

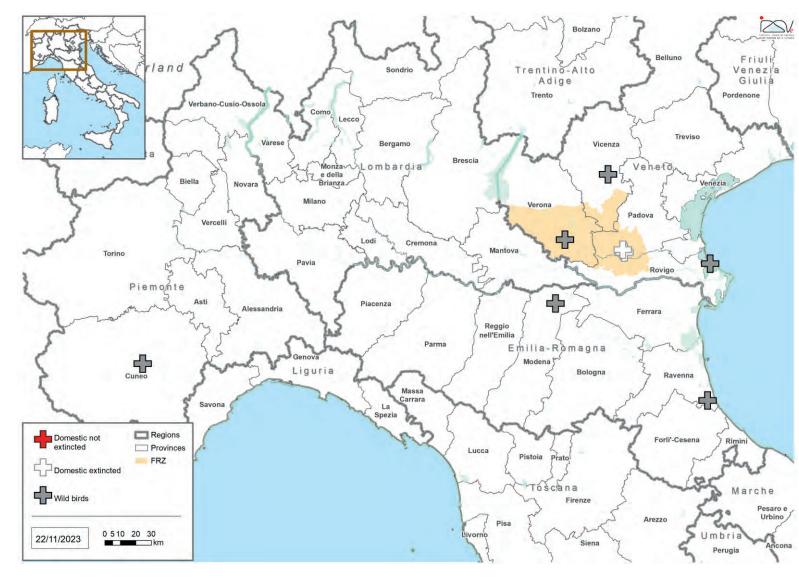
HPAI outbreaks in Italy

Directorate General for Animal Health and veterinary medicinal products



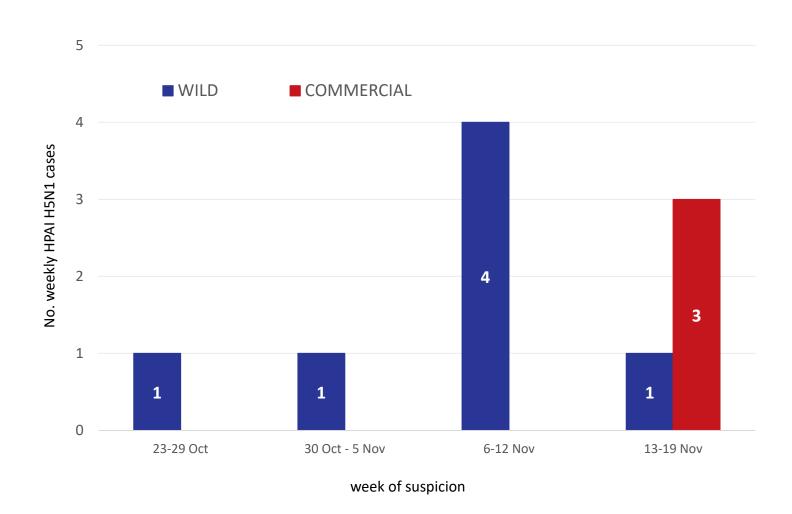
HPAI H5N1 in Italy

- ✓ 3 HPAI outbreaks in poultry (22/11/2023)
 - 3 Veneto
- ✓ 7 HPAI outbreaks in wild birds (22/11/2023)
 - 3 Veneto
 - 3 Emilia Romagna
 - 1 Piemonte



Number of weekly HPAI H5N1 cases

The current epidemic season, compared to the one of 2022/23, started later in autumn (in week 43 vs week 38), with the first positive wild bird found positive at the end of October



HPAI H5N1 in domestic poultry and wild birds

n	ADIS reference	Region	Province	Species	Virus Subtype	Confirmation date
1	IT-HPAI(P)-2023-00012	VENETO	PADOVA	MEAT TURKEY	H5N1	2023-11-13
2	IT-HPAI(P)-2023-00013	VENETO	PADOVA	GUINEA FOWL	H5N1	2023-11-16
3	IT-HPAI(P)-2023-00014	VENETO	PADOVA	BROILER	H5N1	2023-11-16

n	ADIS reference	Region	Province	No. animals	Species	Virus Subtype	Suspicion date	Confirmation date
1	IT-HPAI(NON-P)-2023-00208	VENETO	ROVIGO	1	EURASIAN WIGEON (Mareca penelope)	H5N1	2023-10-28	2023-11-03
2	IT-HPAI(NON-P)-2023-00209	VENETO	VERONA	1	MALLARD DUCK (Anas platyrhynchos)	H5N1	2023-11-09	2023-11-15
3	IT-HPAI(NON-P)-2023-00210	EMILIA ROMAGNA	RAVENNA	2	EURASIAN WIGEON (Mareca penelope) GADWALL (<i>Mareca strepera</i>)	H5N1	2023-11-09	2023-11-20
4	IT-HPAI(NON-P)-2023-00211	EMILIA ROMAGNA	MODENA	1	DUCK (Anas spp.)	H5N1	2023-11-05	2023-11-20
5		VENETO	VICENZA	1	COMMON CRANE (Grus grus)	H5N1	2023-11-15	2023-11-22
6		PIEMONTE	CUNEO	1	COMMON CRANE (Grus grus)	H5N1	2023-11-11	2023-11-22

Outbreaks in poultry

- No at-risk contacts in the 21 days prior onset of symptoms
- Infected premises belongs to 3 different poultry companies
- First cases of HPAI in wild birds in Veneto region confirmed 10 days before the 1st outbreak
- 2nd and 3rd outbreaks within the protection zone (3km) of the first
- High mortality, nervous symptoms and reduced intake of water and feed observed only in meat turkeys (1st outbreak)
- Broiler outbreak (3rd) confirmed at pre-movement virological testing
- Infected premises: close to hunting areas or wetlands/presence of wild birds reported
- Sub-optimal biosecurity practices (managerial and structural)

Disease control measures as provided by Commission Delegated Regulation (EU) 2020/687

- Epidemiological investigation
- Culling, disposal of carcasses, cleaning and disinfection procedures
- Establishment of protection and surveillance zones (3 and 10 km)
- Restrictions on movements of poultry and poultry products (with derogations)
- Pre-emptive culling in 3 poultry holdings (laying hen, broiler and duck/geese) in proximity of infected premises

Phylogenetic analysis



The virus identified in Italy from the first outbreak in **poultry** (13/11/2023) (**in red**) belongs to a new genotype and it is a reassortant virus generated through multiple reassortment events among the European HPAI viruses and LPAI viruses.

Worthy of note: the Italian virus shares a high identity with the HPAI H5N1 virus identified in the first case of HPAI in wild birds (Eurasian wigeon) in Italy (in blue).

A sea eagle Norway 2022-07-196 22VIR3966-1 2022 H5N5 2002-03-25
A sea eagle Norway 2022-07-196 22VIR3966-1 2002 H5N5 2002-03-25
A sea eagle Norway 2022-07-196 22VIR3966-2 2002 H5N5 2002-03-24
A sea eagle Norway 2022-07-100 22VIR396-2 2002 H5N5 2002-03-24
A vertefrowt Russia 1526-4 2021 H5N5 2021-05-2
A shelduck Kalmylia 1514-1 2021 H5N5 2021-01-02
A shelduck Kalmylia 1514-1 2021 H5N5 2021-01-03
A shelduck Kalmylia 1514-1 2021 H5N5 2021-01-03
A shelduck Kalmylia 1514-1 2022 H5N5 2022-06-15
A shelduck Kalmylia 1514-1 2022 H5N5 2022-06-13
A sea eagle Norway 2022-07-1144-17 2002 H5N5 2023-10-04
A shelfering Qill Rogland 2022-07-2935 23VIR6749-2 2023 H5N5 2023-10-04
And-terring Gill England 123277 2023 H5N5
DA purple sandpiper Norway 2023-07-2521 23VIR6749-1 2023 H5N5 2023-09-17
A pelican Dagestan 397-1 2021 H5N5 2021-02-3
A duck Bangsledsh 1777-7 2016 H5N5 2016-1940 2012-09-09 REF
A duck Bangsledsh 1777-7 2016 H5N5 2016-1940 2012-09-09 REF
A share platymynchos Delgium 243 Docs 584 2022-11-13 Sandturbano PD H5N1
A succession 2002-000 2002 H5N1 2023 H5N1 2 A Aust planjalosesh 1/10/4/_2016 noise_2012 HSN2_2012-09-09 REF

A Anas planjrynchos Belgium 243171555_2012 HSN2_2012-09-09 REF

A furkey Ifaly_23VIR1026-13_2023_HSN1_2023_11-13_Sanitufbano PD H5N1

IngEurasian wigeon 11aly_23VIR96205_2023_HSN1_POrto_Levante_RO_2023-10-28

A greyleg poose_Austria_231_3888-001_2023_HSN1

A greyleg poose_Austria_231_3888-001_2029_HSN1

A greyleg poose_Austria_231_3888-001_2029_HSN1

A greyleg poose_Austria_231_3888-001_2029_HSN1

A pleasant_laby_23VIR9623-3_2023_HSN1_2023_07-10

A_chicken_Czech_Republic_3306-1_2022_HSN1_2022-02-09

A_chicken_Czech_Republic_3306-1_2022_HSN1_2022-02-09

A_chicken_Czech_Republic_3306-1_2022_HSN1_2022-02-09

A_mallard_Novosibirst_region_3541_K202_HT32_024_HSN8_2023-01-09

A_mallard_Novosibirst_region_3541_K202_HSN1_2022-02-09

A_mallard_Novosibirst_region_3541_K202_HSN1_2022-02-09

A_mallard_Novosibirst_region_3541_K202_HSN1_2022-02-09

A_mallard_Anhul_2-549_2019_H6N1_2015-11-19

A_mallard_Anhul_1-474_2019_H6N1_2015-11-19

A_duck_Mongolia_WKU-42_2012_H6N1_2015-11-11

A_duck_Mongolia_WKU-42_2012_H6N1_2015-11-11

A_duck_Mongolia_WKU-42_2012_H6N1_2015-11-11

A_duck_Banjadash_44447_2012_H6N1_2015-11-11

A_duck_Banjadash_44481_2012_H6N1_2015-11-11

A_duck_Banjadash_44481_2012_H6N1_2015-11-11

A_duck_Banjadash_44481_2012_H — A. duck Vietnam, HN6265 2020 FI4N8 2020-04-28

A. little curriew Liaoning dandong142 2019 H7N4 2019-04-26

A. mallard Novosibirsk region 964k 2018 F12N5 2018-09-29 REF

Shoveler Novosibirsk region 999k 2018 H12N5 2018-10-01

A. duck Mongolia 314 2018 H3N6 2018-09-02

A. anas platyrhynchos Belgium 9074 H191808 2016 H5N3 2016-09-25

A. chicken Ireland 020138 20VIR5487-4 2020 H6N1 2021-03-01

A. utrkey Fleand 2021404 20VIR5487-6 2020 H6N1 2021-03-01

A. utrkey Fleand 2021403 20VIR5487-1 2020 H6N1 2021-03-01

A. ducken Ireland 005930 20VIR5487-1 2020 H6N1 2021-03-01

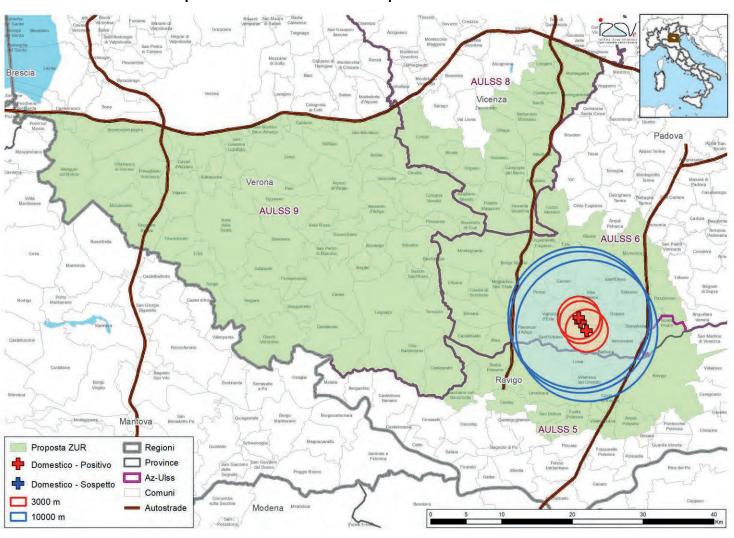
A. chicken Ireland 305930 20VIR5487-2 2020 H6N1 2021-03-01

A. chicken Ireland 305930 20VIR5487-2 2020 H6N1 2021-03-01

A. chicken Ireland 203133 20VIR5487-2 2020 H6N1 2021-03-01 A, Chicken Treland 005930 20VIR5487-1 2020 H6N1 2021-03-01 F
A Chicken Treland 020133 20VIR5487-2 2020 H6N1 2021-03-01 F
A, Chicken Treland 020139 20VIR5487-5 2020 H6N1 2021-03-01 F
A, gadwall Novosibirsk region 3407k 2020 H4N6 2020-08-29 A
Mallard Novosibirsk region 3265k 2020 H3N8 2020-08-29 F
A, Cygnus columbianus Hübel 121 2021 H6N1 2021-13-20 F
A, Tufted Duck Novosibirsk region 3984 2020 H3N8 2020-08-29 A
A Tufted Duck Novosibirsk region 3985k 2020 H3N8 2020-08-29 A
A Tufted Duck Novosibirsk region 398k 2020-08-20 H3N9 2020-08-20 H European herring gull Netherlands 1 2015 H11N9 2015-01-16 Whooper swan Denmark 00120-1.02 2022-01-03 H5N8 2022-01-03 0 Dheasant Denmark 19369-1.02 2021-04-29 H5N8 2021-04-24 12. Rt-F.
A. Chicken, Czech, Republic, 727. orig, 2023, H5N1, 2023-01-15
A. Chicken, Czech, Republic, 67. orig, 2023, H5N1, 2022-12-30
A. Chicken, Czech, Republic, 574, 2023, H5N1, 2023-01-11
A. Chicken, Czech, Republic, 102, orig, 2023, H5N1, 2023-01-10-2
A. Chicken, Czech, Republic, 574, orig, 2023, H5N1, 2023-01-10, A. Chicken, Estonia, TA-2304, 30, 230/R5148-1, 2023, H5N1, 2023-01-27
A. Chicken, Estonia, TA-2304, 2023, H5N1, 2023-01-27
A. Chicken,

Further Restriction Zone

A FRZ has been established by the Competent Authority of Veneto Region to prevent the further spread of the infection



Measures applied within the FRZ

- FRZ is in place until 7/12/2023
- Poultry companies should organize the programmed culling of meat turkeys (max 150 days for males and 110 days for females) according to a specific schedule
- Pre-movement clinical inspection and virological testing according to specific protocols
- Restocking of fattening turkeys is prohibited within the FRZ, with possible derogations following:
 - verification of compliance with biosecurity standards, and evaluation of geographical risk (according to the location of the farm within densely populated poultry areas)

FRZ subject to revision based on evolving epidemiological situation

Other preventive and risk mitigation measures

Preventive and risk mitigation measures already in place since 4/10/2023 (*Ministerial provision*) such as:

- Reinforcement of high biosecurity measures
- Housing order
- Gathering of domestic birds for fairs, exhibitions and live-bird markets are banned
- Release of game for hunting is prohibited
- A strict monitoring plan in high risk areas of Veneto, Lombardy and Emilia-Romagna, on a weekly basis in broiler of age between 37 and 44 days, and fortnightly in fattening turkey older than 50 days and in pullets and laying hen older than 28 days (prevalence 3% - 95% CI)
- The use of live decoy birds belonging to the orders Anseriformes and Charadriformes for hunting can be allowed by the local veterinary authority provided a favourable outcome of a risk assessment protocol; live decoy is prohibited in areas at high risk of introduction and spread
- Enhanced active surveillance for AI in wild birds



Thanks for your kind attention