

**Situation report period covered: 10 March to 30 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 10 March and 30 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., 2018<sup>1</sup>). Based on the data reported to WOA, 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.

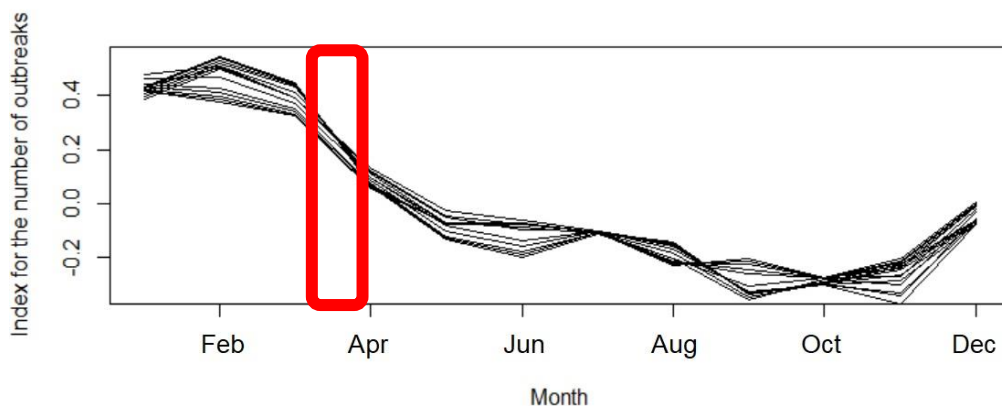


Figure 1. Seasonal trend in global HPAI incidence in poultry

**Recent updates (10/03/2023-30/03/2023)**

To describe the current disease situation of HPAI in poultry and in non-poultry birds, this section covers: (a) a list of new events<sup>2</sup> 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 outbreaks<sup>3</sup> 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 WOA.

**HPAI in poultry****New events by world region (reported through immediate notifications)****Americas****H5N1**

2 first occurrences started in Chile (Clade: 2.3.4.4b - Lineage: Reassortment Eurasian and North American):

- One in the area of Libertador General Bernardo O'Higgins on 10 March 2023
- One in the area of Maule on 15 March 2023

**Europe****Subtype H5N1**

A recurrence started in Germany (Rheinland-Pfalz) on 14 March 2023

A recurrence of subtype H5N1 started in Denmark (Veterinary Inspection Unit East) on 16 March 2023

<sup>1</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>2</sup> As defined in [Article 1.1.2](#) of the WOA 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>3</sup> As defined in the [glossary](#) of the WOA Terrestrial Animal Health Code, an “outbreak” means the occurrence of one or more cases in an epidemiological unit.

A recurrence started in Switzerland (Zürich) on 19 March 2023

A recurrence started in Sweden (Kävlinge) on 20 March 2023

A recurrence started in Hungary (Nógrád) on 21 March 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**

Subtype H5N1

Nigeria

#### **Americas**

Subtype H5

Argentina

Subtype H5N1

United States of America

#### **Asia**

Subtype H5N1

Chinese Taipei (Clade 2.3.4.4b; Lineage: Fully Eurasian) and Japan

#### **Europe**

Subtype H5N1

France, Germany, Hungary, Italy, Poland

#### **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 26 new outbreaks in poultry were reported by 14 countries and territories (Argentina, Chile, Chinese Taipei, Denmark, France, Germany, Hungary, Italy, Japan, Nigeria, Poland, Sweden, Switzerland, United States of America). Details are presented in Figures 2 and 3.



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

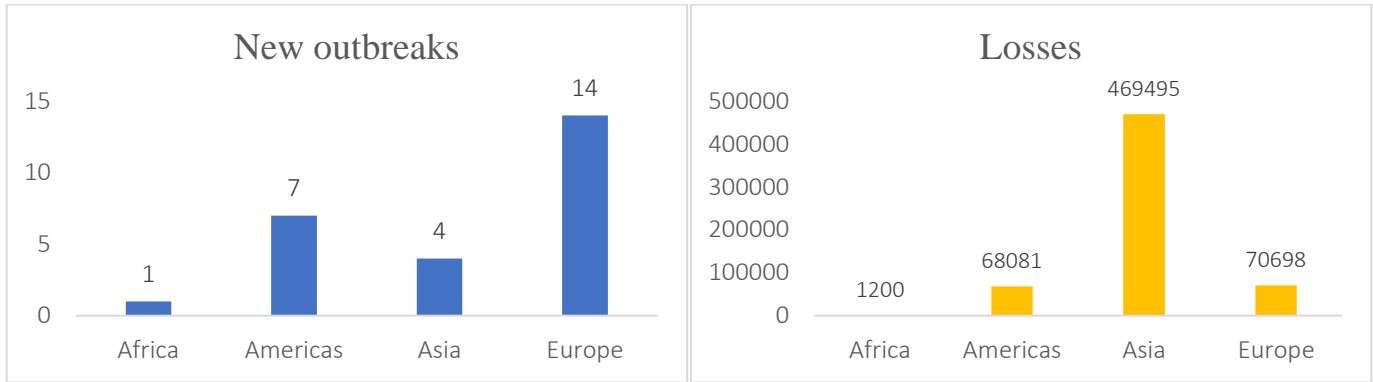


Figure 3. Number of new outbreaks and associated losses by geographical region (losses include animals dead and killed and disposed of within outbreaks – they do not include culling around outbreaks)

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

**Africa, Americas, Asia, Europe and Oceania**

No events reported

## HPAI in non-poultry

New events by world region (reported through immediate notifications)

**Asia**

Subtype H5N1

A recurrence started in Bhutan (Samtse) started on 11 March 2023

**Africa, Americas, Europe 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, Uruguay

H5N1

Panama, United States of America

**Asia**

H5

Japan

**Europe**

H5N1

Austria, Belgium, Czech Republic (Clade 2.3.4.4b - Lineage: Fully Eurasian), France, Germany, Ireland, Italy, Netherlands, Poland, Russia, Serbia (Clade: 2.3.4.4b - Lineage: Reassortment Eurasian and North American), Slovenia (Clade 2.3.4.4b - Lineage: Fully Eurasian), Sweden, Switzerland, 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 148 outbreaks in non-poultry were reported by 21 countries (Argentina, Austria, Belgium, Bhutan, Chile, Czech Republic, France, Germany, Ireland, Italy, Netherlands, Panama, Poland, Russia, Serbia, Slovenia, Sweden, Switzerland, United Kingdom, United States of America, Uruguay). Details are presented in Figures 4 and 5.

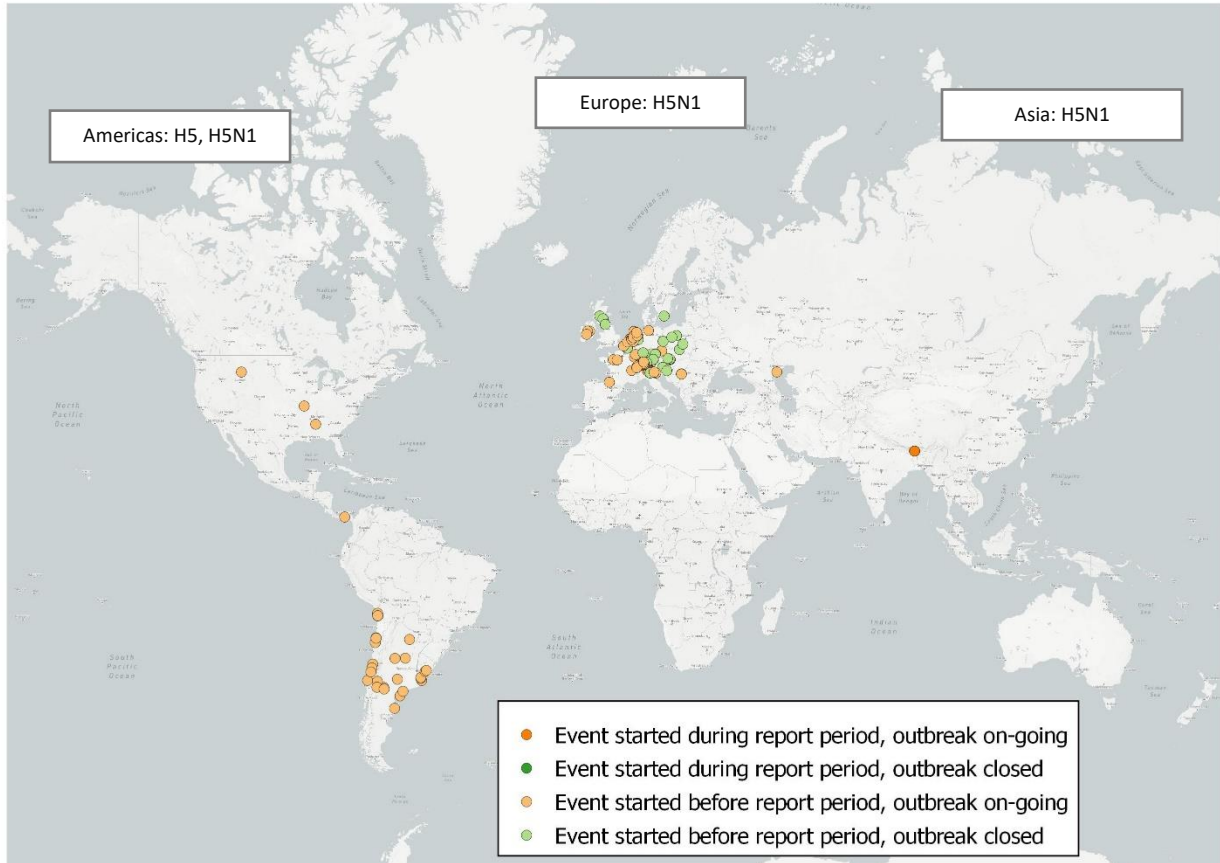


Figure 4. Distribution of HPAI new outbreaks in non-poultry birds, and corresponding subtypes.

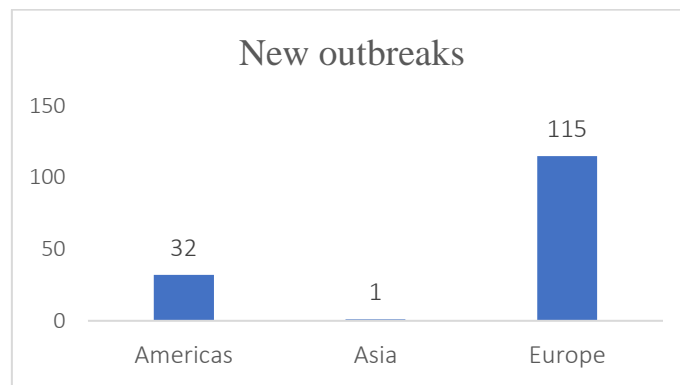


Figure 5. Number of new outbreaks by geographical region

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

**Africa**

Subtype H5N1

2 events started in Senegal :

- The first occurrence in the area of Dakar on 5 March 2023.
- A recurrence (Saint-Louis) on 8 March 2023.

**Europe**

Untyped or partially typed

Occurrence in unusual hosts (*Mustela putorius*, *domestic Mustelidae* and *Vulpes vulpes*) started in Belgium (Vlaanderen) on 7 April 2022

### Subtype H5

A recurrence started in Sweden (Gotland) on 16 January 2023.

### Subtype H5N1

Occurrence in 10 South American Bush dogs (*Speothos venaticus venaticus*) was detected in United Kingdom (England) on samples collected in November 2022.

Occurrence in 5 grey seals (*Halichoerus grypus*), 1 red fox (*Vulpes vulpes*), 1 Harbour porpoise (*Phocoena phocoena*) and 2 common dolphins (*Common dolphins*) was detected in United Kingdom (England) on samples collected between September 2022 and February 2023.

### America, 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<sup>4,5,6,7,8</sup>.

### Key messages

The current HPAI epidemic season continues with 26 outbreaks being reported in poultry and about 150 in non-poultry birds over the 3 weeks covered by the report, mainly in Europe, and also in the Americas, Asia and Africa. The reports of HPAI in mammals (in Belgium and United Kingdom) further highlight the increasing potential risk that HPAI may become better adapted to mammals, and spill over to humans and other animals. About 610 thousand 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 decline. There has been a slight decrease since the previous periodic reports. On 29 March 2023, the Ministry of Health of Chile notified WHO of a laboratory-confirmed case of human infection caused by avian influenza A(H5) virus in the Region of Antofagasta. This is the first human infection with avian influenza A(H5) virus reported in Chile and the third reported in the Region of the Americas to date<sup>9</sup>.

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](mailto:media@woah.org)

### 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](#)

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

<sup>5</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>6</sup> 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](https://cdn.who.int/media/docs/default-source/influenza/human-animal-interface-risk-assessments/2022_nov_tableh5n1.pdf?sfvrsn=babfcad1_1&download=true)

<sup>7</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>8</sup> WHO, Avian Influenza Weekly Update Number 889, [https://www.who.int/docs/default-source/wpro---documents/emergency/surveillance/avian-influenza/ai\\_20230331.pdf?sfvrsn=5bc7c406\\_23#:~:text=A\(H3N8\)%20virus,-Between%2024%20to%2030%20March%202023%2C%20no%20new%20cases%20of,in%20the%20Western%20Pacific%20Region.](https://www.who.int/docs/default-source/wpro---documents/emergency/surveillance/avian-influenza/ai_20230331.pdf?sfvrsn=5bc7c406_23#:~:text=A(H3N8)%20virus,-Between%2024%20to%2030%20March%202023%2C%20no%20new%20cases%20of,in%20the%20Western%20Pacific%20Region.)

<sup>9</sup> Human infection caused by Avian Influenza A (H5) – Chile, <https://www.who.int/emergencies/disease-outbreak-news/item/2023-DON453>

- [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](#)
- [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](#)