

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 6 April 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.

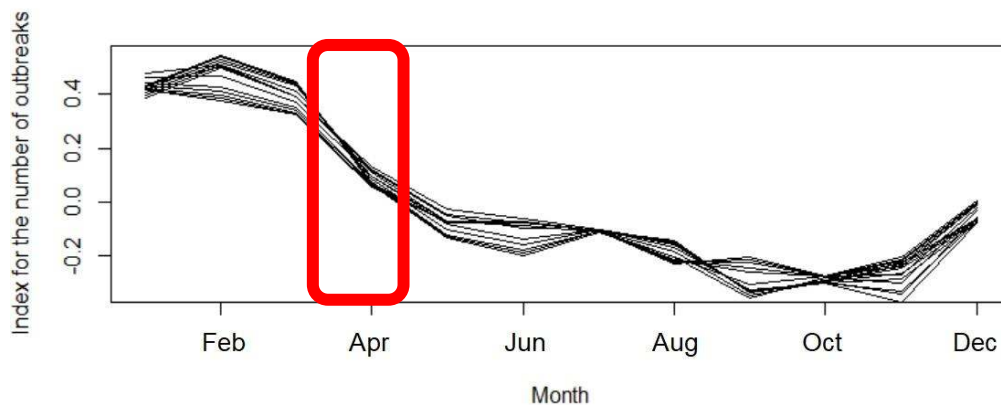


Figure 1. Seasonal trend in global HPAI incidence in poultry

### Recent updates (10/03/2022 – 06/04/2022)

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 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 outbreaks<sup>2</sup> 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 the OIE.

#### HPAI in poultry

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

###### Europe

###### Subtype H5N1

A recurrence started in Romania (Giurgiu) on 17 March 2022.

A recurrence started in Belgium (Vlaanderen) on 28 March 2022.

###### Subtype H5N8

A recurrence started in Albania (Dibër, Durrës, Fier and Korçë) on 17 March 2022.

###### Africa, Americas, Asia and Oceania

No new events reported

<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.

**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

Japan, Nepal, Philippines

**Europe**Subtype unknown

Bulgaria

Subtype H5N1

France, Germany, Italy, Netherlands, Spain, United Kingdom

**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 440 new outbreaks in poultry were reported by 16 countries (Albania, Belgium, Bulgaria, Canada, France, Germany, Italy, Japan, Nepal, Netherlands, Philippines, Romania, South Africa, Spain, United Kingdom, and United States of America). Details are presented in Figures 2 and 3.

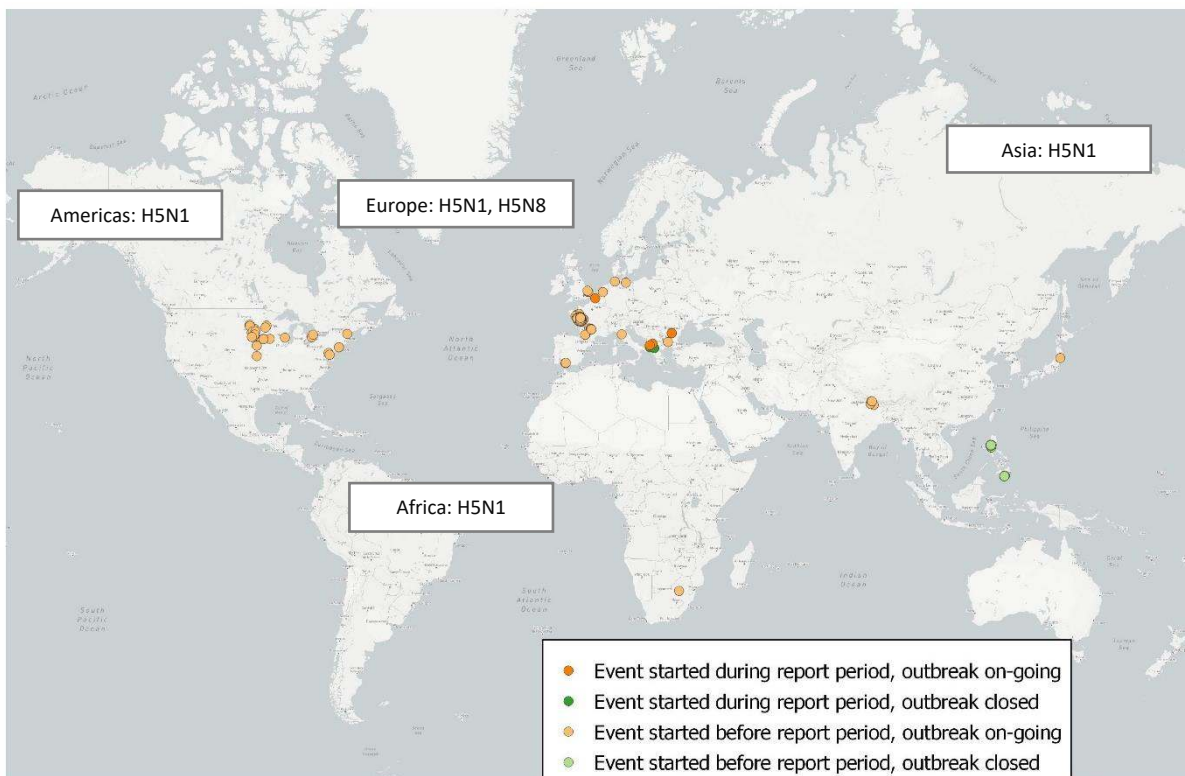


Figure 2. Distribution of HPAI new outbreaks in poultry, and corresponding subtypes

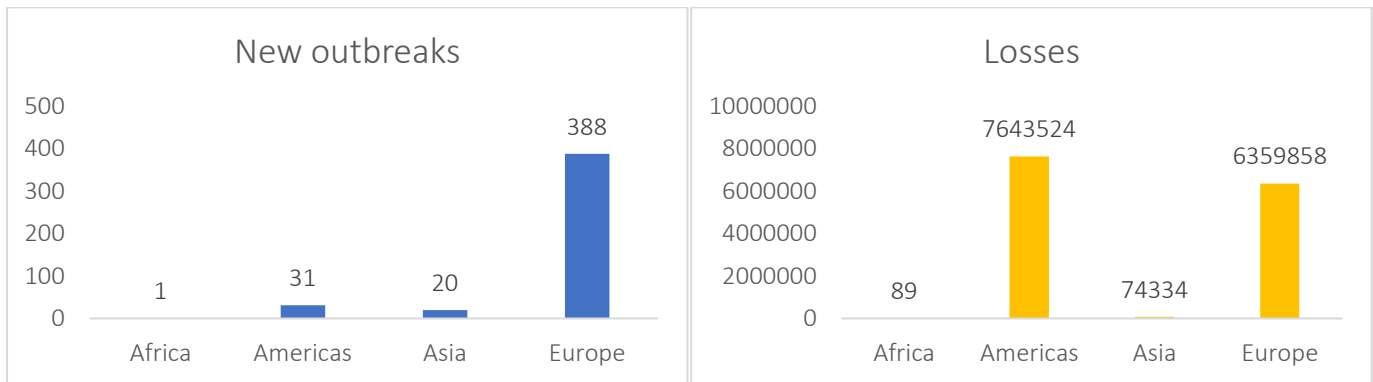


Figure 3. Number of new outbreaks and associated losses by geographical region (losses include animals dead and killed and disposed of)

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

##### Asia

###### Subtype H5N1

The first occurrence of H5N1 in Sultan Kudarat in Philippines started on 10 February 2022.

###### Subtype H5N8

The first occurrence of H5N8 in Pampanga in Philippines started on 28 February 2022.

##### **Africa, Americas, Europe, and Oceania**

No events reported

#### HPAI in non-poultry

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

##### Europe

###### H5

A recurrence started in Russia (Astrakhan') on 15 March 2022.

###### H5N1

A recurrence started in Albania (Korçë) on 18 March 2022.

##### **Africa, Americas, 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

South Africa

##### Americas

###### Subtype H5N1

Canada, United States of America

##### Asia

###### Subtype H5N1

Japan, Korea (Rep. Of)

##### Europe

###### Subtype H5

Belgium

###### Subtype H5N1

Austria, Denmark, Estonia, France, Germany, Greece, Hungary, Ireland, Netherlands, Norway, Portugal, Romania, 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 159 outbreaks in non-poultry were reported by 23 countries (Albania, Austria, Belgium, Canada, Denmark, Estonia, France, Germany, Greece, Hungary, Ireland, Japan, Korea (Rep. of), Netherlands, Norway, Portugal, Romania, Russia, South Africa, Spain, Sweden, United Kingdom, United States of America). Details are presented in Figures 4 and 5.

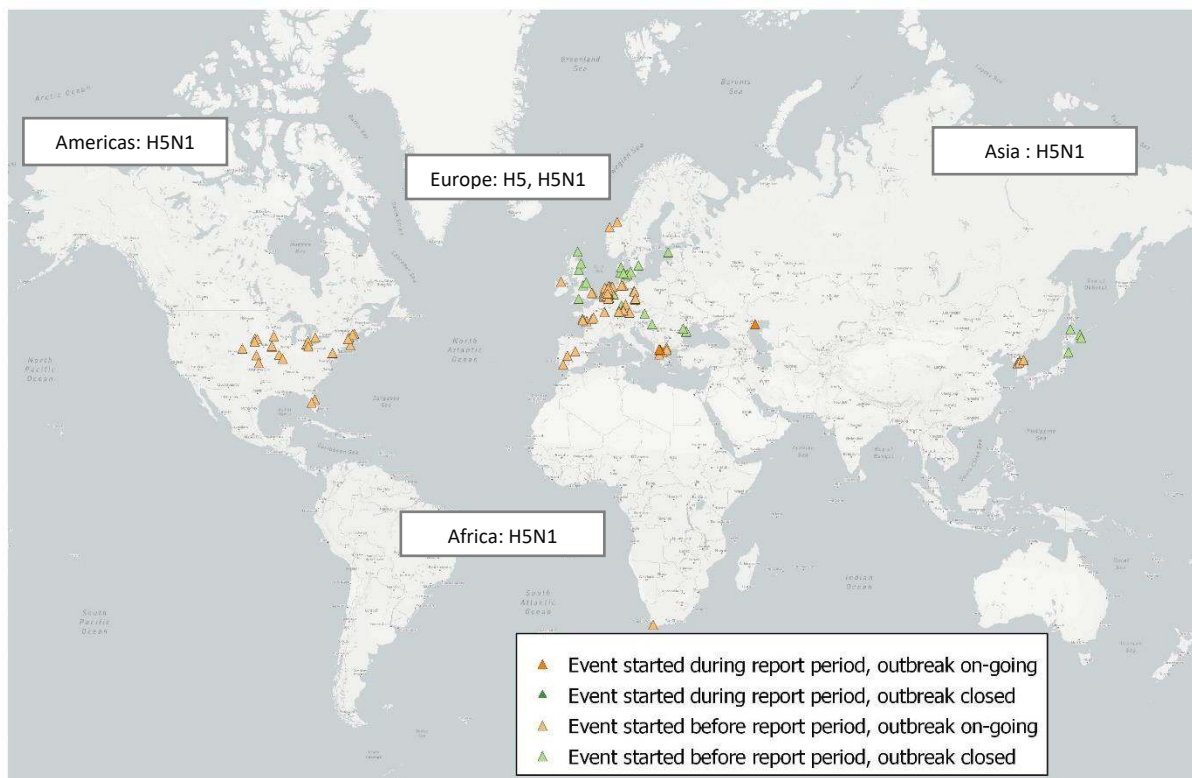


Figure 4. Distribution of HPAI new outbreaks in non-poultry birds, and corresponding subtypes.

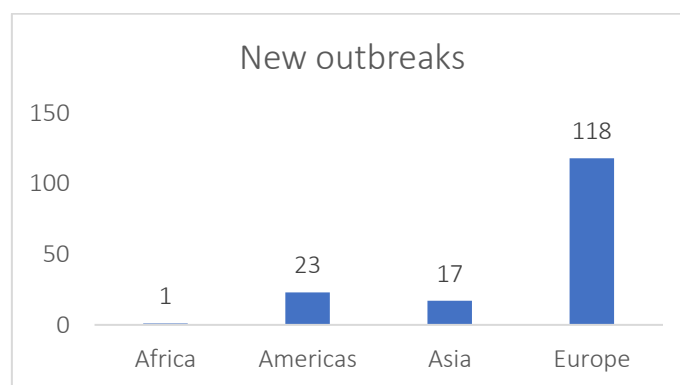


Figure 5. Number of new outbreaks by geographical region

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

**Africa**

Subtype H5N1

A recurrence started in Mali (Koulikoro) on 3 March 2022.

**Europe**Subtype H5N1

A recurrence started in Germany (Thüringen) on 4 March 2022.

Subtype H5N8

A recurrence started in United Kingdom (England) on 7 March 2022.

**Americas, 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 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 75 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 outbreaks being reported in poultry and non-poultry mainly in Europe, and also in Africa, the Americas and Asia over the 4 weeks covered by the report. Significant losses have been reported in the Americas and Europe. The predominant subtype noticed in the current epidemic season is subtype H5N1. Compared with previous reports, the number of new events remains low globally, and based on the known global annual seasonal trend of HPAI cases, the spread of HPAI is expected to continue to decline in the coming weeks and months as the February peak has passed. However, the trend can vary between years and world sub-regions, and given the continued reports of wild bird cases, the World Organisation for Animal Health (OIE) urges countries to maintain their 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](#)
- 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 ([WAHIS](#))

<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 T.C., Brown I.H., Gaidet N., Belot G., Von Dobschuetz S., Kamata A., Kivaria F.M., 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 838, [https://www.who.int/docs/default-source/wpro---documents/emergency/surveillance/avian-influenza/ai-20220401.pdf?sfvrsn=30d65594\\_220](https://www.who.int/docs/default-source/wpro---documents/emergency/surveillance/avian-influenza/ai-20220401.pdf?sfvrsn=30d65594_220)

- [OFFLU Influenza A Cleavage sites update 2021](#)
- [OFFLU avian influenza VCM report for WHO vaccine composition meetings \(February 2022\)](#)
- [OFFLU annual report 2021](#)