

Updated Outbreak Assessment #4

Epizootic haemorrhagic disease in Europe

26 October 2023

Disease report

Following initial confirmation of epizootic haemorrhagic disease (EHD) in France on 21 September, 1,194 outbreaks have been recorded on farms in southern France, primarily in Pyrénées-Atlantiques, Hautes-Pyrénées and nearby municipalities (Figure 1). Since our [previous report](#) on 4 October 2023, there have also been additional outbreaks of EHD in Spain, with the Spanish Ministry of Agriculture, Fisheries and Food reporting a further 48 outbreaks. (Ministerio de Agricultura, 2023a, c, d)

In Switzerland, two positive EHD cases that were confirmed on 10 October 2023 were later negated, following further laboratory testing by the EHD world reference laboratory of the World Organisation for Animal Health (WOAH).

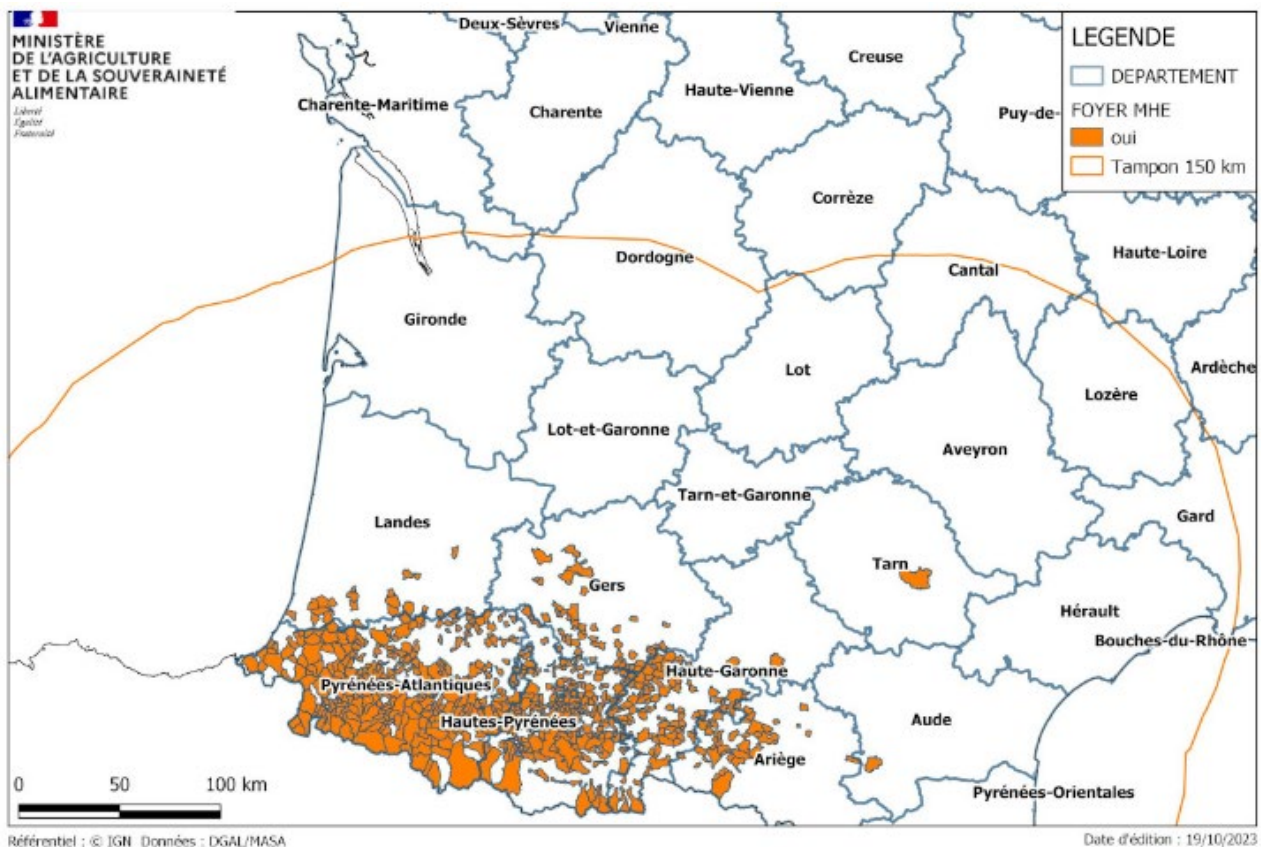


Figure 1: Map showing municipalities in southern France positive for EHD virus (solid orange) and the 150km restriction zones (orange lines), as reported by the French Ministry of Agriculture and Food Sovereignty as of 20 October 2023. (Source: [Epizootic](#)

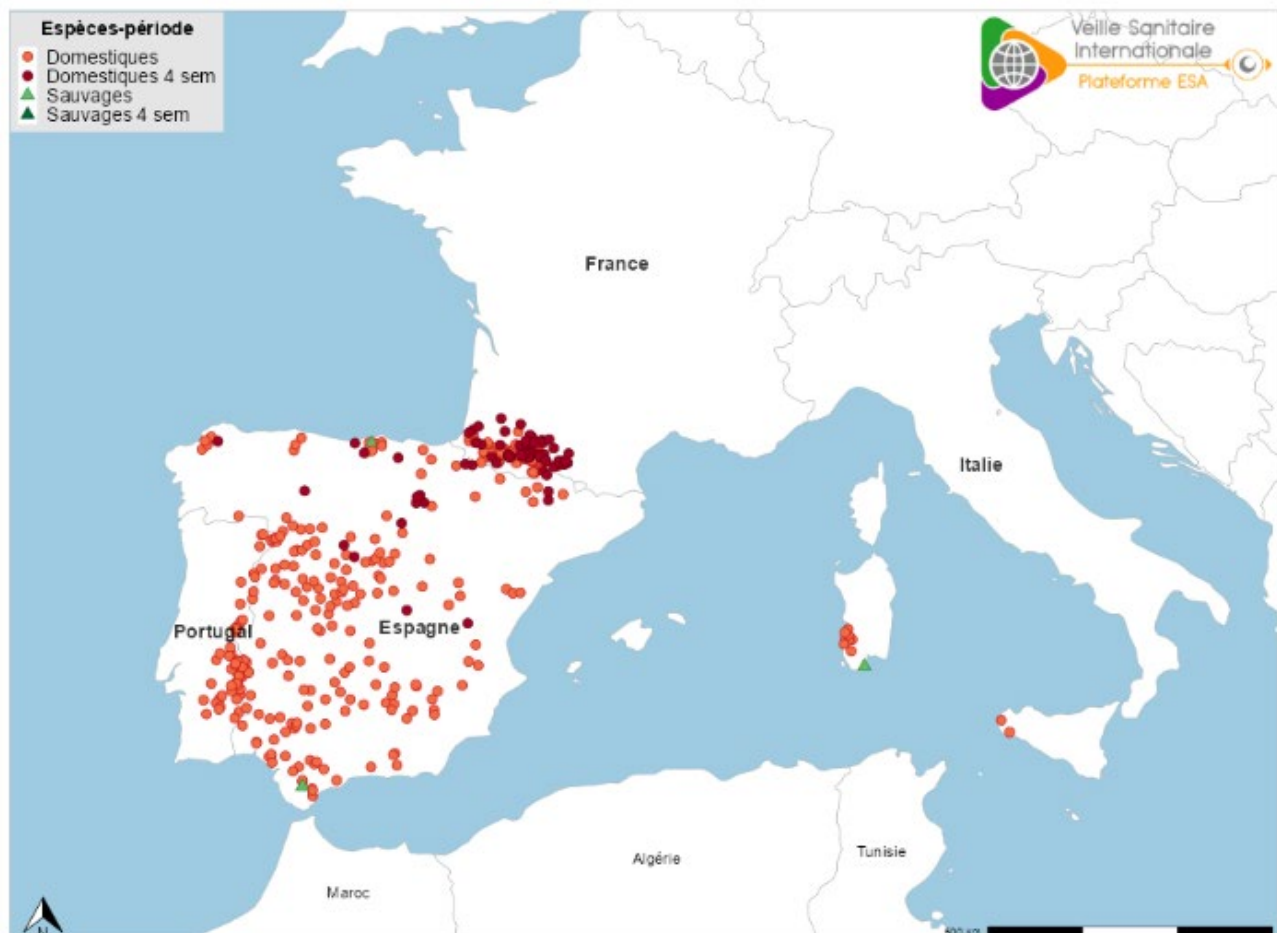


Figure 2: Map showing historic EHD outbreaks detected since 25 October 2022 (orange dots) and outbreaks that have occurred between 26 September and 24 October 2023 (red dots) in Europe, reported by the EU Animal Diseases Information System (ADIS). (Source: [Bulletins hebdomadaires de veille sanitaire internationale du 24/10/2023 \(plateforme-esa.fr\)](#), accessed 26 October 2023.)

Situation assessment

The EHD virus (EHDV) is notifiable in the UK and under EU Animal Health Law, and has been a listed disease by WOAHA since 2008. The virus infects many ruminant species and may manifest as haemorrhagic disease, although sub-clinical infection may also occur (WOAHA, 2019). EHDV is present in neighbouring countries to Europe, across the Middle East and North Africa. To date, there are 8 recognised serotypes of EHDV, though it is likely that more exist (Pirbright, 2022). EHDV-8 is the serotype previously reported in Italy, Spain and Portugal.

Switzerland

Following initial reports of disease in bovines on 10 and 16 October, further testing on 24 October 2023 from the EHD world reference laboratory (WOAHA) in France confirmed that

the first two reported cases of EHDV in Switzerland were, in fact, negative. As such, Switzerland remains free of the disease. Restriction zones that were implemented in Switzerland have been lifted and Switzerland continues to be officially free of EHDV (WOAH).

France

As of 24 October, 1,194 outbreaks of EHDV have been identified on farms in France. The municipalities affected and 150km regulated zones are illustrated in Figure 1. Since our last report outbreaks have also been identified in Haute-Garonne, Gers, Landes, Ariège, Aude and Tarn, and continue to be recognised in Pyrénées-Atlantiques and Hautes-Pyrénées. The first case in wildlife was reported on 25 September 2023 in a red deer found dead near a premises with confirmed EHDV in cattle. (BHVSI-SA, 2023).

It has been suggested that the primary vectors (*Culicoides*) are capable of traveling up to 150km across land in one day in favourable wind conditions (Mellor 2002). However, at this time there is no clear indication as to how EHD or infected *Culicoides* crossed the Pyrénées mountains. To control the spread of EHD, French authorities have prohibited the export of live cattle from the Pyrénées-Atlantiques, Hautes-Pyrénées, Landes, Gers, Haute-Garonne and Ariège regions. The additional outbreaks in Gers, Tarn and Aude have increased the restriction zone North, now including Charente-Maritime, Dordogne, Corrèze, Cantal, Lozère and Gard (see Figure 1).

Spain

The Spanish Ministry of Agriculture, Fisheries and Food have documented the spread of EHDV across mainland Spain (Figure 2). There is continued detection of outbreaks throughout the country, showing continued spread of EHDV northeast (BHVSI-SA, 2023).

Since our last update on 4 October 2023, 48 outbreaks have been reported. All but one of these were detected on cattle farms, with 1 case confirmed in deer in the region of Jaca, Huesca (Ministerio de Agricultura, 2023a). Cases have increased in the Basque Country (52.7km from the French border) where there is a large cattle population, and Huesca province (28.5km from the French border), as well as new outbreaks in the Lleida province. Restrictions zones now include Barcelona and Girona.

Culicoides obsoletus has been implicated as a potential significant vector in the spread of EHD in Spain (PAFF, 2023). This recent surge in outbreaks in Spain could be associated with *Culicoides* populations peaking, which occurs around mid-summer to late autumn (Rocklöv et al., 2020).

The total number of outbreaks in Spain reported by ADIS this year is 185 from 1 January 2023 to 11 October 2023 ([ADIS, 2023](#)). Current measures in Spain involve disinsection of animals and farms in affected areas, and the monitoring of sheep and goat farms in affected zones, as these may be carriers of EHDV without showing clinical symptoms ([PAFF, 2023](#)). All mainland provinces of Spain are currently under restriction ([Update on the situation of Epizootic Haemorrhagic Disease](#)).

Portugal

Since our last report, and as of 24 October 2023, 16 more outbreaks of EHD have been reported in Portugal, bringing the total to 73 outbreaks, predominately along the border with Spain but with some westerly spread (ADIS, 2023).

Italy

There has been no new information or further reports of EHD in Italy since our last report, 4 October 2023.

Conclusion

EHD continues to be detected in southern France and Spain. With France reporting a significant increase in outbreaks on cattle farms, including in Gers, Tarne and Aude, indicating a northerly spread, this has caused an expansion of the restriction zone further north to include six more northern departments of France.

Currently, the outbreaks in France are located in areas of medium to very high abundance of *C. obsoletus* and *C. scoticus*, and the climate of the Pyrénées-Atlantiques region has particularly mild winters resulting in reduced periods of 'vector inactivity' ([Anses Weekly Bulletin of International Health Surveillance in Animal Health \(BHVSI-SA\) for 21 September 2023](#)). This could explain the large number of outbreaks in recent weeks, and there could be more cases of EHD reported in the region. However, a drop in temperature throughout the winter months may also impact the disease dynamics.

Culicoides species are potentially capable of traveling up to 150km over land and 700km over water in one day (Mellor et al., 2000). It should be noted that the outbreaks that occurred in French cattle farms are close to recent outbreaks that occurred in Spain. At this time, the route of entry into France is unclear, as is the route of entry into Switzerland. The current origin of infection is unclear with a significant geographical jump in a short period of time. The seasonal changes may reduce vector activity throughout the coming colder months.

As there have been no reports in the north of France, it is still considered too far for windborne incursion of infected midges to occur, though there could be undetected spread, including in wildlife which are a less monitored population.

There have been consignments of live cattle and sheep scheduled to arrive in Great Britain from France in weeks preceding detection in France. Back tracing is being conducted to identify any consignments of live ruminants and ruminant germplasm from France 28 days prior to outbreak notification.

Trade of live ruminants from France is postponed as they are no longer able to comply with relevant animal health certificates.

The possibility for the windborne incursion of midges to Great Britain from the near continent is monitored frequently, with a collaborative effort between the Animal and Plant

Health Agency (APHA), The Pirbright institute (as vector and disease experts) and the Met Office (who can predict potential airborne movement of vectors into Great Britain).

Currently, the trade of live animals from the affected areas is impacted due to the inability to comply with health certificate attestations required for import. Tracings of imports from France in the four-week period prior to EHD is underway. The risk to Great Britain is currently from the incursion of infected midges (windborne and via transport) from areas we are trading with that have undetected EHDV.

Therefore, we consider the risk of introduction of EHDV into Great Britain via movement of live animals and or vectors to be increased from negligible to **Very low**. We will continue to monitor the situation.

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