

## 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.

#### **VOLUME 21, NUMBER 27**

Reporting period: June 29, 2025 – July 5, 2025 (Week 27) (Published on July 8, 2025)

#### **Summary**

- 1. Since the previous issue of Avian Influenza Report (AIR), there were two new human cases of avian influenza A(H5N1) from Cambodia reported by its Ministry of Health on July 1, 2025 and July 3, 2025 respectively. From 2015 to 2024, 0 to 145 confirmed human cases of avian influenza A(H5N1) were reported to the WHO annually (according to onset date).\*
- 2. Since the previous issue of AIR, there were no new human cases of avian influenza A(H5N6). Since 2014 (as of July 5, 2025), there were 93 human cases of avian influenza A(H5N6) reported globally and 92 of them occurred in Mainland China. The latest case was reported on July 24, 2024.
- 3. Since the previous issue of AIR, there were no new human cases of avian influenza A(H7N9). Since March 2013 (as of July 5, 2025), 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.

<sup>\*</sup> Since November 21, 2012, WHO only publishes information on human cases with avian influenza A(H5N1) infection in "<u>Influenza at human – animal interface: Monthly Risk Assessment Summary</u>". 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 <u>report</u> was published in June 2025.

### This week's highlights

(Sources: World Health Organization (WHO), Overseas health authorities, National Health Commission (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 (WOAH; Founded as 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
01/07/2025	Cambodia	Siem Reap province	Puok district	F	36	Severe	H5N1
03/07/2025	Cambodia	Kampot province	Angkor Chey district	M	5	Under intensive care	H5N1

Table 3. Confirmed human cases of avian influenza A(H5N1) reported to WHO / Overseas health authorities / NHC since 2003 (by onset date)  $\S$ 

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	6	1	16.7%
2023	12	4	33.3%
2024*	81	4	4.9%
2025	22	8	36.4%

Year	Cases	Deaths	Case fatality rate
Overall	985	473	48.0%

<sup>§</sup> Further breakdown by countries is available at WHO website

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

Countries /Areas	Cumulative no. of cases (Nov 2003 to July 2025)	No. of recent cases (Mar to July 2025)
Australia	1	0
Azerbaijan	8	0
Bangladesh	10	2
Cambodia	84	10
Canada	2	0
Chile	1	0
China	57#	1
Djibouti	1	0
Ecuador	1	0
Egypt	359	0
India	2	1
Indonesia	200	0
Iraq	3	0
Lao People's Democratic Republic	3	0
Mexico	1	1
Myanmar	1	0
Nepal	1	0
Nigeria	1	0
Pakistan	3	0
Spain	2	0
Thailand	25	0
Turkey	12	0
United Kingdom	6	0
United States of America	71*	0
Vietnam	130	1
Overall	985	16

<sup>\*</sup>Including two cases from Mainland China detected in Hong Kong and two cases imported from Vietnam.

Table 5. Cumulative numbers of confirmed cases of human infection with avian influenza A(H5N6) since 2014 and since January 2025 respectively (by date of reporting)

Confirmed H5N6 human cases have been reported in the following countries / areas		Cumulative no. of cases since 2014 (93 cases in total) (as of July 5, 2025)	Cumulative no. of cases since Jan 2025 (0 case in total) (as of July 5, 2025)
Mainland	Guangxi Zhuang Autonomous Region	21	0
China	Sichuan Province	15	0

<sup>\*</sup>Including laboratory-confirmed cases of avian influenza A(H5) reported by the United States Centers for Disease Control and Prevention (US CDC) in 2024.

<sup>\*</sup>Including laboratory-confirmed cases of avian influenza A(H5) reported by the US CDC since 2024.

Confirmed H5N6 human cases have been reported in the following countries / areas	Cumulative no. of cases since 2014 (93 cases in total) (as of July 5, 2025)	Cumulative no. of cases since Jan 2025 (0 case in total) (as of July 5, 2025)
Guangdong Province	14	0
Hunan Province	14	0
Chongqing Municipality	5	0
Jiangsu Province	5	0
Fujian Province	4	0
Anhui Province	3	0
Jiangxi Province	3*	0
Yunnan Province	2	0
Zhejiang Province	2	0
Beijing Municipality	1	0
Guizhou Province	1	0
Henan Province	1	0
Hubei Province	1	0
Lao People's Democratic Republic	1	0

<sup>\*</sup> one case was imported from Guangdong Province

 ${\it Table~6.} \quad \textbf{Cumulative numbers of confirmed cases of human infection with avian influenza~A(H7N9) since~2013~and since~October~2024~respectively$ 

Confirmed H7N9 human cases have been reported in the following countries / areas		Cumulative no. of cases since 2013 (1568 cases in total) (as of July 5, 2025)	Cumulative no. of cases since Oct 2024 (0 case in total) (as of July 5, 2025)
	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
Mainland China	Guangxi Zhuang Autonomous Region	31	0
Cillia	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

Confirmed H7N9 human cases have been reported in the following countries / areas	Cumulative no. of cases since 2013 (1568 cases in total) (as of July 5, 2025)	Cumulative no. of cases since Oct 2024 (0 case in total) (as of July 5, 2025)
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
Malaysia	1*	0

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 July 7, 2025)

	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	16(0)	Avian influenza A(H9N2):  Chongqing Municipality:  A 67-year-old man with onset on April 18, 2025.  Guangdong Province:  A 56-year-old woman with onset on January 20, 2025.  Guangxi Zhuang Autonomous Region:  A five-year-old boy with onset on March 3, 2025.  Guizhou Province:  A 35-year-old woman with onset on March 10, 2025.  A one-year-old girl with onset on April 7, 2025.  A one-year-old girl with onset on April 15, 2025.  Henan Province:  A seven-year-old girl with onset on February 11, 2025.

<sup>\*</sup> All cases imported from Mainland China \* The latest case imported from Mainland China

Place of occurrence	No. of cases (No. of deaths)	Details
	deaths)	<ul> <li>A 52-year-old woman with onset on May 10, 2025.</li> <li>Hunan Province:</li> <li>A 15-year-old boy with onset on January 8, 2025.</li> <li>A five-year-old boy with onset on April 1, 2025.</li> <li>A seven-year-old girl with onset on April 1, 2025.</li> <li>A one-year-old girl with onset on April 3, 2025.</li> <li>A five-year-old boy with onset on April 19, 2025.</li> <li>A 72-year-old woman with onset on May 14, 2025.</li> <li>Sichuan Province:</li> <li>A six-year-old boy with onset on May 14, 2025.</li> </ul>
		■ Yunnan Province:  □ A one-year-old girl with onset on April 2, 2025.  Avian influenza A(H10N3):
	2(0)	<ul> <li>Shaanxi Province:</li> <li>A 68-year-old woman with onset on April 13, 2025.</li> <li>A 70-year-old woman with onset on April 21, 2025.</li> </ul>
United States of America	1(0)	Avian influenza A(H5):  California:  It was reported on January 17, 2025 that one case occurred in a child with unknown exposure source.

Table 8. Hong Kong: Confirmed reports of avian influenza A(H5) or aian 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)	30*	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 January 2 & January 9, 2018 (H5N6)

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

A black-headed gull carcass found in Ngau Hom Tsuen, Lau Fau Shan, reported on February 9, 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 April 7, 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 reported on November 16, 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)

Environmental sample from Mai Po Nature Reserve reported on December 8, 2023 (H5N1)

Eurasian teal carcass found in the Mai Po Nature Reserve reported on December 21, 2023 (H5N1)

Pin-tailed snipe and Eurasian teal carcasses found in the Hong Kong Wetland Park reported on December 28, 2023 (H5N1)

Eurasian wigeon carcass found in the Hong Kong Wetland Park, reported on January 5, 2024 (H5N1)

Eurasian wigeon sample collected from the Hong Kong Wetland Park, reported on January 5, 2024 (H5N1)

Environmental sample collected from Mai Po Nature Reserve reported on November 8, 2024 (H5N1)

Eurasian wigeon sample and environmental sample collected from Mai Po Nature Reserve reported on November 14, 2024 (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		
H5	2		
H5N1	16		
H5N5	1		

Subtype of virus	No. of reports		
H7N3	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		
	Samples from poultry and birds in England and Wales were tested positive for highly pathogenic avian influenza A(H5N1).	June 27, 2025 June 30, 2025 July 3, 2025		
United Kingdom	Samples from birds in British Exclusive Economic Zone and Scotland were tested positive for highly pathogenic avian influenza A(H5N1).	July 3, 2025		
Cambodia	Samples from poultry in Prey Vêng, Siemréab and Svay Rieng were tested positive for highly pathogenic avian influenza A(H5N1).	June 29, 2025 July 1, 2025		
Mexico	Samples from birds in Chiapas, Coahuila, Durango and Sonora were tested positive for highly pathogenic avian influenza A(H5N1).	June 30, 2025		
	Samples from poultry in Jalisco and Nuevo León were tested positive for highly pathogenic avian influenza A(H7N3).	June 30, 2025		
South Africa	Samples from poultry in Mpumalanga and North West were tested positive for highly pathogenic avian influenza A(H5N1).			
Spain	Samples from birds in Extremadura were tested positive for highly pathogenic avian influenza A(H5N1).	July 2, 2025		
Ireland	Samples from birds in Clare, Galway and Kerry were tested positive for highly pathogenic avian influenza A(H5N1).	July 3, 2025 July 4, 2025		
	Samples from birds in Massachusetts and New York were tested positive for highly pathogenic avian influenza A(H5) and A(H5N1).	July 3, 2025		
United States of America	Samples from birds in Colorado, Idaho, Illinois, Minnesota, North Carolina, North Dakota and Pennsylvania were tested positive for highly pathogenic avian influenza A(H5).	July 3, 2025		
	Samples from poultry in Arizona were tested positive for highly pathogenic avian influenza A(H5N1).	July 3, 2025		

Places of Occurrence	Details	OIE Report Date
	Samples from birds in Arkansas, Maine, Michigan and Wyoming were tested positive for highly pathogenic avian influenza A(H5N1).	July 3, 2025
Brazil	Samples from poultry in Distrito Federal, Espírito Santo, Minas Gerais, Rio Grande do Sul and São Paulo were tested positive for highly pathogenic avian influenza A(H5N1).	July 4, 2025
Canada	Samples from poultry in Ontario and Prince Edward Island were tested positive for highly pathogenic avian influenza A(H5N1).	July 4, 2025
Germany	Samples from birds in Niedersachsen were tested positive for highly pathogenic avian influenza A(H5N1).	July 4, 2025
Norway	Samples from birds in Nordland were tested positive for highly pathogenic avian influenza A(H5).	July 4, 2025
Finland	Samples from birds in Lapin aluehallintovirasto were tested positive for highly pathogenic avian influenza A(H5N5).	July 7, 2025
Korea	Samples from poultry in Gyeongsangnam-do and Jeollanam-do were tested positive for highly pathogenic avian influenza A(H5N1).	July 7, 2025

For cumulative reports of avian influenza A(H5) or other highly pathogenic avian influenza in poultry / wild birds, please refer to the  $\underline{WOAH}$  website.

Table 11. Countries / areas with documented infections with highly pathogenic avian influenza (including infections in humans/birds and relevant environmental samples) in the past 6 months (as of July 7, 2025)

	Human cases		Poultry cases / other related samples		Wild bird cases / other related samples	
Countries / Areas	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	04/03/2025 (H5N1)	-	-
Argentina	-	-	-	-	H5	21/02/2025*
Australia	-	-	H7	13/06/2025 (H7N8)	-	-
Austria	-	-	-	-	H5	26/05/2025 (H5N1)
Bangladesh	H5	04/06/2025	H5	24/03/2025*	=	-
Belgium	-	-	Н5	06/03/2025 (H5N1)	Н5	20/06/2025* 20/06/2025 (H5N1)
Bosnia and Herzegovina	-	-	H5	11/02/2025 (H5N1)	H5	17/02/2025 (H5N1)
Brazil	-	-	H5	04/07/2025 (H5N1)	H5	26/06/2025 (H5N1)
Bulgaria	-	-	H5	20/05/2025 (H5N1)	-	-
Cambodia	Н5	03/07/2025 (H5N1)	H5	01/07/2025 (H5N1)	Н5	03/03/2025 (H5N1)
Canada	-	-	Н5	02/05/2025 (H5N5) 04/07/2025 (H5N1)	Н5	31/01/2025* 11/06/2025 (H5N5) 26/06/2025 (H5N1)
Mainland China						
Guangxi Zhuang Autonomous Region	Н5	17/03/2025 (H5N1)	-	-	-	-
Colombia	-	-	-	-	H5	20/01/2025 (H5N1)
Croatia	-	-	H5	07/04/2025 (H5N1)	-	-
Czech Republic	-	-	H5	16/06/2025 (H5N1)	H5	16/06/2025 (H5N1)
Denmark	-	-	H5	22/04/2025 (H5N1)	H5	24/06/2025 (H5N1)
Egypt	-	-	Endemic (H5)	Endemic (H5N1)	-	-
Estonia	-	-	-	-	H5	15/04/2025 (H5N1)
Finland	-	-	-	-	Н5	16/06/2025 (H5N1) 07/07/2025 (H5N5)
France	-	-	H5	07/01/2025*	H5	25/04/2025 (H5N1)
Germany	-	-	Н5	06/06/2025 (H5N1)	Н5	17/01/2025 (H5N5) 04/07/2025 (H5N1)
Greece	-	-	-	-	H5	06/03/2025 (H5N1)
Greenland	-	-	-	-	Н5	12/05/2025 (H5N5)

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)
Hungary	-	-	Н5	15/05/2025 (H5N1)	Н5	27/05/2025 (H5N1)
Iceland	-	-	-	-	Н5	02/04/2025 (H5N5)
India	H5	28/02/2025 (H5N1)	H5	01/04/2025 (H5N1)	Н5	01/04/2025 (H5N1)
Indonesia	-	-	Endemic (H5)	Endemic (H5N1)	-	-
Ireland	-	-	-	-	Н5	04/07/2025 (H5N1)
Israel	-	-	Н5	21/01/2025 (H5N1)	Н5	21/01/2025 (H5N1) 06/04/2025 (H5N8)
Italy	-	-	Н5	26/03/2025 (H5N1)	Н5	26/03/2025 (H5N1)
Japan	-	-	Н5	17/03/2025 (H5N1)	Н5	05/06/2025* 09/06/2025 (H5N2) 11/06/2025 (H5N1)
Korea	-	-	H5	07/07/2025 (H5N1)	Н5	19/05/2025 (H5N1)
Latvia	-	-	H5	11/06/2025 (H5N1)	-	-
Liberia	-	-	Н5	17/04/2025 (H5N1)	-	-
Lithuania	-	-	Н5	10/02/2025 (H5N1)	Н5	28/05/2025 (H5N1)
Mexico	H5	07/03/2025 (H5N1)	Н7	30/06/2025 (H7N3)	Н5	30/06/2025 (H5N1)
Moldova	-	-	-	-	Н5	14/03/2025 (H5N1)
Mongolia	-	-	-	-	Н5	17/01/2025 (H5N1)
Nepal	-	-	Н5	19/02/2025 (H5N1)	-	-
Netherlands	-	-	H5	20/03/2025 (H5N1)	Н5	26/06/2025 (H5N1)
Niger	-	-	Н5	14/02/2025 (H5N1)	-	-
Nigeria	-	-	H5	13/05/2025 (H5N1)	-	-
Norway	-	-	-	-	Н5	31/03/2025 (H5N1) 17/06/2025 (H5N5) 04/07/2025*
Panama	-	-	-	-	Н5	30/01/2025 (H5N1)
Peru	-	-	-	-	H5	09/06/2025*
Philippines	-	-	Н5	07/01/2025(H5N2) 13/05/2025 (H5N1) 13/05/2025 (H5N9)	Н5	02/06/2025 (H5N1)
Poland	-	-	Н5	05/05/2025 (H5N1)	H5	06/06/2025 (H5N1)
Portugal	-	-	Н5	04/01/2025 (H5N1)	Н5	24/01/2025 (H5N1)
Puerto Rico	-	-	Н5	22/05/2025 (H5N1)		-

	Human cases		Poultry cases / other related samples		Wild bird cases / other related samples	
Countries / Areas	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)
Romania	-	-	-	-	H5	30/04/2025 (H5N1)
Russia	-	-	-	-	Н5	05/03/2025 (H5N1)
Slovakia	-	-	-	-	Н5	13/01/2025 (H5N1)
Slovenia	-	-	-	-	Н5	10/01/2025 (H5N1)
Careth Africa			Н5	01/07/2025 (H5N1)		
South Africa	-	-	H7	18/06/2025 (H7N6)	-	-
Spain	-	-	-	-	Н5	02/07/2025 (H5N1)
St. Helena	-	-	-	-	Н5	20/03/2025 (H5N1)
Sweden		-	Н5	14/03/2025 (H5N1)	Н5	08/05/2025 (H5N5)
Sweden	-					27/05/2025 (H5N1)
Switzerland	-	-	-	-	H5	19/02/2025 (H5N1)
Taiwan	-	-	H5	10/04/2025 (H5N1)	H5	10/04/2025 (H5N1)
Togo	-	-	Н5	14/03/2025* 24/03/2025 (H5N1)	-	-
Turkey	-	-	H5	29/05/2025 (H5N1)	Н5	21/02/2025 (H5N1)
Ukraine	-	-	-	-	Н5	12/03/2025* 17/03/2025 (H5N1)
United Kingdom	Н5	27/01/2025 (H5N1)	Н5	30/06/2025 (H5N1)	Н5	02/05/2025 (H5N5) 03/07/2025 (H5N1)
United States of America	Н5	15/01/2025* 21/02/2025 (H5N1)	Н5	29/05/2025* 03/07/2025 (H5N1)	Н5	03/07/2025* 03/07/2025 (H5N1)
			H7	25/04/2025 (H7N9)		05/07/2025 (115141)
Vietnam	Н5	11/04/2025 (H5N1)	H5	18/04/2025 (H5N1)	-	-

Sources: WHO, WOAH, NHC and other official websites \* without further subtype information