

Avian Influenza Report

Avian Influenza Report is a weekly report produced by the Surveillance Division of the Communicable Disease Branch of the Centre for Health Protection. This report highlights global avian influenza activity in humans and birds.

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Summary

1. Since the previous issue of Avian Influenza Report (AIR), there were no new human cases of avian influenza A(H7N9). Since March 2013 (as of December 31, 2022), there were a total of 1568 human cases of avian influenza A(H7N9) reported globally (all were reported in the seven waves between 2013 and September 2019). The latest case was reported on April 5, 2019.
2. Since the previous issue of AIR, there were no new human cases of avian influenza A(H5N6). Since 2014 (as of December 31, 2022), there were 82 human cases of avian influenza A(H5N6) reported globally and 81 of them occurred in Mainland China. The latest case was reported on October 21, 2022.
3. Since the previous issue of AIR, there were no new human cases of avian influenza A(H5N1). From 2012 to 2022, 0 to 145 confirmed human cases of avian influenza A(H5N1) were reported to the World Health Organization (WHO) annually (according to onset date).* The latest case was reported on November 30, 2022.

* Since November 21, 2012, WHO only publishes information on human cases with avian influenza A(H5N1) infection in “[Influenza at human – animal interface: Monthly Risk Assessment Summary](#)”. Only cases of human infection with H5N1 involved in events that are unusual or associated with potential increased risks will be reported in Disease Outbreak News. The latest [report](#) was published in December, 2022.

This week's highlights

(Sources: WHO, NHC, Mainland health authorities, Ministry of Agriculture of the People's Republic of China, Centre for Health Protection (CHP) and World Organisation for Animal Health (OIE))

Table 1. Hong Kong: Confirmed human cases of avian influenza A(H5N1 / H5N6 / H7N9) since previous issue of AIR

	No. of H5 cases (No. of deaths)	No. of H7N9 cases (No. of deaths)	Details
In this reporting period	0(0)	0(0)	-

Table 2. Outside Hong Kong: Confirmed human cases of avian influenza A(H5N1 / H5N6 / H7N9) since previous issue of AIR

Date of report	Country	Province / Region	District / City	Sex	Age	Condition at time of reporting	Subtype of virus
-	-	-	-	-	-	-	-

Table 3. Confirmed human cases of avian influenza A(H5N1) reported to WHO / NHC since 2003 (by onset date) §

Year	Cases	Deaths	Case fatality rate
2003	4	4	100%
2004	46	32	69.6%
2005	98	43	43.9%
2006	115	79	68.7%
2007	88	59	67.0%
2008	44	33	75.0%
2009	73	32	43.8%
2010	48	24	50.0%
2011	62	34	54.8%
2012	32	20	62.5%
2013	39	25	64.1%
2014	52	22	42.3%
2015	145	42	29.0%
2016	10	3	30.0%
2017	4	2	50.0%
2018	0	0	0%
2019	1	1	100%
2020	1	0	0%
2021	2	1	50.0%
2022	4	1	25.0%
Overall	868	457	52.6%

§ Further breakdown by countries is available at [WHO](https://www.who.int/) website

Table 4. Confirmed human cases of avian influenza A(H5N1) reported to WHO / NHC since 2003 (by date of reporting)

Countries /Areas	Cumulative no. of cases (December 2003 to December 2022)	No. of recent cases (August to December 2022)
Azerbaijan	8	0
Bangladesh	8	0
Cambodia	56	0
Canada	1	0
Mainland China	54#	1
Djibouti	1	0
Egypt	359	0
India	1	0
Indonesia	200	0
Iraq	3	0
Lao People's Democratic Republic	3	0
Myanmar	1	0
Nepal	1	0
Nigeria	1	0
Pakistan	3	0
Spain	2	2
Thailand	25	0
Turkey	12	0
United Kingdom	1	0
United States of America	1	0
Vietnam	127	0
Overall	868	3

Including two cases from Mainland China detected in Hong Kong

Table 5. Cumulative numbers of confirmed cases of human infection with avian influenza A(H5N6) since 2014 and since January 2022 respectively

Confirmed H5N6 human cases have been reported in the following countries / areas		Cumulative no. of cases since 2014 (82 cases in total) (as of December 31, 2022)	Cumulative no. of cases since January 2022 (24 cases in total) (as of December 31, 2022)
Mainland China	Guangxi Zhuang Autonomous Region	20	9
	Guangdong Province	13	1
	Hunan Province	13	0
	Sichuan Province	12	5
	Jiangsu Province	5	3
	Chongqing Municipality	3	0
	Anhui Province	2	0
	Fujian Province	2	1
	Jiangxi Province	3*	2
	Yunnan Province	2	0
	Zhejiang Province	2	2

Confirmed H5N6 human cases have been reported in the following countries / areas		Cumulative no. of cases since 2014 (82 cases in total) (as of December 31, 2022)	Cumulative no. of cases since January 2022 (24 cases in total) (as of December 31, 2022)
	Beijing Municipality	1	0
	Guizhou Province	1	0
	Henan Province	1	1
	Hubei Province	1	0
Lao People's Democratic Republic		1	0

* one case was imported from Guangdong Province

Table 6. Cumulative numbers of confirmed cases of human infection with avian influenza A(H7N9) since 2013 and since October 2022 respectively

Confirmed H7N9 human cases have been reported in the following countries / areas		Cumulative no. of cases since 2013 (1568 cases in total) (as of December 31, 2022)	Cumulative no. of cases since October 2022 (0 case in total) (as of December 31, 2022)
Mainland China	Zhejiang Province	310	0
	Guangdong Province	259	0
	Jiangsu Province	252	0
	Fujian Province	108	0
	Anhui Province	99	0
	Hunan Province	95	0
	Shanghai Municipality	57	0
	Jiangxi Province	52	0
	Sichuan Province	38	0
	Beijing Municipality	35	0
	Guangxi Zhuang Autonomous Region	31	0
	Hubei Province	31	0
	Hebei Province	29	0
	Henan Province	28	0
	Shandong Province	28	0
	Guizhou Province	20	0
	Xinjiang Uygur Autonomous Region	14	0
	Chongqing Municipality	9	0
	Yunnan Province	8	0
	Shaanxi Province	7	0
	Gansu Province	6	0
	Liaoning Province	5	0
	Tianjin Municipality	5	0
	Jilin Province	3	0
	Shanxi Province	3	0
	Tibet Autonomous Region	3	0
Inner Mongolia Autonomous Region	2	0	
Hong Kong		21*	0
Taiwan		5*	0
Canada		2*	0
Macao		2 [#]	0

Confirmed H7N9 human cases have been reported in the following countries / areas	Cumulative no. of cases since 2013 (1568 cases in total) (as of December 31, 2022)	Cumulative no. of cases since October 2022 (0 case in total) (as of December 31, 2022)
Malaysia	1*	0

* All cases imported from Mainland China

The latest case imported from Mainland China

Table 7. Confirmed human cases of avian influenza A infections other than avian influenza A(H5N1 / H5N6 / H7N9) reported in the past 6 months (as of January 2, 2023)

	Place of occurrence	No. of cases (No. of deaths)	Details
In this reporting period	-	0(0)	-
Previously reported cases (onset/ reported in the past 6 months)	Mainland China	2(0)	Avian influenza A(H9N2): ◆ Guangdong Province: <ul style="list-style-type: none"> ▫ A 1-year-old boy with onset on August 1, 2022. ◆ Gansu Province: <ul style="list-style-type: none"> ▫ A 3-year-old boy with onset on September 20, 2022.

Table 8. Hong Kong: Confirmed reports of avian influenza A(H5) or avian influenza A(H7N9) in poultry / wild birds / environmental samples since 2015

	No. of reports of H5 in poultry / wild birds / environmental samples	No. of reports of H7N9 in poultry / wild birds / environmental samples	Details
In this reporting period	0	0	-
Previously reported cases since 2015 (before this reporting period)	23*	1#	-

* [Carcass of a peregrine falcon found in Yuen Long on April 9, 2015 \(H5N6\)](#)

[Carcass of an oriental magpie robin found in Sai Kung on April 29, 2015 \(H5N6\)](#)

[Carcass of an oriental magpie robin found in Kwai Chung on November 17, 2015 \(H5N6\)](#)

[Carcass of a great egret found in Wong Tai Sin on December 31, 2015 \(H5N6\).](#)

[Chicken carcass found in Tuen Mun on February 14, 2016 \(H5N6\)](#)

[Chicken carcass found in Tai O on February 18, 2016 \(H5N6\)](#)

[Samples of faecal droppings collected at Mai Po Nature Reserve on November 25, 2016 \(H5N6\)](#)

[A sample of faecal droppings collected at Mai Po Nature Reserve on November 30, 2016 \(H5N6\)](#)

[A dead red-whiskered bulbul collected at Kowloon City on April 7, 2017 \(H5N6\)](#)

[A dead oriental magpie robin found in Tseung Kwan O on December 21, 2017 \(H5N6\)](#)

[A dead black-faced spoonbill found in the Hong Kong Wetland Park in Tin Shui Wai on December 21, 2017 \(H5N6\)](#)

[An environmental swab of a chopping board and skin swabs of a chilled duck sample taken from a fresh provision shop](#)

[in Wan Chai on 2 January & 9 January, 2018 \(H5N6\)](#)

[An oropharyngeal swab from a batch of chilled chicken taken at a fresh provision shop in Mong Kok, reported on 23 January, 2018 \(H5N6\)](#)

[A black-headed gull carcass found in Ngau Hom Tsuen, Lau Fau Shan on February 8, 2018 \(H5N6\)](#)

[A dead crested myna found at Kun Lung Wai, Fanling reported on April 9, 2018 \(H5N6\)](#)

[A swab sample taken from a bird cage housing a hill myna at a pet bird shop in Yuen Po Street Bird Garden in Mong Kok on 7 April, 2018 \(H5N6\)](#)

[Samples of faecal droppings collected at Mai Po Nature Reserve reported on January 14, 2021 \(H5N8\)](#)

[Carcass of a peregrine falcon found in Wu Kai Sha reported on February 1, 2021 \(H5N8\)](#)

[Carcass of a black-faced spoonbill found in the Hong Kong Wetland Park in Tin Shui Wai reported on December 20, 2021 \(H5N1\)](#)

[Carcass of a Eurasian Curlew found in the Mai Po Nature Reserve reported on January 26, 2022 \(H5N1\)](#)

[Environmental sample collected from Mai Po Nature Reserve on November 9, 2022 \(H5N1\)](#)

[Carcass of a black-faced spoonbill found in Mai Po Nature Reserve reported on November 30, 2022 \(H5N1\)](#)

[Black-faced spoonbill carcass found in Hong Kong Wetland Park reported on December 12, 2022 \(H5N1\)](#)

[A sample of faecal droppings of live poultry taken from a poultry stall in Yan Oi Market in Tuen Mun reported on June 5, 2016 \(H7N9\)](#)

Table 9. Outside Hong Kong: Confirmed avian influenza A(H5) or other highly pathogenic avian influenza in poultry / wild birds / environmental samples reported in this week – number of reports for various subtypes of virus

Subtype of virus	No. of reports
H5N1	28
H5N5	1

Table 10. Outside Hong Kong: Confirmed avian influenza A(H5) or other highly pathogenic avian influenza in poultry / wild birds / environmental samples reported in this week – details of reports

Places of Occurrence	Details	OIE Report Date
Belgium	Samples from poultry and birds in Vlaanderen were tested positive for highly pathogenic avian influenza A(H5N1).	December 27, 2022 December 30, 2022
	Samples from birds in Wallonie and Belgian Exclusive Economic Zone were tested positive for highly pathogenic avian influenza A(H5N1).	December 27, 2022
France	Samples from poultry and birds in Pays de la Loire, Occitanie, Centre-Val de Loire, Auvergne-Rhône-Alpes, Bretagne, Normandie, Nouvelle-Aquitaine, Hauts-de-France and Île-de-France were tested positive for highly pathogenic avian influenza A(H5N1).	December 28, 2022 December 30, 2022
	Samples from birds in Bourgogne-Franche-Comté, Grand Est and Provence-Alpes-Côte d'Azur were tested positive for highly pathogenic avian influenza A(H5N1).	December 30, 2022
Italy	Samples from birds in Emilia-Romagna, Lombardia, Veneto, Friuli-Venezia Giulia, Italian Exclusive	December 28, 2022

Places of Occurrence	Details	OIE Report Date
	Economic Zone, Umbria and Sardegna were tested positive for highly pathogenic avian influenza A(H5N1).	
Japan	Samples from poultry and birds in Kagawa, Hokkaido, Miyagi, Hyōgo, Kagoshima, Niigata and Yamagata were tested positive for highly pathogenic avian influenza A(H5N1).	December 28, 2022
	Samples from poultry in Aichi, Fukuoka, Ibaraki, Nagasaki, Miyazaki, Okayama, Hiroshima, Saitama, Okinawa, Aomori, Tottori, Chiba, Fukushima and Wakayama were tested positive for highly pathogenic avian influenza A(H5N1).	December 28, 2022
	Samples from birds in Toyama, Akita and Fukui were tested positive for highly pathogenic avian influenza A(H5N1).	December 28, 2022
Poland	Samples from poultry in Pomorskie, Warmińsko-Mazurskie and Kujawsko-Pomorskie were tested positive for highly pathogenic avian influenza A(H5N1).	December 28, 2022
United Kingdom	Samples from poultry in Isle of Man were tested positive for highly pathogenic avian influenza A(H5N1).	December 28, 2022
	Samples from poultry and birds in England, Scotland, Wales and Northern Ireland were tested positive for highly pathogenic avian influenza A(H5N1).	December 30, 2022
Iceland	Samples from birds in Suðurnes, Icelandic Exclusive Economic Zone, Austurland, Höfuðborgarsvæði, Suðurland, Hálshreppur, Norðurland vestra and Vesturland were tested positive for highly pathogenic avian influenza A(H5N1).	December 29, 2022
Norway	Samples from birds in Troms Og Finnmark, Svalbard Exclusive Economic Zone, Trøndelag, Møre Og Romsdal, Nordland, Svalbard and Jan Mayen were tested positive for highly pathogenic avian influenza A(H5N5).	December 29, 2022
	Samples from poultry in Rogaland were tested positive for highly pathogenic avian influenza A(H5N1).	December 30, 2022
Slovenia	Samples from birds in Podravska were tested positive for highly pathogenic avian influenza A(H5N1).	December 29, 2022
Sweden	Samples from birds in Norrköping, Tomelilla,	December 29, 2022

Places of Occurrence	Details	OIE Report Date
	Staffanstorp, Malmö, Lund, Trelleborg, Varberg and Lomma were tested positive for highly pathogenic avian influenza A(H5N1).	
Mexico	Samples from poultry in Jalisco, Chiapas, Nuevo León, Sonora, Chihuahua, Yucatán and México were tested positive for highly pathogenic avian influenza A(H5N1).	December 30, 2022
Panama	Samples from birds in Panamanian Exclusive Economic Zone were tested positive for highly pathogenic avian influenza A(H5N1).	December 30, 2022
Switzerland	Samples from birds in Ticino, Zürich and Thurgau were tested positive for highly pathogenic avian influenza A(H5N1).	December 30, 2022
United States of America	Samples from poultry and birds in Colorado, South Dakota, Minnesota, Tennessee, Arkansas, Pennsylvania, Oregon, Utah, Indiana, Nebraska, Iowa, Washington, Missouri, California, Illinois, Mississippi, Florida, Wisconsin, North Dakota, Kentucky, Michigan, Idaho, Montana, New York, New Jersey, Alaska, Maine and North Carolina were tested positive for highly pathogenic avian influenza A(H5N1).	December 30, 2022
	Samples from poultry in Ohio, Kansas, Delaware, Nevada and Maryland were tested positive for highly pathogenic avian influenza A(H5N1).	December 30, 2022
	Samples from birds in West Virginia, New Mexico, Texas, Oklahoma, Alabama, Vermont, Arizona, Wyoming, Louisiana, South Carolina, Massachusetts and Connecticut were tested positive for highly pathogenic avian influenza A(H5N1).	December 30, 2022
Austria	Samples from birds in Niederösterreich, Wien and Steiermark were tested positive for highly pathogenic avian influenza A(H5N1).	January 2, 2023
Denmark	Samples from poultry in Veterinary Inspection Unit South and Veterinary Inspection Unit East were tested positive for highly pathogenic avian influenza A(H5N1).	January 2, 2023
Niger	Samples from poultry in Tillabéry were tested positive for highly pathogenic avian influenza A(H5N1).	January 2, 2023

For cumulative reports of avian influenza A(H5) or other highly pathogenic avian influenza in poultry / wild birds, please refer to the [OIE](#) website.

Table 11. Countries / areas with documented human infection with avian influenza A(H7N9) or highly pathogenic avian influenza (including infections in humans/birds and relevant environmental samples) in the past 6 months (as of January 2, 2023)

Countries / Areas	Human cases		Poultry cases / other related samples		Wild bird cases / other related samples	
	Subtype of virus	Date of last report / onset of last reported case (Subtype in this report)	Subtype of virus	Date of last report (Subtype in this report)	Subtype of virus	Date of last report (Subtype in this report)
Albania	-	-	H5	16/08/2022 (H5N8)	-	-
Algeria	-	-	H5	12/12/2022 (H5N1)	-	-
Austria	-	-	-	-	H5	02/01/2023 (H5N1)
Belgium	-	-	H5	30/12/2022 (H5N1)	H5	20/07/2022* 27/12/2022 (H5N1)
Canada	-	-	H5	22/12/2022 (H5N1)	H5	16/12/2022* 16/12/2022 (H5N1)
Chile	-	-	-	-	H5	16/12/2022 (H5N1)
Colombia	-	-	-	-	H5	19/12/2022 (H5N1)
Cyprus	-	-	-	-	H5	09/12/2022 (H5N1)
Czech Republic	-	-	H5	15/12/2022 (H5N1)	-	-
Denmark	-	-	H5	02/01/2023 (H5N1)	H5	22/12/2022 (H5N1)
Ecuador	-	-	H5	28/11/2022 (H5)	-	-
Egypt	-	-	Endemic (H5)	Endemic (H5N1)	-	-
Faroe Islands	-	-	-	-	H5	21/12/2022 (H5N1)
Finland	-	-	-	-	H5	12/10/2022 (H5N5) 09/11/2022 (H5N1)
France	-	-	H5	30/12/2022 (H5N1)	H5	30/12/2022 (H5N1)
Germany	-	-	H5	12/12/2022 (H5N1)	H5	22/12/2022 (H5N1)
Hong Kong Special Administrative Region	-	-	-	-	H5	12/12/2022 (H5N1)
Hungary	-	-	H5	23/12/2022 (H5N1)	H5	21/12/2022 (H5N1)
Iceland	-	-	H5	23/11/2022 (H5N1)	H5	29/12/2022 (H5N1)
India	-	-	H5	07/11/2022 (H5N1)	-	-
Indonesia	-	-	Endemic (H5)	Endemic (H5N1)	-	-
Ireland	-	-	H5	09/12/2022 (H5N1)	H5	20/12/2022 (H5N1)
Israel	-	-	H5	22/12/2022 (H5N1)	-	-
Italy	-	-	H5	07/12/2022 (H5N1)	H5	28/12/2022 (H5N1)
Japan	-	-	H5	28/12/2022 (H5N1)	H5	23/12/2022*

Countries / Areas	Human cases		Poultry cases / other related samples		Wild bird cases / other related samples	
	Subtype of virus	Date of last report / onset of last reported case (Subtype in this report)	Subtype of virus	Date of last report (Subtype in this report)	Subtype of virus	Date of last report (Subtype in this report)
						08/11/2022 (H5N2) 28/12/2022 (H5N1)
Kazakhstan	-	-	-	-	H5	04/08/2022*
Korea	-	-	H5	28/10/2022 (H5N1)	-	-
Latvia	-	-	-	-	H5	27/12/2022 (H5N1)
Mainland China						
Guangxi	H5	30/07/2022 (H5N6) 22/09/2022 (H5N1)	-	-	-	-
Qinghai	-	-	-	-	H5	29/07/2022 (H5N1)
Mexico	-	-	H5	30/12/2022 (H5N1)	H5	19/11/2022 (H5N1)
Moldova	-	-	H5	26/12/2022 (H5N1)	-	-
Netherlands	-	-	H5	28/11/2022 (H5N1)	H5	24/12/2022 (H5N1)
Niger	-	-	H5	02/01/2023 (H5N1)	-	-
Nigeria	-	-	H5	26/10/2022 (H5N1)	H5	24/11/2022 (H5N1)
North Macedonia	-	-	-	-	H5	09/11/2022 (H5N1)
Norway	-	-	H5	30/12/2022 (H5N1)	H5	29/11/2022 (H5N1) 23/12/2022* 29/12/2022 (H5N5)
Panama	-	-	-	-	H5	30/12/2022 (H5N1)
Peru	-	-	H5	22/12/2022*	H5	18/11/2022*
Philippines	-	-	H5	15/09/2022 (H5N1)	-	-
Poland	-	-	H5	28/12/2022 (H5N1)	H5	23/12/2022 (H5N1)
Portugal	-	-	H5	01/10/2022 (H5N1)	H5	23/11/2022 (H5N1)
Reunion	-	-	H5	13/10/2022 (H5N1)	H5	12/10/2022 (H5N1)
Romania	-	-	-	-	H5	09/12/2022 (H5N1)
Russia	-	-	H5	14/11/2022 (H5N1)	H5	08/12/2022 (H5N1)
Serbia	-	-	H5	04/11/2022 (H5N1)	H5	14/11/2022 (H5N1)
Slovenia	-	-	-	-	H5	29/12/2022 (H5N1)
South Africa	-	-	H5	14/11/2022 (H5N2) 13/12/2022 (H5N1)	H5	13/12/2022 (H5N1)
Spain	H5	13/10/2022 (H5N1)	H5	22/12/2022 (H5N1)	H5	19/12/2022 (H5N1)
Sweden	-	-	-	-	H5	29/12/2022 (H5N1)

Countries / Areas	Human cases		Poultry cases / other related samples		Wild bird cases / other related samples	
	Subtype of virus	Date of last report / onset of last reported case (Subtype in this report)	Subtype of virus	Date of last report (Subtype in this report)	Subtype of virus	Date of last report (Subtype in this report)
Switzerland	-	-	-	-	H5	30/12/2022 (H5N1)
Taiwan	-	-	H5	27/12/2022 (H5N1) 27/12/2022 (H5N2)	H5	04/07/2021 (H5N1)
United Kingdom	-	-	H5	30/12/2022 (H5N1)	H5	28/10/2022 (H5N8) 30/12/2022 (H5N1)
United States of America	-	-	H5	26/10/2022 (H5N4) 30/12/2022 (H5N1)	H5	30/12/2022 (H5N1)
Venezuela	-	-	-	-	H5	02/12/2022 (H5N1)
Vietnam	H5	05/10/2022*	H5	26/10/2022 (H5N1)	-	-

Sources: WHO, OIE, NHC and other official websites

* without further subtype information