

# Surveillance for Avian Influenza in the European Union in 2017

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# Overview

- 2017 surveillance programme in
  - Poultry
  - Wild birds



- Additional epidemiological analyses at the EURL



## Annual Report



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on surveillance  
for avian influenza in  
poultry and in wild birds in  
Member States of the  
European Union  
in 2015

## Annual Report



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# Surveillance for AI in Poultry in EU

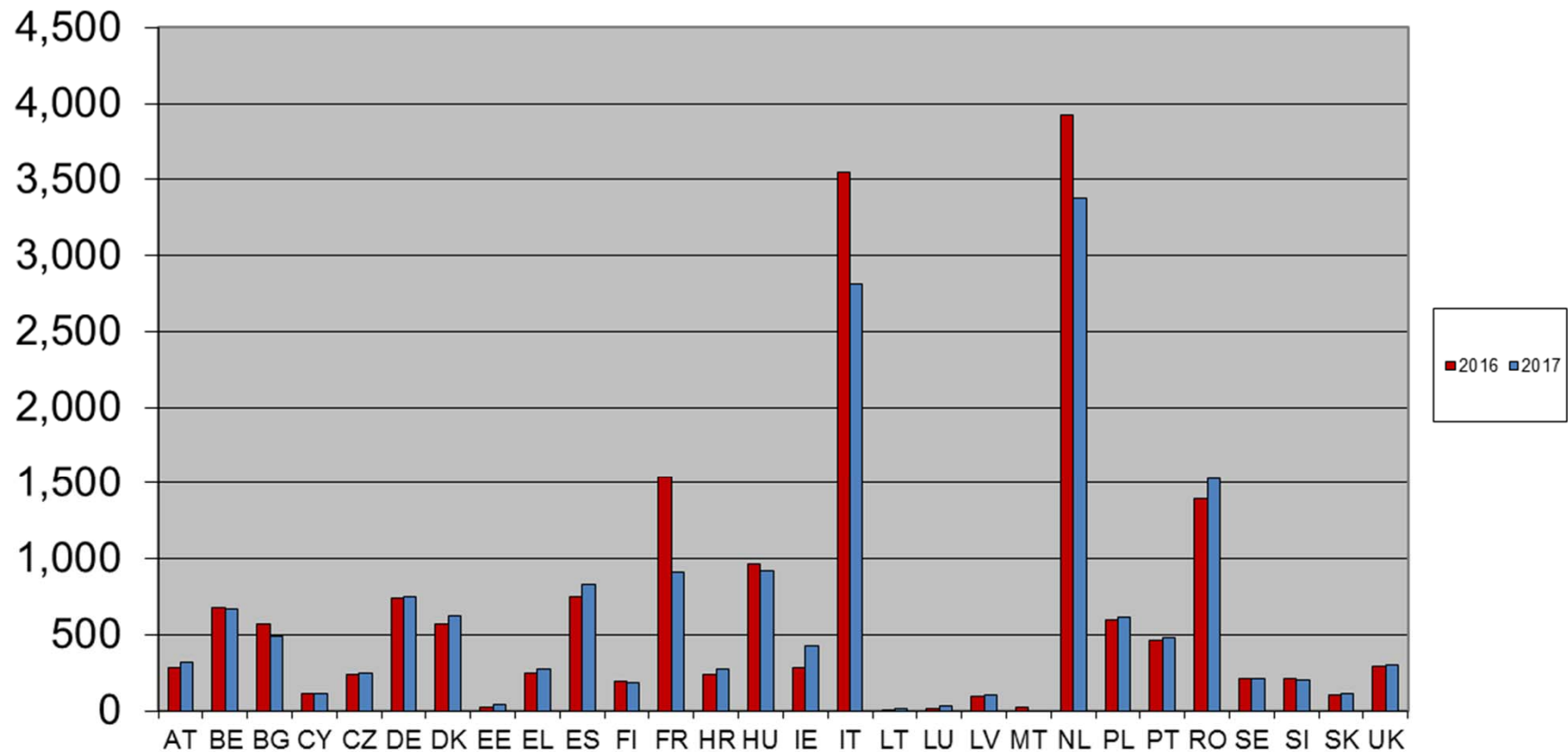
- Objectives
  - Inform the competent authority of circulating avian influenza virus with a view to controlling the disease
  - Primarily serological surveillance for detection of evidence of exposure to AI of subtypes H5 and H7
  - Complement early detection systems (scanning/passive surveillance)

# Poultry 2017 – Results

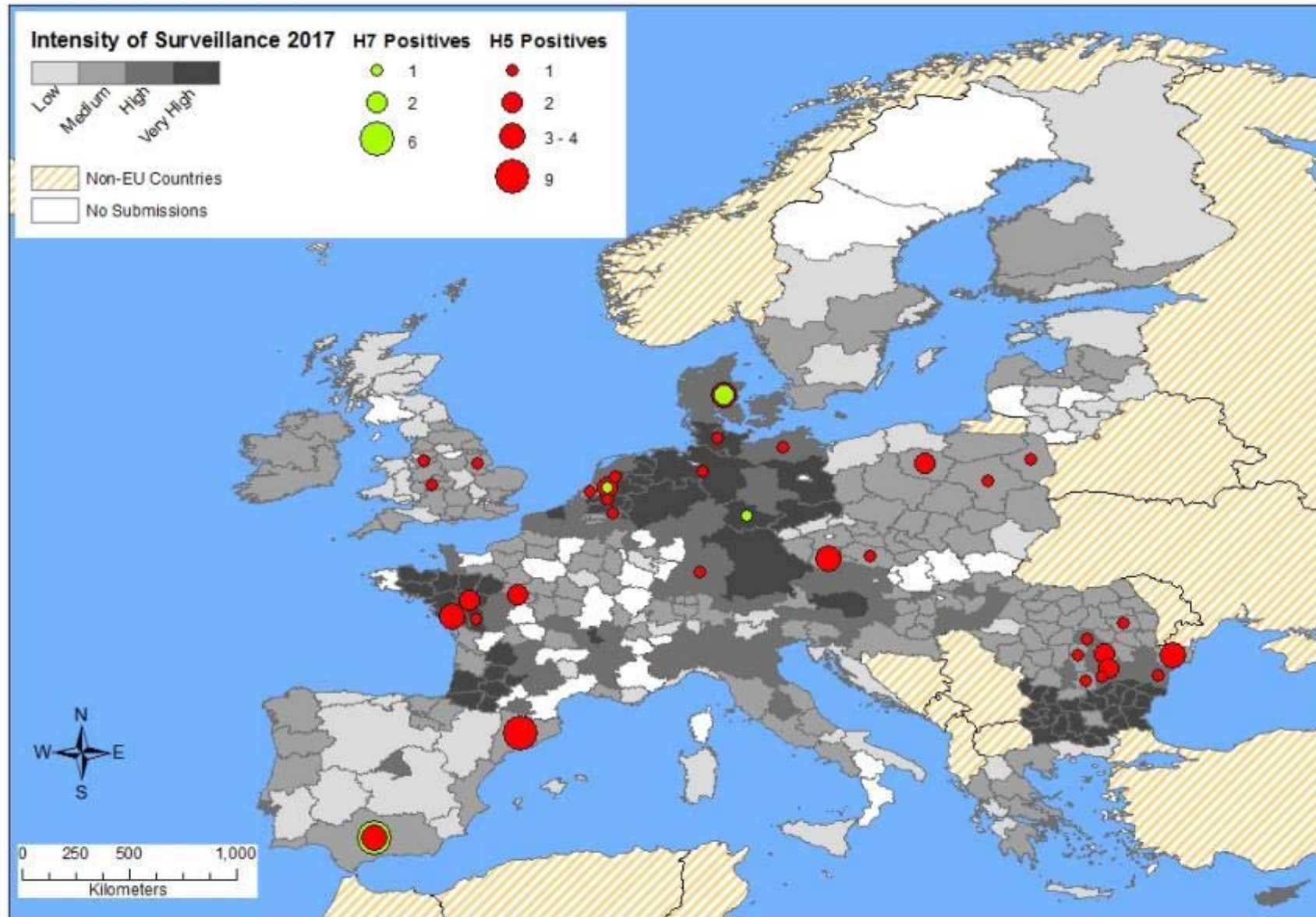
- 16,851 poultry holdings sampled by 27 MS (in 2016 18,138)
- Number of holdings sampled varied by MS from 11– 3,375

# Poultry 2017 – Results (data from 27 MS)

## Number of poultry holdings sampled in 2016 and 2017



# Poultry 2017 – Seropositive Results



# Poultry 2017 - Results (2016 blue)

## 61\* (116) H5 seropositive holdings:

- Backyard Flocks: 14 (0) in RO
- Fattening Ducks: 11 (9) in ES (9), BE and DE
- Breeder Ducks: 9 (73) mainly in FR (6), also in CZ NL and UK
- Farmed Game Birds (waterfowl): 9 (5) in CZ, DK, ES, FR and UK
- Breeder Geese: 8 (18) in CZ, FR, DE and PL
- Free-range Laying Hens: 4 (3) in DK and NL
- Farmed Game Birds (gallinaceous): 2 (0) in DK
- Fattening Geese: 2 (5) in ES and UK
- Chicken Breeders: 1 (0) in NL
- Others: 1 (2) in DE
- Fattening Turkeys: 1 (1) in DE



\*One CZ holding seropositive for H5 in both BG and BD categories



# Poultry 2017 - Results

## Epidemiological follow up investigations following an H5 seropositive result

H5 seropositive poultry holdings	Number of poultry holdings	% of total number of H5 seropositive poultry holdings
<b>Following H5 seropositive result, epidemiological follow-up visit 'Done'</b>	<b>59</b>	<b>96.7</b>
Done: H5 detected by virological testing	24	39.3
Done: No detection by virological testing	35	57.4
<b>Following H5 seropositive result, epidemiological follow-up visit 'Not done'</b>	<b>2</b>	<b>3.3</b>
Not done: Sampling at slaughter	0	0.0
Not done: Birds slaughtered/killed	2	3.3
<b>Total number of H5 seropositive poultry holdings (by MS)</b>	<b>61</b>	

# Poultry 2017 - Results (2016 blue)

## 10\* (7) H7 seropositive holdings

- Farmed Game Birds (waterfowl): 7 (1) in ES (6) and DK
- Free-range Laying Hens: 1 (4) in NL
- Farmed Game Birds (gallinaceous) 2 (0) in DK
- Others: 1 (1) in DE



\*One DK holding seropositive for H7 in both FGB-W and FGB-G categories

# Poultry 2017 - Results

## Epidemiological follow up investigations following a H7 seropositive result

H7 seropositive poultry holdings	Number of poultry holdings	%of total number of H7 seropositive poultry holdings
<b>Following H7 seropositive result, epidemiological follow-up visit 'Done'</b>	<b>9</b>	<b>90</b>
Done: H7 detected by virological testing	1	10.0
Done: No detection by virological testing	8	80.0
<b>Following H7 seropositive result, epidemiological follow-up visit 'Not done'</b>	<b>1</b>	<b>10</b>
<b>Total number of H7 seropositive poultry holdings (by MS)</b>	<b>10</b>	

# Poultry 2017 - Results

## Summary

- Number of H5 seropositive holdings (61) was less than in 2016 (116).
- High proportion of detections in Ducks and Geese as in previous years, and Farmed Game Birds (waterfowl).
- 59 H5 seropositive holdings underwent follow up testing and 39 were H5 virus positive.
- Number of H7 seropositive holdings (10) was greater than 2016 (7).
- Detections in Free-range Laying Hens, Farmed Game Birds (gallinaceous and waterfowl) and Others.
- Nine H7 seropositive holdings underwent follow up testing and 1 was H7 virus positive.
- Surveillance effective in detection of H5 and H7 virus exposure and infection where clinical indicators may not trigger detection by other methods.

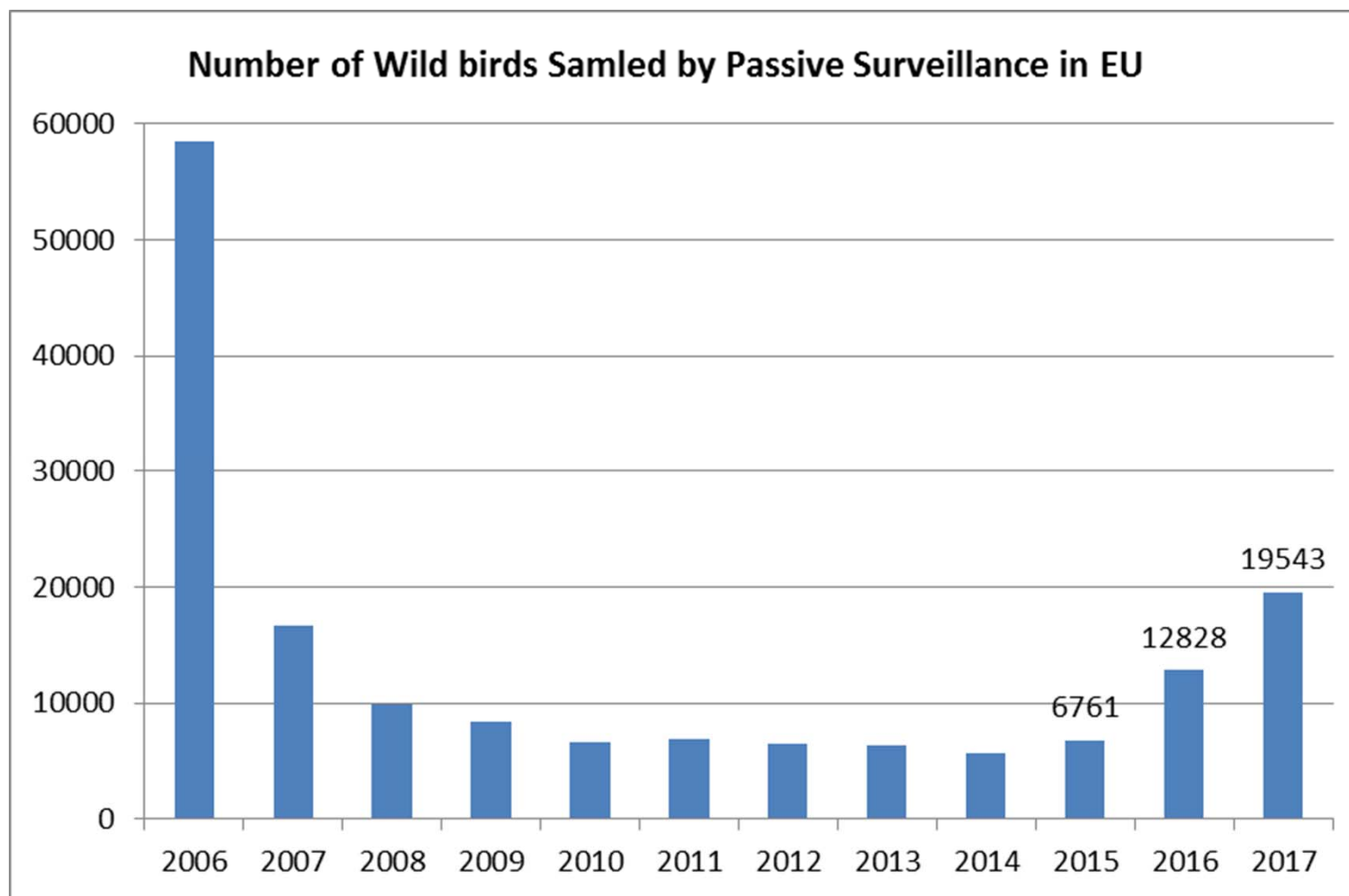
# Passive surveillance for AI in **wild birds** in EU 2017

## Objectives (2010/367/EU)

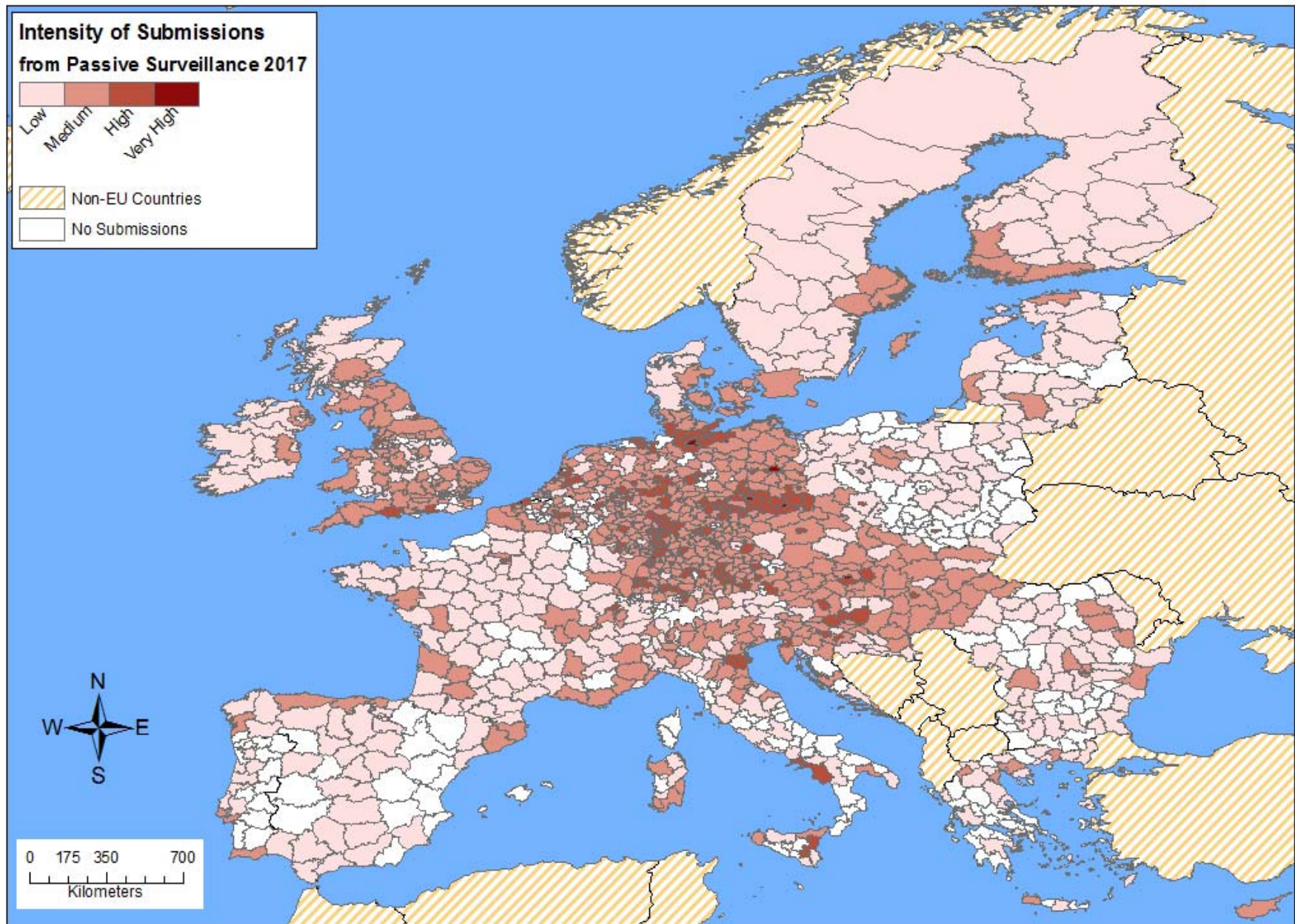
Timely detection of HPAI of the subtype H5N1 in wild birds in order to protect poultry and safeguard veterinary public health.

- a) Risk based passive surveillance
- b) Target species to be prioritised
- c) Areas close to water bodies and high density poultry holding areas targeted
- d) Epidemiologists, ornithologists and conservationists to be consulted
- e) Enhanced surveillance to be implemented if the epidemiological situation requires.

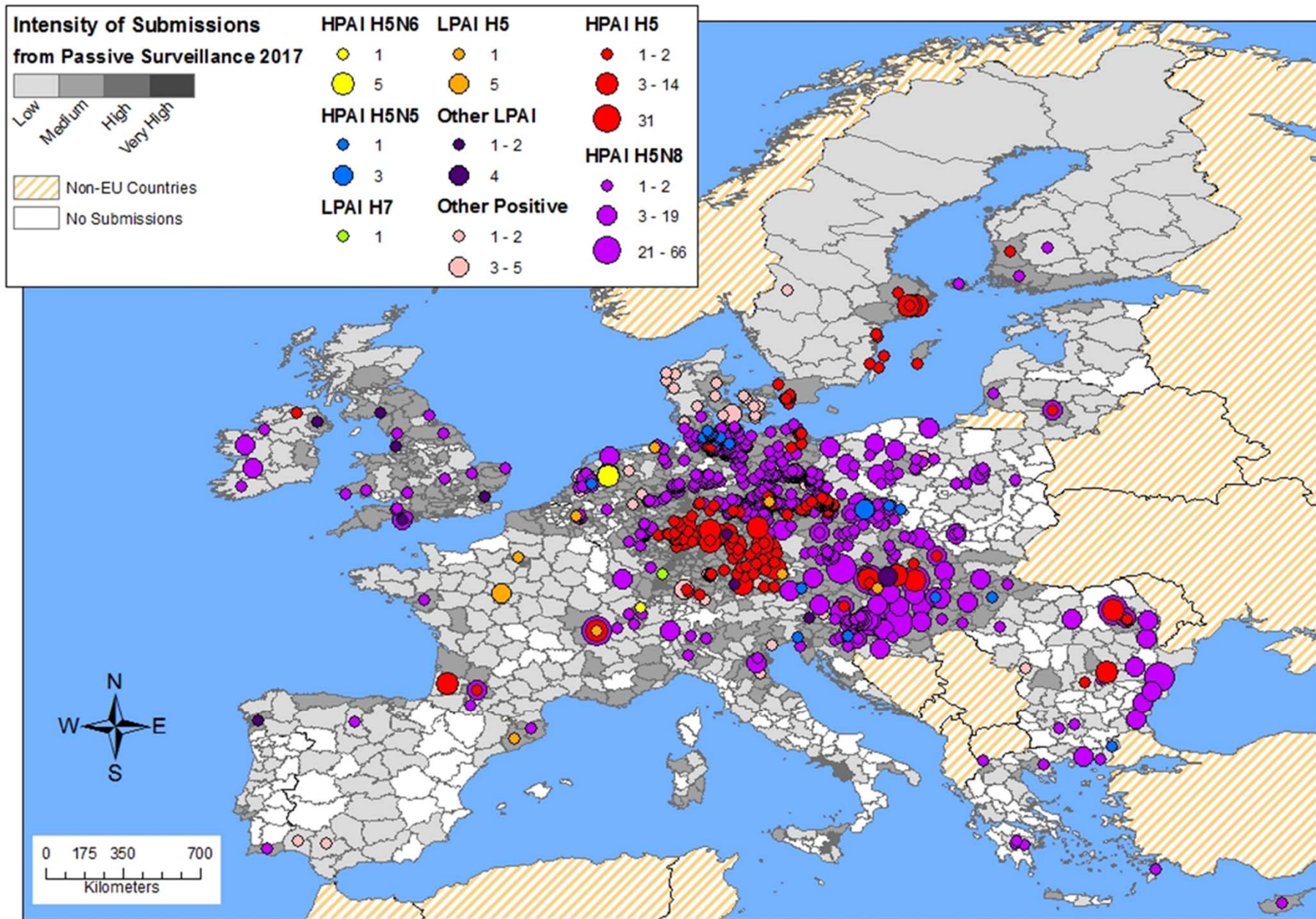
# Passive surveillance for AI in wild birds in EU 2017



- ~ Over 50% increase on 2016
- ~ Nearly 3 times more compared to 2015



Intensity of sampling by **PASSIVE** surveillance (birds found dead, injured or live with clinical signs) in EU MS in 2017.

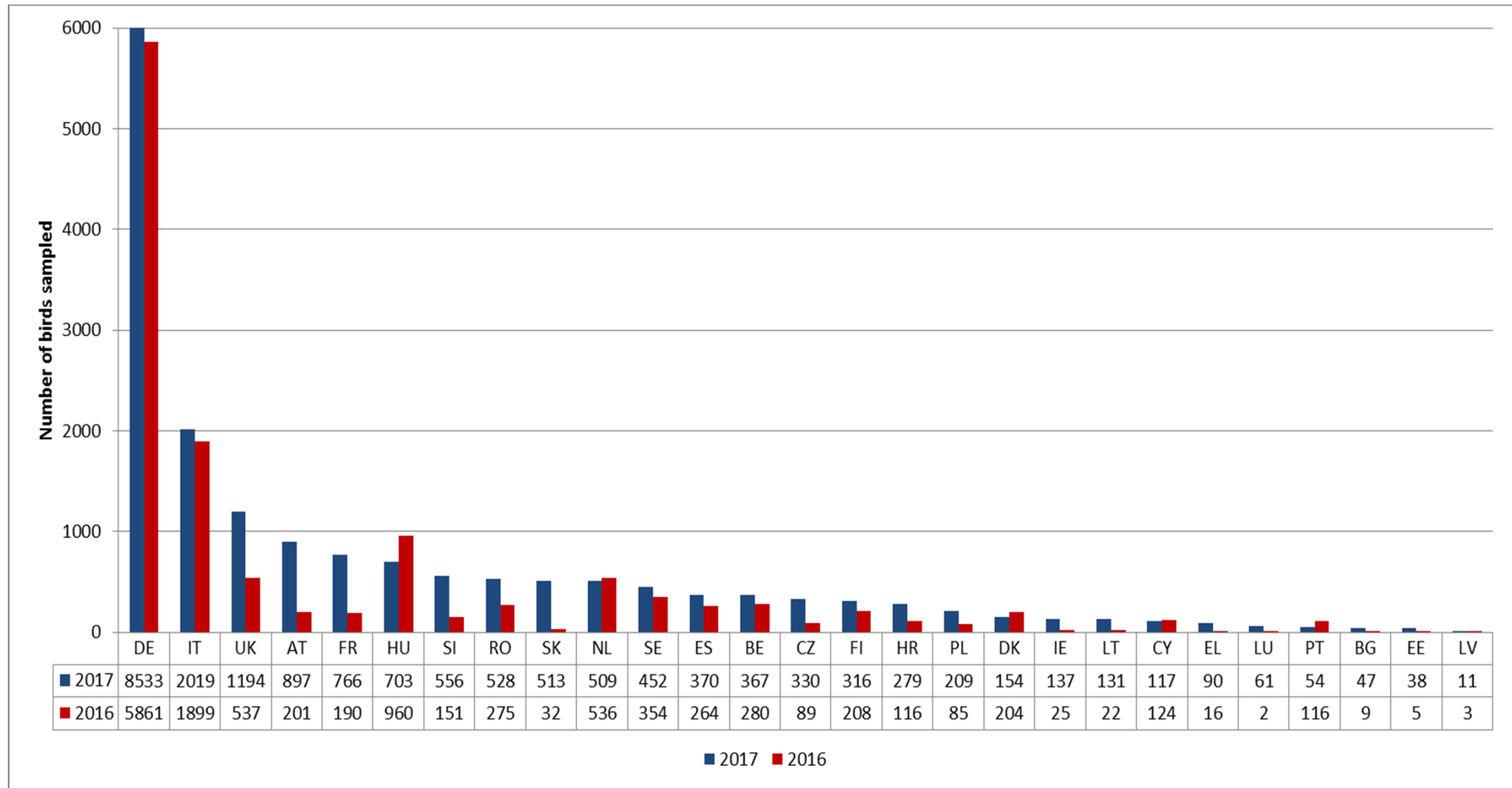


Detections of Avian Influenza by **PASSIVE** surveillance (birds found dead, injured or live with clinical signs) in EU MS in 2017.



# Passive surveillance for AI in wild birds in EU 2017

## Number of birds sampled by Member State



# Passive surveillance for AI in **wild birds** in EU 2017

19,488 birds identified in 2017 - belonging to 23 Orders

## The most frequently sampled Orders

Order	2017	2016	2015
Anseriformes	6,672		
Falconiformes	3,571		
Pelecaniformes	2,844		
Passeriformes	2,293		
Charadriiformes	1,380		
Columbiformes	876		

# Passive surveillance for AI in **wild birds** in EU 2017

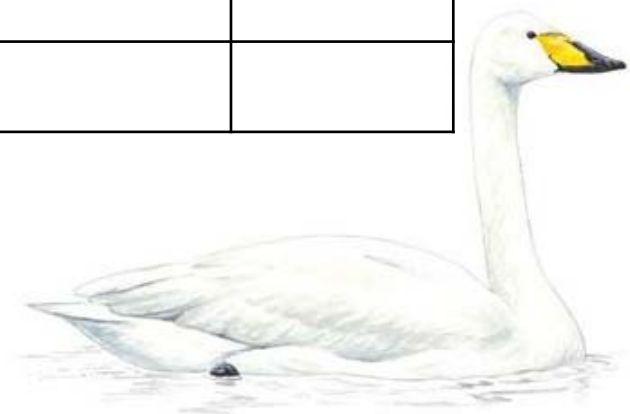
19,488 birds identified in 2017 - belonging to 23 Orders

## The most frequently sampled Orders

Order	2017	2016	2015
Anseriformes	6,672 (34%)	4,118 (32%)	1,893 (28%)
Falconiformes	3,571 (18%)	1,826 (14%)	966 (14%)
Pelecaniformes	2,844 (15%)	539 (4%)	235 (3%)
Passeriformes	2,293 (12%)	2,146 (17%)	1,068 (16%)
Charadriiformes	1,380 (7%)	1,454 (11%)	760 (11%)
Columbiformes	876 (4%)	1,060 (8%)	622 (9%)

# Passive surveillance for AI in **wild birds** in EU 2017

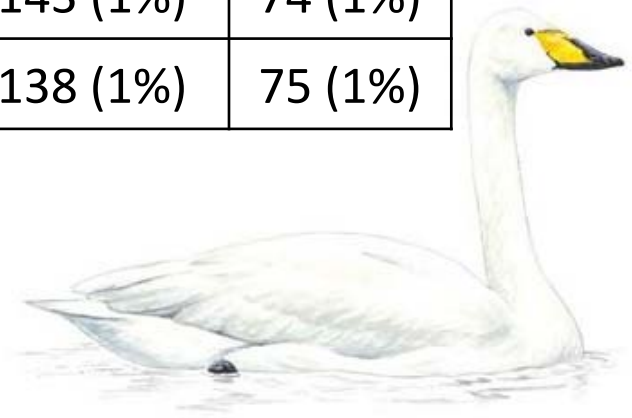
## The most frequently sampled species



Species	2017	2016	2015
<i>Cygnus olor</i>	2,064		
<i>Anas platyrhynchos</i>	1,734		
<i>Ardea cinerea</i>	1,673		
<i>Buteo buteo</i>	1,249		
<i>Falco tinnunculus</i>	432		
<i>Phalacrocorax carbo</i>	406		
<i>Cygnus cygnus</i>	366		

# Passive surveillance for AI in **wild birds** in EU 2017

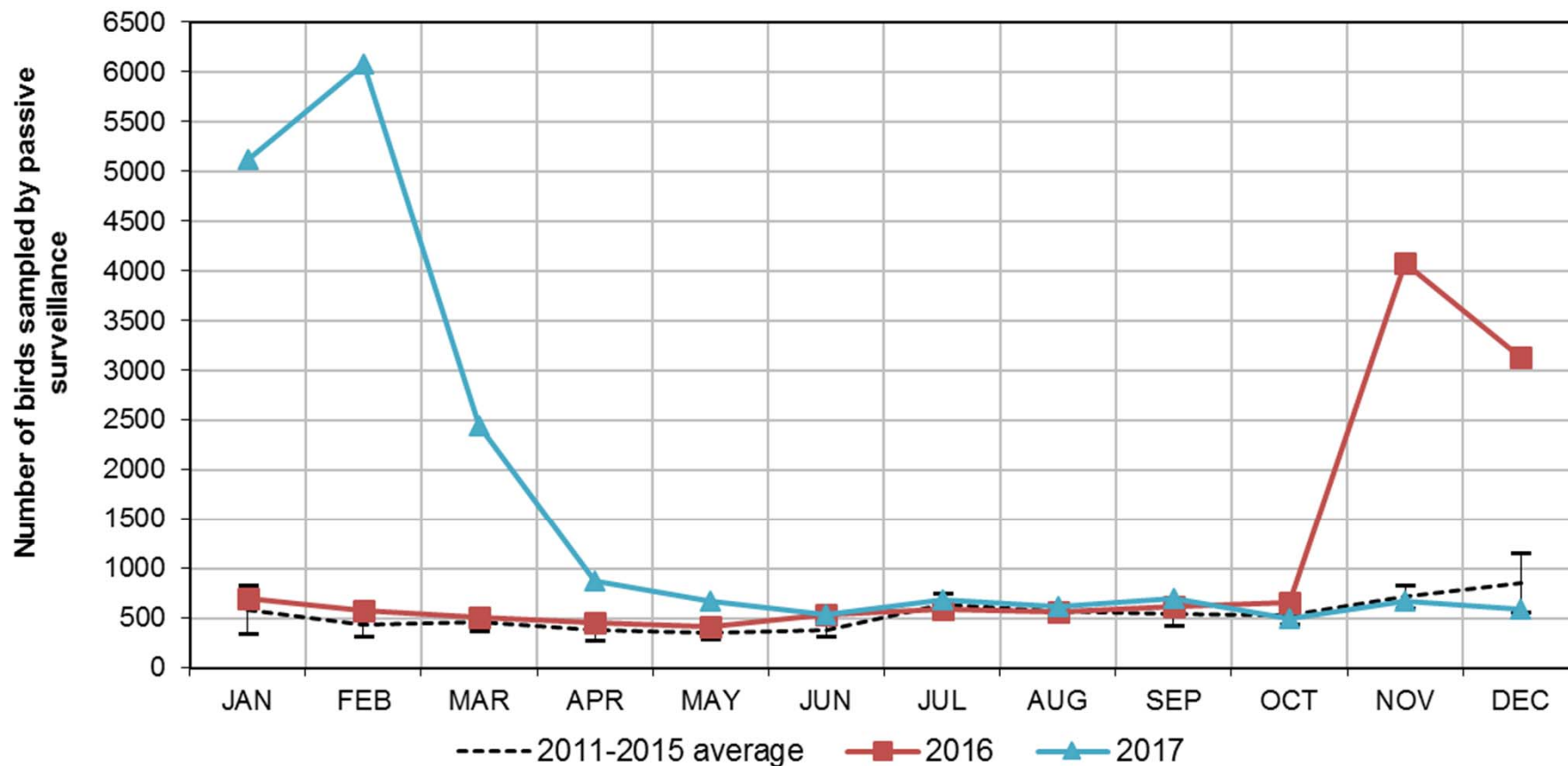
## The most frequently sampled species



Species	2017	2016	2015
<i>Cygnus olor</i>	2,064 (11%)	555 (4%)	349 (5%)
<i>Anas platyrhynchos</i>	1,734 (9%)	1092 (9%)	735 (11%)
<i>Ardea cinerea</i>	1,673 (9%)	254 (2%)	75 (1%)
<i>Buteo buteo</i>	1,249 (6%)	548 (4%)	324 (5%)
<i>Falco tinnunculus</i>	432 (2%)	291 (2%)	198 (3%)
<i>Phalacrocorax carbo</i>	406 (2%)	143 (1%)	74 (1%)
<i>Cygnus cygnus</i>	366 (2%)	138 (1%)	75 (1%)

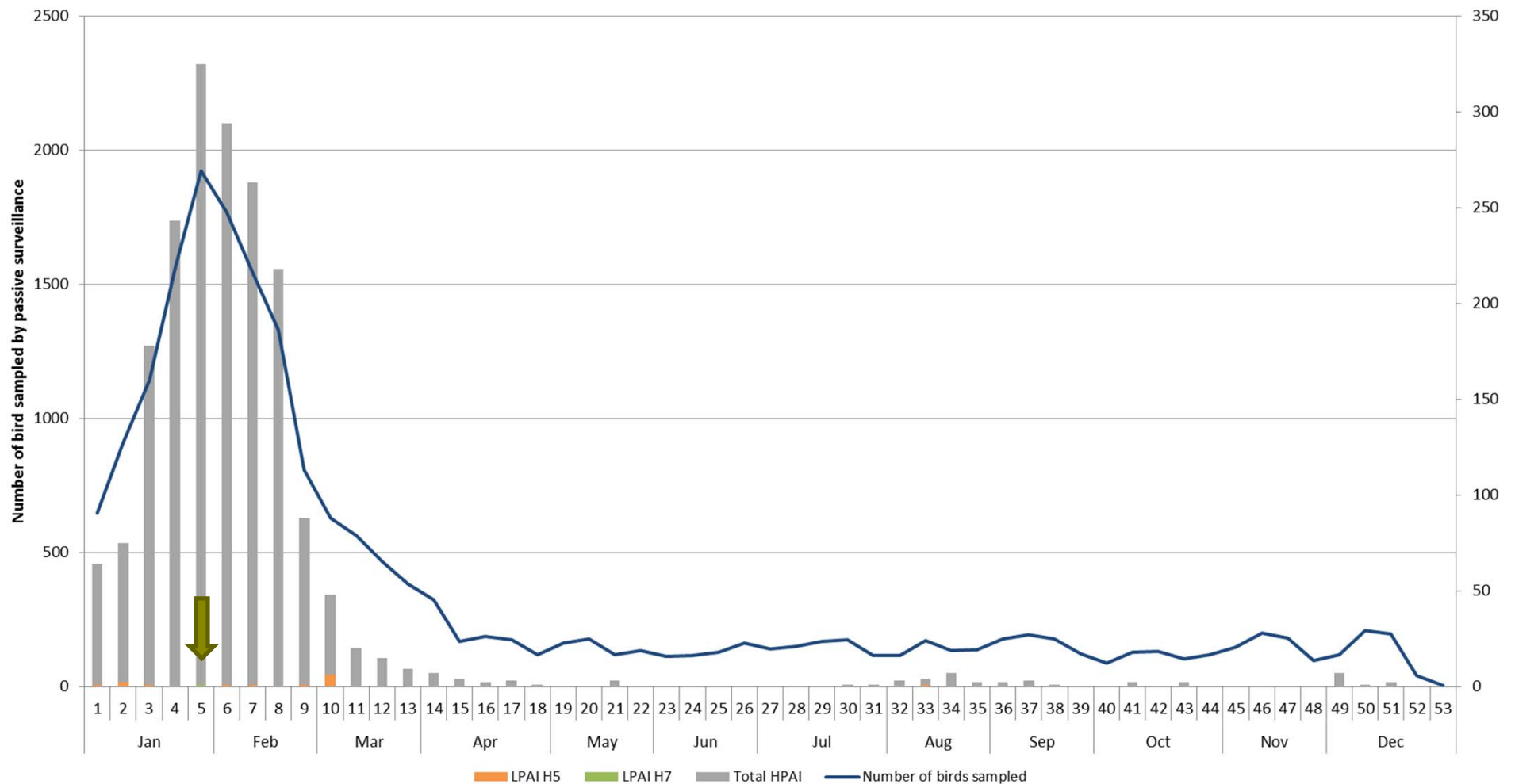
# Passive surveillance for AI in wild birds in EU 2017

## Temporal pattern



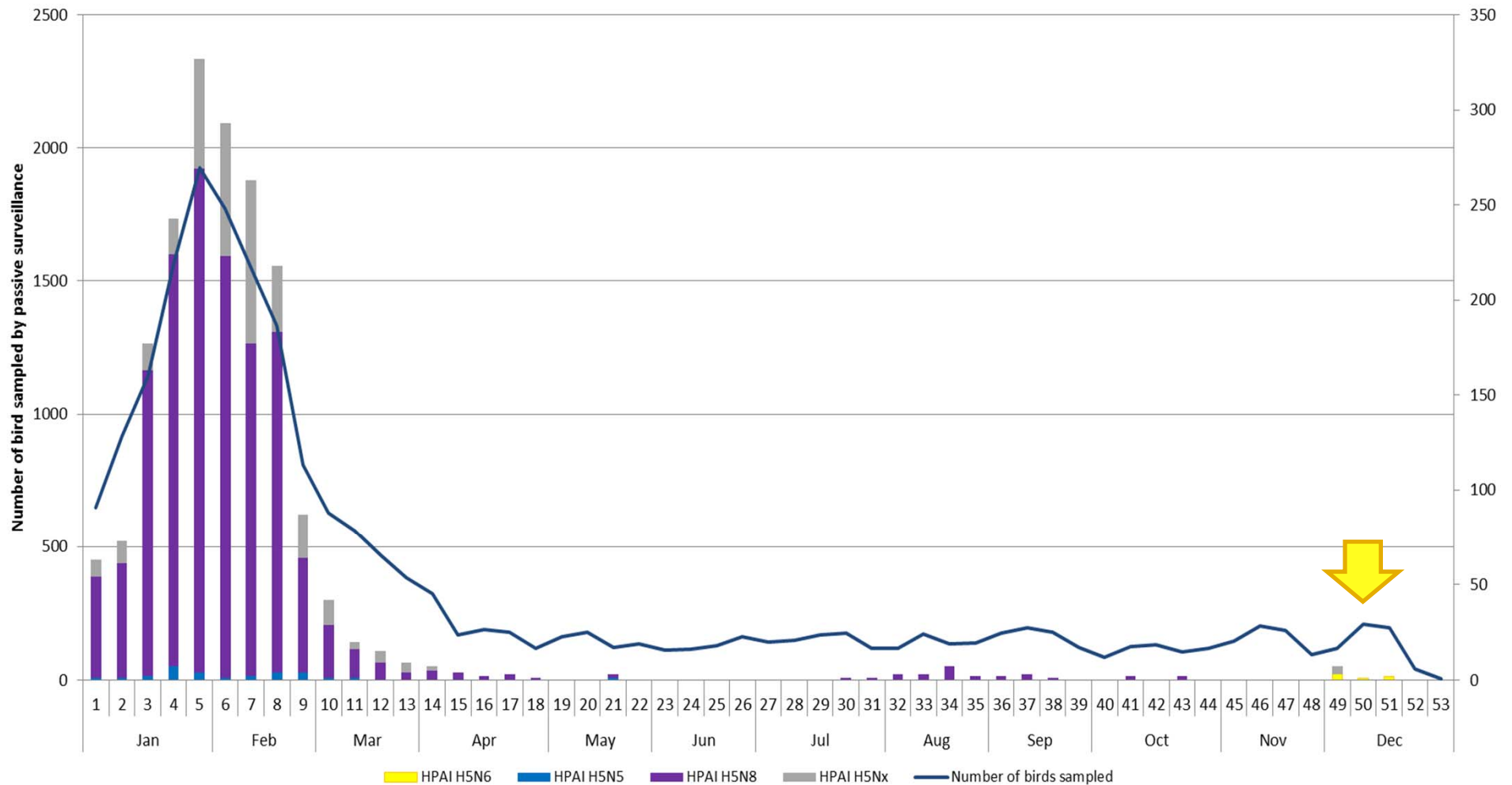
# Passive surveillance for AI in wild birds in EU 2017

## Temporal pattern of LPAI and HPAI in 2017



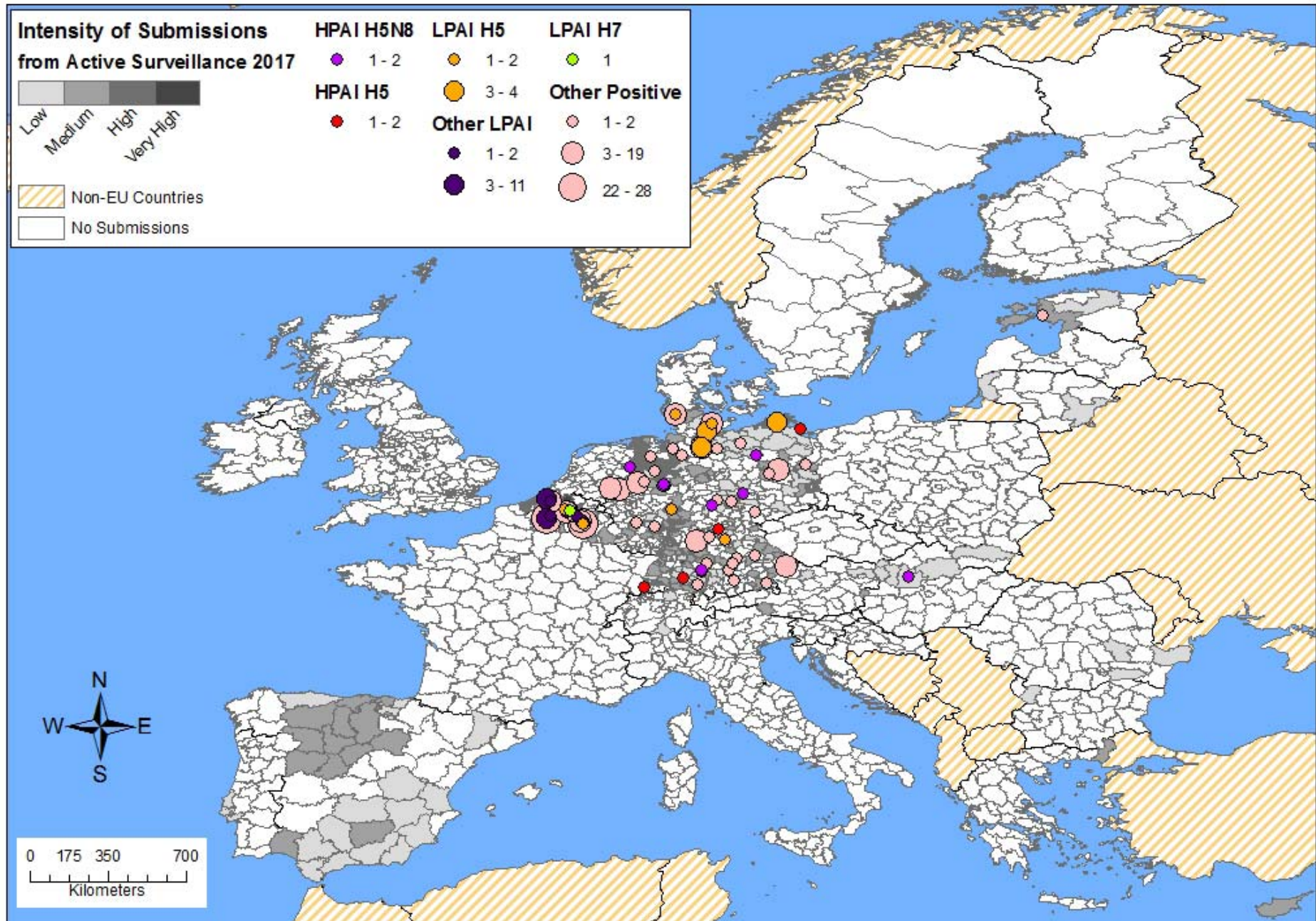
# Passive surveillance for AI in wild birds in EU 2017

## Temporal pattern of HPAI subtypes in 2017

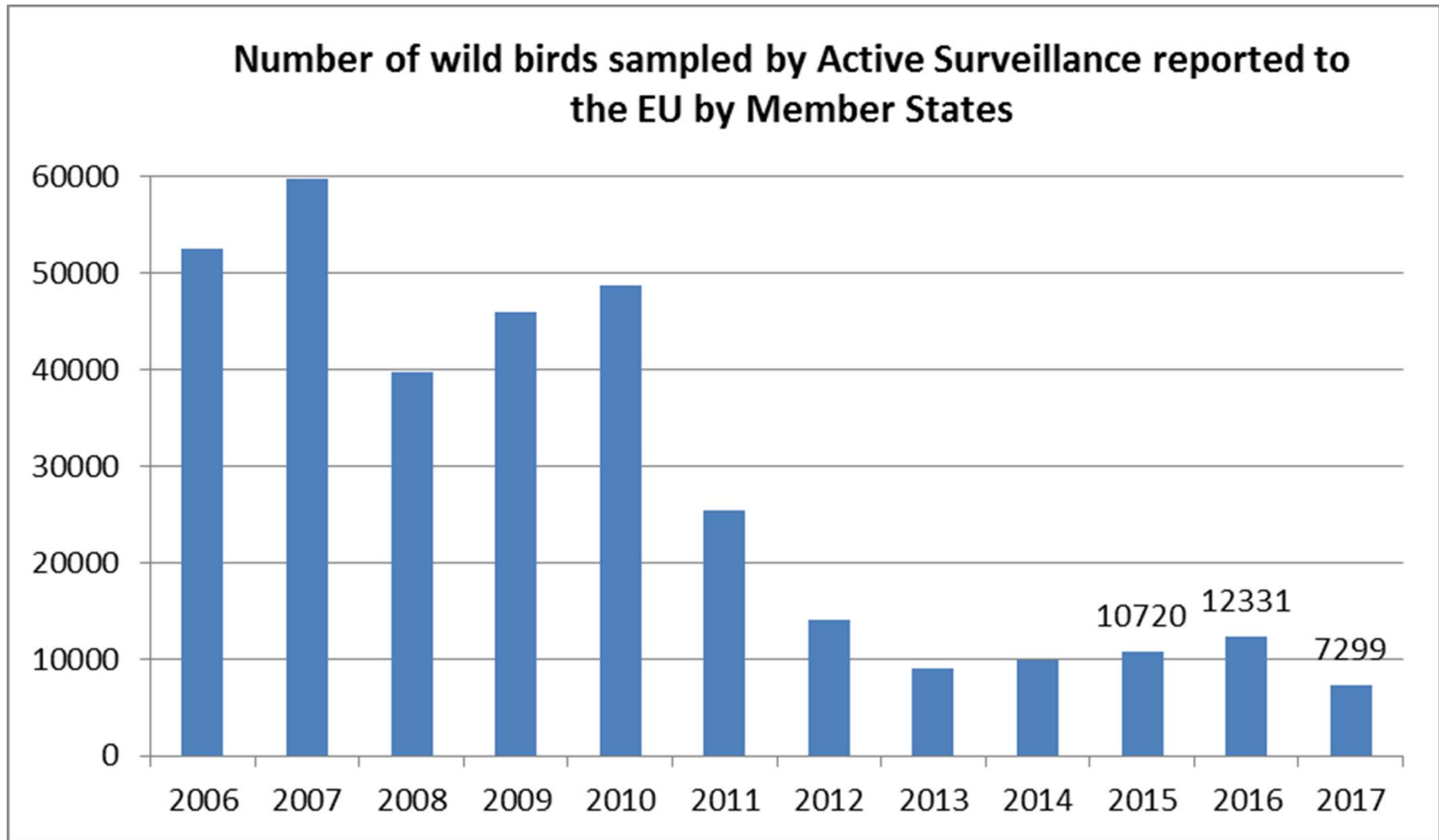




# Sampling by **ACTIVE** surveillance in EU MS in 2017

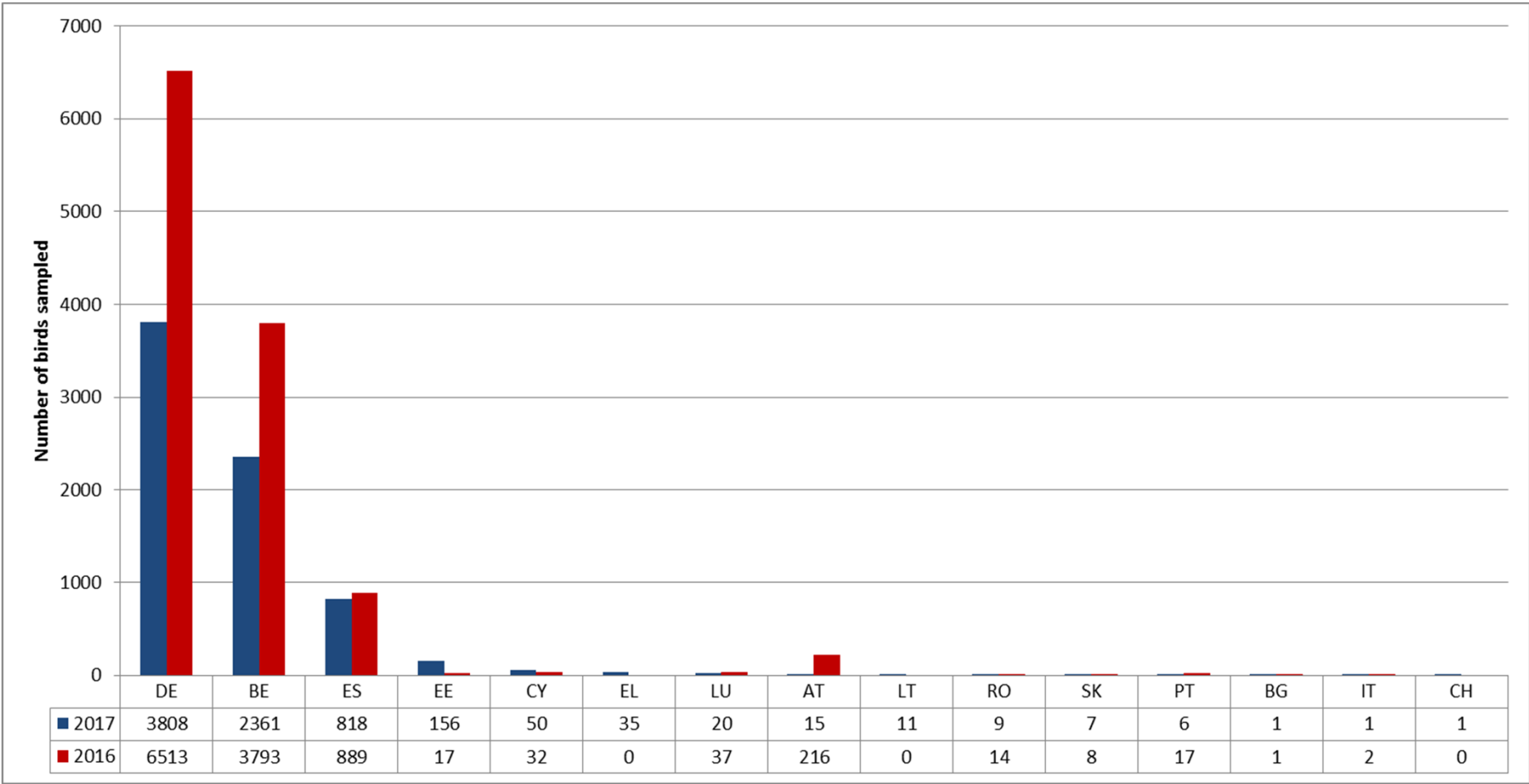


# Active surveillance for AI in wild birds in EU 2017



# Active surveillance for AI in wild birds in EU 2017

## Number of birds sampled by Member State



# Active surveillance for AI in **wild birds** in EU 2017

7,299 birds identified in 2017 - belonging to 16 Orders

## The most frequently sampled Orders

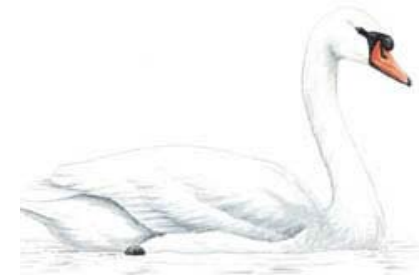
Order	2017	2016	2015
Anseriformes	5,386 (74%)	8,880 (73%)	7647 (71%)
Charadriiformes	569 (8%)	947 (8%)	1307 (12%)
Galliformes	557 (8%)	483 (4%)	642 (6%)
Falconiformes	257 (4%)	263 (2%)	310 (3%)
Gruiformes	165 (2%)	253 (2%)	286 (3%)

# Active surveillance for AI in **wild birds** in EU 2017

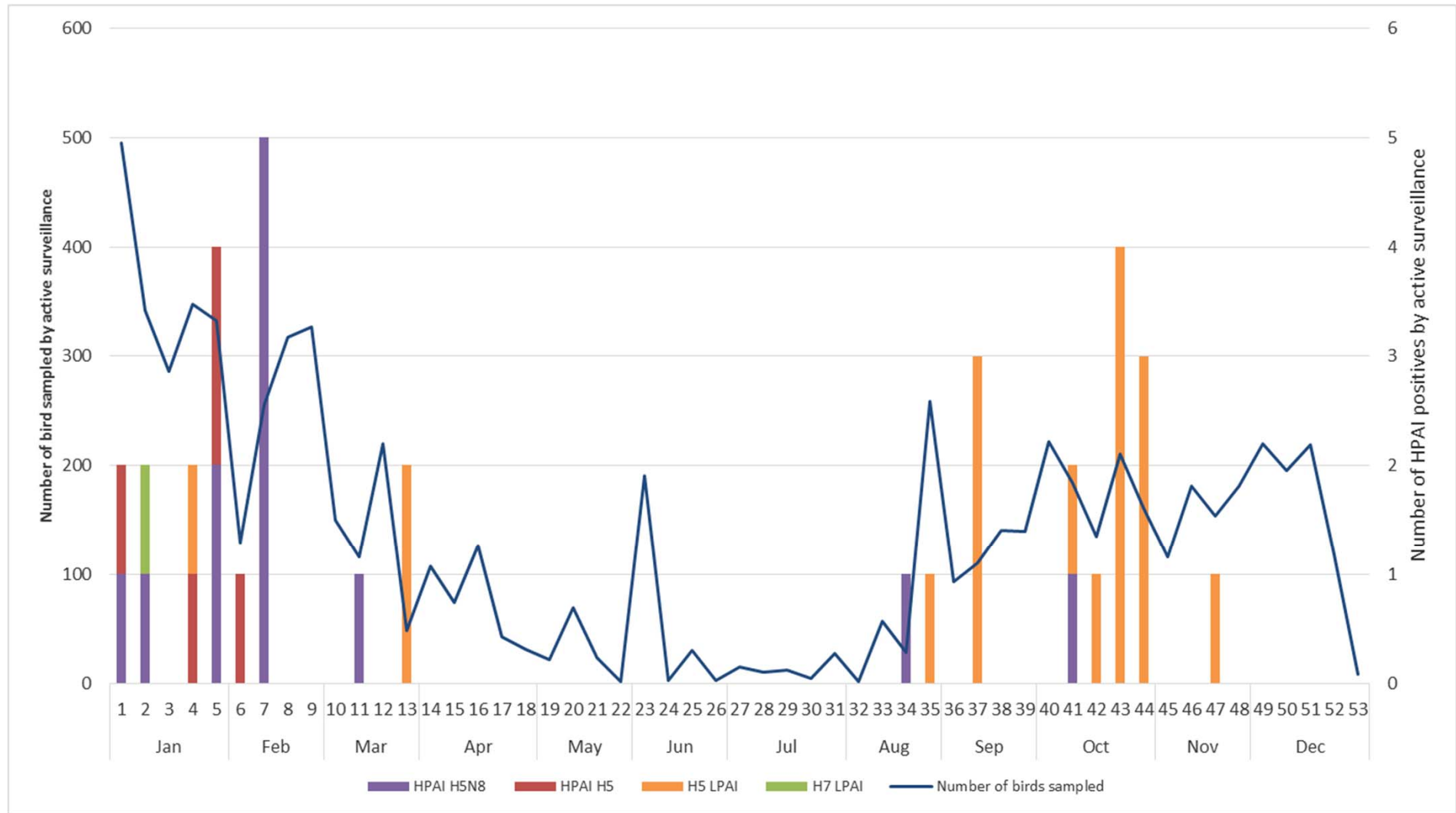
## The most frequently sampled species



Species	2017	2016	2015
Anas platyrhynchos	1,828 (25%)	3,943 (32%)	3,345 (31%)
Anser anser	1,101 (15%)	1,413 (11%)	1,239 (12%)
Coturnix coturnix	321 (4%)	377 (3%)	299 (3%)
Tadorna tadorna	320 (4%)	238 (2%)	99 (1%)
Larus ridibundus	315 (4%)	452 (4%)	384 (4%)
Alopochen aegyptiacus	285 (4%)	351 (3%)	209 (2%)
Cygnus olor	245 (3%)	221 (2%)	355 (3%)



# Active surveillance for AI in **wild birds** in EU 2017



# Acknowledgements

- Support and contribution from all participating NRLs and competent veterinary authorities in Member States
- Team at EURL :
  - Amanda Seekings, Sharon Brookes, Alex Nunez, James Seekings, Chris Russell, Viv Coward, Scott Reid, Vanessa Ceeraz, Ruth Manvell, Steven Essen, Nicola Lewis

# Thank you for your attention



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