

Preliminary Outbreak Assessment

Foot and Mouth Disease in South-East Asia

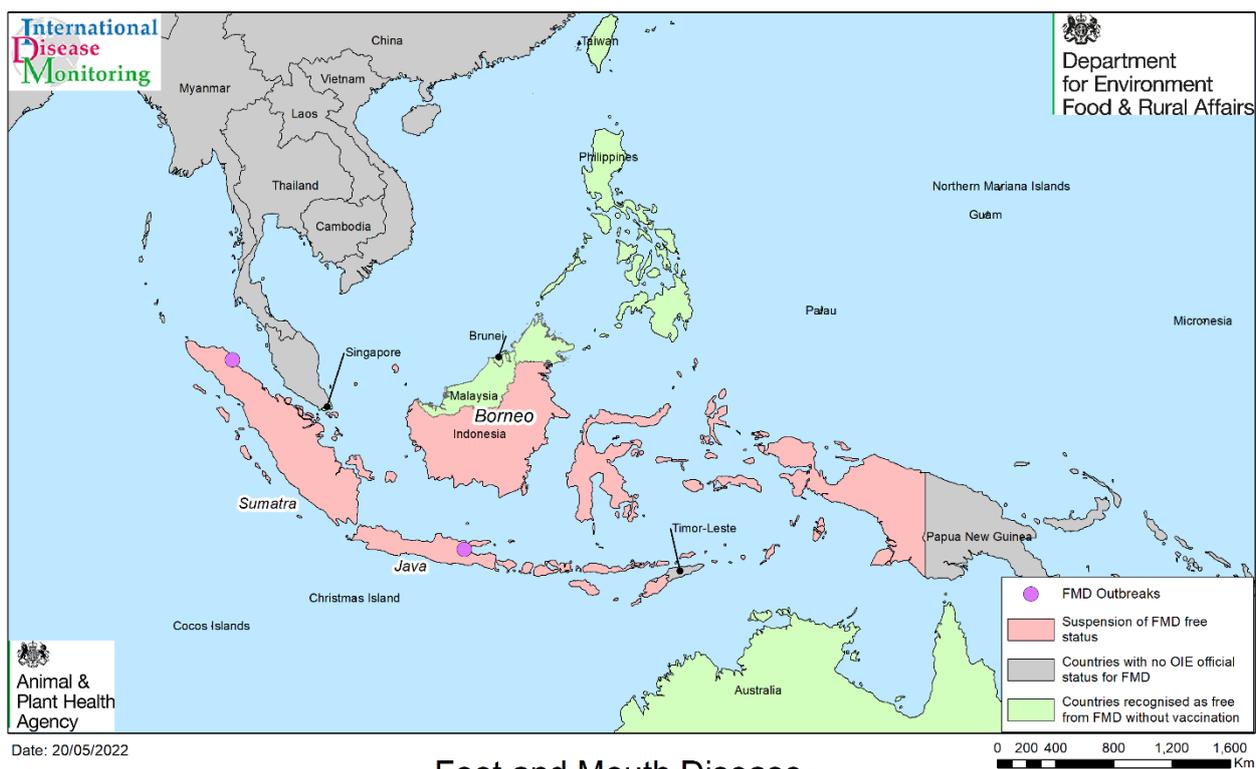
18 May 2022

Ref: VITT/1200 FMD in south-east Asia

Disease Report

The Ministry of Agriculture for Indonesia have reported outbreaks of foot and mouth disease (FMD) serotype O in two provinces on the islands of Sumatra and Java (Figure 1). The last reported outbreak of FMD in Indonesia was in 1983 (OIE, 2022).

Figure 1: Map of OIE FMD country status and OIE reports of FMD in South-East Asia between June 2021 and May 2022. There have multiple outbreaks at each OIE report location. Note that while China and India are not FMD-free, both countries have OIE endorsed official control programs for FMD.



Foot and Mouth Disease
June 2021 - May 2022
(OIE Data Only)

The first suspected outbreaks of FMD occurred in cattle on village premises in the northern and western suburbs of Surabaya, and disease was reported on 28 April 2022, with further cases reported on 1 May and 3 May (OIE, 2022). This was the first report to OIE of FMD in

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the region, although it is endemic in neighbouring countries in mainland South-East Asia (Figure 1). Initial clinical cases were diagnosed as bovine ephemeral fever and were treated unsuccessfully before further disease spread and mortalities were observed, and so it is suspected that FMD could have been spreading in cattle on Java since mid-April (OIE, 2022). Surabaya is the second-largest city in Indonesia. The diagnosis was reported to the OIE on 9 May. FMD viral sequence data has been exchanged with the OIE and FAO World Reference Laboratory for Foot-and-Mouth Disease in the United Kingdom (Pirbright Institute), confirming the presence of serotype O (O/ME-SA/Ind-2001e lineage).

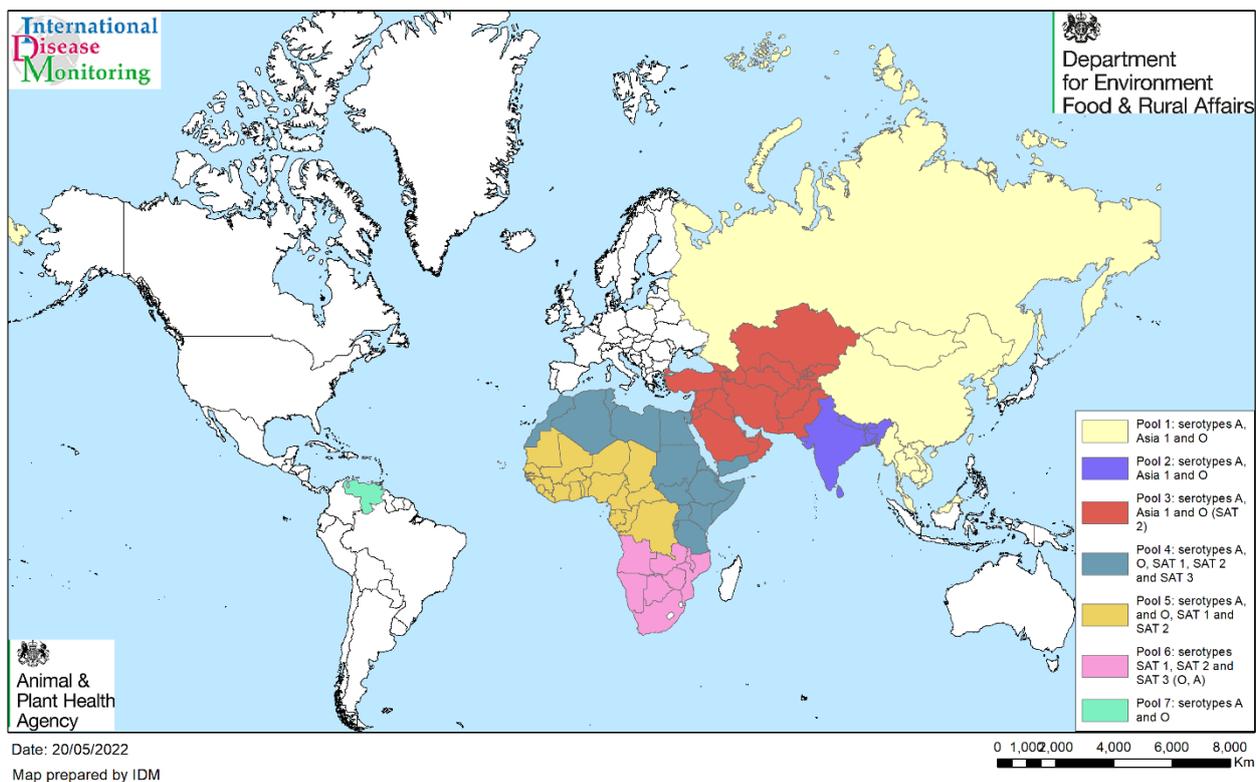
Situation Assessment

To 11 May 2022, cattle in four districts of the East Java province (Java) and two districts in Aceh province (Sumatra) have been affected by FMD. There are reports of 79 outbreaks in East Java and one in Aceh (OIE, 2022). The distance between the two affected regions is approximately 2,100km (1,300 miles). The source of the outbreak is suspected to be illegal imports of live animals (OIE, 2022; Fitzgerald and Long, 2022). In addition, the emergence of FMD has coincided with annual large movements of people and animals in Indonesia during the Lebaran holiday period, which may be a concern for onward spread of disease. There have also been media reports of FMD outbreaks in West Kalimantan on the island of Borneo (VOI, 2022).

While the OIE immediate notification reports around 3,500 affected animals, data from the Indonesian Ministry states that over 2,200 animals have been affected in Aceh, with one death as of 11 May 2022, and 3,200 animals have been affected in East Java with a 1.5% death rate (Aditya and Kenzu, 2022; ProMed, 2022). Targeted slaughter will form part of the control strategy, but vaccination will be the main control measure taken. A task force has been established to control cattle movements in affected areas, and to distribute veterinary medicines, including imported FMD vaccines. Since the virus has been identified as being serotype O, the manufacture of a vaccine in Indonesia is under way (Emeria, 2022) and discussions are also underway to explore opportunities to import vaccines from international suppliers. The annual population of cattle in Indonesia across all islands is estimated to be 18 million, the population of goats is over 19 million, and the population of pigs is estimated at 9 million (Statista, 2020).

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Figure 2: Map showing endemic Pools of foot-and-mouth disease where FMD virus genotypes circulate independently. Countries are highlighted where at least some territory is considered to be within an Endemic Pool, although parts of some countries may have OIE-free status with or without vaccination, for example Russia. For more information about OIE status see <https://www.oie.int/app/uploads/2022/05/fmd-world-eng-indonesia-06-05-2022.png>



**Distribution of Endemic Viral Pools of Foot and Mouth Disease
(Correct as of May 2022)**

The global distribution of FMD can be divided into seven endemic Pools (Figure 2) which represent regions where specific FMD viral lineages are maintained (FAO, 2021). Although previously FMD-free Indonesia is a member of the OIE South-East Asia and China FMD campaign (SEACFMD) comprising countries in endemic Pool 1 such as Cambodia, Laos, Malaysia, Myanmar, Thailand and Vietnam where serotypes O, A, and Asia 1 are considered endemic. This regional pool has experienced recent incursions of new FMD viral lineages from South Asian countries in Pool 2 (Bangladesh, Nepal and India) including the O/ME-SA/Ind-2001e lineage which is now a dominant virus in Southeast Asia. The most recent OIE reported outbreaks in the region were in Cambodia in early 2021 and February 2022 (FAO, 2021). Occurrences of FMD in other endemic countries can be found on the OIE and FAO World Reference Laboratory for FMD website: (<https://www.wrlfmd.org/country-reports/east-and-southeast-asia>).

Conclusion

The re-emergence of foot and mouth disease virus in an area with FMD-free status (without vaccination) is always of great concern. The events highlight how this virus can still make significant and unexpected jumps, often through trade and movements of people, animals and animal products, and therefore there is a need for continued vigilance.

Indonesia is not currently considered a major trade partner of the UK, and the majority of animal products imported relate to fish. Since January 2021, there have been only three reported consignments of products of animal origin from other species, which were consignments of butter from cattle.

Nevertheless, there still remains a risk of entry of FMD in products of animal origin from affected countries via other pathways, including from illegal imports, including from Indonesia. Travellers from Asia and other third country areas who bring meat or dairy products can face prosecution and a large fine.

We therefore consider there to be no change in the risk of incursion of FMD to the UK and consider an overall **low** risk of introduction of disease from any affected region in the world, despite the detections in Indonesia.

UK trade partners in the region, such as Australia, will be concerned about FMD reports in a neighbouring country, particularly considering the large volumes of Australian tourists that visit parts of Indonesia, such as Bali, who could bring infectious fomites into the country (Fitzgerald and Long, 2022). The Australian government has suspended import permits for some animal products from Indonesia, and is providing financial assistance to Indonesia for the identification and purchase of a suitable FMD vaccine, as well as technical assistance (Sinclair et al., 2022).

We will continue to monitor the situation and remind livestock keepers of the importance of maintaining strict on-farm biosecurity, compliance with the swill feeding ban, and the reporting of all suspicions of notifiable disease promptly.

Authors

Dr Sonny Bacigalupo

Dr Don King

Anthony Pacey

Dr Lauren Perrin

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Any enquiries regarding this publication should be sent to us at

iadm@apha.gov.uk