

This report provides an update of the high pathogenicity avian influenza (HPAI) situation, according to the information submitted through the World Animal Health Information System of the World Organisation for Animal Health ([OIE-WAHIS](#)) between 13 January 2022 and 16 February 2022.

### Seasonal trend

Using data reported to the OIE between 2005 and 2019 by 76 affected countries and territories for 18,620 outbreaks in poultry, we carried out a Seasonal and Trend decomposition using Loess (STL) analysis to determine the seasonal pattern of the disease (detailed methodology presented in Awada et al., 2018<sup>5</sup>). Based on the data reported to the OIE, spread is lowest in September, begins to rise in October, and peaks in February. Figure 1 shows the global seasonal pattern of HPAI in poultry and the red rectangle indicates where we currently are in the cycle based on the period covered in “recent updates” below.

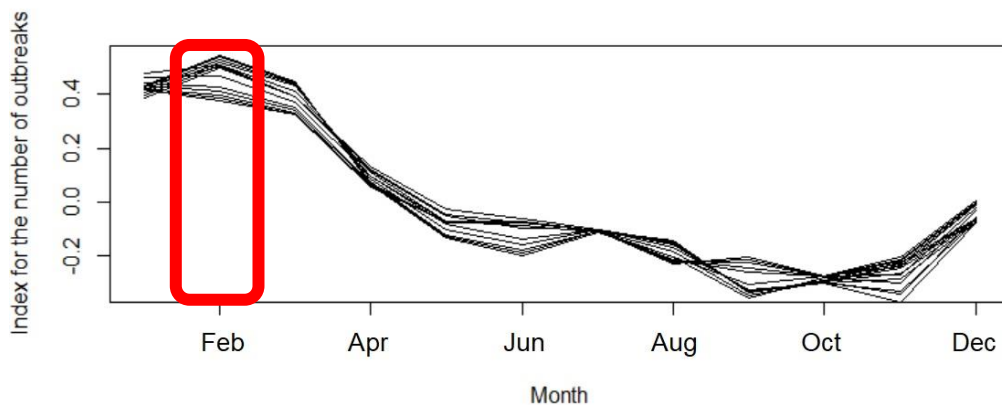


Figure 1. Seasonal trend in global HPAI incidence in poultry

### Recent updates (13/01/2022 – 16/02/2022)

To describe the current disease situation of HPAI in poultry and in non-poultry birds, this section covers: (a) a list of new events<sup>1</sup> which started during the 5-week period (reported through immediate notifications); (b) information on events that started before the 5-week period but were still ongoing during that period; (c) the geographic distribution of new outbreaks<sup>2</sup> that started during the 5-week period and d) events which started before the 5-week period but were reported during the 5-week period. The different subtypes of HPAI circulating during the 5-week period are also listed below. This information is based on the immediate notifications and follow-up reports received by the OIE.

#### HPAI in poultry

##### New events by world region (reported through immediate notifications)

###### Africa

###### Subtype H5N1

A recurrence started in Cameroon (Ouest) on 29 January 2022.

###### Americas

###### Subtype H5N1

A recurrence started in Canada (Nova Scotia) on 30 January 2022.

A recurrence started in United States of America (Indiana) on 7 February 2022.

###### Asia

###### Subtype H5N1

A recurrence started in Nepal (East) on 17 January 2022.

<sup>1</sup> As defined in [Article 1.1.2.](#) of the OIE Terrestrial Animal Health Code, an “event” means a single outbreak or a group of epidemiologically related outbreaks of a given listed disease or emerging disease that is the subject of a notification. An event is specific to a pathogenic agent and strain, when appropriate, and includes all related outbreaks reported from the time of the initial notification through to the final report. Reports of an event include susceptible species, the number and geographical distribution of affected animals and epidemiological units.

<sup>2</sup> As defined in the [glossary](#) of the OIE Terrestrial Animal Health Code, an “outbreak” means the occurrence of one or more cases in an epidemiological unit.

A recurrence started in India (Bihar) on 18 January 2022.

#### **Europe**

##### Not typed

The first occurrence started in Dobrich in Bulgaria on 24 January 2022.

##### Subtype H5N1

H5N1 reached a new area in Spain (Castilla y León) on 13 January 2022.

A recurrence started in Russia (Stavropol') on 31 January 2022.

A recurrence started in Denmark (Veterinary Inspection Unit East) on 10 February 2022.

A recurrence started in Romania (Ialomița) on 10 February 2022.

#### **Oceania**

No new events reported

### **On-going events for which there were new reported outbreaks, by world region (reported through follow-up reports):**

#### **Africa**

##### Subtype H5N1

Nigeria, South Africa

#### **Asia**

##### Subtype H5N1

Japan, Korea (Rep. Of), Vietnam

##### Subtype H5N2

Chinese Taipei

#### **Europe**

##### Not typed

Bulgaria

##### Subtype H5N1

Czech Republic, France, Germany, Hungary, Italy, Netherlands, Poland, Portugal, United Kingdom

#### **Americas and Oceania**

No new outbreaks reported in the on-going events, or no on-going events

### **New outbreaks and associated subtypes**

During the period covered by this report, a total of 317 new outbreaks in poultry were reported by 25 countries and territories (Bulgaria, Cameroon, Canada, Chinese Taipei, Czech Republic, Denmark, France, Germany, Hungary, India, Italy, Japan, Korea (Rep. of), Nepal, Netherlands, Nigeria, Poland, Portugal, Romania, Russia, South Africa, Spain, United Kingdom, United States of America, and Vietnam). Details are presented in Figures 2 and 3.

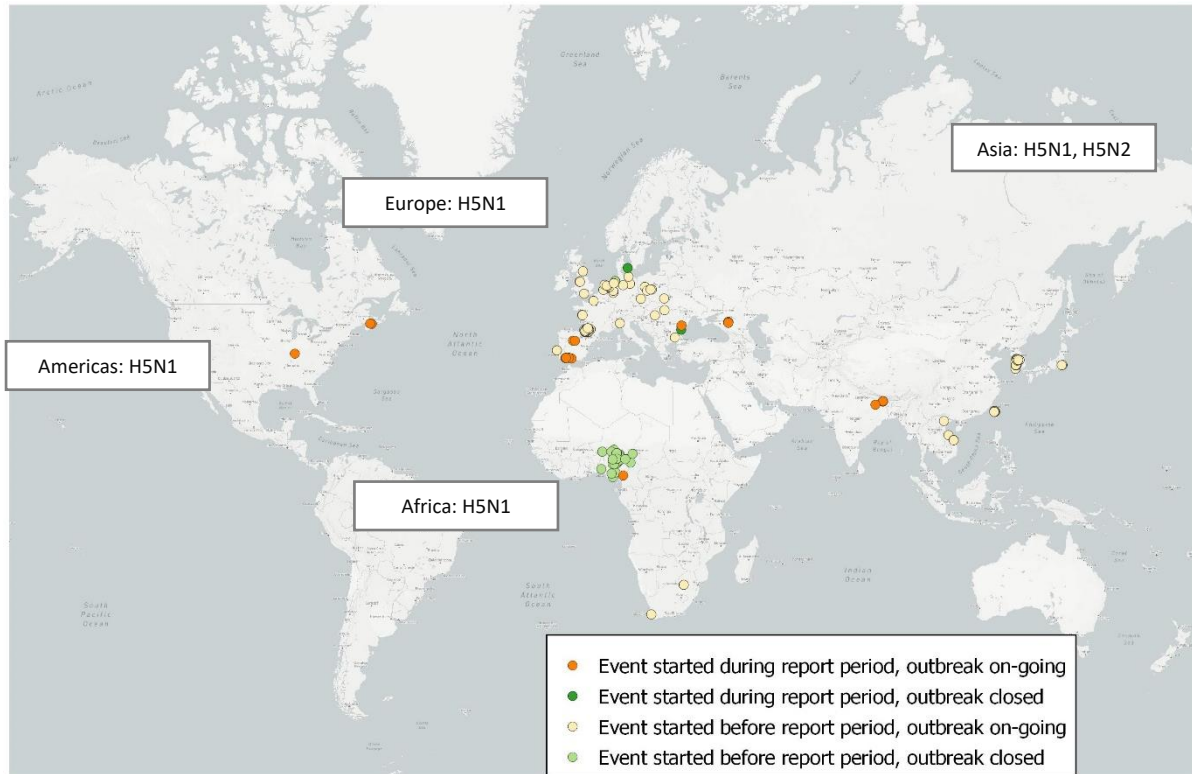


Figure 2. Distribution of HPAI new outbreaks in poultry, and corresponding subtypes

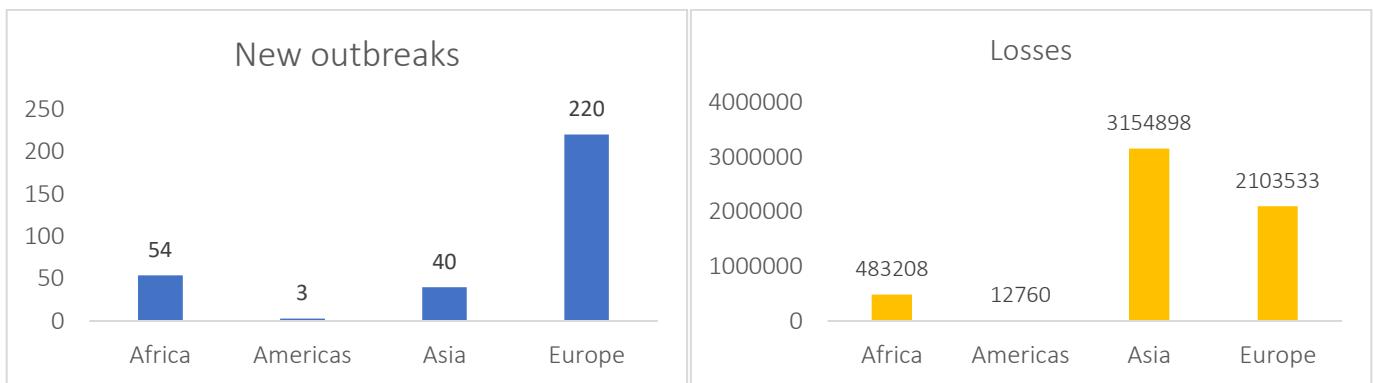


Figure 3. Number of new outbreaks and associated losses by geographical region (losses include animals dead and killed and disposed of)

**Events which started before the 5-week period but were reported during the 5-week period (reported through immediate notifications)**

**Africa**

Subtype H5N1

2 recurrences started in Côte d’Ivoire:

- in Comoé on 10 November 2021,
- in Abidjan on 21 November 2021.

A recurrence started in Burkina Faso (Centre) on 15 December 2021.

A recurrence started in Togo (Maritime) on 1 January 2022.

**Europe**

Subtype H5N1

A recurrence started in Slovakia (Žilinský) on 26 December 2021.

The first occurrence started in Moldova (Telenești) on 1 January 2022.

A recurrence started in Croatia (Osječko-Baranjska) on 10 January 2022.

Subtype H5N8

A recurrence started in Denmark (Veterinary Inspection Unit North) on 6 January 2022.

**Americas, Asia, and Oceania**

No events reported

**HPAI in non-poultry****New events by world region (reported through immediate notifications)****Africa**Subtype H5N1

The first occurrence of H5N1 started in Erongo and Namibian Exclusive Economic Zone in Namibia on 13 January 2022.

A recurrence started in Senegal (Saint-Louis) on 25 January 2022.

**Asia**Subtype H5N1

A recurrence started in Hong Kong (Yuen Long) on 21 January 2022.

**Europe**H5

A recurrence started in Russia (Moscow City) on 22 January 2022.

H5N1

A recurrence started in Latvia (Rīgas) on 17 January 2022.

H5N1 was reported for the first time in two zones of Germany:

- The first occurrence started in Hessen on 19 January 2022.
- The first occurrence started in Berlin on 24 January 2022.

H5N1 was reported in an unusual host species (*Vulpes vulpes*) in Ireland, Donegal (event start date on 3 February 2022).

H5N2

H5N2 was reported for the first time in Baden-Württemberg in Germany on 3 February 2022.

**Americas and Oceania**

No new events reported

**On-going events for which there were new reported outbreaks, by world region (reported through follow-up reports):****Africa**Subtype H5N1

South Africa

**Americas**Subtype H5N1

Canada, United States of America

**Asia**Subtype H5N1

Israel, Japan, Korea (Rep. Of)

Subtype H5N8

Korea (Rep. Of)

**Europe**Subtype H5

Belgium

Subtype H5N1

Austria, Belgium, Croatia, Czech Republic, Denmark, France, Germany, Hungary, Ireland, Italy, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom

**Oceania**

No new outbreaks reported in the on-going events, or no on-going events.

**New outbreaks**

During the period covered by this report, a total of 411 outbreaks in non-poultry were reported by 30 countries and territories (Austria, Belgium, Canada, Croatia, Czech Republic, Denmark, France, Germany, Hong Kong, Hungary, Ireland, Israel, Italy, Japan, Korea (Rep. of), Latvia, Namibia, Netherlands, Poland, Portugal, Romania, Russia, Senegal, Slovakia, Slovenia, South Africa, Spain, Sweden, United Kingdom, United States of America). Details are presented in Figures 4 and 5.

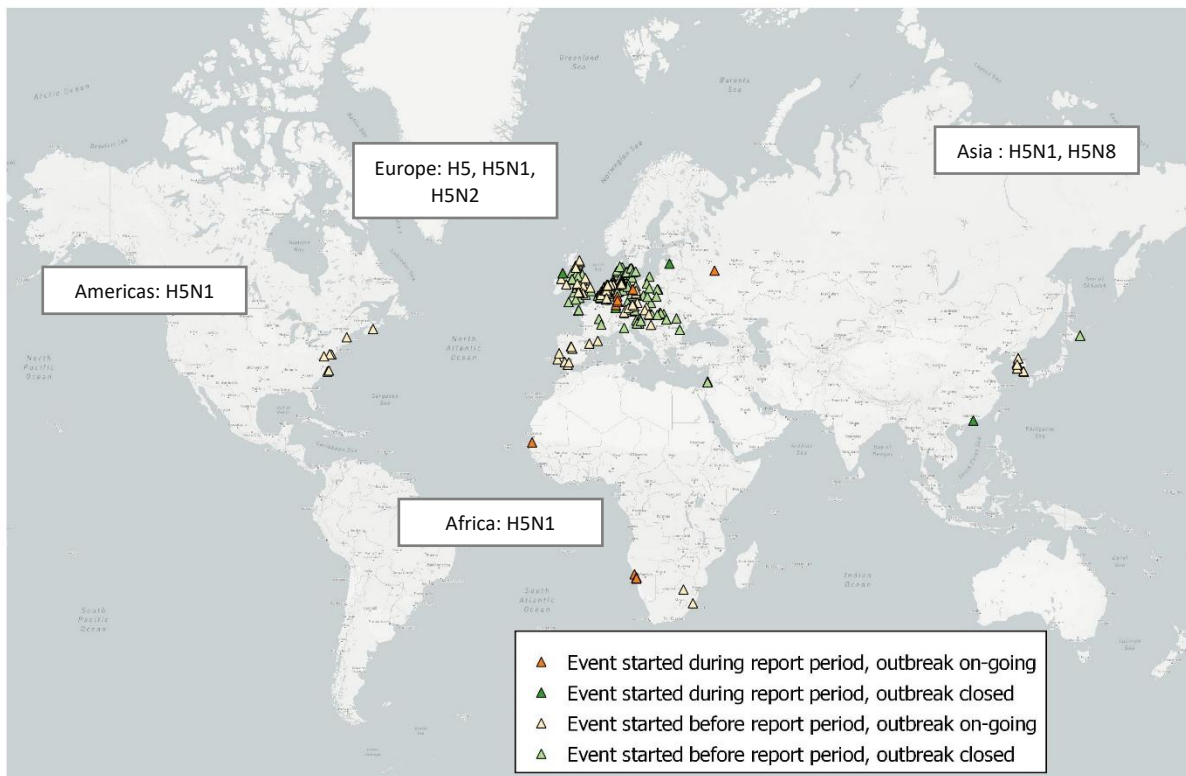


Figure 4. Distribution of HPAI new outbreaks in non-poultry birds, and corresponding subtypes.

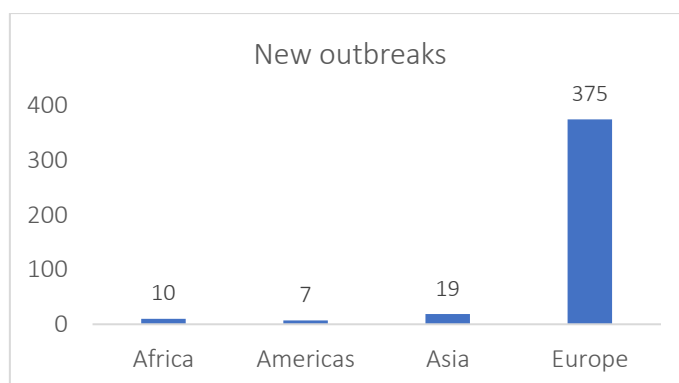


Figure 5. Number of new outbreaks by geographical region

**Events which started before the 5-week period but were reported during the 5-week period (reported through immediate notifications)**

**Americas**

Subtype H5N1

A recurrence started in United States of America (South Carolina) on 30 December 2021.

**Asia**

Subtype H5N1

A recurrence started in Japan (Hokkaido) on 2 January 2022.

**Europe**Subtype H5N1

A recurrence started in Finland (Etelä-Suomen aluehallintovirasto) on 25 December 2021.

A recurrence started in Norway (Agder and Vestland) on 10 January 2022.

The first occurrence of H5N1 started in Isle of Man in United Kingdom on 11 January 2022.

Subtype H5N3

A recurrence started in Germany (Mecklenburg-Vorpommern) on 22 December 2021.

**Africa and Oceania**

No events reported

**Epidemiological background**

High pathogenicity avian influenza (HPAI) is caused by influenza A viruses in the family Orthomyxoviridae. Since its identification in China (People's Rep. of) in 1996, there have been four waves of intercontinental transmission of the H5Nx Gs/GD lineage virus:

- 1) in 2005-2006, H5N1 clade 2.2 virus involving Africa, Asia and Europe;
- 2) in 2009-2010, clade 2.3.2.1c virus affecting Asia and Europe;
- 3) in 2014-2015, at the same time clade 2.3.4.4a H5N8 virus as well as clade 2.3.2.1c H5N1 virus involving Africa, Asia, and Europe ; and
- 4) in 2016-2017, 2.3.4.4b H5Nx clade also involving Africa, Asia, and Europe<sup>3,4</sup>.

HPAI has resulted in the death and mass slaughter of more than 246 million poultry worldwide between 2005 and 2020, with peaks in 2006 and 2016. During these two particular years, about a quarter of the world's countries were affected with HPAI<sup>5</sup>. In addition, up to now, humans have occasionally been infected with subtypes H5N1 (around 850 cases reported, of which half died), H7N9 (around 1,500 cases reported), H5N6 (around 70 cases reported, of which about 30 died) and sporadic cases have been reported with subtypes H7N7 and H9N2<sup>6,7,8,9,10</sup>.

**Key messages**

The current HPAI epidemic season continues with a high number of outbreaks in poultry and non-poultry reported mainly in Europe, but also in Africa, Americas and Asia over the 5 weeks covered by the report. The predominant subtype noticed in the current epidemic season is subtype H5N1. During the period of interest, more than 5 million poultry birds have died from the disease or have been killed and disposed due to outbreaks.

Notifications in wild birds in multiple countries and regions indicates a possible introduction and spread of the virus through current wild bird migration. The increased number of notifications reflects the annual seasonal trend of HPAI cases. Based on this known pattern, February is known to be the peak of the epidemic season. In this context, the World Organisation for Animal Health (OIE) urges countries to intensify surveillance efforts, implement strict biosecurity measures at farm level to prevent the introduction of the disease, continue timely reporting of avian influenza outbreaks in both poultry and non-poultry species, and maintain the high quality of the information provided to support early detection and rapid response to potential threats to both animal and public health.

**Other relevant resources**

- [OFFLU avian influenza statement](#)
- [OFFLU statement on outbreak of H5N1 high pathogenicity avian influenza in Newfoundland, Canada](#)
- [WHO, Human infection with avian influenza A\(H5\) viruses](#)
- [The World Organisation for Animal Health calls for increased surveillance of avian influenza as outbreaks in poultry and wild birds intensify – Press release](#)

<sup>3</sup> Lee D.H., Ferreira Criado M. & Swayne D.E (2021). Pathobiological Origins and Evolutionary History of Highly Pathogenic Avian Influenza Viruses, Cold Spring Harb Perspect Med 2021;11:a038679

<sup>4</sup> Sims L., Harder TC., Brown IH., Gaidet N., Belot G., Von Dobschuetz S., Kamata A., Kivaria FM., Palamara E., Bruni M., Dauphin G., Raizman E., Lubroth J. 2017. Highly pathogenic H5 avian influenza in 2016 and early 2017 - observations and future perspectives. Rome : FAO, 16 p. (Empres Focus On, 11)

<sup>5</sup> Awada L, Tizzani P, Noh SM, Ducrot C, Ntsama F, Caceres P, Mapitse N and Chalvet-Monfray K, 2018. Global dynamics of highly pathogenic avian influenza outbreaks in poultry between 2005 and 2016—focus on distance and rate of spread. Transboundary and Emerging Diseases, 65, 2006–2016. <https://doi.org/10.1111/tbed.12986>

<sup>6</sup> Chen H. 2019. H7N9 viruses. Cold Spring Harb Perspect Med doi: 10.1101/cshperspect.a038349

<sup>7</sup> WHO. Influenza (Avian and other zoonotic), 2018, available at [https://www.who.int/news-room/fact-sheets/detail/influenza-\(avian-and-other-zoonotic\)](https://www.who.int/news-room/fact-sheets/detail/influenza-(avian-and-other-zoonotic))

<sup>8</sup> WHO. Cumulative number of confirmed human cases for avian influenza A(H5N1) reported to WHO, 2003-2021, 21 May 2021, available at [https://www.who.int/publications/m/item/cumulative-number-of-confirmed-human-cases-for-avian-influenza-a\(h5n1\)-reported-to-who-2003-2021-21-may-2021](https://www.who.int/publications/m/item/cumulative-number-of-confirmed-human-cases-for-avian-influenza-a(h5n1)-reported-to-who-2003-2021-21-may-2021)

<sup>9</sup> Yang L, Zhu W, Li X, Chen M, Wu J, Yu P, Qi S, Huang Y, Shi W, Dong J, Zhao X, Huang W, Li Z, Zeng X, Bo H, Chen T, Chen W, Liu J, Zhang Y, Liang Z, Shi W, Shu Y, Wang D. 2017a. Genesis and spread of newly emerged highly pathogenic H7N9 avian viruses in mainland China. J Virol doi: <https://doi.org/10.1128/JVI.01277-17>

<sup>10</sup> WHO. Avian Influenza Weekly Update Number 830, [https://www.who.int/docs/default-source/wpro---documents/emergency/surveillance/avian-influenza/ai-20220204805e8ba915ef4c16920ae7f3d2a1bdae.pdf?sfvrsn=30d65594\\_203](https://www.who.int/docs/default-source/wpro---documents/emergency/surveillance/avian-influenza/ai-20220204805e8ba915ef4c16920ae7f3d2a1bdae.pdf?sfvrsn=30d65594_203)

- WHO 2021, [Assessment of risk associated with highly pathogenic avian influenza A\(H5N6\) virus](#)
- World Organisation for Animal Health (OIE), [Self-declared Disease Status](#)
- OIE World Animal Health Information System ([OIE-WAHIS](#))
- [OFFLU Influenza A Cleavage sites update 2021](#)