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SCIENTIFIC REPORT

Surveillance of West Nile virus infections in humans and animals in Europe, monthly report – data submitted up to 4 November 2026

European Centre for Disease Prevention and Control (ECDC), European Food Safety Authority (EFSA)

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As part of their One Health activities, the European Centre for Disease Prevention and Control (ECDC) and the European Food Safety Authority (EFSA) jointly collate and analyse data from national surveillance systems on West Nile virus (WNV) infections in humans and outbreaks in equids and birds to monitor the epidemiological situation in Europe. This surveillance informs public health and veterinary authorities and supports timely prevention and control measures, including the deferral or testing of blood donors who have potentially been exposed to the virus, in accordance with Commission Directives 2004/33/EC and 2014/110/EU.

Through this joint surveillance, ECDC and EFSA continue to monitor the WNV epidemiological situation in Europe.

Key findings

- Following the seasonal peak from August to early September, WNV activity declined across Europe.
- In 2026, Europe experienced the most widespread geographical distribution of WNV to date, with numbers of human cases and animal outbreaks exceeding levels reported in previous years.
- Overall, there is no indication of increased disease severity in humans in Europe compared with previous years.
- **Italy** remained the most affected country, reporting the highest numbers of human cases and avian outbreaks.
- **Greece** and **France** reported their highest numbers of human WNV cases ever, with France also reporting a record number of equid outbreaks.
- WNV activity expanded in northern Europe, with human cases and animal outbreaks detected across multiple regions in **Belgium** and the **Netherlands**, with **Belgium** reporting its first-ever human WNV infections.

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Epidemiological overview

Findings from human surveillance

EU/EEA countries

In 2026, and as at 4 November, 15 countries in the EU/EEA have reported 1 883 locally acquired[1] human cases of West Nile virus (WNV) infection. The earliest and latest dates of symptom onset among human cases were 22 May in Italy and 18 October in Spain, respectively. Locally acquired cases have been reported by **Italy** (783 cases), **Greece** (469 cases, of which 4 had an unknown place of infection), **France** (191 cases), **Spain** (149 cases), **Romania** (125 cases), **the Netherlands** (76 cases, of which 3 had an unknown place of infection), **Croatia** (22 cases), **Cyprus** (21 cases), **Belgium** (15 cases), **Austria** (8 cases), **Bulgaria** (8 cases), **Germany** (7 cases), **Hungary** (5 cases), **Slovenia** (3 cases) and **Slovakia** (1 case). A total of 148 deaths have been reported by Italy (60 deaths), Greece (53 deaths), the Netherlands (10 deaths), Romania (9 deaths), Spain (7 deaths), France (4 deaths), Belgium (2 deaths), Bulgaria (1 death), Croatia (1 death) and Hungary (1 death).

The number of human cases reported in the EU/EEA so far this year (1 883 cases) is higher than the average number reported during the same period over the past decade (698 cases), and is the highest number of WNV infections in humans ever reported in the EU/EEA.

As at 4 November 2026, locally acquired human cases have been reported in 211 NUTS 3 regions across 15 EU/EEA countries, making this the most geographically widespread WNV season on record.

As in previous years, most cases were reported among males 65 years old and above. Overall, 76% of cases were hospitalised and 56% presented with neurological symptoms, compared with 10-year averages of 84% and 62%, respectively. The case fatality ratio was approximately 8%, below the 10-year average of 10%. These findings are within expected levels and do not indicate increased disease severity compared with previous years. Country-specific case fatality ratios are affected by the sensitivity of the surveillance system, including blood donor screening practices; therefore, direct comparisons between countries should be made with caution.

EU candidate countries

In 2026, and as at 4 November, the following EU candidate countries have reported 146 locally acquired human cases of WNV infection: **North Macedonia** (71 cases), **Serbia** (59 cases), **Kosovo*** (8 cases), **Albania** (7 cases) and **Moldova** (1 case). The earliest and latest dates of symptom onset among human cases were 12 May in North Macedonia and 10 October in North Macedonia, respectively. A total of 15 deaths have been reported by **North Macedonia** (12 deaths), **Albania** (2 deaths) and **Kosovo*** (1 death).

[1] Locally acquired cases refer to cases acquired within the reporting country

*This designation is without prejudice to positions on status and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

Findings from veterinary surveillance

EU/EEA countries

From the veterinary perspective, 13 countries in the EU/EEA have reported 680 WNV outbreaks among equids and 769 outbreaks among birds in 2026. The earliest reported WNV outbreak among equids had a suspected start date of 30 March 2026 in France, while the most recent had a suspected start date of 27 October 2026 in France. Outbreaks among equids have been reported by **France** (440 outbreaks), **Italy** (90 outbreaks), **Belgium** (45 outbreaks), **Spain** (26 outbreaks), **the Netherlands** (24 outbreaks), **Germany** (15 outbreaks), **Greece** (14 outbreaks), **Portugal** (10 outbreaks), **Austria** (5 outbreaks), **Croatia** (5 outbreaks), **Hungary** (4 outbreaks) and **Cyprus** (2 outbreaks). Among birds, the earliest reported WNV outbreak had a suspected start date of 31 March 2026 in Italy, while the most recent had a suspected start date of 30 October 2026 in Italy. Outbreaks among birds have been reported by **Italy** (406 outbreaks), **Belgium** (274 outbreaks), **France** (21 outbreaks), **Spain** (20 outbreaks), **Germany** (19 outbreaks), **Croatia** (13 outbreaks), **Austria** (11 outbreaks), **Slovenia** (4 outbreaks) and **the Netherlands** (1 outbreak).

No information was available on the equid species involved in the outbreaks reported in the Animal Disease Information System (ADIS). The bird species most frequently associated with the reported outbreaks were the hooded crow (150 outbreaks), the carrion crow (147 outbreaks) and the common magpie (127 outbreaks), followed by the Eurasian jackdaw (68 outbreaks), the Northern goshawk (37 outbreaks), the common wood-pigeon (30 outbreaks), the Eurasian blackbird (20 outbreaks), the little owl (18 outbreaks) and the common kestrel (17 outbreaks). Several other bird species were also reported, each associated with up to 15 outbreaks.

As at 4 November 2026, the monthly numbers of equid and bird outbreaks reported from July to October were notably higher than their respective historical monthly averages. For equids, monthly outbreak counts ranged from about three times to more than five times the corresponding historical monthly averages for 2016 to 2025. For birds, they ranged from about two times to almost three times the corresponding monthly averages for 2022 to 2025. The cumulative numbers of bird and equid outbreaks reported so far in 2026 were also the highest on record for the same period in any of the preceding years.

So far in 2026, outbreaks in birds and/or equids have been reported in 198 NUTS 3 regions across 13 EU/EEA countries. This exceeds the geographical spread observed during this period in 2025, when outbreaks were reported in 120 NUTS 3 regions across 12 countries, as well as what has been observed in most previous years. The 2026 season was comparable to 2024, which was one of the most geographically widespread WNV seasons for animal outbreaks, with outbreaks in birds and/or equids reported in 200 regions across 14 countries.

Of the 13 EU/EEA countries that submitted data to ADIS in 2026, all had previously reported WNV outbreaks in birds and/or equids, reflecting endemic WNV circulation in these territories.

EU candidate countries and other European countries

In 2026, as at 4 November, one EU candidate country (North Macedonia) and Switzerland had reported WNV outbreaks in birds and/or equids. **Switzerland** reported one outbreak in equids, with a suspected start date of 21 July. **North Macedonia** reported four outbreaks in birds, with suspected start dates ranging from 18 August to 7 September.

WNV outbreaks in animals were reported to ADIS for the first time in the NUTS 3 region of Aargau (CH033) in Switzerland and in two regions in North Macedonia: Skopski (MK008) and Pelagoniski (MK005). If the outbreaks reported by EU/EEA countries, EU candidate countries and other European countries are all taken into account, the geographical spread observed to date in 2026 in Europe is slightly greater than what was observed during the same period in 2024.

Patterns across human and veterinary surveillance

EU/EEA countries

Most affected EU/EEA countries reported both human WNV infections and outbreaks in equids and/or birds. Bulgaria, Romania and Slovakia only reported human WNV infections, while Portugal only reported outbreaks among equids.

Differences in WNV patterns across European countries may reflect a combination of ecological, climatic and surveillance-related factors. Climatic conditions, habitat characteristics and the local abundance and distribution of competent mosquito vectors and bird hosts can influence WNV circulation. Differences in surveillance design and intensity, diagnostic practices and reporting may also affect the number of human infections and animal outbreaks detected.

Most human WNV infections are asymptomatic or subclinical. Consequently, the case numbers reported by EU/EEA countries represent only a fraction of the true number of infections. Furthermore, the reported numbers of human cases and animal outbreaks, particularly for October, should be considered provisional, as reporting delays may lead to additional notifications in November or later.

A selection of country-specific findings are presented below to further illustrate the heterogeneity of WNV activity across Europe.

Italy

Italy remains the most affected country in 2026, reporting the highest number of human WNV cases (783 cases; 42% of all reported human cases in the EU/EEA), including 60 deaths (case fatality ratio: 8%). Nevertheless, the number of human cases reported was still slightly lower than during the same period in 2025.

Italy also reported the highest number of outbreaks in birds (406 outbreaks; 53% of all avian outbreaks reported in the EU/EEA) and a high number of outbreaks in equids (90 outbreaks; 13% of all equid outbreaks reported in the EU/EEA). As at 4 November, the number of bird outbreaks notified to ADIS was the highest for this period since reporting became mandatory in 2021, while the number of equid outbreaks was higher than in the same period for all previous years except 2018.

Overall, 82 of Italy's 107 NUTS 3 regions are currently affected, with human WNV cases and/or animal outbreaks reported.

Greece

Greece has reported its highest number of human WNV cases (469 cases) to date, including 53 deaths (case fatality ratio: 11%). WNV transmission was most intense in the Attica NUTS 2 region, which accounted for 222 cases. The highest numbers were reported in Anatoliki Attiki (East Attica, 103 cases) and Voreios Tomeas Athinon (North Athens, 64 cases). An additional 79 cases were reported in the Larisa NUTS 3 region. Although Greece represented

25% of all reported human WNV cases in in the EU/EEA, it reported only 14 outbreaks in equids (2% of all equid outbreaks) and no outbreaks in birds.

France

France has reported 191 locally acquired human WNV infections, including four deaths (case fatality ratio: 3%, among cases with known outcomes), representing 10% of all cases in the EU/EEA. This is by far the highest number of cases ever reported by France. France reported the highest number of equid outbreaks (440 outbreaks), accounting for 65% of the 680 outbreaks reported in the EU/EEA. This was also the highest number of WNV outbreaks in equids ever notified by France. An additional 21 outbreaks were reported in birds.

The Netherlands

In the Netherlands, 76 human WNV infections have been reported, including 10 deaths (case fatality ratio: 13%). The Netherlands previously reported locally acquired human WNV infections in 2020, when the country documented its first human cases, with seven cases reported in Utrecht (previously NL310) and one in the Arnhem/Nijmegen region (NL226).

In 2026, 24 outbreaks were reported in equids and one in birds. WNV was first reported in animals in the Netherlands in 2025, with a single equid outbreak. Overall, WNV infections in humans and/or animals were detected across 19 of the 40 NUTS 3 regions in the Netherlands this year.

Belgium

Belgium has reported 15 human WNV infections, representing the country's first-ever reported human cases of WNV infection. Two deaths were also reported (case fatality ratio: 15%, among cases with known outcomes).

WNV was first detected in Belgium in 2025 through avian surveillance, with seven bird outbreaks reported in Arr. Mechelen (BE212), Arr. Dendermonde (BE232) and Arr. Halle-Vilvoorde (BE241). In 2026, WNV was again detected in birds in these three regions and spread to 15 additional NUTS 3 regions that had not previously reported WNV activity. Overall, 45 outbreaks in equids and 274 outbreaks in birds were reported across 18 of Belgium's 44 NUTS 3 regions in 2026.

Newly affected regions

In 2026, the regions listed below reported WNV activity for the first time ever. The type of first reported event is indicated in brackets for each NUTS 3 region, distinguishing between human WNV infections, animal outbreaks or both.

WNV activity was reported for the first time ever in humans and/or animals by:

- **Belgium** in Arr. Aalst (BE231; animal), Arr. Antwerpen (BE211; human and animal), Arr. de Bruxelles-Capitale/Arr. Brussel-Hoofdstad (BE100; human and animal), Arr. Charleroi (BE32B; animal), Arr. Eeklo (BE233; animal), Arr. Gent (BE234; animal), Arr. Hasselt (BE224; animal), Arr. Leuven (BE242, human, animal), Arr. Liège (BE332, animal), Arr. Maaseik (BE225, animal), Arr. Namur (BE352; animal), Arr. Nivelles (BE310; animal), Arr. Sint-Niklaas (BE236; human and animal), Arr. Tielt (BE257; animal) and Arr. Turnhout (BE213; animal);
- **Bulgaria** in Sliven (BG342; human), Stara Zagora (BG344; human) and Varna (BG331; human).
- **France** in Ain (FRK21; human and animal), Allier (FRK11; human and animal), Alpes-de-Haute-Province (FRL01; animal), Ariège (FRJ21; animal), Aude (FRJ11, human and animal), Bas-Rhin (FRF11, animal), Deux-Sèvres (FRI33, human and animal), Dordogne (FRI11; animal), Drôme (FRK23; human and animal), Essonne

(FR104; animal), Haut-Rhin (FRF12; animal), Hauts-de-Seine (FR105; animal), Ille-et-Vilaine (FRH03; animal), Isère (FRK24; human), Landes (FRI13; animal), Loire-Atlantique (FRG01; human and animal), Lot-et-Garonne (FRI14; animal), Maine-et-Loire (FRG02; human and animal), Moselle (FRF33; animal), Pyrénées-Orientales (FRJ15; human and animal), Rhône (FRK26; human), Saône-et-Loire (FRC13; animal), Seine-et-Marne (FR102; human and animal), Tarn-et-Garonne (FRJ28; animal) and Val-d'Oise (FR108; animal).

- **Germany** in Erzgebirgskreis (DED42; animal), Heidelberg, Stadtkreis (DE125; animal) and Stuttgart, Stadtkreis (DE111; human).
- **Italy** in Pescara (ITF13; human and animal), Rieti (ITI42; human and animal), Terni (ITI22; human), Trento (ITH20; human and animal) and Valle d'Aosta/Vallée d'Aoste (ITC20; animal).
- **The Netherlands** in Agglomeratie Leiden en Bollenstreek (NL363; human), Agglomeratie's-Gravenhage (NL361; human and animal), Delft en Westland (NL362; human and animal), Groot-Amsterdam (NL32B; human and animal), Het Gooi en Vechtstreek (NL327; human), IJmond (NL323; human), Midden-Noord-Brabant (NL415; human), Noordoost-Noord-Brabant (NL416; human and animal), Noord-Overijssel (NL211; human), Oost-Zuid-Holland (NL365; human and animal), Overig Zeeland (NL342; human), Veluwe (NL221; human), Zuidoost-Noord-Brabant (NL414; human), Zuidoost-Zuid-Holland (NL364; human and animal), Zuidwest-Gelderland (NL224; animal) and Zuidwest-Overijssel (NL212; human).
- **Spain** in Girona (ES512; animal), Gran Canaria (ES705; animal) and Huesca (ES241; animal).

Other European countries

In 2026, WNV activity was reported for the first time in several regions of Kosovo*, Moldova and North Macedonia. The type of first reported event is indicated in brackets for each NUTS 3 region, distinguishing between human WNV infections, animal outbreaks or both.

WNV activity was reported for the first time ever in humans and/or animals by:

- **Kosovo*** in Ferizaj (XK005; human) and Gjakovë (XK007; human).
- **Moldova** in Chisinau (MDG13746; human)
- **North Macedonia** in Pelagoniski (MK005; human and animal) and Vardarski (MK001; human).

It should be noted that other European countries, including EU candidate countries, have no obligation to report animal outbreaks to ADIS.

North Macedonia

North Macedonia has reported an unprecedented number of human WNV infections, with 71 cases and 12 deaths (case fatality ratio: 17%), reported from five NUTS 3 regions. Two of these regions have also reported outbreaks among birds. The Skopski region, which includes the capital city of Skopje, is by far the most affected, accounting for 62 human WNV infections and three bird outbreaks. In 2026, North Macedonia reported WNV outbreak data to ADIS for the first time, with four bird outbreaks across two regions. Over the last 10 years, the country reported a maximum of five human WNV infections per year.

Seasonal outlook

In 2026, WNV activity across Europe peaked in humans in August and in birds and equids from late August to early September, followed by a marked decline.

Although environmental conditions for WNV transmission are becoming less favourable, low-level transmission may continue in the coming weeks. Additional cases may still be reported, including delayed notifications of infections acquired in October or earlier.

Background

The tables and maps in this monthly report show the countries and areas where human cases of WNV infection and outbreaks among equids and birds have been reported to the European surveillance portal for infectious diseases (EpiPulse Cases) and the Animal Disease Information System (ADIS). In addition to this monthly report, ECDC provides a weekly report presenting the locally acquired WNV infections among humans in Europe[2]. Human surveillance covers EU/EEA countries as well as reporting by EU candidate and potential candidate countries. Cases are reported in accordance with the EU case definition for West Nile virus infection laid down in Commission Implementing Decision (EU) 2018/945. Some countries are already using (parts of) the updated case definition set out in Commission Implementing Regulation (EU) 2026/2097, which will formally apply from 1 July 2028 and replace the current definition.

For the analysis of ADIS outbreak data, this report includes only animal outbreaks with a 'suspicion/start date' in 2026. For analysis of historical data, when the 'suspicion/start date' was not reported, the 'confirmation date' was used instead. Outbreaks of WNV in animals shall be notified to ADIS in accordance with the provisions and definitions laid down in Commission Implementing Regulation (EU) 2020/2002. Under this Regulation, the reporting obligation applies to EU Member States. Data from non-EU countries, including candidate countries reporting through ADIS, may also be available in the system. As human surveillance does not cover Switzerland, animal outbreaks reported to ADIS by this country are presented exclusively in the 'Findings from veterinary surveillance' section. A notified outbreak may include one or more WNV cases. Since there is no specific case definition for WNV infection in animals, the general definition provided in Article 9 of Commission Delegated Regulation (EU) 2020/689 applies. When comparing the number of WNV outbreaks in birds reported in 2026 with historical data, a four-year average (2022–2025) was used – rather than the 10-year average applied to equids – since mandatory reporting of WNV outbreaks in birds only began in April 2021.

Surveillance of WNV in mosquitoes can support the detection of local virus circulation and complement human and animal surveillance findings. However, because these data are not systematically collected and reported at European level, they are not included in this report.

The **most recent full automated report, including graphs, maps and a table**, is **available online** at the following link: https://www.ecdc.europa.eu/en/infectious-disease-topics/west-nile-virus-infection/surveillance-and-disease-data/monthly-updates

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[2] In this report, Europe refers to EU/EEA countries, EU candidate countries (Albania, Bosnia and Herzegovina, Kosovo*, Moldova, Montenegro, North Macedonia, Serbia, Türkiye, and Ukraine) and Switzerland. Data from Switzerland are included only for animal outbreaks.