



HPAI outbreaks in **Italy**

Directorate General for Animal Health and veterinary medicinal products



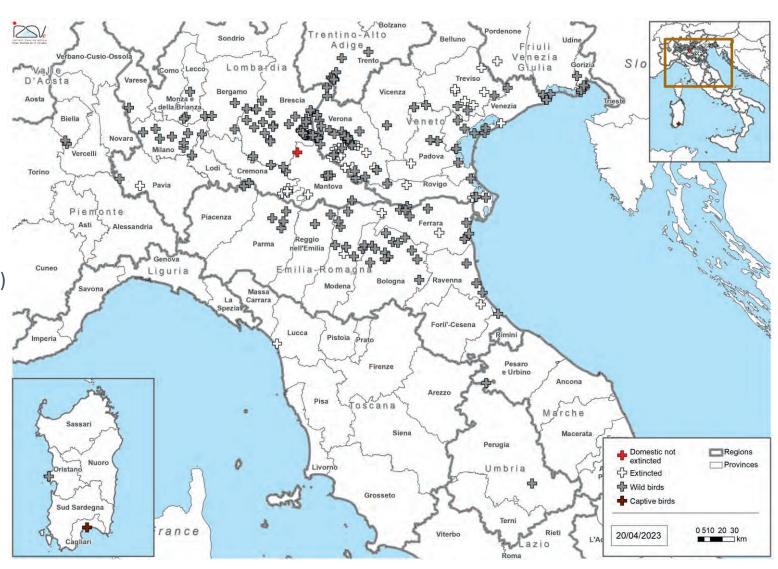
HPAI H5N1 in Italy

- ✓ 38 HPAI outbreaks in poultry (21/04/2023)
 - 24 Veneto
 - 8 Lombardia
 - 4 Emilia Romagna
 - 1 Friuli Venezia-Giulia from January
 - 1 Toscana
- ✓ 215 HPAI outbreaks in wild birds (21/04/2023)

+ 160

from January

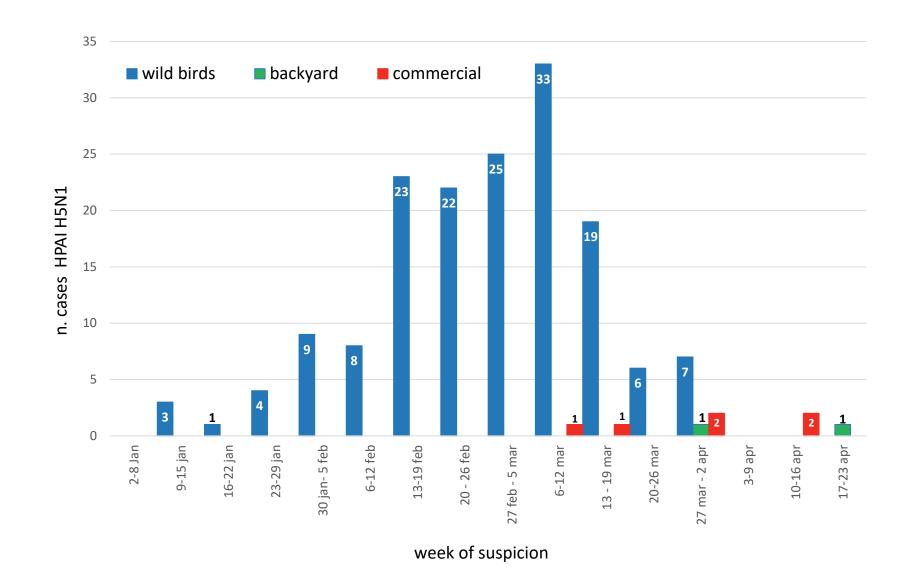
- 79 Lombardia
- 63 Veneto
- 41 Emilia Romagna
- 16 Trentino Alto Adige
- 10 Friuli Venezia Giulia
- TO THAIL VEHEZIA
- 2 Sardegna
- 2 Umbria
- 2 Piemonte



Number of weekly HPAI H5N1 cases in poultry and wild birds from January 2023 to date

A notable increase of cases in wild birds, particularly in gulls, was observed since January

Since the beginning of March 8 outbreaks were confirmed in poultry, mainly commercial



HPAI H5N1 in poultry: distribution and type of affected farms

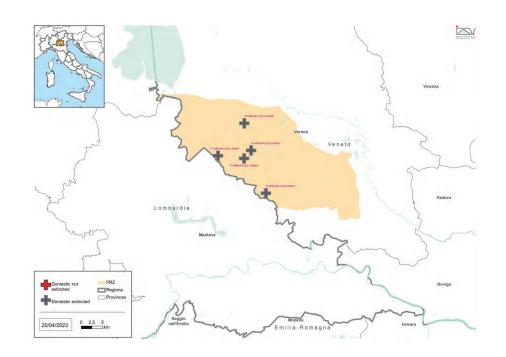
	Province	Backyard/Multispecies	Laying hen	Meat turkey	Total
EMILIA-ROMAGNA	Forlì -Cesena			1	1
LOMBARDIA	Brescia	1			1
TOSCANA	Lucca	1			1
VENETO	Verona		2	3	5
Total		2	2	4	8

HPAI H5N1 in wild birds: distribution and species affected since January

REGION	SPECIES	No. positivity
	Black-headed gull	18
	Eurasian buzzarad	2
EMILIA ROMAGNA	Peregrin falcon	2 2 1
	Common kestrel	1
	Eurasian oystercatcher	1
	Eurasian collared-Dove	1
	Black-headed gull	58
	Laridae (unidentified)	3
	Peregrin falcon	
LOMBARDIA	Common kestrel	1
	Common Wood-Pigeon	1
	Grey heron	1
	Little egret	1
	Tawny owl	
	Anatidae (unidentified)	1
FRIULI- VENEZIA GIULIA	Mute swan	5
PIEMONTE	Black-headed gull	2
TRENTINO - ALTO ADIGE	Black-headed gull	16
VENETO	Black-headed gull	38
VENETO	Yellow-legged gull	3
Total		160

Key features observed in poultry outbreaks

- mainly diagnostic outbreaks (after laboratory confirmation during pre-movement testing, monitoring plan)
- in several of the outbreaks identified since January, unusual disease behavior has been reported in meat turkey and laying hen characterized by
 - low mortality,
 - very low prevalence of infection
 - no significant change in production parameters such as feed and water intake and egg production
- within the farms sampling gave patchy positive results in the sheds, with re-samplings which sometimes may give negative results
- positive birds were mainly restricted to carcasses and not all pooled samplings tested positive.
- surveillance in the areas at highest risk has been reshaped including dead birds collected in different places of the holding and over several days (weekly bucket sampling).

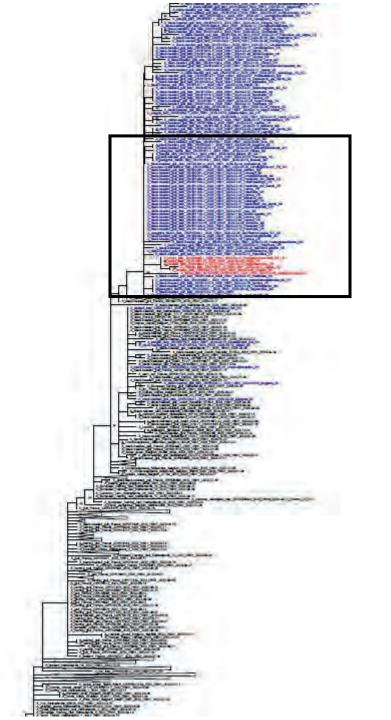


HYPOTHESYS OF THESE «SPRING OUTBREAKS»

The virus that circulated extensively in the wintering black-headed gulls could have passed to other non-migratory wild species (herons, egrets, sedentary gulls, ibises, etc.), usually seen in rural areas and poultry farms.

Seek confirmation in targeted surveillance activities in the wild birds in the coming months.

U



Clade 2.3.4.4k

```
Appliack-headed gull Italy 23VIR1203-2 2023 H5N1 2023-02-10 Peschiera VR
A peregrine falcon Italy 23VIR1618-1 2023 H5N1 2023-02-15 Brescia BS
A black-headed gull Italy 23VIR1481-4 2023 H5N1 2023-02-18 Bussolengo VR
A eurasian-oystercafcher Italy 23VIR2984-2 2023 H5N1 2023-03-20 Lidodegliscacchi FE HA
A black-headed gull Italy 23VIR2257-1 2023 H5N1 2023-03-04 Samico BS
A black-headed gull Italy 23VIR2251-2 2023 H5N1 2023-02-23 Vanzago MI
A black-headed gull Italy 23VIR2013 7 2023 H5N1 2023-02-23 Vanzago MI
A black-headed gull Italy 23VIR2013-7 2023 H5N1 2023-02-26 LimonesulGarda BS A black-headed gull Italy 23VIR1484-4 2023 H5N1 2023-02-18 Peschiera del Garda VR A black-headed gull Italy 23VIR1103-4 2023 H5N1 2023-01-31 PoldiPastrengo VR A black-headed gull Italy 23VIR1478-4 2023 H5N1 2023-02-18 Peschiera del Garda VR
  A black-headed gull Italy 23VIR1369-1 2023 H5N1 2023-02-14 Parma PR
A black-headed gull Italy 23VIR1203-7 2023 H5N1 2023-02-10 Peschiera VR
 A black-headed gull Italy 23VIR1100-4 2023 H5N1 2023-01-24 Verona VR A black-headed gull Italy 23VIR1616-1 2023 H5N1 2023-02-20 Mantova MN A black-headed gull Italy 23VIR1515-2 2023 H5N1 2023-02-22 Vallelaghi TN
A black-headed gull Italy 23VIR1614-1 2023 H5N1 2023-02-17 Desenzano del Garda BS A black-headed gull Italy 23VIR1106-4 2023 H5N1 2023-02-01 MezzanediSotto VR A black-headed gull Italy 23VIR258-1 2023 H5N1 2023-03-07 Iseo BS A black-headed gull Italy 23VIR258-1 2023 H5N1 2023-03-07 Iseo BS A black-headed gull Italy 23VIR1102-4 2023 H5N1 2023-01-30 SGiovLupatoto VR A black-headed gull Italy 23VIR1107-4 2022 H5N1 2022-12-30 Verona VR
A black-headed gull Italy 23VIR1099-4 2023 H5N1 2023-02-03 Verona VR
A black-headed gull Italy 23VIR1099-4 2023 H5N1 2023-02-03 Verona VR
A black-headed gull Italy 23VIR2013-16 2023 H5N1 2023-02-26 Sirmione BS
A black-headed gull Italy 23VIR1203-5 2023 H5N1 2023-02-10 Peschiera VR
A black-headed gull Italy 23VIR1203-8 2023 H5N1 2023-02-10 Peschiera VR
A peregrine falcon Ifaly 23VIR3236-1 2023 H5N1 2023-02-25 SanPietroinCasale BO HA
A black-headed gull Italy 23VIR2052-4 2023 H5N1 2023-03-14 GranarolodellEmilia BO
A black-headed gull Italy 23VIR108-4 2023 H5N1 2023-01-16 Verona VR

A black-headed gull Italy 23VIR108-4 2023 H5N1 2023-01-16 Verona VR

A black-headed gull Italy 23VIR103-5 2023 H5N1 2023-02-25 PadenghesulGarda BS

A black-headed gull Italy 23VIR1203-3 2023 H5N1 2023-02-10 Peschiera VR

A black-headed gull Italy 23VIR1658-4 2023 H5N1 2023-02-20 SanGiovLupatoto VR

A black-headed gull Italy 23VIR2013-4 2023 H5N1 2023-02-24 LidodiPadenghe BS

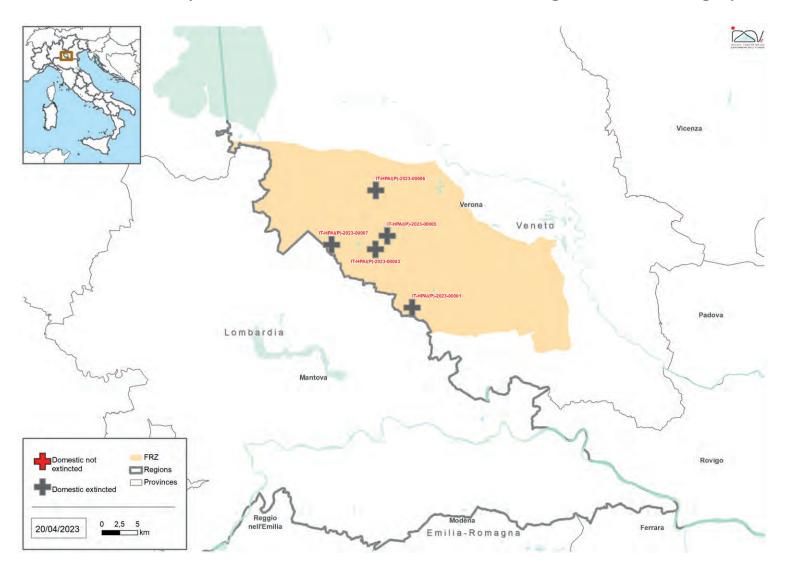
A black-headed gull Italy 23VIR1203-9 2023 H5N1 2023-02-10 Peschiera VR

A turkey Italy 23VIR3366-1 2023 H5N1 2023-04-10 PoveglianoVeronese VR HA
                                     A turkey Italy 23VIR1887-10 2023 H5NT 2023-03-06 Sorga VR
                                     Auchicken Italy 23VIR2802-7 2023 H5N1 2023-03-27 NogaroleRocca VR
                                                                        A chicken Italy 23VIR3021-13 2023 H5N1 2023-04-02 Vigasio VR
                                                                chicken Italy 23VIR3022-15 2023 H5NT 2023-03-30 Vigasio VR
                 A black-headed gull Italy 23VIR3053-1 2023 H5N1 2023-03-16 GattolinoCesena FC A black-headed gull Italy 23VIR3053-1 2023 H5N1 2023-03-16 SanGiulianoMilanese MI HA A black-headed gull Italy 23VIR310-3 2023 H5N1 2023-03-16 Verona VR A black-headed gull Italy 23VIR310-3 2023 H5N1 2023-02-15 Verona VR
                   A black-headed quil Italy 23VIR1101-4 2023 H5N1 2023-01-29 ToscMaderno BS
```

From the phylogenetic analysis it is confirmed that viruses responsible for the outbreaks in poultry since March 2023 derive from wild birds, being the level of similarity of the poultry viruses with those found in gulls in Italy (shown in blue in the box) of 99.8-99.9%. Despite the high homology of the viruses, no evidence of secondary spread was found except for the two outbreaks in layers. Contacts with the same wild reservoir circulating in the affected area is the most likely hypothesis so far.

Control measures: establishment of a Further Restricted Zone (FRZ)

A FRZ has been established until 2 May 2023 and will be amended according to the evolving epidemiological situation



Measures applied within the Further Restricted Zone

- Census of industrial poultry holdings
- Birds shall be kept inside closed buildings and measures should be taken to reduce the risk of direct/indirect contacts with wild birds
- Enforcement of increased biosecurity measures (vehicles, personnel, etc.)
- Gathering of domestic birds for fairs, exhibitions and live-bird markets are banned
- Pre-movement clinical inspection and virological testing (Ministerial Provision n. 0009342-05/04/2023)
- All holdings which birds reached the end of the cycle or production career, must be sent to the slaughterhouse without delay
- Re-stocking of meat turkey farms is prohibited



Thanks for your kind attention