

Situation report period covered: 17 February to 9 March 2023

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 (WAHIS) between 17 February and 9 March 2023.

Seasonal trend

Using data reported to the World Organisation for Animal Health (WOAH) 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., 2018¹). Based on the data reported to WOAH, 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.

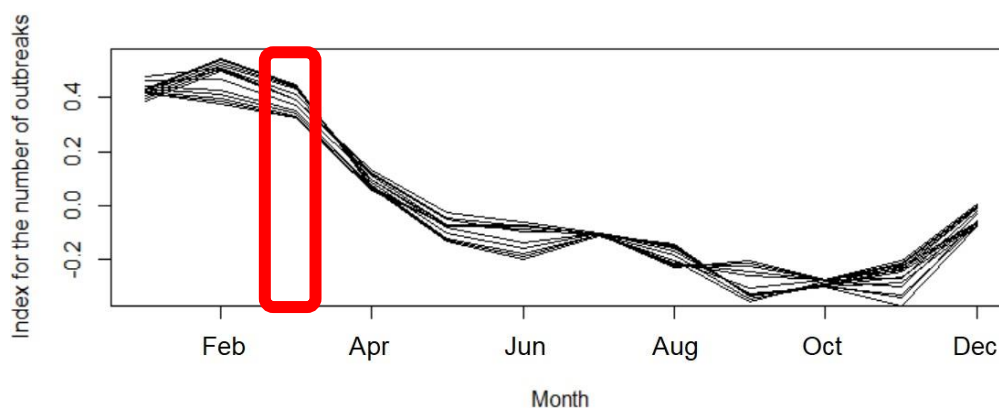


Figure 1. Seasonal trend in global HPAI incidence in poultry

Recent updates (17/02/2023-9/03/2023)

To describe the current disease situation of HPAI in poultry and in non-poultry birds, this section covers: (a) a list of new events² which started during the 3-week period (reported through immediate notifications); (b) information on events that started before the 3-week period but were still ongoing during that period; (c) the geographic distribution of new outbreaks³ that started during the 3-week period and d) events which started before the 3-week period but were reported during the 3-week period. The different subtypes of HPAI circulating during the 3-week period are also listed below. This information is based on the immediate notifications and follow-up reports received by WOAH.

HPAI in poultry**New events by world region (reported through immediate notifications)****Americas****H5**

The first occurrence in the country started in Argentina (Buenos Aires and Río Negro) on 24 February 2023

Europe**Subtype H5N1**

A recurrence started in Slovenia (Gorenjska) on 24 February 2023 (Clade 2.3.4.4b; Lineage: Fully Eurasian)

A recurrence of the strain started in Italy (Veneto) on 6 March 2023

¹ 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>

² As defined in [Article 1.1.2](#) of the WOAH 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.

³ As defined in the [glossary](#) of the WOAH Terrestrial Animal Health Code, an “outbreak” means the occurrence of one or more cases in an epidemiological unit.

Africa, Asia, and Oceania

No new events reported

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

AmericasSubtype H5N1

United States of America

AsiaSubtype H5N1

Türkiye

EuropeSubtype H5N1

Belgium, France, Germany, Hungary, and Poland

Africa, 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 44 new outbreaks in poultry were reported by 10 countries (Argentina, Belgium, France, Germany, Hungary, Italy, Poland, Slovenia, Türkiye, United States of America). Details are presented in Figures 2 and 3.

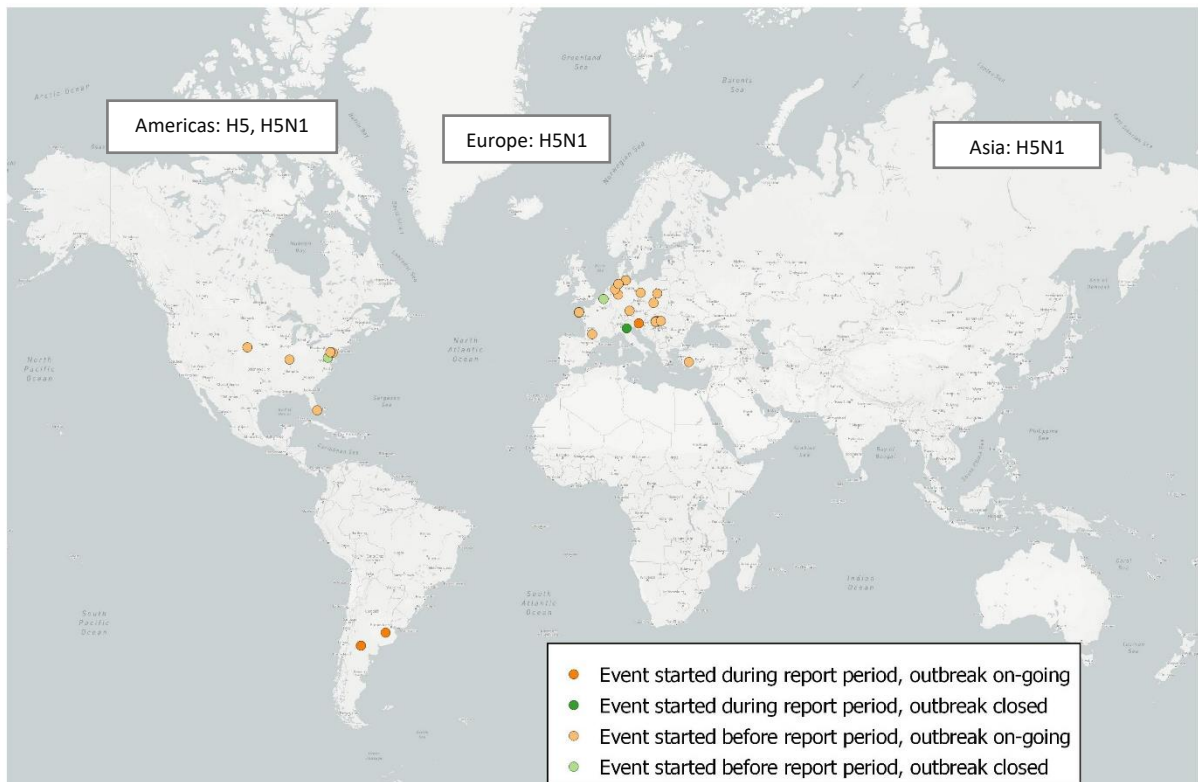


Figure 2. Distribution of HPAI new outbreaks in poultry, and corresponding subtypes

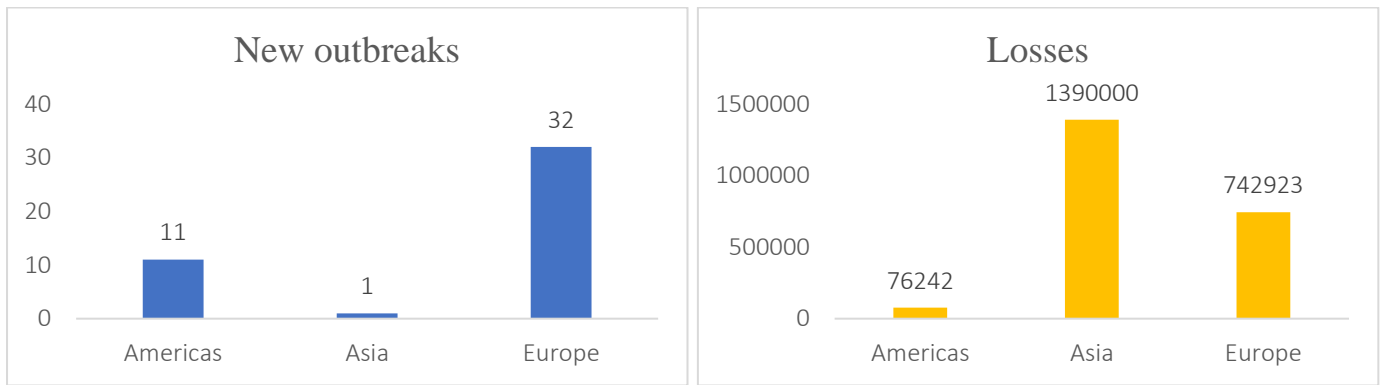


Figure 3. Number of new outbreaks and associated losses by geographical region (losses include animals dead and killed and disposed of within outbreaks – they do not include culling around outbreaks)

Events which started before the 3-week period but were reported during the 3-week period (reported through immediate notifications)

Europe

Subtype H5N1

A recurrence started in Estonia (Rapla) on 15 February 2023.

Africa, Americas, Asia and Oceania

No events reported

HPAI in non-poultry

New events by world region (reported through immediate notifications)

Americas

Subtype H5

The first occurrence started in Uruguay (Tacuarembó) started on 3 March 2023

Asia

Subtype H5N1

A recurrence started in Cambodia (Prey Vêng) started on 24 February 2023

Europe

Subtype H5N1

A recurrence started in United Kingdom (Isle of Man) started on 28 February 2023

Africa, and Oceania

No new events reported

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

Americas

H5

Argentina, Chile

H5N1

Chile (Clade: 2.3.4.4b - Lineage: Reassortment Eurasian and North American), Colombia (Clade: 2.3.4.4b - Lineage: Reassortment Eurasian and North American), United States of America

Asia

H5

Japan

Europe

H5

Belgium

H5N1

Austria, Belgium, Czech Republic, Germany, Hungary, Italy, Poland, Romania, Slovenia (Clade 2.3.4.4b - Lineage: Fully Eurasian), Sweden, Switzerland and United Kingdom

Africa, and 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 161 outbreaks in non-poultry were reported by 19 countries (Argentina, Austria, Belgium, Cambodia, Chile, Colombia, Czech Republic, Germany, Hungary, Italy, Japan, Poland, Romania, Slovenia, Sweden, Switzerland, United Kingdom, United States of America and Uruguay). Details are presented in Figures 4 and 5.

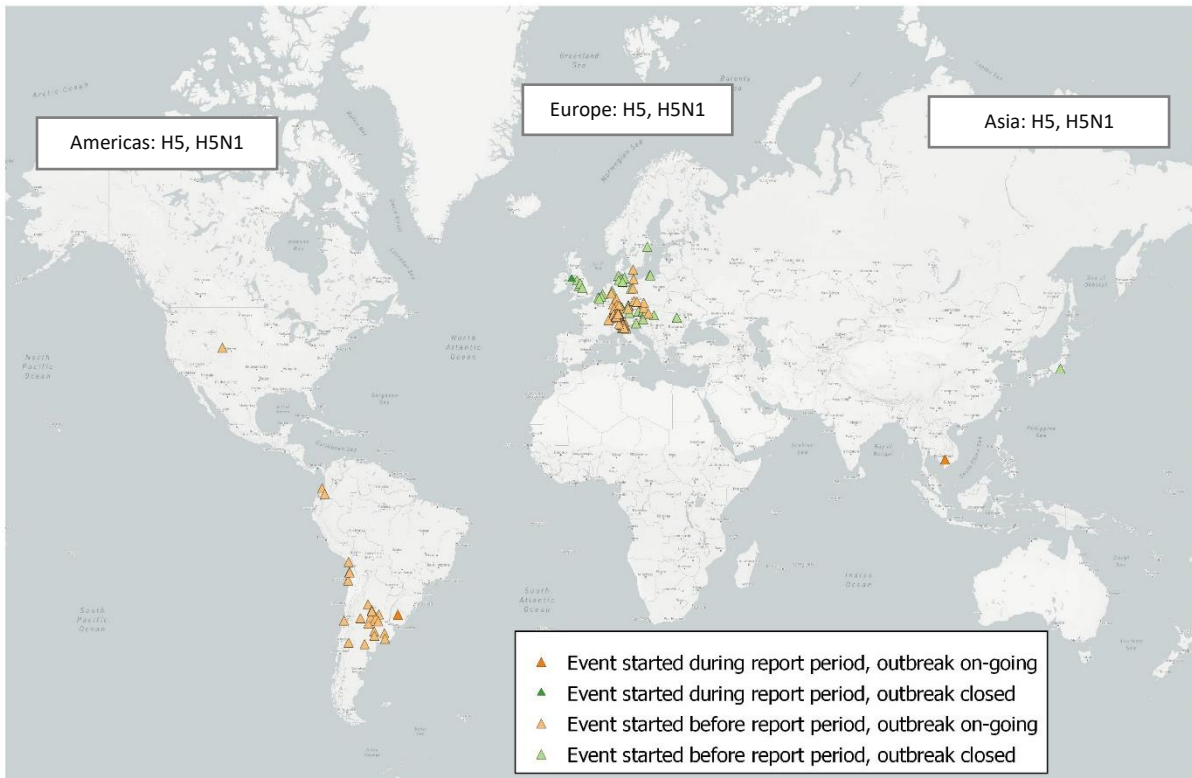


Figure 4. Distribution of HPAI new outbreaks in non-poultry birds, and corresponding subtypes.

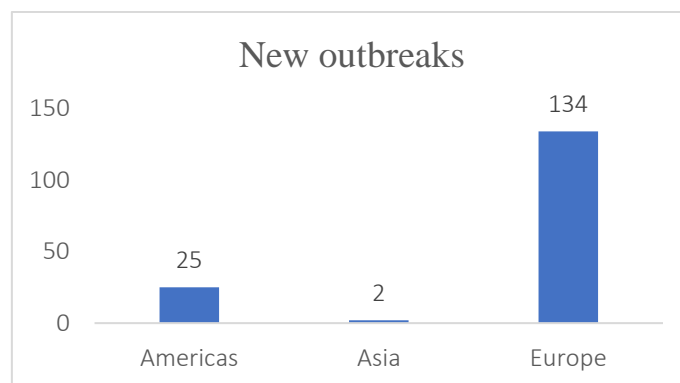


Figure 5. Number of new outbreaks by geographical region

Events which started before the 3-week period but were reported during the 3-week period (reported through immediate notifications)

Americas

Subtype H5

Occurrence in unusual host (*Otaria flavescens*) started in Chile (Antofagasta) on 10 February 2023.

Asia**Subtype H5N1**

A recurrence started in Chinese Taipei (Chinese Taipei) on 14 January 2023 (Clade 2.3.4.4b - Lineage: Fully Eurasian).

A recurrence of the strain started in Nepal (Bagmati Pradesh) on 9 February 2023.

Europe**Subtype H5N5**

A recurrence of the strain started in Sweden (Vellinge) on 19 February 2021.

Subtype H5N1

A recurrence started in Spain (Cataluña) on 5 January 2023.

Occurrence in unusual host (*Vulpes vulpes*) started in France (Île-de-France) on 10 February 2023 (Clade: 2.3.4.4b - Lineage: Reassortment Eurasian and North American).

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 multiple waves of intercontinental transmission of the H5Nx Gs/GD lineage virus. HPAI has resulted in the death and mass slaughter of more than 316 million poultry worldwide between 2005 and 2021, with peaks in 2021, 2020 and 2016. During each of the years 2006, 2016, 2017 and 2021, more than 50 countries and territories in the world were affected with HPAI. In addition, up to now, humans have occasionally been infected with subtypes H5N1 (around 870 cases reported, of which half died), H7N9 (around 1,500 cases reported, of which about 600 died), H5N6 (around 80 cases reported, of which about 30 died), H9N2 (around 80 cases reported, of which 2 died) and sporadic cases have been reported with subtypes H3N8, H7N4, H7N7 and H10N3^{4,5,6,7,8}.

Key messages

The current HPAI epidemic season continues with 44 outbreaks being reported in poultry and about 160 in non-poultry birds over the 3 weeks covered by the report, mainly in Europe, and also in the Americas and Asia. Outbreaks are also spreading further to Central America countries. It is worth highlighting the first occurrence of HPAI in poultry in Argentina, and the first occurrence of HPAI in non-poultry birds in Uruguay. The report of HPAI in mammals (in Chile and France) highlights virus spillover to mammalian hosts. About 2.2 million poultry birds died or were culled worldwide during the 3 weeks period. The predominant subtype noticed in the current epidemic season is still subtype H5N1. Based on the HPAI seasonal pattern, the number of outbreaks in animals is expected to have passed the peak and start to decline.

On 23 February 2023, Cambodia reported one confirmed case of human infection with avian influenza A (H5N1) virus to WHO. A second case, a family contact of the first case, was reported on 24 February 2023. These are the first two human cases of avian influenza A (H5N1) reported from Cambodia since 2014⁹.

The World Organisation for Animal Health (WOAH) recommends that countries maintain their surveillance efforts, biosecurity measures at farm level, and continue timely reporting of avian influenza outbreaks in both poultry and non-poultry species. WOAH also stresses the importance of reporting outbreaks of avian influenza in unusual hosts, as it has been noted that the virus has been increasingly detected in mammals in recent months, a situation that should be monitored. High quality of information is key to support early detection and rapid response to potential threats to both animal and public health.

Visit our [website](#) for more information on avian influenza. For any press inquiry on the disease, you can email us at media@woah.org

⁴ Chen H. 2019. H7N9 viruses. Cold Spring Harb Perspect Med doi: 10.1101/cshperspect.a038349

⁵ 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))

⁶ WHO. Cumulative number of confirmed human cases for avian influenza A(H5N1) reported to WHO.

⁷ 2003-2022, 25 November 2022, available at https://cdn.who.int/media/docs/default-source/influenza/human-animal-interface-risk-assessments/2022_nov_tableh5n1.pdf?sfvrsn=babfcd1_1&download=true

⁸ 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>

⁸ WHO, Avian Influenza Weekly Update Number 886, https://www.who.int/docs/default-source/wpro---documents/emergency/surveillance/avian-influenza/ai_20230310.pdf?sfvrsn=22ea0816_25

⁹ WHO, Avian Influenza A (H5N1) – Cambodia, <https://www.who.int/emergencies/disease-outbreak-news/item/2023-DON445>

Other relevant resources

- [OFFLU avian influenza matching \(AIM\) pilot study](#)
- [WOAH Statement on avian influenza and mammals](#)
- [WHO, Human infection with avian influenza A\(H5\) viruses](#)
- [Influenza at the human-animal interface summary and assessment, January 2023](#)
- World Organisation for Animal Health (WOAH), [Self-declared Disease Status](#)
- [World Animal Health Information System \(WAHIS\)](#)
- [One health Joint plan of action \(2022 – 2026\)](#)
- [30th Conference of the Regional Commission for Europe, Catania, Italy, October 2022](#)
- [OFFLU AI situation update \(December 2022\)](#)
- [First meeting of the Standing Group of Experts on Avian Influenza, Americas](#)
- [Epidemiological Alert Outbreaks of avian influenza and human infection caused by influenza A\(H5\) public health implications in the Region of the Americas](#)
- [OFFLU avian influenza VCM report for WHO vaccine composition meetings \(February 2023\)](#)
- [Technical meeting on HPAI vaccination, GF-TAD Americas, March 2023](#)