

Updated Outbreak Assessment

Foot and Mouth Disease in the Middle East and Türkiye

20 April 2023

Disease Report

This updated outbreak assessment describes the spread of Foot and Mouth Disease virus (FMDV) serotype SAT-2 to new regions in Türkiye (Plateforme, 2023). FMD SAT-2 was first detected in Türkiye on 3 March 2023 ([Foot and mouth disease in North Africa and the Middle East](#)). In early January 2023, FMDV serotype SAT-2 was detected in Iraq for the first time with further outbreaks reported throughout the month across much of the east of the country including reports close to the borders with Kuwait and Iran. Since our last report on 10 March 2023 there have been a further 10 FMDV serotype SAT-2 outbreaks in cattle, buffaloes and sheep reported in Iraq according to WOA. FMD serotype SAT-2 was also detected in Jordan for the first time in late January 2023.

Situation Assessment

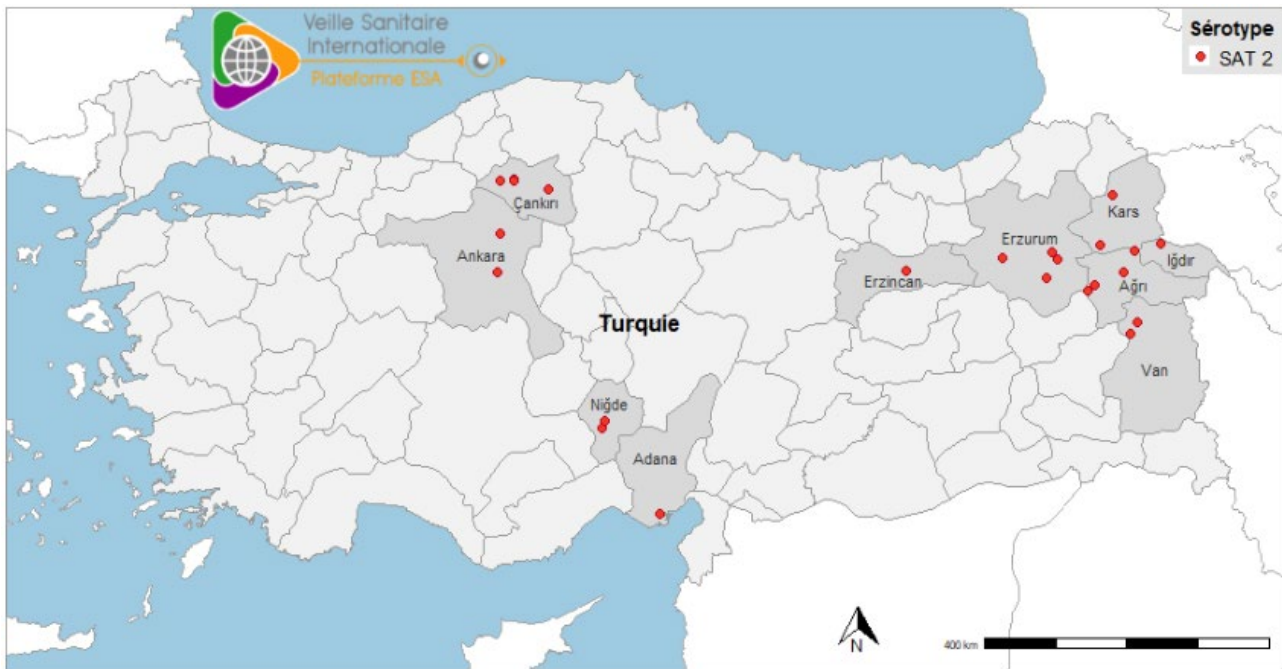
In our previous outbreak assessments ([Foot and mouth disease in North Africa and the Middle East](#)), we documented the first reports of FMD serotype SAT-2 in Türkiye, Iran and Jordan. Those outbreaks represented the first event in the Middle East caused by toptype XIV of serotype SAT-2, closely related to SAT-2 strains collected from Ethiopia during 2022 (Promed 2023a). Since then, FMDV serotype SAT-2 has jumped geographically from north-eastern Türkiye to Ankara and other regions in central Türkiye (Plateforme 2023).

The westerly spread of FMDV serotype SAT-2 in Türkiye is concerning for neighbouring countries. The potential for northerly spread through Armenia and Georgia and into south-west Russia is also a concern. Given the ongoing conflict with Ukraine, there could be spread into eastern Ukraine. Iran is also implementing preventative measures and according to ProMED, Russia is releasing 3.5 million doses of vaccine for FMDV-SAT-2 in co-operation with Iran (ProMED 2023d).

Türkiye

The first outbreak of FMDV serotype SAT-2 occurred on 3 March 2023 in the far east of the country near the border with Armenia (WOAH 2023). To 29 March further SAT-2 outbreaks were detected in eastern and central Türkiye and reported to the Animal Disease Information Service (ADIS) (Figure 1, Plateforme 2023)

Figure 1: Map of Türkiye showing outbreaks of foot and mouth disease serotype SAT-2 in March 2023 (Plateforme 2023).



Upon detection of the first outbreaks, the Ministry of Agriculture and Forestry in Türkiye reported that provincial and district livestock markets were closed down until further notice throughout the country (ProMED 2023b). In the west of Türkiye, in Thrace which borders Greece and Bulgaria (Tekirdag, Edirne and Kırklareli), vaccination provided by the European Union for SAT-2 (PAFF 2023) was implemented in 800,000 sheep and cattle (ProMED 2023c). Thrace has been considered FMD-free for 13 years, despite reports of FMD serotype O in other parts of the country. Türkiye has also produced SAT-2 vaccines to be used in higher risk areas such as those bordering Armenia and Iraq. In April 2023, to date, there have been no reports of FMDV serotype SAT-2 in Türkiye to WOA or ADIS.

Iraq

The first outbreaks of FMDV serotype SAT-2 occurred in domestic buffaloes, cattle and sheep in northern Iraq on 03 January 2023. Since our last update on 10 March 2023 there have been 10 outbreaks of FMD SAT-2 throughout the east of Iraq on farm premises with cattle, buffaloes and sheep. There have been no reports of FMD serotype O in Iraq during this time period.

Since our last update, there have been no further reports by WOA of FMDV in countries in the Middle East.

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 FMDV serotype SAT-2 in Iraq and Jordan in January and February and its subsequent spread to north-east Türkiye, detected in early March. The early control

of the SAT-2 serotype in Türkiye may have been 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 initial FMD serotype SAT-2-affected region, it was suggested on ProMED (ProMed 2023b) that the fallout from the earthquake may have interfered with Türkiye's effort to handle the initial spread of the FMD serotype SAT-2.

The events in Iraq, Jordan, north-eastern Türkiye and now central 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 would have increased during Ramadan in late March through April 2023. 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 and there is potential for onward spread through the Caucasus. 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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References

- ADIS (2023). Outbreaks per disease. Available from https://food.ec.europa.eu/animals/animal-diseases/animal-disease-information-system-adis_en (Accessed 20 April 2023)
- PAFF 2023 Available from: https://food.ec.europa.eu/system/files/2023-03/reg-com_ahw_20230323_pres-14.pdf (Accessed 20 April 2023)
- Plateforme ESA (2023). Spread of SAT-2 foot-and-mouth disease in Turkey (Correction on 17/04/2023). Available from: <https://www.plateforme-esa.fr/fr/diffusion-de-la-fievre-aphteuse-sat-2-en-turquie-correction-le-17-04-2023> (Accessed 20 April 2023)

- ProMed (2023a). Foot & mouth disease – Jordan (07). Archive number 20230205.8708191. Available from <https://promedmail.org/promed-post/?id=8708191> (Accessed 20 April 2023)
- ProMED (2023b) Foot & mouth disease – Turkey: livestock, serotype SAT-2, 1st report, spread
Archive Number: 20230310.8708855. Available from:
<https://promedmail.org/promed-post/?id=8708855> (Accessed 20 April 2023)
- ProMED (2023c) Foot & mouth disease – Turkiye (05): (Thrace) livestock, serotype SAT-2, vaccination. Archive Number: 20230329.8709203. Available from:
<https://promedmail.org/promed-post/?id=8709203> (Accessed 26 April 2023)
- ProMED (2023d) Foot & mouth disease - Iran, Russia: livestock, serotype SAT-2, prevention, RFI. Archive Number: 20230422.8709637 Available from:
<https://promedmail.org/promed-post/?id=8709637> (Accessed 26 April 2023)



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