

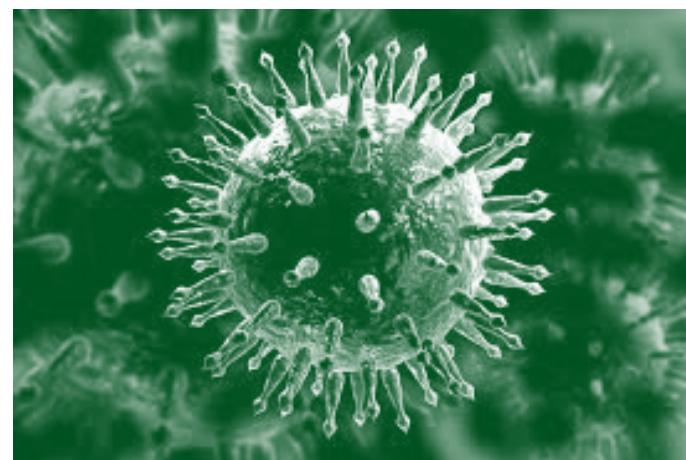
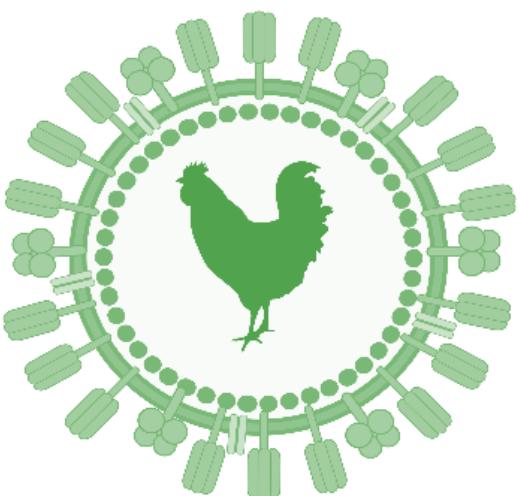
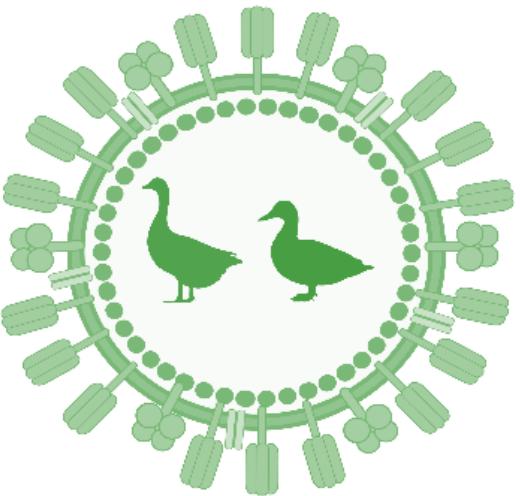
ZOONOTIC RISK OF THE CURRENT CIRCULATING HPAI-H5 VIRUS

Mieke Steensels
NRL AI/NDV for BE and GDL

Sciensano Symposium 8 /12/2022 BEL Brussels

.be

Avian Influenza



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Current Situation

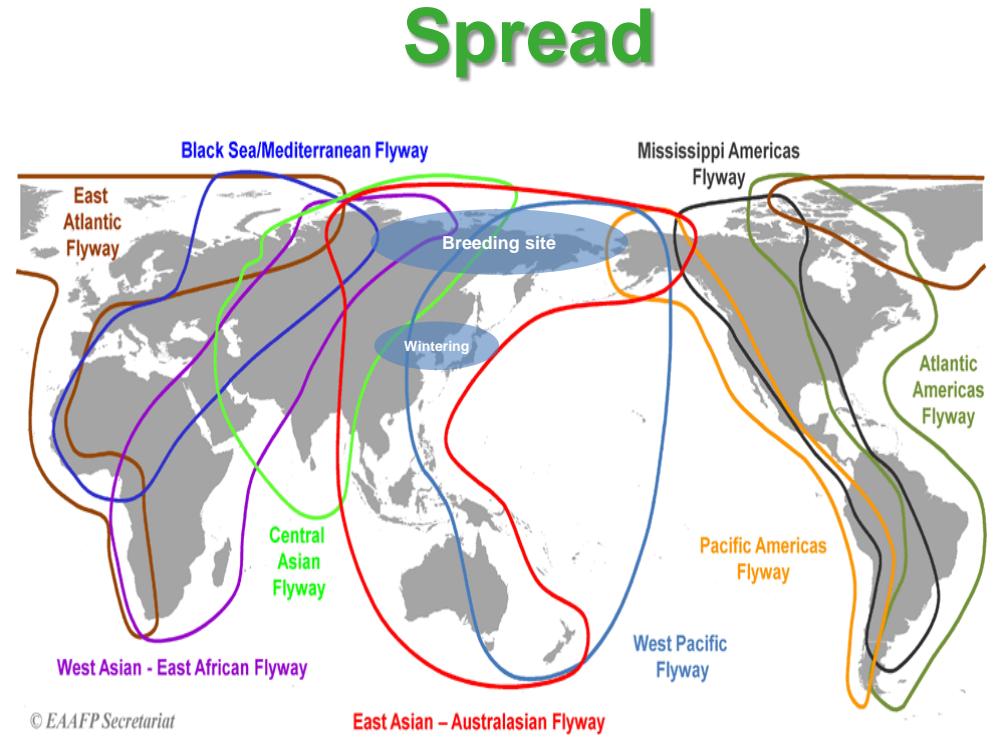
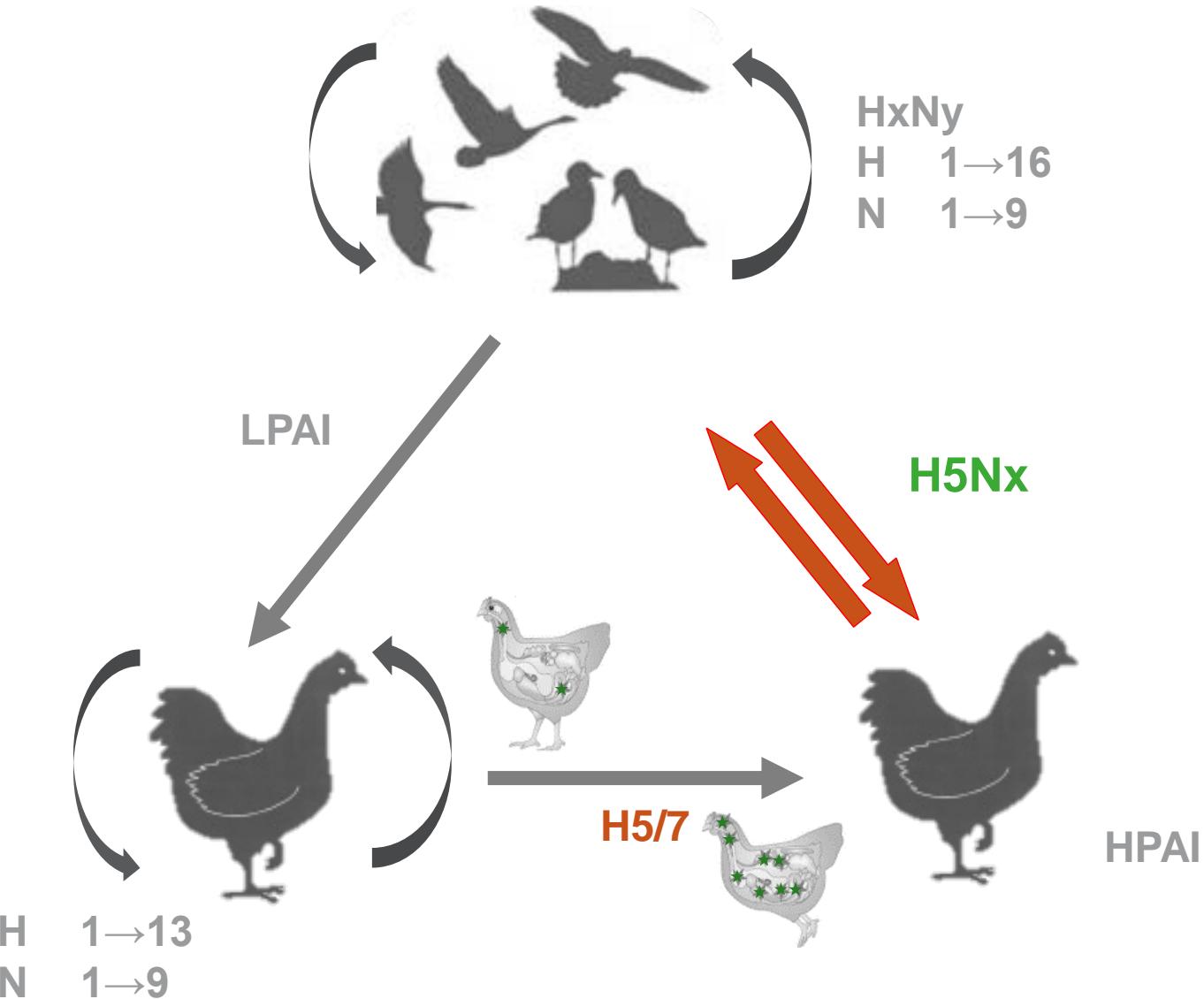


Challenges



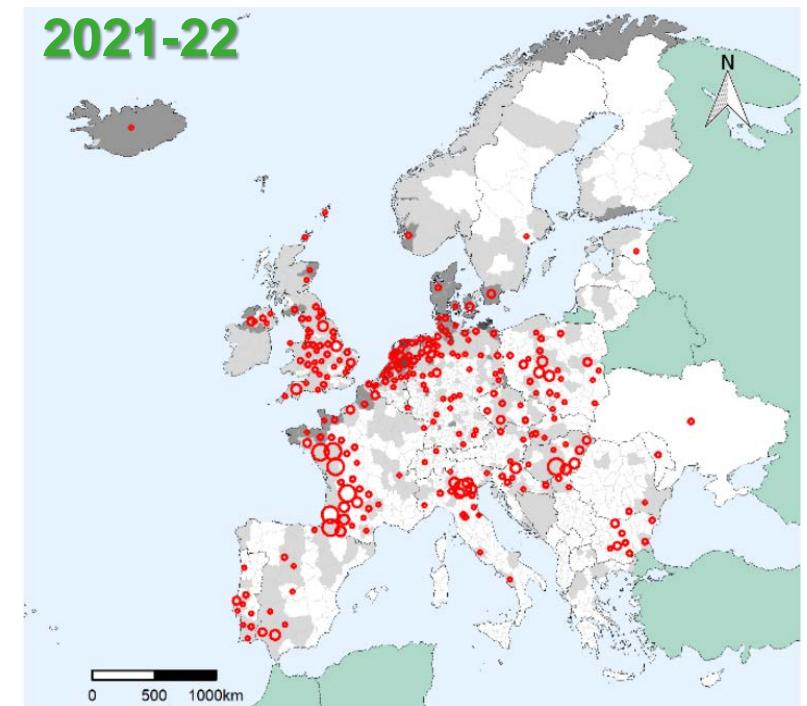
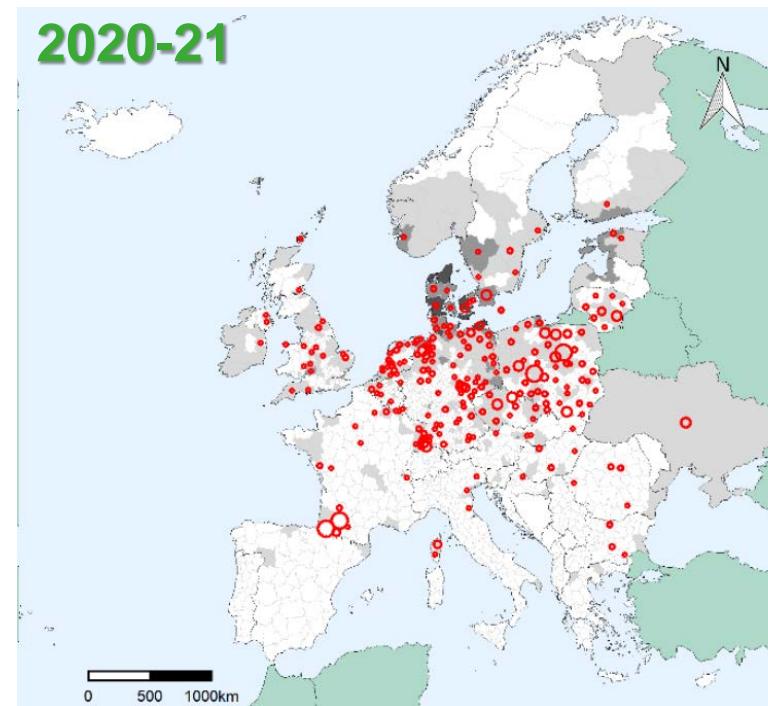
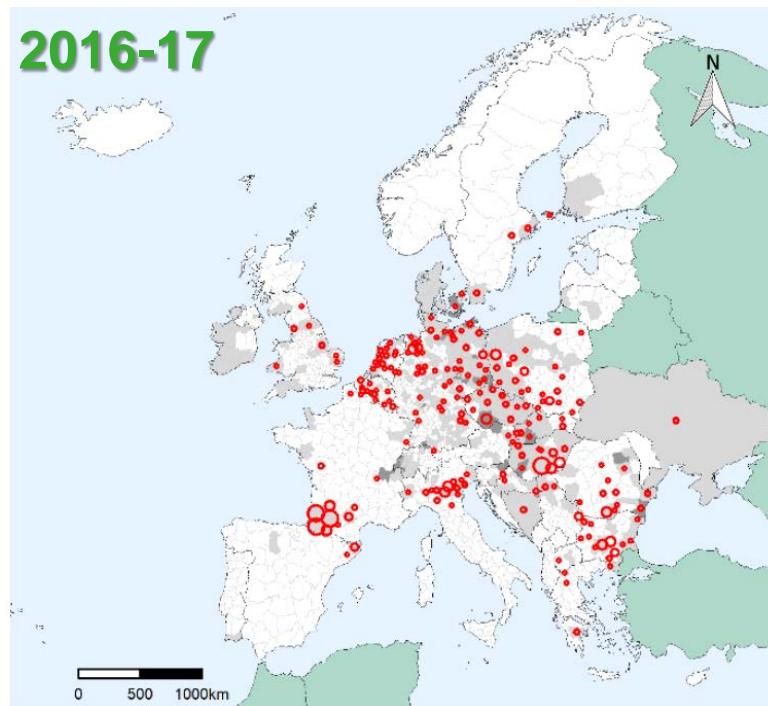
Role of Sciensano

Avian Influenza Epidemiology



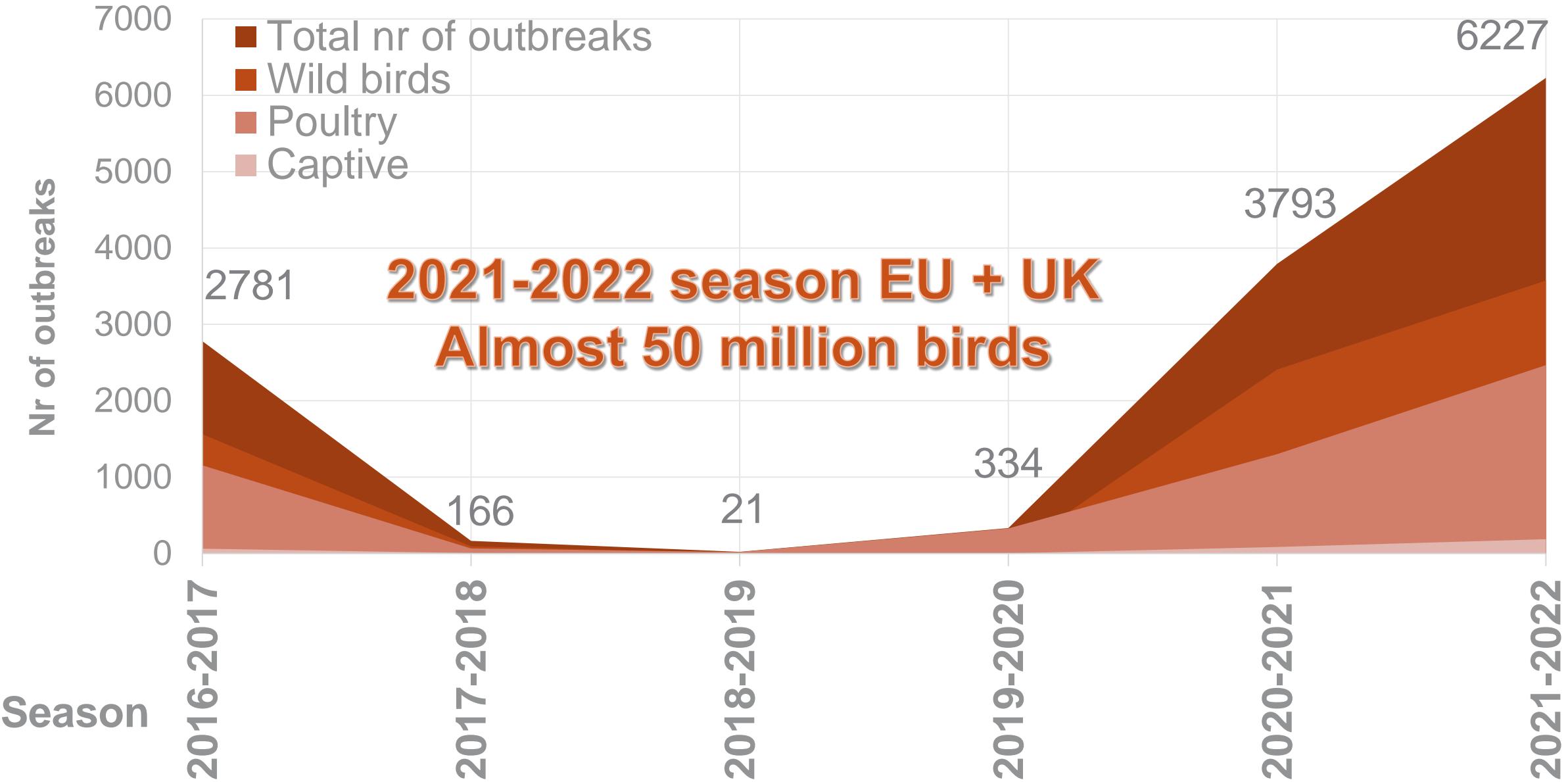
HPAI-H5 in Europe: Recurrence

Clade 2.3.4.4b



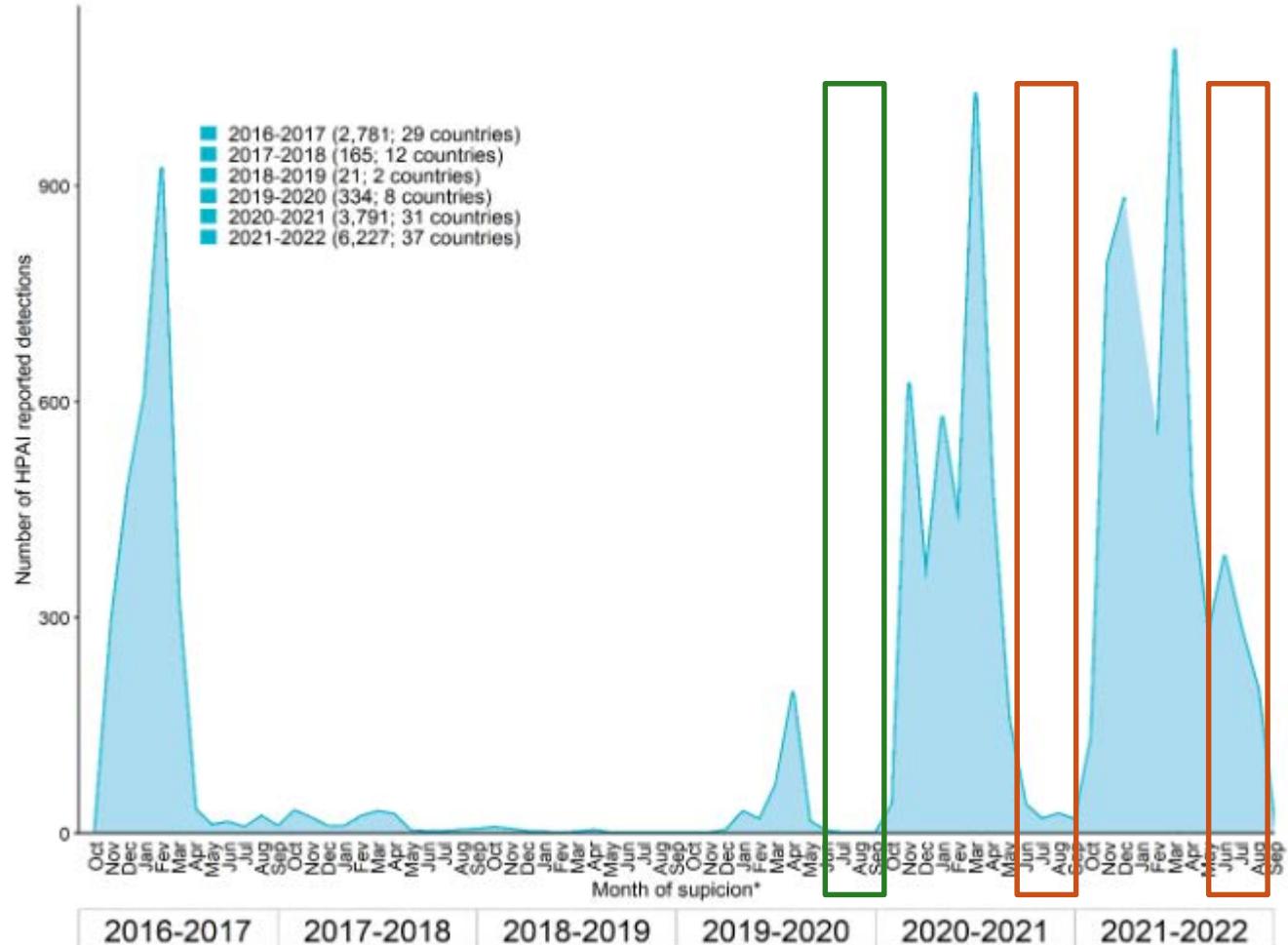
HPAI-H5 in Europe: Incidence

Current Situation
Challenges
Role of Sciensano

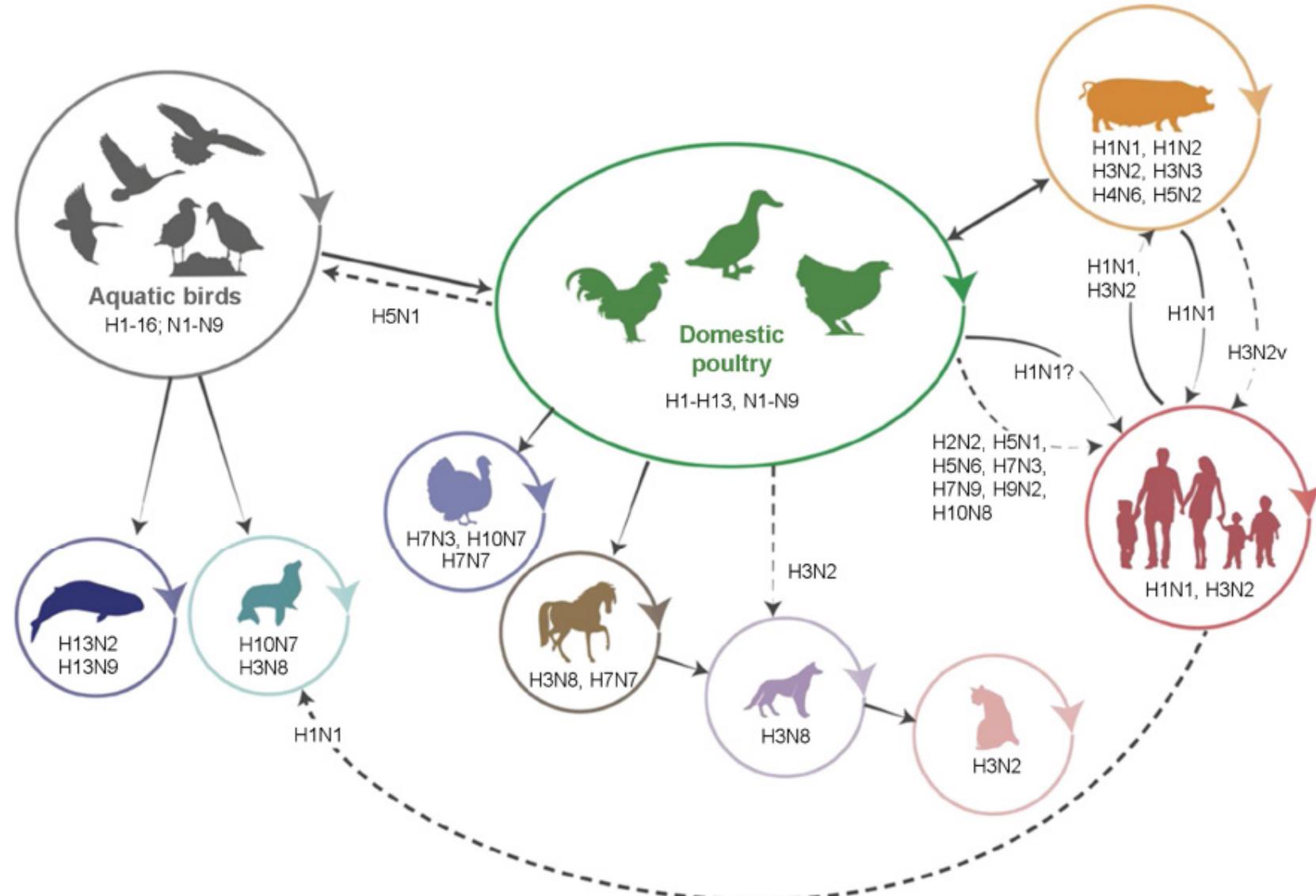


HPAI-H5 In Europe: Endemisation

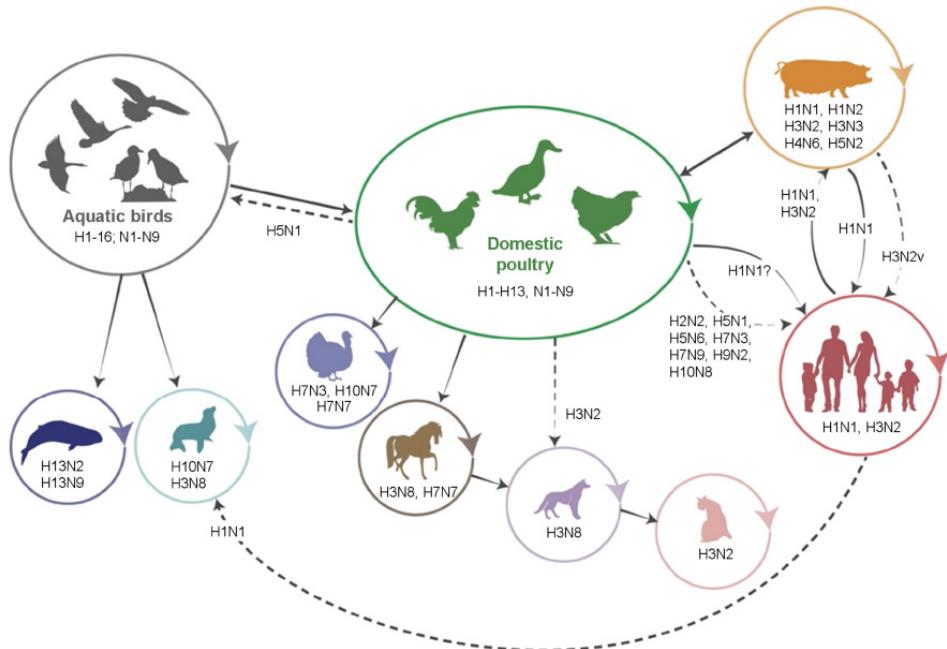
Clade 2.3.4.4b



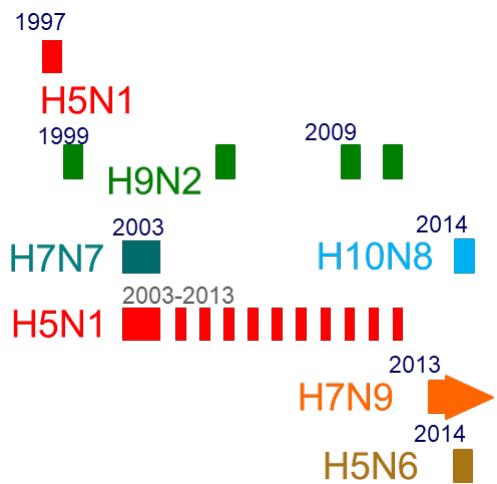
Avian Influenza: Host spectrum



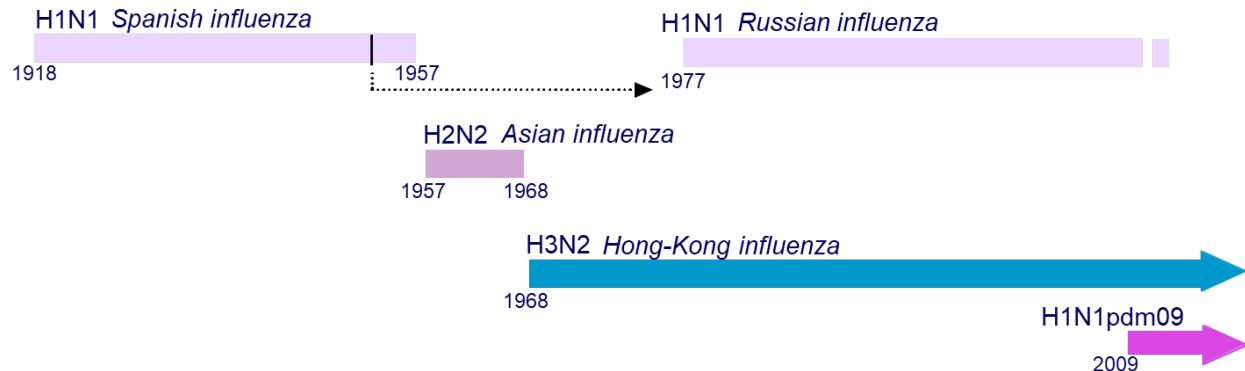
Transmission to humans



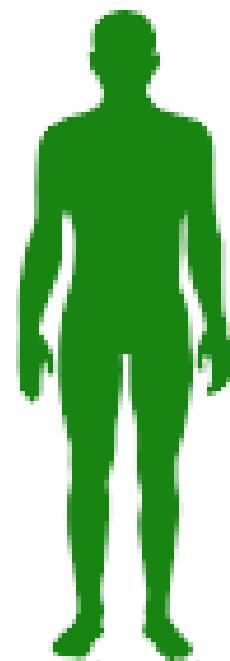
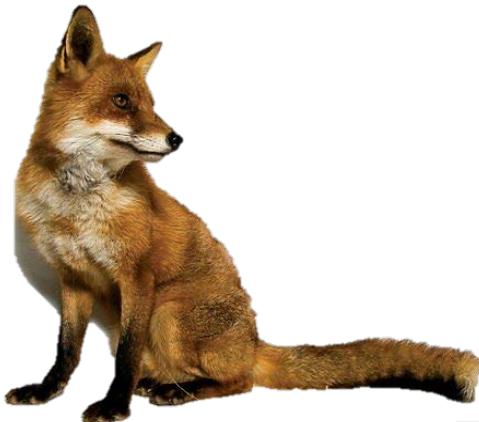
Strains with zoonotic potential



Pandemic → Seasonal flu



Zoonotic Potential



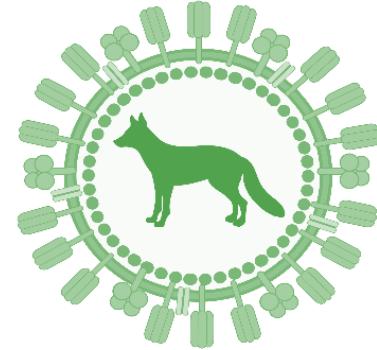
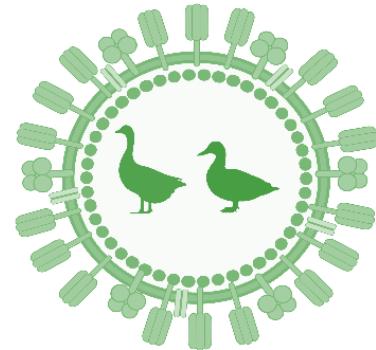
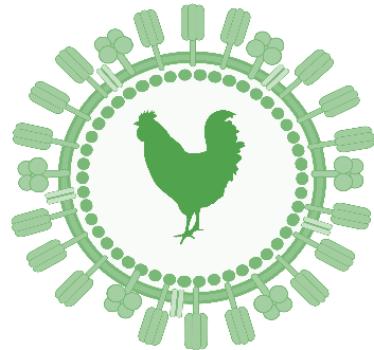
**ECDC risk assessment
infection likelihood**

Low for the general population

Low to Medium for people
occupationally

disease severity
asymptomatic or mild

HPAI-H5 in Belgium: Surveillance





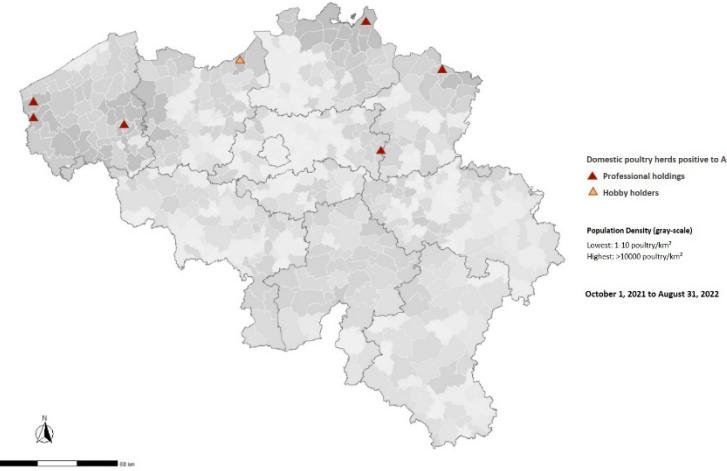
HPAI-H5 in Belgium



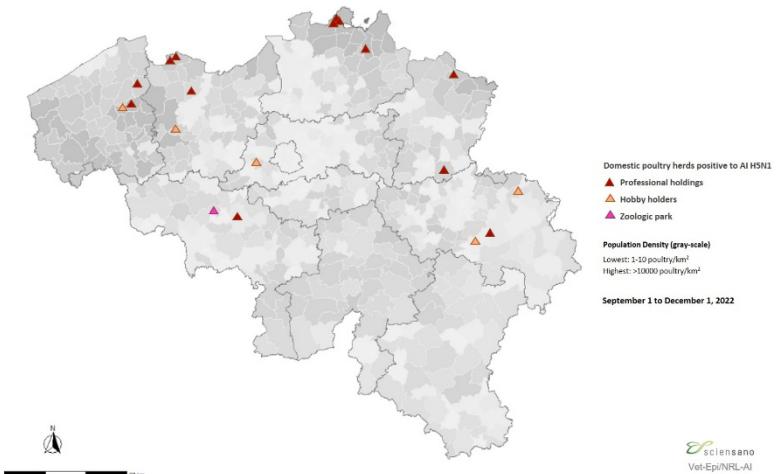
Current Situation
↓
Challenges
↓
Role of Sciensano

POULTRY / CAPTIVE

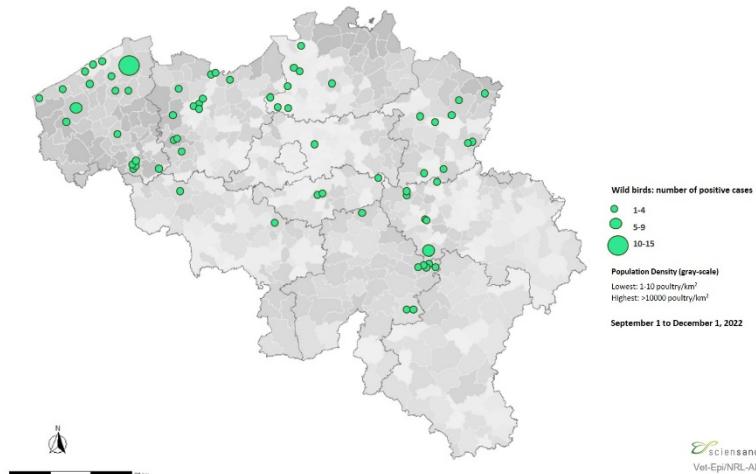
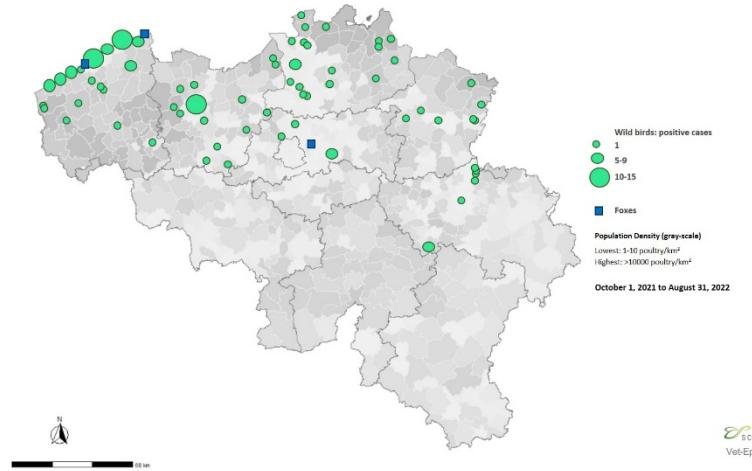
2021-2022



2022-2023



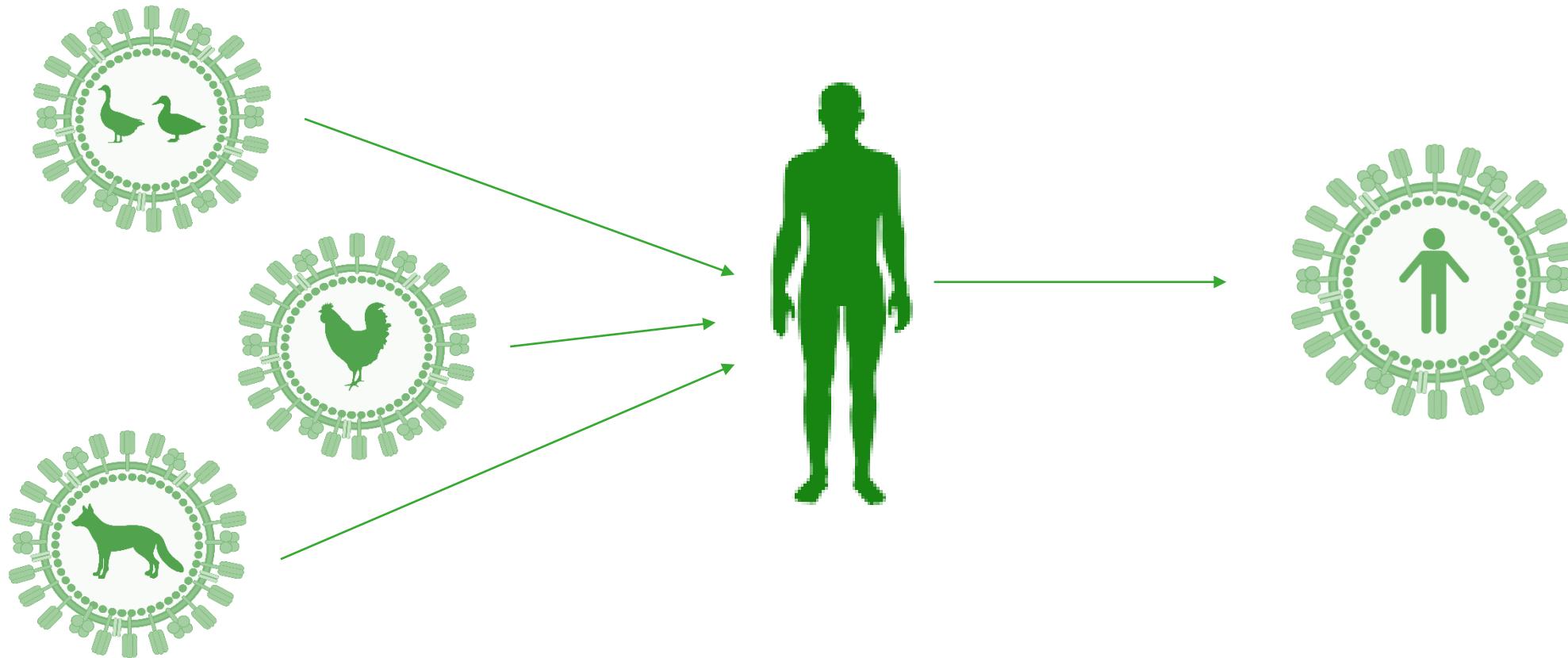
WILD BIRDS / MAMMALS



Role of Sciensano



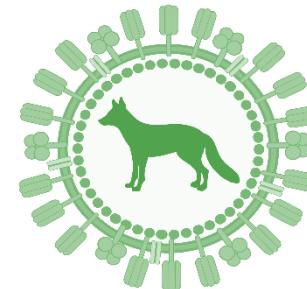
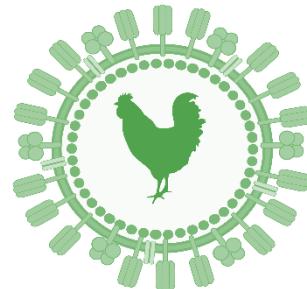
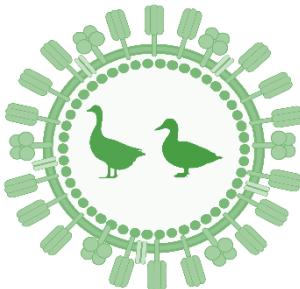
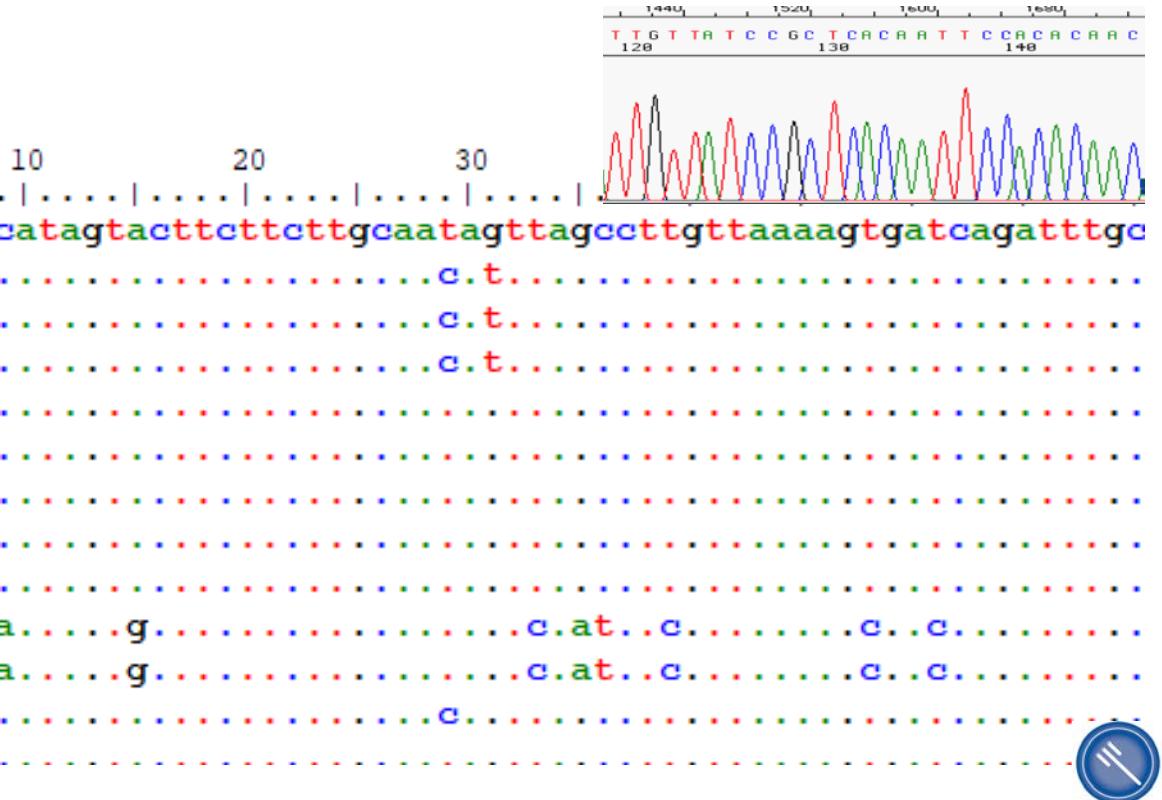
VIGILANCE!



Role of Sciensano



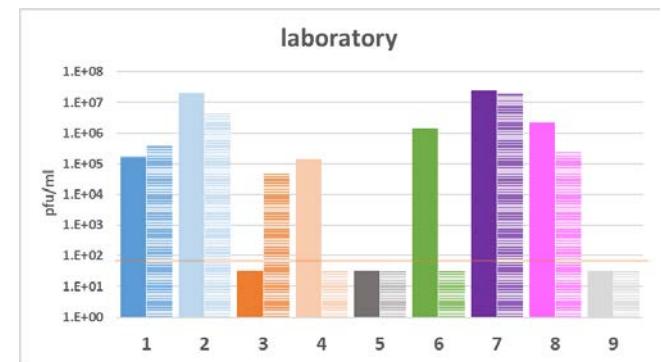
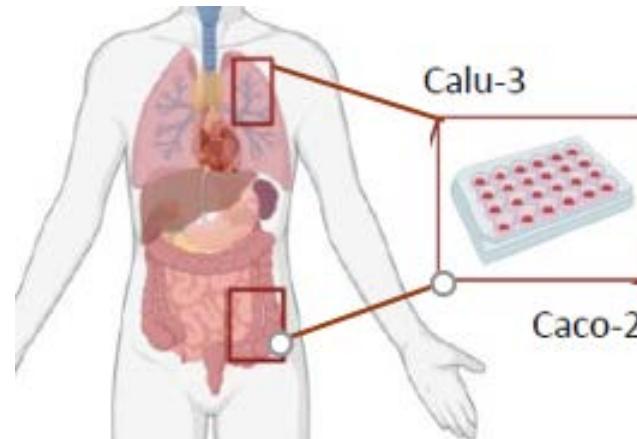
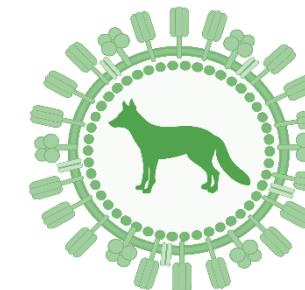
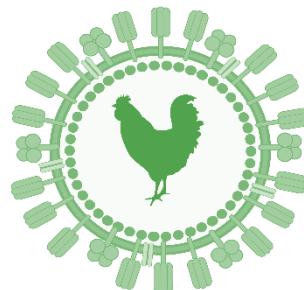
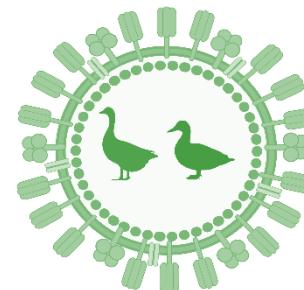
VIGILANCE!



Role of Sciensano

VIGILANCE!

II



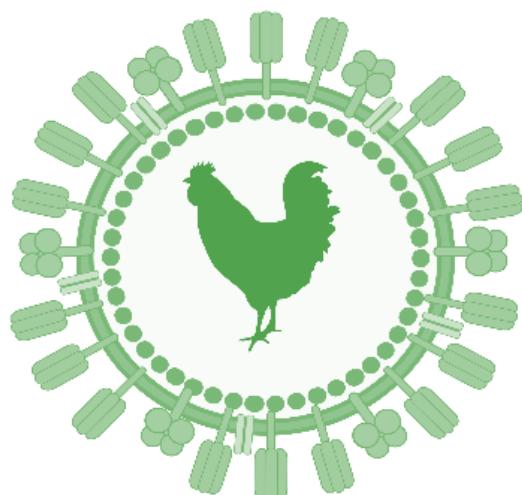
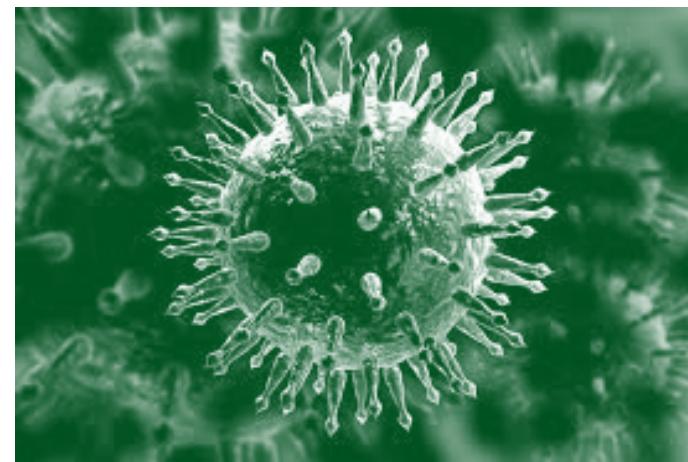
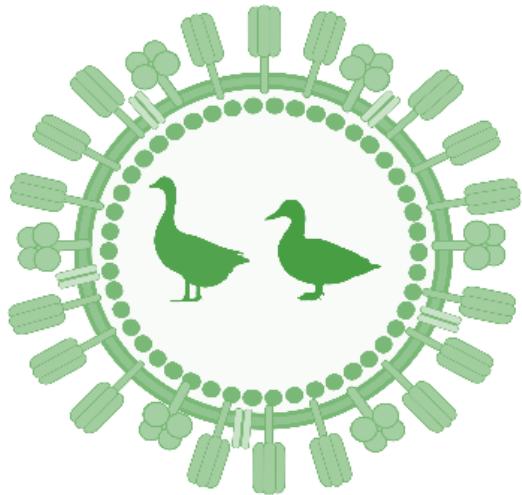


Role of Sciensano

VIGILANCE!

III





Contact

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<https://www.sciensano.be/>

Aviaire influenza | informatie & cijfers

De gezondheidsautoriteiten volgen de situatie op de voet. Ontdek de [rol van Sciensano](#) in de strijd tegen aviaire influenza in België.

Blijf op de hoogte van de
[meest recente cijfers](#)

Influenza aviaire | information & chiffres

Les autorités sanitaires belges suivent la situation de près. Découvrez le [rôle de Sciensano](#) dans la lutte contre l'influenza aviaire en Belgique.

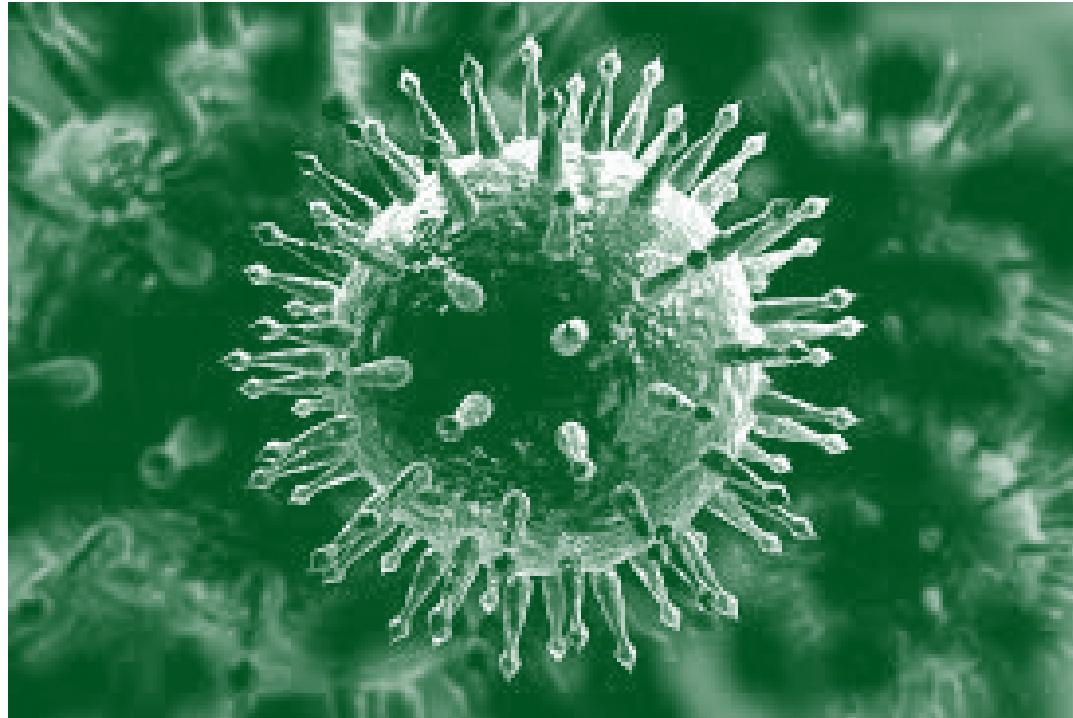
Restez au courant des
[derniers chiffres](#)

Avian influenza | information & data

The Belgian health authorities closely monitor the situation. Discover the [role of Sciensano](#) in tackling avian influenza in Belgium.

Stay up to date with the [latest figures](#)

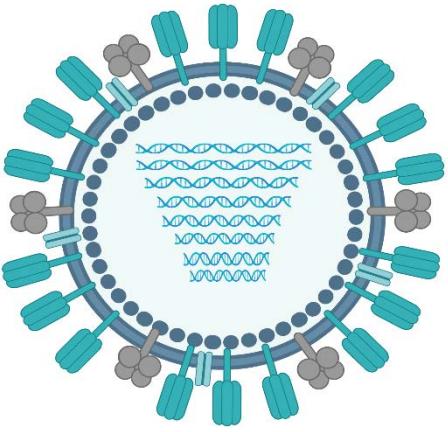
Avian Influenza



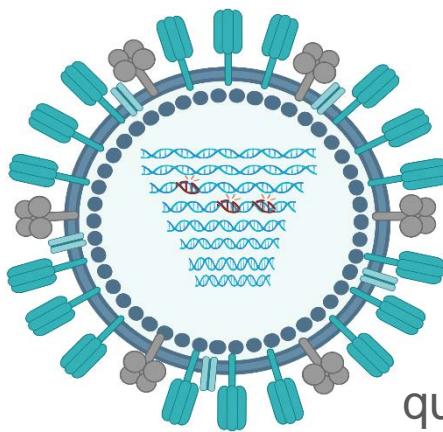
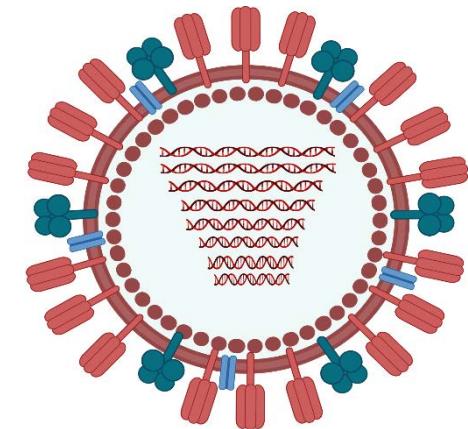
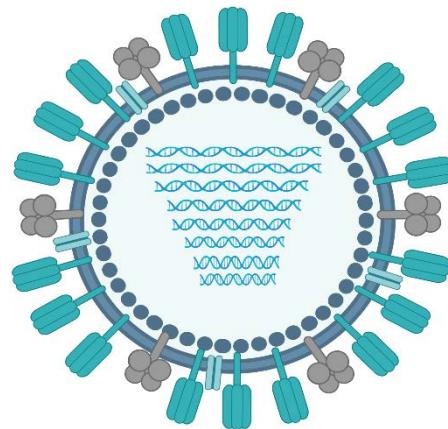
HxNy

AI evolution

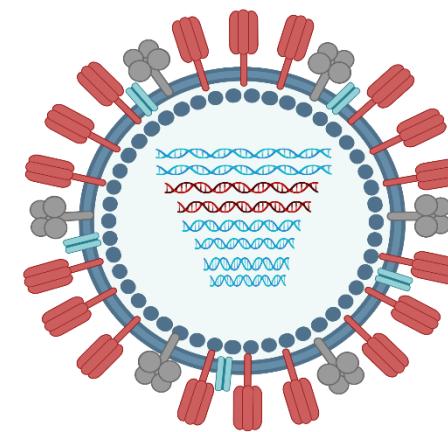
RNA virus – prone to mutation



Segmented genome – exchange of segments

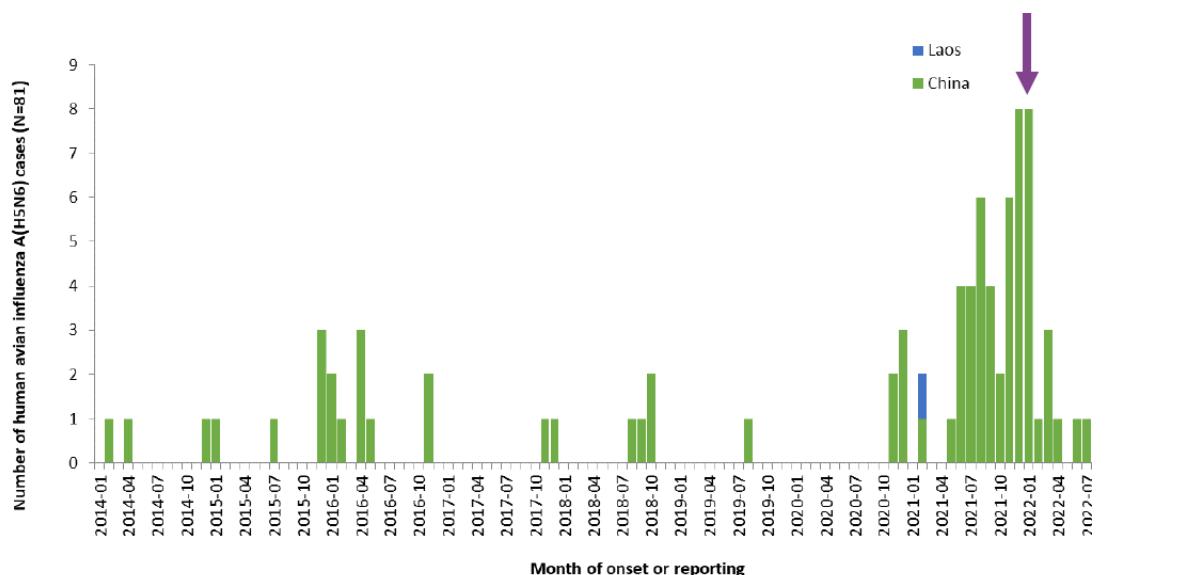


quasispecies

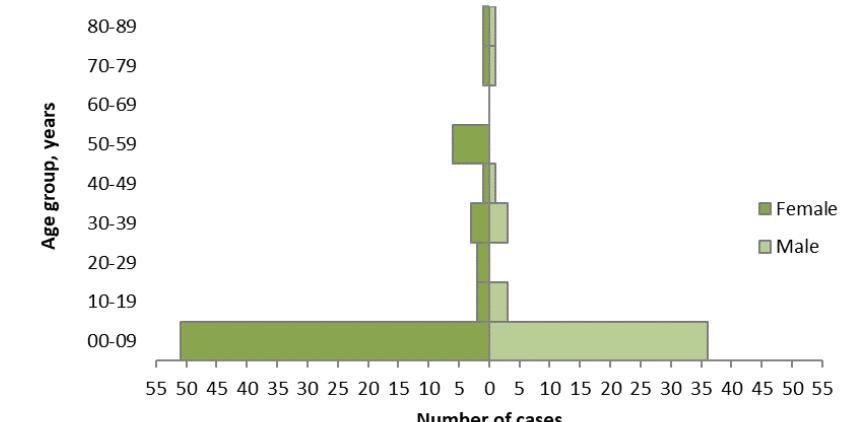
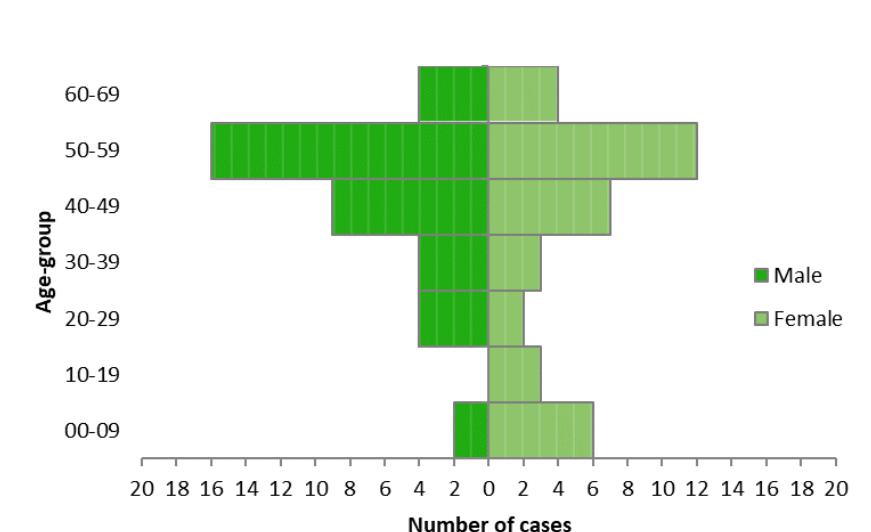
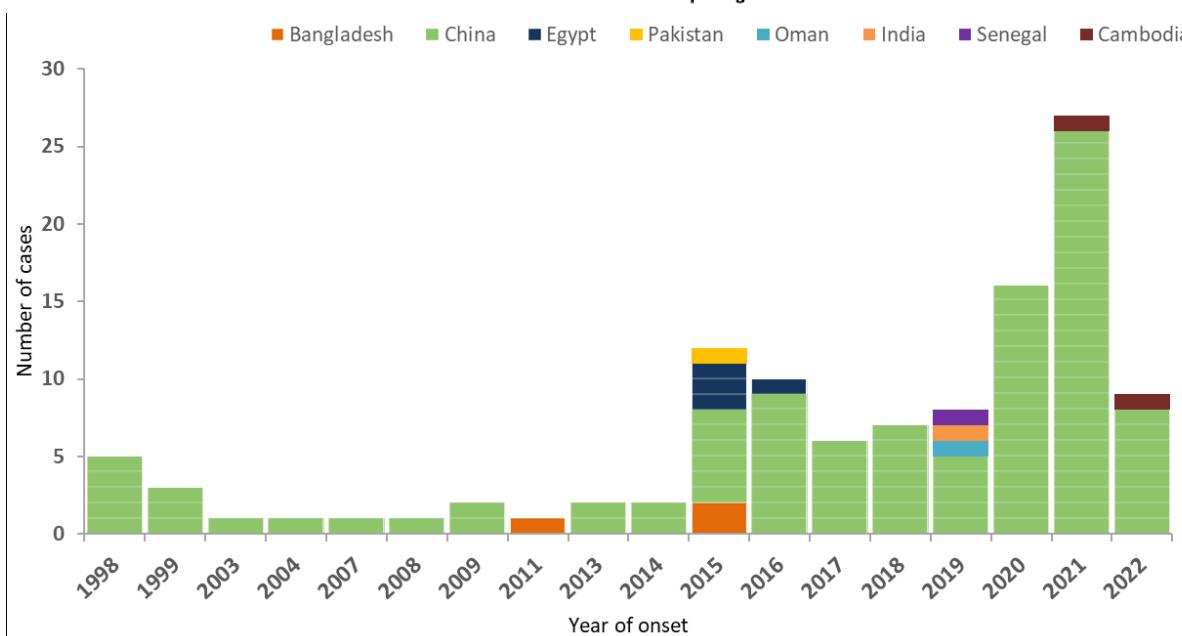


Human infections with other AI strains

H5N6



H9N2



Cumulative number of confirmed human cases for avian influenza A(H5N1) reported to WHO, 2003-2021

Country	2003-2009*		2010-2014*		2015-2019*		2020		2021		Total	
	cases	deaths	cases	deaths	cases	deaths	cases	deaths	cases	deaths	cases	deaths
Azerbaijan	8	5	0	0	0	0	0	0	0	0	8	5
Bangladesh	1	0	6	1	1	0	0	0	0	0	8	1
Cambodia	9	7	47	30	0	0	0	0	0	0	56	37
Canada	0	0	1	1	0	0	0	0	0	0	1	1
China	38	25	9	5	6	1	0	0	0	0	53	31
Djibouti	1	0	0	0	0	0	0	0	0	0	1	0
Egypt	90	27	120	50	149	43	0	0	0	0	359	120
Indonesia	162	134	35	31	3	3	0	0	0	0	200	168
Iraq	3	2	0	0	0	0	0	0	0	0	3	2
Lao People's Democratic Republic	2	2	0	0	0	0	1	0	0	0	3	2
Myanmar	1	0	0	0	0	0	0	0	0	0	1	0
Nepal	0	0	0	0	1	1	0	0	0	0	1	1
Nigeria	1	1	0	0	0	0	0	0	0	0	1	1
Pakistan	3	1	0	0	0	0	0	0	0	0	3	1
Thailand	25	17	0	0	0	0	0	0	0	0	25	17
Turkey	12	4	0	0	0	0	0	0	0	0	12	4
Viet Nam	112	57	15	7	0	0	0	0	0	0	127	64
Total	468	282	233	125	160	48	1	0	0	0	862	455

Human infections with other AI strains

Virus	Time	Number of human infections
A(H3N8)	2022	2
A(H6N1)	2013	1
A(H7N4)	2017	1
A(H10N3)	2021, 2022	2
A(H10N8)	2013, 2014	3