

17 January 2023

Standing Committee on Plants, Animals, Food and Feed

Section Animal Health and Welfare

AVIAN INFLUENZA OVERVIEW SEPTEMBER – DECEMBER 2022

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MONITORING HPAI OUTBREAKS

- Quarterly reports outside the EU
- Joint scientific reports
- 22 reports

SCIENTIFIC REPORT



APPROVED: 15 December 2022

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Avian influenza overview September – December 2022

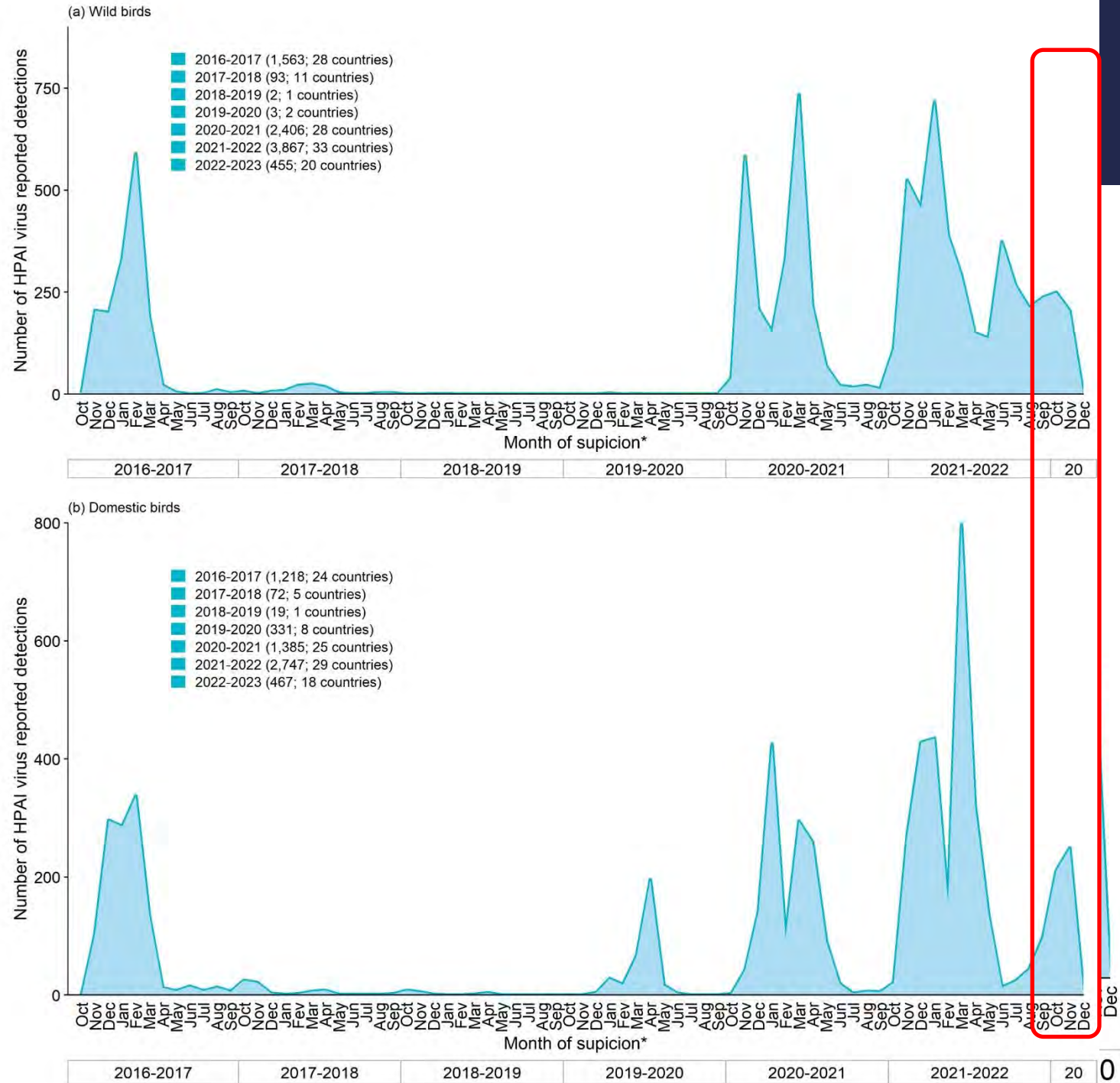
European Food Safety Authority,
European Centre for Disease Prevention and Control,
European Union Reference Laboratory for Avian Influenza,
Cornelia Adlhoch, Alice Fusaro, José L Gonzales, Thijs Kuiken, Stefano Marangon, Éric Niqueux, Christoph Staubach, Calogero Terregino, Inma Aznar, Irene Muñoz Guajardo and
Francesca Baldinelli



HPAI IN EUROPE IN BIRDS

Distribution of HPAI virus detections reported in EU/EEA and the UK by epidemic seasons and month of suspicion

1 Oct 2016 – 2 Dec 2022 (14,629)



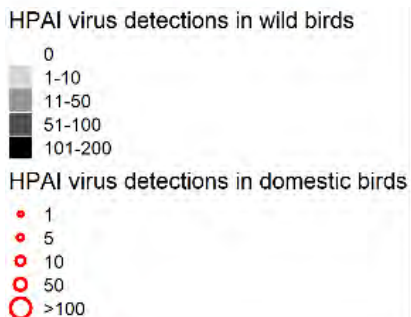
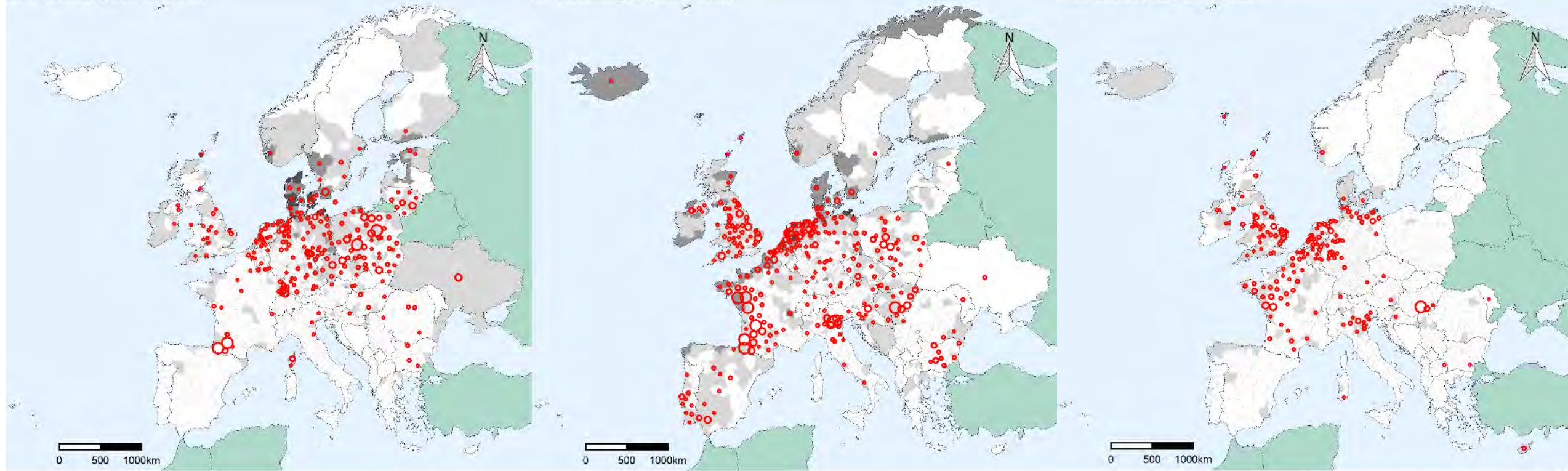
Source: EFSA/ECDC/EURL avian influenza reports <https://efsa.onlinelibrary.wiley.com/doi/toc>

HPAI IN EUROPE IN BIRDS

(a) - Epidemiological year 2020-2021

(b) - Epidemiological year 2021-2022

(c) - Epidemiological year 2022-2023



Author: EF
 Data sources: ADIS, WO
 Date updated: 02/12/2023

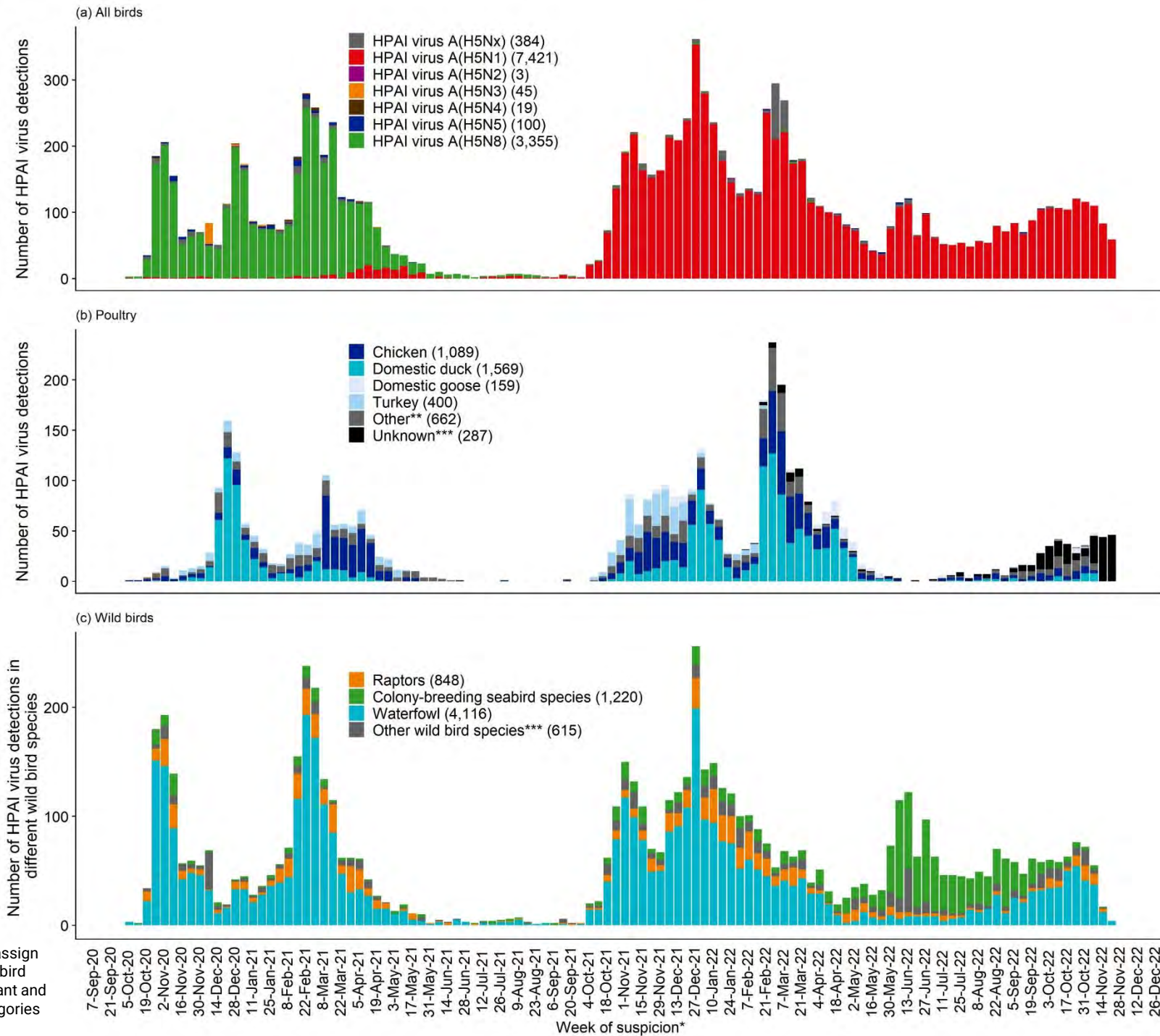


HPAI IN EUROPE IN BIRDS

Distribution of total number of HPAI virus detections reported in Europe by week of suspicion (dates indicate the first day of the week) and

- virus subtype
- affected poultry categories
- affected wild bird categories

5 Oct 2020 – 2 Dec 2022



* When the date of suspicion is not available then the date of confirmation is used to assign the week of suspicion. ** 'Other domestic species' category contains mixed, unknown bird species, or categories different from those displayed (i.e guinea fowl, peacock, pheasant and quail). *** 'Other wild species' category contains mixed, unknown bird species, or categories different from those displayed

VIRUS DETECTIONS IN HUMANS

- During this reporting period **six new detections** of avian influenza in humans have been reported from three countries: **Spain**: two A(H5N1); **China**: one A(H5N1), one A(H5N6), and one A(H9N2); **Vietnam**: one A(H5) without NA-type.
- The HPAI A(H5N1) virus collected from one human sample in Spain, likely originating from an **environmental contamination**, clusters with the viruses collected from the infected laying hens' farm where the person was involved in culling activities. No mutation associated with increased zoonotic potential was identified

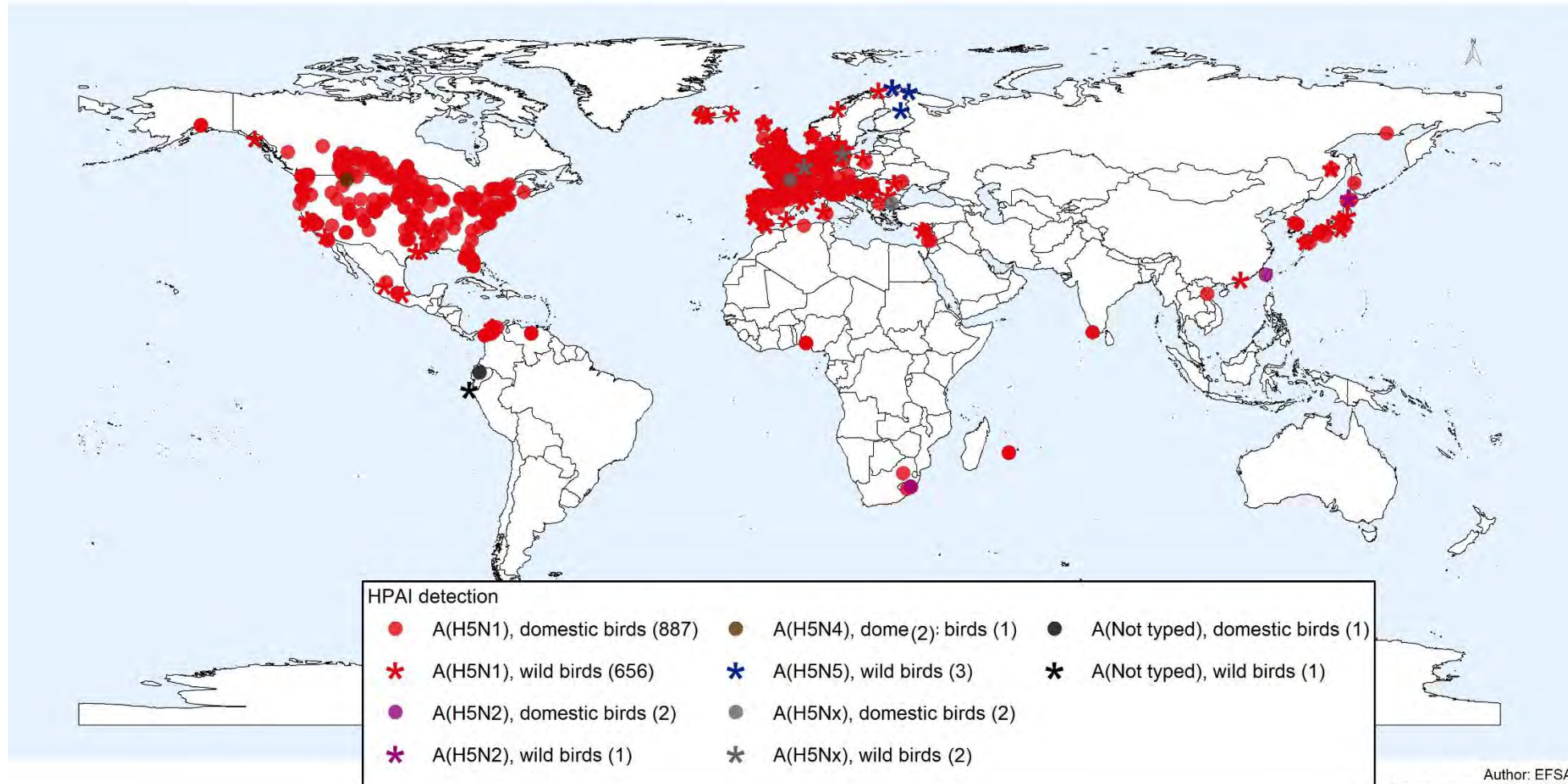


VIRUS DETECTIONS IN MAMMAL SPECIES OTHER THAN HUMANS

Virus	Animal (order, family, species)		Country	Epidemic season	
A(H5N8) clade 2.3.4.4b	Artiodactyla	Suidae	Domestic pigs (<i>Sus scrofa</i>), serological detection	France	December 2016
			Wild boar, serological detection	Germany	2017
	Carnivora	Phocidae	Grey seals (<i>Halichoerus grypus</i>)	Poland, United Kingdom, Sweden	November 2016; 2020-2021
			Harbour seals (<i>Phoca vitulina</i>)	Germany, United Kingdom; Denmark	December 2020
A(H5N1) clade 2.3.4.4b	Carnivora	Canidae	Red foxes (<i>Vulpes vulpes</i>)	United Kingdom, Canada	December 2020
			Red foxes (<i>Vulpes vulpes</i>)	Sweden; Netherlands; Finland; Estonia; Ireland; Belgium; Norway; Japan; USA; Canada	2020-2021; 2021-2022; 2022-2023
			Common raccoon dog (<i>Nyctereutes procyonoides</i>)	Japan	2021-2022
			Coyote (<i>Canis latrans</i>)	USA	2021-2022
	Mustelidae		Eurasian otter (<i>Lutra lutra</i>)	Netherlands; Finland	2021-2022
			European badger (<i>Meles meles</i>)	Netherlands	2021-2022
			European polecat (<i>Mustela putorius</i>)	Netherlands	2021-2022
			Ferret (<i>Mustela furo</i>)	Slovenia	2021-2022
	Felidae		American mink (<i>Neovison vison</i>)	Canada, Spain	2021-2022; 2022-2023
			Lynx (<i>Lynx lynx</i>)	Finland	2021-2022
			Bobcat (<i>Lynx rufus</i>)	USA	2021-2022
			Fisher cat (<i>Pekania pennanti</i>)	USA	2021-2022
	Procyonidae		Amur leopard (<i>Panthera pardus</i>)	USA	2021-2022
			Raccoon (<i>Procyon lotor</i>)	USA	2021-2022
	Mephitidae		Skunks (<i>Mephitis mephitis</i>)	Canada; USA	2021-2022; 2022-2023
	Phocidae		Grey seals (<i>Halichoerus grypus</i>)	USA; Canada	2021-2022
			Harbour seals (<i>Phoca vitulina</i>)	USA; Canada	2021-2022
	Ursidae		American black bear (<i>Ursus americanus</i>)	Canada	2021-2022; 2022-2023
			Brown bear (<i>Ursus arctos</i>)	USA	2022-2023
			Domestic pigs (<i>Sus scrofa</i>), serological detection ^a	Italy	2021-2022
Didelphimorphia	Dedelphidae	Virginia opossum (<i>Didelphis virginiana</i>)	USA	2021-2022; 2022-2023	
Cetacea	Phocoenidae	Porpoise (<i>Phocoena phocoena</i>)	Sweden	2021-2022	
		Delphinidae	Bottlenose dolphin (<i>Tursiops truncatus</i>)	USA	2021-2022
			White-sided dolphin (<i>Lagenorhynchus acutus</i>)	Canada	2022-2023

HPAI DETECTIONS WORLDWIDE

Distribution of reported HPAI virus detections, 10 Sep – 2 Dec 2022



Author: EFSA
Data sources: ADIS, WOAH
Date updated: 02/12/2022



MAIN CONCLUSIONS AND OPTIONS FOR RESPONSE

- The **2021–2022 HPAI epidemic observed in Europe is the largest in history**: 2,520 HPAI outbreaks in poultry (50 million birds dead or culled in the affected establishments), 227 detections in captive birds, and 3,867 detections in wild birds
- The epidemic **didn't stop during the summer** and continued into the 2022–2023 epidemiological year due to the persistence of the virus in wild birds along the summer months and indicates a **continuous risk for HPAI virus to spread** among wild birds and mammals, as well as for virus entry into poultry establishments



MAIN CONCLUSIONS AND OPTIONS FOR RESPONSE

- From the previous reporting period (June-September) to the current reporting period (September-December), **waterfowl replaced colony-breeding seabirds** as the main wild birds in which HPAI virus detection was reported
- **Waterfowl** might be more **involved** than seabirds **in the incursion of HPAI virus into poultry** establishments, likely because the habitat of waterfowl is more likely to overlap with the location of poultry establishments than seabird colony sites
- To mitigate the risk of further spread of the infection in poultry, adequate **early detection** and **rapid control** of HPAI outbreaks should be ensured and the **pattern of introduction** into the different production systems should be investigated and identified to take appropriate risk mitigation measures



MAIN CONCLUSIONS AND OPTIONS FOR RESPONSE

- **Testing** for avian influenza virus should be strongly considered in wild and farmed **mammals showing neurological symptoms** but also respiratory symptoms, particularly in highly susceptible species for influenza virus, in high risk period and high risk areas
- **Surveillance in mammals and humans** that could potentially be exposed to infected birds should be strengthened to facilitate the early detection of virus transmission events from birds to wild or domestic mammals and/or humans, and subsequently between humans



DASHBOARD ON HPAI VIRUS DETECTIONS IN EUROPE

Highly pathogenic avian influenza virus detection in Europe



Settings

Main bird categories:
 All birds Poultry Wild birds

Subtypes:
 A(H5Nx) A(H5N3) A(H5N6)
 A(H5N1) A(H5N4) A(H5N8)
 A(H5N2) A(H5N5)

Bird Sub-categories:
 Captive birds Poultry Wild birds

Choose minimum date:
 2016-10-01 2021-10-01

Choose maximum date:
 2021-10-01 2022-12-02

Press play above to animate the graphics (adding 7 days to the maximum date)

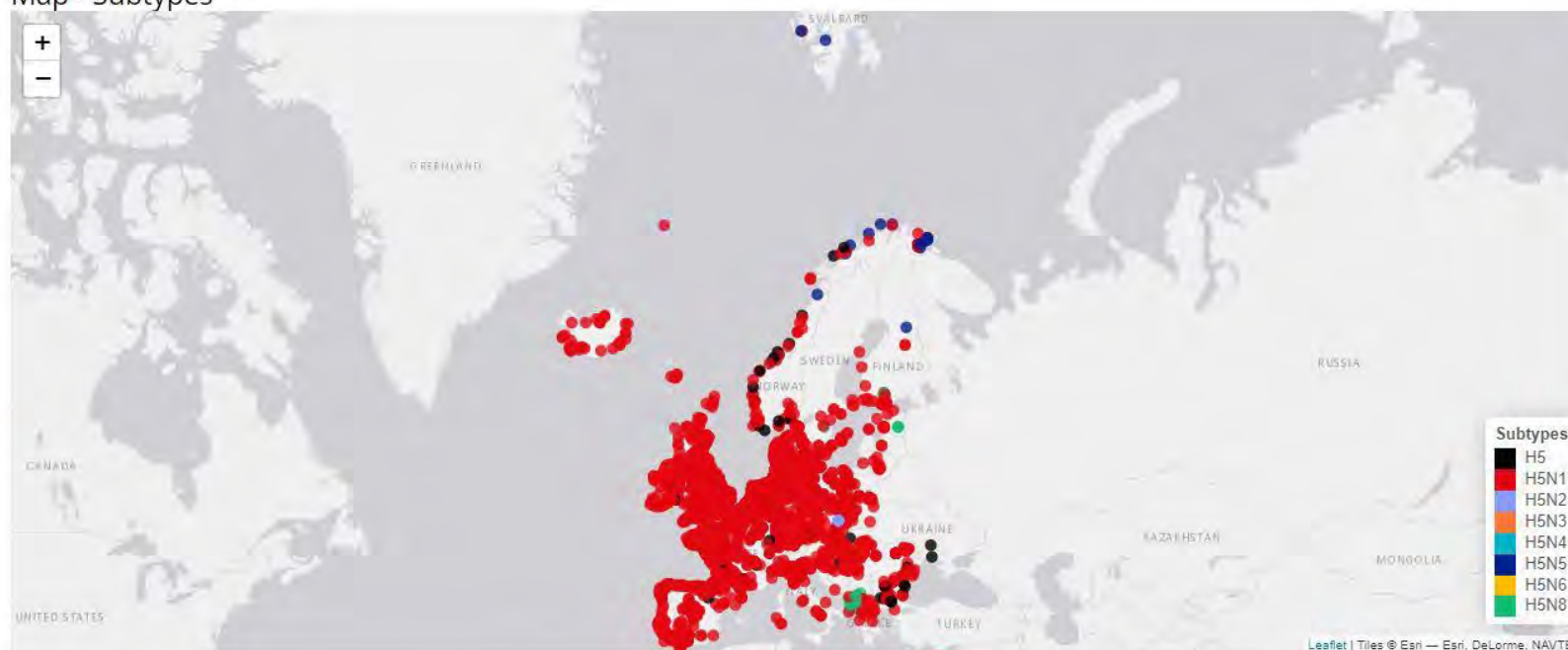
Summary per country
 Show **4** entries Search:

Country	Number of detection
Albania	8
Austria	32
Belgium	205
Bosnia and Herzegovina	1

Showing 1 to 4 of 38 entries

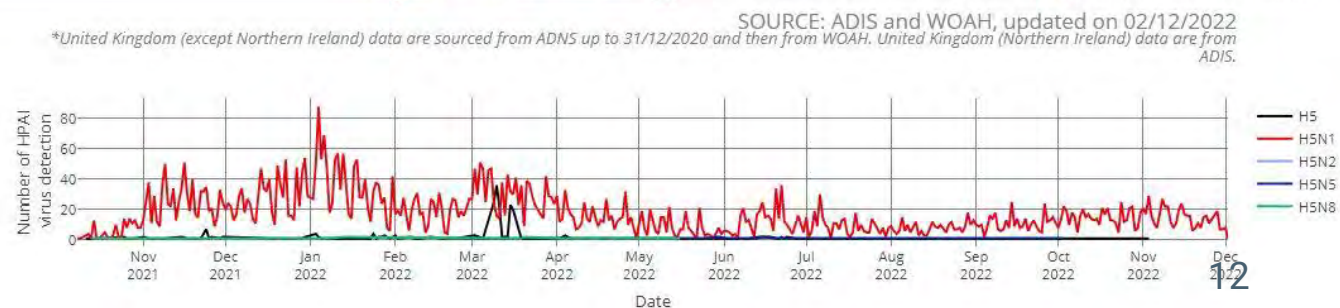
Previous **1** 2 3 4 5 ... 10 Next

Map - Subtypes



Time series

Timeseries type:
 Bird categories
 Subtypes



Available at: <http://hpaiefsa.aus.vet/>

EXPERT INVOLVED

Member State representative for avian influenza


Working group members

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- GONZALES Josè (WUR)
- KUIKEN Thijs (Erasmus MC)
- MARANGON Stefano (EURL)
- NIQUEUX Eric (ANSES)
- STAUBACH Christoph (FLI)
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attention

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