

Situation report period covered: 5 May to 1 June 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 5 May and 1 June 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.

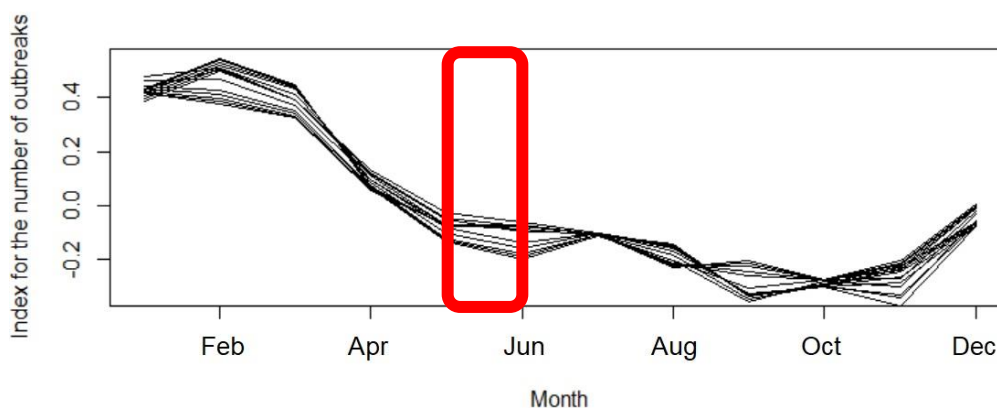


Figure 1. Seasonal trend in global HPAI incidence in poultry

Recent updates (05/05/2023-01/06/2023)

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 4-week period (reported through immediate notifications); (b) information on events that started before the 4-week period but were still ongoing during that period; (c) the geographic distribution of new outbreaks³ that started during the 4-week period and d) events which started before the 4-week period but were reported during the 4-week period. The different subtypes of HPAI circulating during the 4-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)****Europe****H5N1**

A recurrence started in Russia (Yaroslavl) on 11 May 2023

Africa, Americas, Asia, and Oceania

No new events reported.

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.

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

Americas

Subtype H5

Argentina

Subtype H5N1

Canada (Clade: 2.3.4.4b - Lineage: Reassortment Eurasian and North American)

Asia

Subtype H5N1

Nepal

Europe

Subtype H5N1

France, Poland, United Kingdom

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 82 new outbreaks in poultry were reported by seven countries (Argentina, Canada, France, Nepal, Poland, Russia, and United Kingdom). Details are presented in Figures 2 and 3.

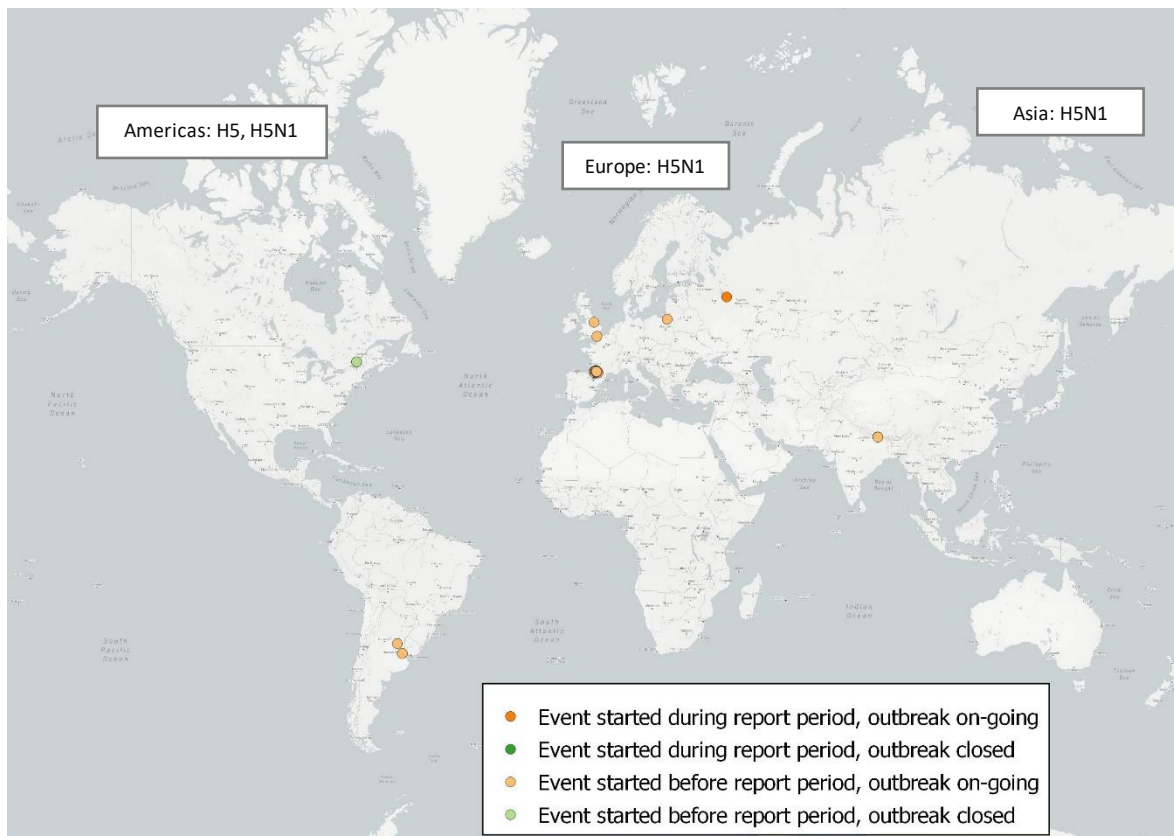


Figure 2. Distribution of HPAI new outbreaks in poultry, and corresponding subtypes

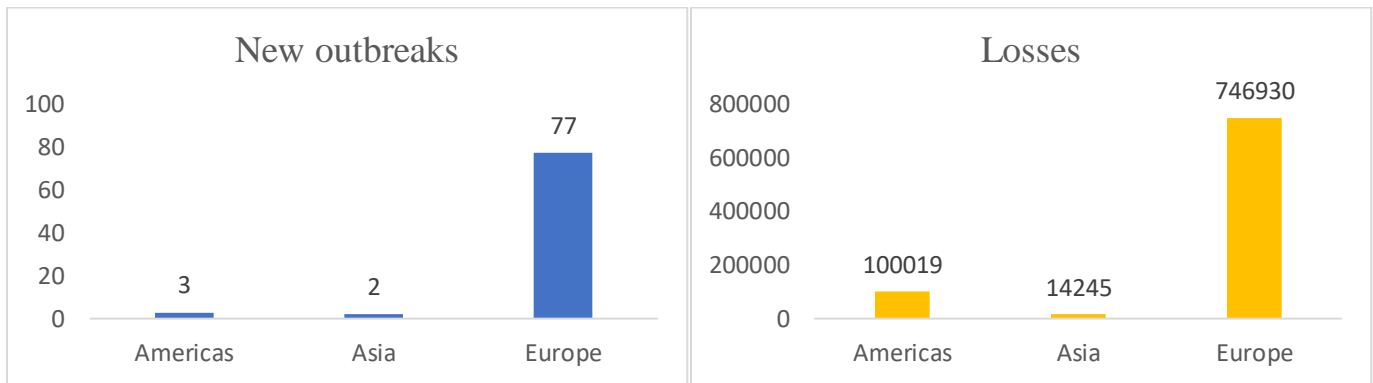


Figure 3. Number of new outbreaks and associated losses by geographical region (losses include animals dead and killed and disposed of within outbreaks – they do not include culling around outbreaks)

Events which started before the 4-week period but were reported during the 4-week period (reported through immediate notifications)

Asia

H5N1

A recurrence in India (Bihar) started on 17 March 2023

A new clade was detected in the area of Kalimantan Selatan in Indonesia. The event started on 5 April 2022.

Africa, Americas, Europe, and Oceania

No events reported

HPAI in non-poultry

New events by world region (reported through immediate notifications)

Americas

H5 in mammals

An occurrence in unusual host (South American coati [*Nasua nasua*]) started in Uruguay (Flores) on 5 May 2023.

H5 in non-poultry birds

The first occurrence of HPAI started in Paraguay (Boquerón) on 5 May 2023.

H5N1 in non-poultry birds

The first occurrence of HPAI started in Brazil (Brazilian Exclusive Economic Zone, Espírito Santo, Rio de Janeiro, Rio Grande do Sul) on 8 May 2023

Europe

H5N1 in non-poultry birds

2 recurrences started in Russia:

- One in Ivanovo, Kaluga, Kostroma, Moscow City, Smolensk, Tver' on 6 May 2023
- One in Komi and Novgorod on 13 May 2023

A recurrence started in Slovenia (Podravska) on 9 May 2023 (Clade 2.3.4.4b - Lineage: Fully Eurasian)

A recurrence started in Estonia (Harju) on 9 May 2023

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):

Africa

H5 in non-poultry birds

South Africa

Americas

H5 in non-poultry birds

Argentina and Uruguay

H5N1 in non-poultry birds

United States of America

EuropeUntyped in mammalsBelgiumH5 in non-poultry birdsBelgiumH5N1 in non-poultry birds

Austria, Belgium, Czech Republic (Clade 2.3.4.4b - Lineage: Fully Eurasian), Denmark (Clade 2.3.4.4b - Lineage: Fully Eurasian), France, Germany, Hungary, Latvia, Lithuania, Luxembourg, Poland, Russia, Serbia (Clade: 2.3.4.4b - Lineage: Reassortment Eurasian and North American), Sweden, Switzerland, and United Kingdom

Asia, 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 198 outbreaks in non-poultry were reported by 24 countries (Argentina, Austria, Belgium, Brazil, Czech Republic, Denmark, Estonia, France, Germany, Hungary, Latvia, Lithuania, Luxembourg, Paraguay, Poland, Russia, Serbia, Slovenia, South Africa, Sweden, Switzerland, United Kingdom, United States of America and Uruguay). Details are presented in Figures 4 and 5.

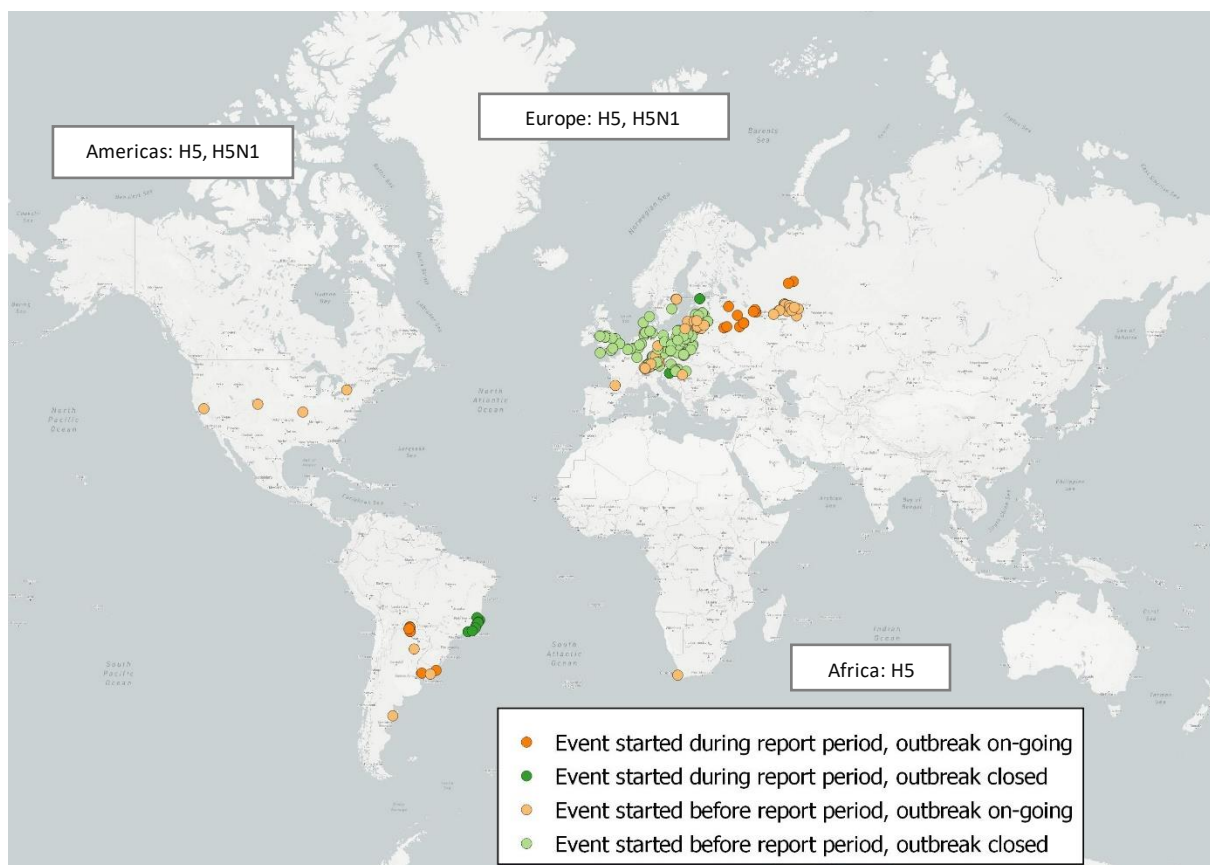


Figure 4. Distribution of HPAI new outbreaks in non-poultry animals, and corresponding subtypes.

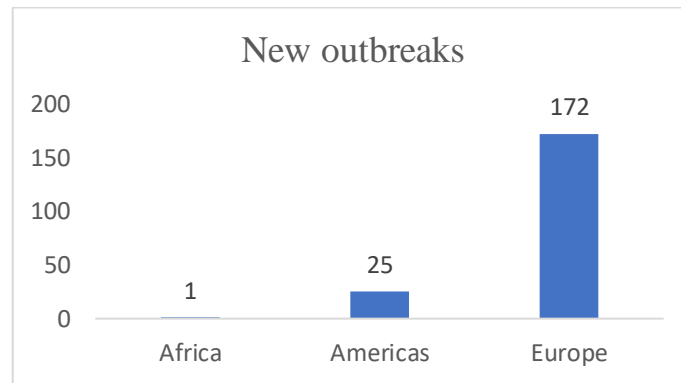


Figure 5. Number of new outbreaks by geographical region

Events which started before the 4-week period but were reported during the 4-week period (reported through immediate notifications or through emails)

Africa

H5N1 in non-poultry birds

The first occurrence started in the area of Guinean Exclusive Economic Zone in Guinea on 15 April 2023

Americas

H5N5 in mammals

An occurrence in unusual host (raccoon [*Procyon lotor*]) started in Canada (Prince Edward Island) on 4 April 2023.

Europe

H5N1 in mammals

An occurrence in unusual host (red fox [*Vulpes vulpes*]) started in Italy (Veneto) on 3 April 2023.

H5N1 in non-poultry birds

A recurrence started in Iceland (Höfuðborgarsvæði) on 23 March 2023

The first occurrence started in the area of Amur in Russia on 30 April 2023

A recurrence started in Russia (Kirov, Mariy-El and Udmurt) on 2 May 2023

A recurrence started in Latvia (Latgales) on 4 May 2023

Asia, 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 82 outbreaks being reported in poultry and 198 in non-poultry birds over the 4 weeks covered by the report, mainly in Europe, and also in Africa, Asia and the Americas. More than 860,000 poultry birds died or were culled worldwide during the 4 weeks period. Based on the previous HPAI seasonal patterns, the number of outbreaks in animals is expected to have passed the peak and decline. However, the number of outbreaks

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,

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=babfcad1_1&download=true

⁷ 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 897, https://cdn.who.int/media/docs/default-source/wpro---documents/emergency/surveillance/avian-influenza/ai_20230526.pdf?sfvrsn=22ea0816_28

reported for the period covered by this report shows a slight upturn compared with previous periods. The events will be closely monitored by the World Organisation for Animal Health (WOAH) to analyse the trend over the coming weeks. WOAHO 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 the virus has been increasingly detected in mammals in recent months, a situation that should be monitored. The occurrence of HPAI in terrestrial and marine mammals notified during this 4-week period by countries in Americas and Europe is noteworthy. High quality of information is key to support early detection and rapid response to potential threats to both animal and public health.

WOAH resources

- [Avian influenza portal](#)
- [Self-declared disease status](#)
- [World Animal Health Information System \(WAHIS\)](#)
- [Strategic challenges in the global control of high pathogenicity avian influenza](#)
- [Animal Health Forum on avian influenza : policy to action: The case of avian influenza – reflections for change](#)
- [Resolution adopted in WOAHO General Session 2023: Strategic challenges in the global control of HPAI](#)
- [Avian influenza: understanding new dynamics to better combat the disease](#)
- [Avian influenza: why strong public policies are vital](#)
- [WOAH Statement on avian influenza and mammals](#)
- Preliminary FAO/WHO/WOAH Joint Rapid Risk Assessment - Human infection with influenza A(H5N1), Cambodia (2023)
- One health Joint plan of action (2022 – 2026)
- [The first meeting of the Standing Group of Experts on HPAI for Europe, May 2023](#)
- [Technical meeting on HPAI vaccination, GF-TAD Americas, March 2023](#)
- Press inquiries: media@woah.org

OFFLU resources

- [OFFLU annual report 2022](#)
- [OFFLU Statement on high pathogenicity avian influenza caused by viruses of the H5N1 subtype](#)
- [OFFLU avian influenza matching \(AIM\) pilot study](#)
- [OFFLU avian influenza VCM report for WHO vaccine composition meetings \(February 2023\)](#)

Other relevant resources

- [WHO, Human infection with avian influenza A\(H5\) viruses](#)
- [Epidemiological Alert Outbreaks of avian influenza and human infection caused by influenza A\(H5\) public health implications in the Region of the Americas](#)
- [WHO, Influenza at the human-animal interface, Summary and risk assessment, from 4 March to 24 April 2023](#)