

Updated Outbreak Assessment

Foot and Mouth Disease in the Middle East and Türkiye

10 March 2023

Disease Report

This updated outbreak assessment describes, for the first time, the detection and subsequent confirmation of Foot and Mouth Disease virus (FMDV) serotype SAT-2 on a cattle farm in Türkiye (WOAH, 2023) and considers the risks of spread into eastern Europe. FMD SAT-2 was first detected in Türkiye on 3 March 2023 and eight other premises in the country are currently being investigated. In early January 2023, FMDV serotype SAT-2 was detected in Iraq for the first time ([Foot and mouth disease in North Africa and the Middle East - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/news/foot-and-mouth-disease-in-north-africa-and-the-middle-east)) with further outbreaks reported throughout the month across much of the east of the country and south down to the borders with Kuwait and Iran. Since our last report and to 9 March 2023 a total of 38 FMDV serotype SAT-2 outbreaks in cattle, buffaloes, sheep and goats have been reported in Iraq. FMD serotype SAT-2 was also detected in Jordan for the first time in late January 2023.

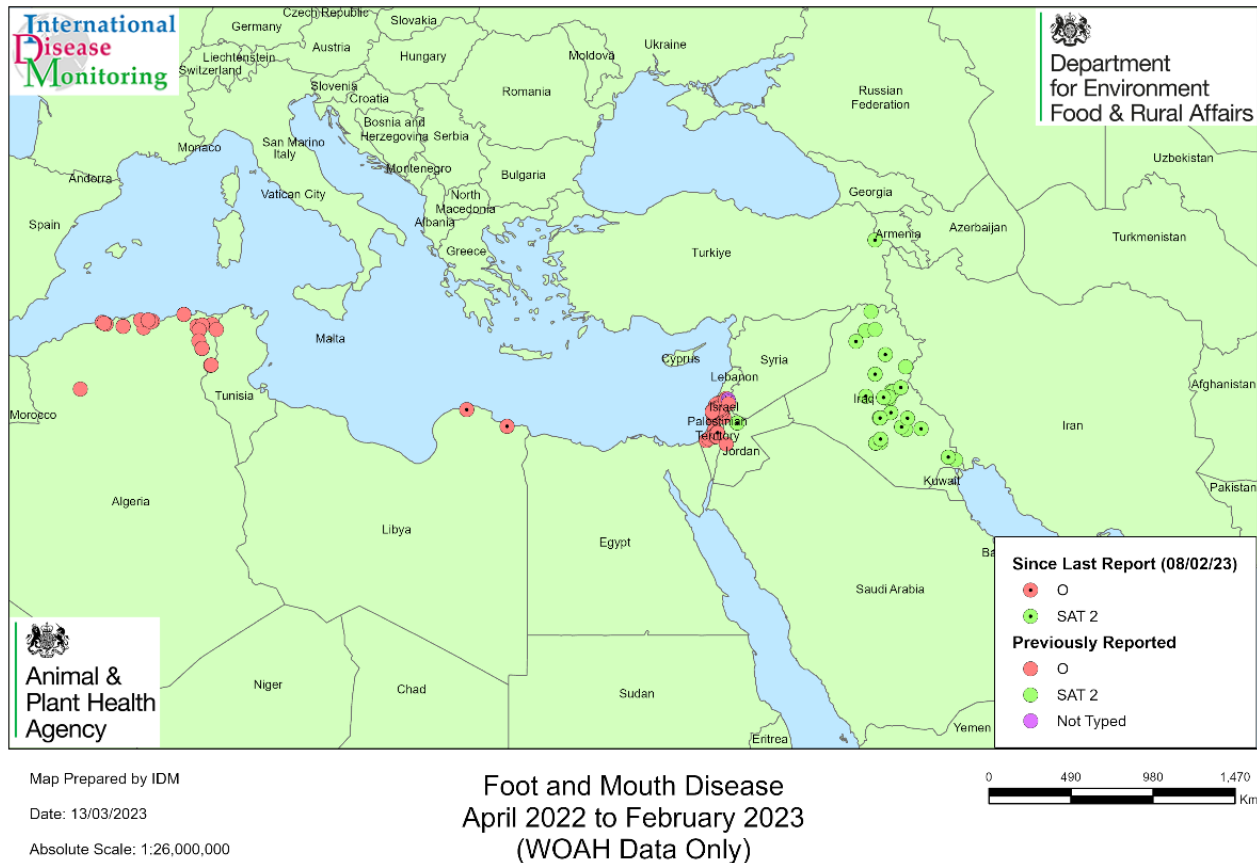
Situation Assessment

In our previous outbreak assessment ([Foot and mouth disease in North Africa and the Middle East - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/news/foot-and-mouth-disease-in-north-africa-and-the-middle-east)), we documented the first reports of FMD serotype SAT-2 in Iraq and Jordan in January and February 2023. Those outbreaks represented the first event in the Middle East caused by topotype XIV of serotype SAT-2, closely related to SAT-2 strains collected from Ethiopia during 2022 (Promed 2023a). Since then, FMDV serotype SAT-2 has jumped geographically north into north-eastern Türkiye, near to the border with Armenia with an outbreak in village cattle (WOAH 2023). FMD signs were observed by the animal keeper in cattle recently moved to the farm from the village. Mouth lesions were detected in a total of four cattle in a clinical examination. All susceptible animals with a 3 km radius are being vaccinated with serotype SAT-2 vaccine (WOAH 2023).

Further northerly spread through Armenia and Georgia and into south-west Russia is a concern and the recent earthquake may disrupt veterinary services in parts of the country. Given the ongoing conflict with Ukraine, there could be spread into eastern Ukraine. It is also worth noting that in June 2018, the first occurrence of peste de petits ruminants (PPR) was reported in south-east Bulgaria in sheep on the border with the Thrace region of

Türkiye ([Peste de Petits Ruminants \(PPR\) in sheep in Bulgaria - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/news/peste-de-petits-ruminants-ppr-in-sheep-in-bulgaria)). This was the first occurrence of PPR for the EU. The source of the PPR in Bulgaria remains unknown although, should FMDV serotype SAT-2 spread west in Türkiye, it would be concerning for neighbouring countries.

Figure 1: Map showing outbreaks of foot and mouth disease in the Middle East and North Africa between April 2022 and 09 March 2023



Türkiye

The FMDV serotype SAT-2 outbreak occurred in a herd of 1,849 susceptible cattle with four clinical cases. It was detected on 03 March, confirmed on 08 March and reported to WOAHA on 10 March. It occurred in the village of Asagimahalle in Igdir in the far east of the country near the border with Armenia.

The Ministry of Agriculture and Forestry in Türkiye has reported that provincial and district livestock markets are closed down until further notice throughout the country (ProMED 2023b). All animal markets are now closed in various provinces. Intercity animal transport is prohibited. The Ministry of Agriculture and Forestry announced that all measures, including quarantine, have been taken in eight enterprises with FMD. The Turkish Veterinary Medical Association also warned about the risks arising from FMD all over Türkiye, especially in the earthquake region. There are nearly 14 million bovine and ovine

animals in the earthquake region and vaccination and preventive medicine services against infectious diseases is to be continued. Containers are to be provided to the veterinarians whose clinics were destroyed in the earthquake so that the veterinary service would not be disrupted in the region. The supply of vaccines and drugs is to be free of charge for a period of time according to reports on ProMED (2023b).

According to ADIS, there have been 27 outbreaks of FMD reported in Türkiye between 1 January 2023 and 10 March 2023 (ADIS, 2023; Plateforme ESA, 2023). These are not broken down according to serotype.

Iraq

The first outbreaks of FMD serotype SAT-2 occurred in domestic buffaloes, cattle and sheep in northern Iraq on 03 January 2023. To 10 March 2023 there have been 38 outbreaks of FMD SAT-2 in Iraq with eight in buffaloes, twenty in cattle, one in goats and nine in sheep. There was a large increase in outbreaks in February with 28 detected and two detected so far in March. There have been no reports of FMD serotype O in Iraq during this time period.

Jordan

Following media reports, one outbreak of FMD SAT-2 has been reported in Jordan by WOA. Since 01 January 2023, there have been two outbreaks of FMD serotype O in Jordan in domestic cattle and sheep reported to WOA. These both occurred in January.

Israel

Since 01 January 2023, there has been one outbreak of FMD serotype O in Israel. This was in cattle. There are also three outbreaks in cattle from December for which the serotype is pending.

Palestine

In Palestine, two outbreaks of FMD serotype O have been detected since 01 January 2023. These were in sheep and goats and were detected in February. Two more outbreaks were reported from November and December.

Libya

There have been two reports of FMD serotype O in cattle on the north-east coast of Libya in February and March.

Conclusion

The emergence of a new foot and mouth disease virus (FMDV) serotype in an area where vaccination has not previously covered the new serotype is of great concern. This is borne

out by the spread of FMD serotype SAT-2 in Iraq and Jordan in January and February and its subsequent spread to north-east Türkiye, detected in early March. The control of the SAT-2 serotype in Türkiye may be further complicated by the earthquake in southern Türkiye on 06 Feb 2023. Though the earthquake happened more than 400 km (249 miles) west of the FMD serotype SAT-2-affected region, it is suggested on ProMED (ProMed 2023b) that this crisis may have interfered with Türkiye's effort to handle the initial spread of the FMD serotype SAT-2. Cattle usually show worse signs from FMD and there may be outbreaks in sheep or goats which are being missed because they can be subclinical. Also, there may be wild boar in the region which could be infected, although few domestic pigs.

The events in Iraq and Jordan and now north-eastern Türkiye, highlight how FMDV can 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. As with Iraq and Jordan, Türkiye is not approved for ruminant meat or live animal trade to the UK. Across the region, trade and movements of animals usually increase during Ramadan which will take place around late March 2023. If effective vaccination or movement restrictions are not implemented, this may exacerbate spread of FMD serotype SAT-2. Importation of live horses may present a fomite risk for FMD and Türkiye is regionalised for transit of equines.

We 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, and that the situation in the Middle East does not change this risk level at present, but does merit enhanced support and vigilance, particularly as the recent earthquake and subsequent crisis in Türkiye may further affect disease control and surveillance capabilities in the affected area. Assistance provided to earthquake affected areas, including rescue dogs, may present a fomite risk on their return to Great Britain. The risk from illegal imports is difficult to quantify but travellers from the Middle East and other third country areas who bring meat or dairy products can face prosecution and a large fine. 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.

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