diseases such as FMD. In order to encourage farmers to fully participate this biosecurity scheme; incentives were also emphasized for the sustainability and the benefit for farmers.

#### FOOT AND MOUTH DISEASE CONTROL IN SOUTHEAST ASIA

- The SEACFMD national coordinators noted the progress of SEACFMD members in

implementing their FMD control and prevention activities.

- The goals for SEACFMD campaign in current phase (phase 5, 2016-2020) are to 1) Decrease FMD prevalence in South-East Asia and China, expand disease-free zones, and maintain FMD freedom in countries and zones that have attained that status, 2) Strengthen national Veterinary Services and 3) Enhance regional cooperation in policy and capacity development [1].
- Technical issues in SEACFMD strategic framework to control FMD are surveillance, biosecurity and vaccination.
- There are some implementation pilot FMD controls in selected areas in the region, for example in Laos and Myanmar, funded by the New Zealand government.
- SEACFMD encourages members to submit field isolates of FMDV to the OIE Reference Laboratories for antigenic characterization to support vaccine strain selection. In Southeast Asia, OIE Regional Reference Laboratory is located at Pakchong, Thailand.

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#### **REFERENCES**

- [1] OIE South-East Asia and China for Foot and Mouth Disease (SEACFMD) Campaign. 2016. SEACFMD Roadmap: a strategic framework to control, prevent and eradicate foot and mouth disease in Southeast Asia and China 2016-2020.
- [2] Smith P, Lüthi LN, Huachun L, Oo KN, Phonvisay A, Premashthira S, Abila R, Widders P, Kukreja K and Miller C. Movement pathways and market chains of large ruminants in the Greater Mekong Sub-region. World Organisation for Animal Health, funded by the government of PR China and Australian STANDZ INITIATIVE. 2016. Available at [www.rr-asia.oie.int/fileadmin/SRR\\_Activities/documents/movement.pdf](http://www.rr-asia.oie.int/fileadmin/SRR_Activities/documents/movement.pdf)