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## **Report**

# **Surveillance for avian influenza in wild birds carried out by Member States**

**January – March 2007**

*Prepared by the Community Reference Laboratory for avian influenza and  
Newcastle disease*



12. JULY 2007

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**REPORT OF THE EU WILD BIRD  
SURVEILLANCE FOR AVIAN INFLUENZA  
2007 – FIRST QUARTER (JANUARY –  
MARCH)**



12. JULY 2007

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## SUMMARY

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All 27 EU Member States (MS) and Switzerland submitted Surveillance data to the European Commission; the last data set was received on the 20th of June.

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Overall for the first quarter 2007, a total of 23963 birds were sampled/tested where 213 birds were tested positive for low pathogenic avian influenza (LPAI). No positive results were found for highly pathogenic avian influenza (HPAI) H5 or H7.

Overall, in comparison with the previous reporting period (Sept-Dec 2006) sampling of birds from active surveillance had decreased whilst those from passive surveillance had slightly increased. All MS carried out passive surveillance in this first quarter 2007 period, whilst only 74% of MS (20 out of 27) undertook active surveillance, however the actual numbers of birds sampled from active surveillance was greater in the majority of MS (63%, 17 out of 27).

Active surveillance accounted/was the source for 79.9% of birds sampled in this quarter. This is less than the proportion of birds sampled through active surveillance in the previous quarter (87.5%), but greater than that for the whole of 2006, which was 43%. Birds sourced from passive surveillance accounted for 17.6% of the total, and in contrast to the active surveillance, this is more than proportion of birds sampled in the previous quarter (9.9%) but less than that for 2006 overall (53%).

In total 213 birds tested positive for AI in 12 MS. No HPAI was detected. H5 LPAI was found in 9 birds in 5 MS: 1 Mallard (*Anas platyrhynchos*) and 1 White-fronted Goose (*Anser albifrons*) in Germany, 1 Mallard (*Anas platyrhynchos*) and 1 White-fronted Goose (*Anser albifrons*) in the Netherlands, 2 Black Swans (*Cygnus atratus*) in Italy, 1 Mute Swan (*Cygnus olor*) and 1 Pintail (*Anas acuta*) in the UK, and 1 Teal (*Anas crecca*) in Ireland. The strain in Italy was determined to be H5N2. H7 LPAI was detected in 3 birds in 3 MS: 1 *Cygnus sp.* in Germany, 1 Mallard (*Anas platyrhynchos*) in Italy and 1 Mute Swan (*Cygnus olor*) in Hungary.

- A large heterogeneity occurred between MS in respect to their surveillance programmes and especially the number of birds tested. Whilst some Member States focused on the active surveillance of live birds, others focused on passive surveillance of dead or diseased birds. The degree of targeting of risk species and sample types also varied between Member States. As these factors impact on the probability of obtaining positive results, **the proportion of birds that were found to be positive for avian influenza cannot be directly compared either between species or countries.**
- The proportion of samples that yielded a positive result cannot be interpreted as indicating prevalence of avian influenza in a country or species for the following reasons:
  - The sampled birds of a particular species are unlikely to be representative of the wild bird population of that species
  - As previously mentioned, there is considerable heterogeneity in the surveillance methodologies amongst Member States

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- The probability of any bird of a particular species being sampled is not equal
- The probability that a sample from a particular species yielding a positive result is not equal

Finally, wild bird populations are dynamic, so a sample taken at a particular place and time is not representative of that place and time at some future date.

Due to the necessity for a timely turnaround time of this report all records reported to the Community Reference Laboratory (CRL) are included in this report. All outstanding queries returned to the CRL until the 22<sup>nd</sup> of July are integrated into the report. However, a small number of queries were not answered in time and records may be amended or removed for the annual report for 2007.

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## INTRODUCTION

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For the 2007-2008 surveillance the reporting template changed somewhat from that used in the 2006-2007 surveillance. Changes include the introduction of a date of receipt at the laboratory, increased number of categories in reporting the GEO of samples (to meet EU requirements), and a change in the categories for origin or status of the birds.

The categories for 'status of bird' are now- (1) live and clinically healthy; (2) live and clinically diseased; (3) injured; (4) hunted clinically healthy; (5) hunted clinically diseased; and (6) found dead.

Consequently the definition of active and passive surveillance for the purpose of this report has been adapted as follows:

**Passive surveillance:** Passive surveillance will be used as an equivalent to the surveillance of injured, diseased and dead birds for the purpose of this report.

**Active surveillance:** Active surveillance will be used as an equivalent to the surveillance of live healthy birds, hunted birds' clinically healthy and hunted birds clinically diseased.

**Positive/ Infected:** For the purpose of this report, a positive/ infected case of avian influenza is defined as a bird, from which at least one sample tested positive on either PCR or virus isolation.

**Risk Species:** Species listed as those with an increased probability to contribute to the transmission of the Asian-lineage H5N1 viruses within Europe as defined in the scientific report by EFSA (EFSA, 2006) and the 2007 guidelines (SANCO, 2006) (in total 29 species).

**Bridge species:** Species listed as those, which may provide contact between risk species and poultry through sharing of wetlands or farmlands with poultry and the categorization of the risk

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into high medium and low was also used from the EFSA Scientific Opinion (EFSA, 2006), (SANCO, 2006).

**Origin:** Relates to the collected information on the status of the bird when sampled. Categories are (1) live and clinically healthy; (2) live and clinically diseased; (3) injured; (4) hunted clinically healthy; (5) hunted clinically diseased; and (6) found dead.

**Date:** Dates quoted will refer to the date of sampling in the field if this information was provided and if unavailable will refer to the date of date of receipt in the laboratory.

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## OBJECTIVES

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It is the intention of this report to provide a brief descriptive overview of the surveillance data for wild birds in EU MS and reported results for 2007. Results are not discussed in this report, which will be done through annual reports.

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## MATERIALS AND METHODS

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Switzerland: Switzerland submitted data and is included in the report but numbers are not included in EU totals.

Several MS reported birds that were tested outside the reporting period for a variety of reasons. Queries were sent to clarify the dates, but could not always be answered in time. Where a response was received before the 22<sup>nd</sup> of July the updated information was integrated. All records reported to the CRL are included in this report but some records (Table 1) do fall outside the official reporting period for a variety of reasons. Details on the number of records of birds collected outside the reporting period are displayed in Table 1.

**Table 1 Number of birds sampled outside the reporting period**

<b>Scenario</b>	<b>MS</b>	<b>Number of records</b>	<b>Number of AI positive records</b>
Date missing for both sampling in the field and received at the laboratory	The Netherlands	1483	6
	Spain	2	0

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Sampling date in the field outside of reporting period (before 11/2006) and no date received at the laboratory provided	The Netherlands	197(1151 reported between 11/2006 and 12/2006)	0 (18)
	Denmark	(2 reported 12/2006)	0

**Table 2 Key to Member State abbreviations**

Abbreviation	Member State (MS)
AT	Austria
BE	Belgium
BG	Bulgaria
CH	<i>Switzerland (non EU MS)</i>
CY	Cyprus
CZ	Czech Republic
DE	Germany
DK	Denmark
EE	Estonia
EL	Greece
ES	Spain
FI	Finland
FR	France
HU	Hungary
IE	Ireland
IT	Italy
LT	Lithuania
LU	Luxembourg
LV	Latvia
MT	Malta
NL	Netherlands
PL	Poland
PT	Portugal
RO	Romania
SE	Sweden
SI	Slovenia
SK	Slovak Republic
UK	United Kingdom

### Data Processing and completeness

All data records were submitted from the MS to the CRL via the European Commission. This report is restricted to data that was collected and submitted to the European Commission under Commission Decision 2006/101/EC. Records were checked for data quality and completeness. (If deemed necessary, queries were sent out to MS and their responses were integrated before the data was uploaded into the database). Table 3 displays the proportion of records complete for origin of birds, location, Euring code and birds identified at genus level only.



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**Table 3 Data completeness of reported bird records by MS**

Member State	Proportion of birds sampled where the information on origin of the bird was complete	Proportion of birds sampled where information on the location (Nuts 4/5 or Lat/Long) was complete	Proportion of birds sampled where Euring Code was reported*	Proportion of birds sampled where information on species could be provided at genus level only
AT	96%	100%	65%	35%
BE	100%	100%	100%	0%
BG	96%	99%	61%	26%
CH	100%	100%	99%	0%
CY	60%	100%	51%	0%
CZ	100%	100%	100%	0%
DE	95%	100%	84%	14%
DK	100%	100%	100%	0%
EE	100%	100%	100%	0%
EL	100%	100%	95%	5%
ES	94%	99%	93%	2%
FI	100%	100%	100%	0%
FR	100%	100%	84%	16%
HU	100%	100%	98%	0%
IE	100%	100%	99%	1%
IT	99%	63%	98%	2%
LT	100%	100%	35%	65%
LU	100%	100%	56%	43%
LV	27%	27%	7%	20%
MT	100%	100%	100%	0%
NL	100%	100%	91%	0%
PL	70%	70%	57%	14%
PT	100%	98%	53%	29%
RO	99%	100%	98%	1%
SE	95%	79%	96%	4%
SI	100%	100%	100%	0%
SK	100%	100%	84%	16%
UK	100%	100%	93%	4%
EU**	97%	95%	90%	6%

\* Excluding unknown species and those at genus level

\*\* CH not included in average

Where MS have used the old reporting template, any birds reported as 'Hunted' were assumed to be 'Hunted-clinically healthy'.

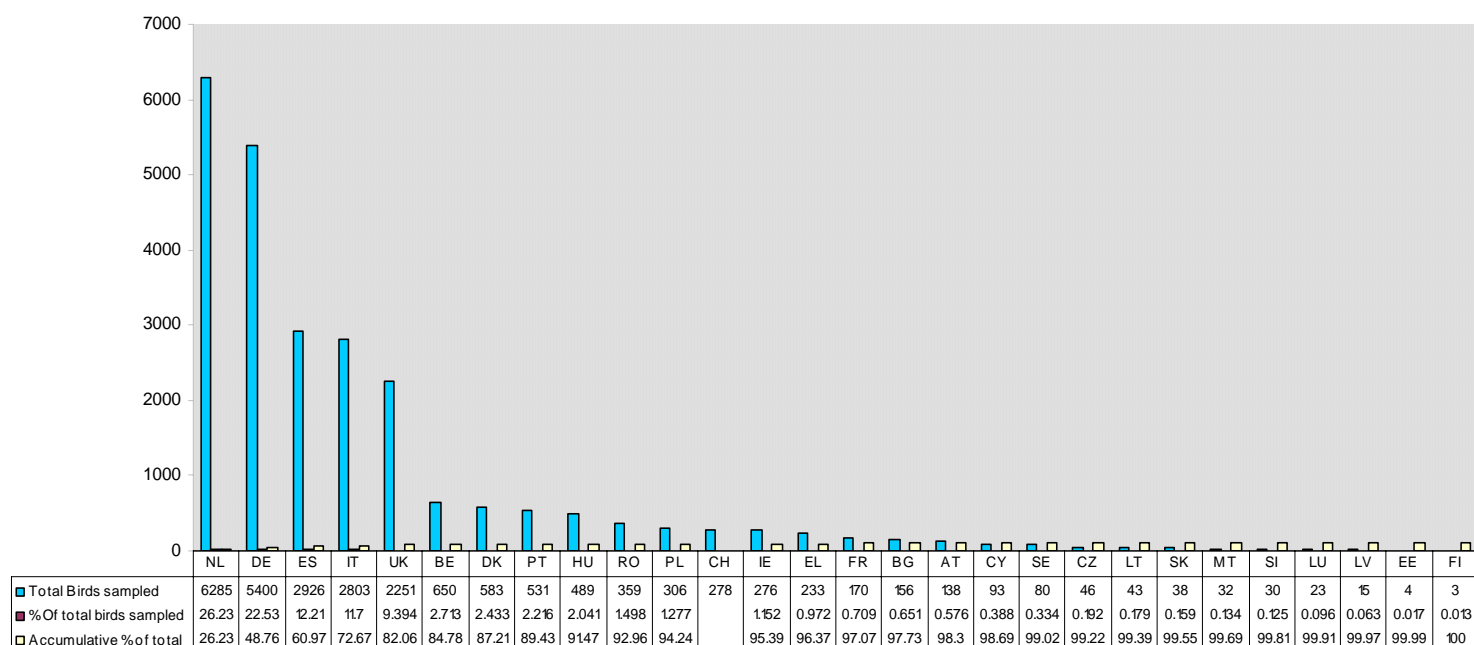
## RESULTS

In total, 23963 birds were sampled between January and March 2007 in MS.

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In terms of sampling this total is less than half of the numbers sampled in the equivalent period/season in 2006, when the total was 65415 for February-May. However, data is not directly comparable for two reasons, firstly the reporting period in 2006 included 4 months rather than three in 2007 and secondly numbers of birds sampled were much higher due to the outbreaks of H5N1 in MS. The total number of birds sampled in this first quarter 2007 is also less than the previous reporting period in 2006 from September-December where 36953 birds were tested. (2006 figures from Annual Report).

Figure 1 displays the total number of birds sampled by MS for the first quarter of 2007. A large majority of samples (82%) were collected from 5 MS: The Netherlands, Germany, Spain, Italy and United Kingdom. These were the only MS that sampled from more than 1000 birds. 11 MS tested less than 100 birds in the first quarter of 2007.



**Figure 1 Total number of birds sampled from January to March by MS including Switzerland**

The percentage of total birds sampled does not include Switzerland in the EU total.

Tables 4 and 5 display the number of birds tested in active and passive surveillance respectively by Member State and reporting period. The EU total for Tables 4 and 5 exclude samples for which the origin of the birds or the sampling date was not reported. Overall, in comparison with the previous reporting period (Sept-Dec 2006) sampling of birds from active surveillance had decreased whilst those from passive surveillance had slightly increased. All MS carried out passive surveillance in this first quarter 2007 period, whilst 20 out of 27 MS undertook active surveillance, however the actual numbers of birds sampled from active surveillance was greater in the majority of MS (17 out of 27). 12 MS, undertaking passive surveillance, sampled more birds than the previous quarter,

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however, the difference/increase varied from 2 birds to 230 birds.

**Table 4 Number of birds tested in active surveillance by country (live and hunted, healthy birds)**

Member State	Feb - May 2006	Jun - Aug 2006	Sep - Dec 2006	Jan - Mar 2007
AT	585	55	349	70
BE	664	772	639	643
BG	0	0	0	116
CH	0	0	347	237
CY	32	9	22	0
CZ	0	0	0	0
DE	114	1078	5613	4150
DK	1102	1017	3411	450
EE	0	0	87	0
EL	165	107	248	143
ES	NI	NI	NI	1883
FI	312	26	2	0
FR	588	1720	1657	0
HU	0	0	2646	391
IE	0	0	192	172
IT	851	611	2475	2670
LT	2	0	0	22
LU	200	0	0	0
LV	17	239	45	0
MT	21	0	21	30
NL	4099	2436	7404	6087
PL	596	50	1010	140
PT	278	275	948	387
RO	NI	NI	NI	311
SE	485	1087	2159	31
SI	56	91	250	12
SK	0	21	93	10
UK	385	365	2942	1433
EU*	10552	9959	32213	19151

All birds for which the origin had been available

\* EU total excluding Switzerland

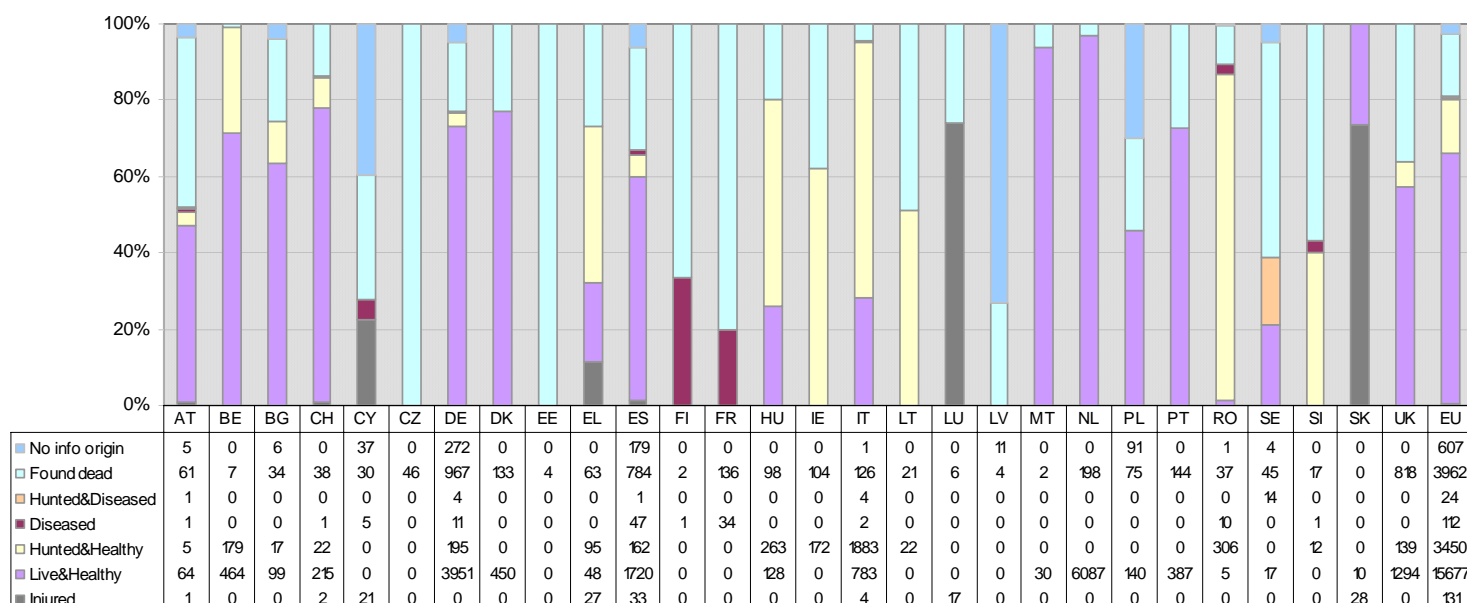
**Table 5 Number of birds tested in passive surveillance by country (injured, live and diseased and dead birds)**

Member State	Feb - May 2006	Jun - Aug 2006	Sep - Dec 2006	Jan - Mar 2007
AT	3008	253	114	63
BE	54	27	21	7
BG	NI	NI	NI	34
CH	1075	42	65	41
CY	141	27	48	56
CZ	2048	121	68	46
DE	16427	2660	1148	978
DK	1011	127	51	133
EE	0	6	15	4
EL	1430	125	54	90
ES	NI	NI	NI	864
FI	131	59	6	3
FR	2655	355	278	170
HU	3119	0	36	98
IE	518	113	92	104
IT	442	457	550	132
LT	576	20	23	21
LU	374	25	65	23
LV	122	1	22	4
MT	16	0	0	2
NL	10261	71	182	198
PL	1387	17	14	75
PT	766	298	257	144
RO	NI	NI	NI	47
SE	519	29	43	45
SI	567	47	24	18
SK	1506	99	16	28
UK	6711	1327	588	818
EU*	53789	6264	3716	4205

All birds for which the origin had been available

\* EU total excluding Switzerland

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**Figure 2 Number and proportion of birds sampled by origin and MS \* EU total excluding CH**

Figure 2 displays the number of birds sampled by MS and origin. A large heterogeneity between MS in terms of focus on active or passive surveillance occurred, with 10 MS sourcing the majority of their samples from the surveillance of live and healthy birds. The proportion of birds found dead were 3962 out of 23963 total birds sampled (16.5%). Overall, 66% of birds collected in EU MS were sourced from the surveillance of live and healthy birds.

Active surveillance was the source for 79.9% of birds sampled in this quarter. This is less than the proportion of birds sampled through active surveillance in the previous quarter (87.5%), but greater than that for the whole of 2006, which was 43%. Birds sourced from passive surveillance accounted for 17.6% of the total, and in contrast to the active surveillance, this is more than the proportion of birds sampled in the previous quarter (9.9%) but less than that for 2006 overall (53%). The remaining proportion of birds sampled (2.5%) could not be classified into active/ passive surveillance due to absence of info on the birds' origin.

Figure 3 shows the number and proportion of risk species that were sampled in the first quarter by MS. In total 59.5% of the samples were collected from risk species. This proportion is higher than the overall proportion (48.7%) of samples collected from risk species in 2006, and very similar to the proportion of risk species sampled in the last quarter (60.4%) of 2006. A large variation in the degree of targeting risk species occurred between MS and the proportion of risk species amongst all the birds sampled varied from over 80% (Switzerland, Malta and Slovenia) to 0% (Slovak Republic and Latvia).

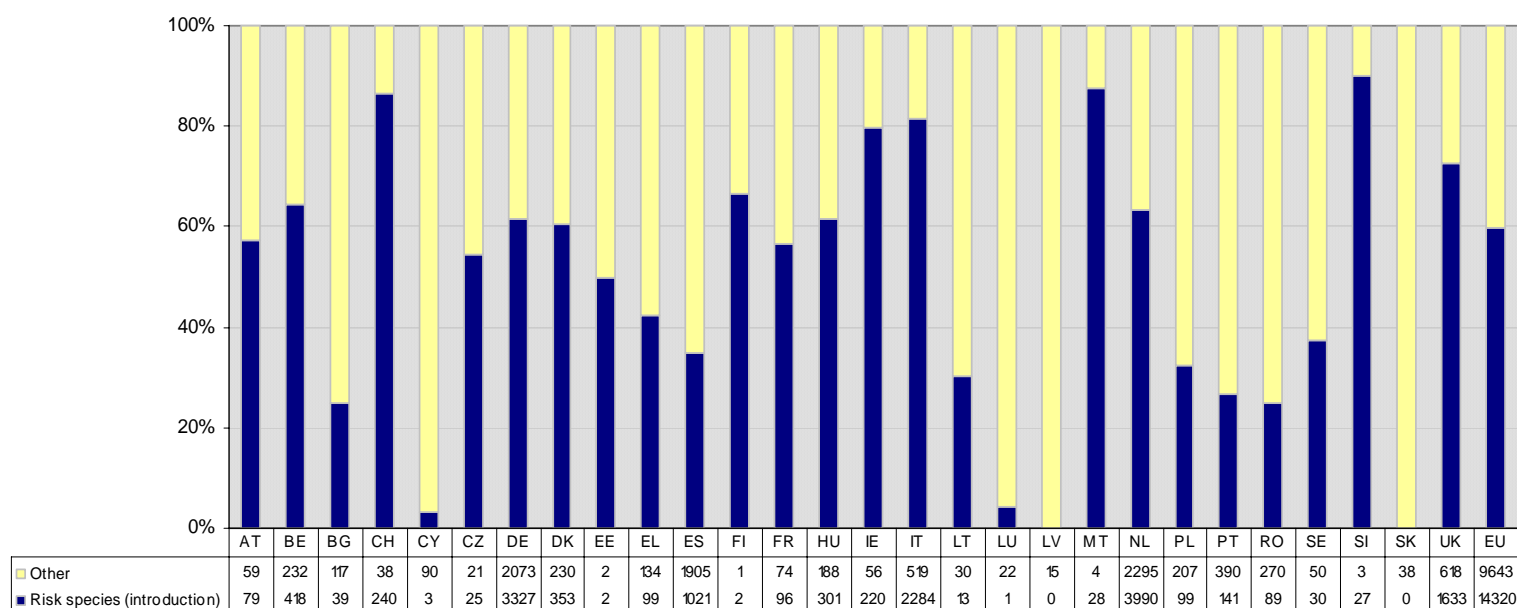


Figure 3 Numbers and proportion of birds sampled by risk species and MS \* EU total excluding CH

### Positives

In total 213 birds tested positive for LPAI in 12 MS. No HPAI was detected. H5 LPAI was found in 9 birds in 5 MS: 1 Mallard (*Anas platyrhynchos*) and 1 White-fronted Goose (*Anser albifrons*) in Germany, 1 Mallard (*Anas platyrhynchos*) and 1 White-fronted Goose (*Anser albifrons*) in the Netherlands, 2 Black Swans (*Cygnus atratus*) in Italy, 1 Mute Swan (*Cygnus olor*) and 1 Pintail (*Anas acuta*) in the UK, and 1 Teal (*Anas crecca*) in Ireland. The strain in Italy was determined to be H5N2. H7 LPAI was detected in 3 birds in 3 MS: 1 *Cygnus sp.* in Germany, 1 Mallard (*Anas platyrhynchos*) in Italy and 1 Mute Swan (*Cygnus olor*) in Hungary. 27 other LPAI infections were found in 5 MS in 10 species (one of which was an unknown species), and for 174 birds that tested positive the subtype information was not available. These positives were found in 11 MS from 26 different species (including species unknown). Subtypes that were reported as not determined or pending are included in the category of all other subtypes.

Table 6 presents the overall proportion of positive birds according to four surveillance types (injured/diseased/dead birds of risk species, injured/diseased/dead birds of other species, live and healthy/hunted of risk species, and live and healthy/hunted of the other species). With the exception of Poland, where a high proportion of positive birds was found through passive surveillance of species not classified as risk species, none of the surveillance activities resulted in a significantly higher proportion than the overall positive proportion. All 29 positive birds (out of 35 tested) in

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Poland were Common Terns (*Sterna hirundo*) that were found dead at the same location, on the same date, the subtype was not determined.

**Table 6: Proportion of sampled and positive birds by surveillance type and MS, for all MS including Switzerland.**

Member State	Total number of birds sampled	Total number of birds positive	Overall positive proportion of sampled birds	Positive proportion in passive surveillance risk species (injured, live and diseased, found dead)	Positive proportion in active surveillance risk species (live and healthy, hunted)	Positive proportion in passive surveillance other species (injured, live and diseased, found dead)	Positive proportion in active surveillance other species (live and healthy, hunted)	Surveillance source unknown
				n= number sampled	n= number sampled	n= number sampled	n= number sampled	
PL	306	29	9.48%	0.00% n=4	0.00% n=95	40.85% n=71	0.00% n=45	0.00% n=91
BE	650	32	4.92%	0.00% n=5	6.30% n=413	0.00% n=2	2.61% n=230	N/A n=0
SI	30	1	3.33%	6.67% n=15	0.00% n=12	0.00% n=3	N/A n=0	N/A n=0
IT	2803	48	1.71%	0.00% n=43	2.01% n=2241	2.25% n=89	0.23% n=429	0.00% n=1
DK	583	6	1.03%	1.37% n=73	0.36% n=280	0.00% n=60	2.35% n=170	N/A n=0
NL	6285	64	1.02%	1.18% n=85	0.74% n=3905	0.00% n=113	1.56% n=2182	N/A n=0
IE	276	2	0.72%	0.00% n=60	1.25% n=160	0.00% n=44	0.00% n=12	N/A n=0
ES	2926	16	0.55%	0.00% n=130	0.69% n=869	0.27% n=734	0.79% n=1014	0.00% n=179
PT	531	2	0.38%	0.00% n=6	1.48% n=135	0.00% n=138	0.00% n=252	N/A n=0
HU	489	1	0.20%	3.57% n=28	0.00% n=273	0.00% n=70	0.00% n=118	N/A n=0
UK	2251	4	0.18%	0.19% n=529	0.27% n=1104	0.00% n=289	0.00% n=329	N/A n=0
DE	540	8	0.15%	0.24% n=424	0.07% n=2863	0.00% n=554	0.31% n=1287	0.37% n=272
AT	138	0	0.00%	0.00% n=39	0.00% n=40	0.00% n=24	0.00% n=30	0.00% n=5
BG	156	0	0.00%	0.00% n=2	0.00% n=37	0.00% n=32	0.00% n=79	0.00% n=
CH	278	0	0.00%	0.00% n=29	0.00% n=211	0.00% n=12	0.00% n=26	N/A n=0
CY	93	0	0.00%	0.00% n=3	N/A n=0	0.00% n=53	N/A n=0	0.00% n=37
CZ	46	0	0.00%	0.00% n=25	N/A n=0	0.00% n=21	N/A n=0	N/A n=0
EE	4	0	0.00%	0.00% n=2	N/A n=0	0.00% n=2	N/A n=0	N/A n=0
EL	233	0	0.00%	0.00% n=25	0.00% n=74	0.00% n=65	0.00% n=69	N/A n=0
FI	3	0	0.00%	0.00% n=2	N/A n=0	0.00% n=1	N/A n=0	N/A n=0

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Member State	Total number of birds sampled	Total number of birds positive	Overall positive proportion of sampled birds	Positive proportion in passive surveillance risk species (injured, live and diseased, found dead) n= number sampled	Positive proportion in active surveillance risk species (live and healthy, hunted) n= number sampled	Positive proportion in passive surveillance other species (injured, live and diseased, found dead) n= number sampled	Positive proportion in active surveillance other species (live and healthy, hunted) n= number sampled	Surveillance source unknown n= number sampled
FR	170	0	0.00%	0.00% n=96	N/A n=0	0.00% n=74	N/A n=0	N/A n=0
LT	43	0	0.00%	0.00% n=13	N/A n=0	0.00% n=8	0.00% n=22	N/A n=0
LU	23	0	0.00%	0.00% n=1	N/A n=0	0.00% n=22	N/A n=0	N/A n=0
LV	15	0	0.00%	N/A n=0	N/A n=0	0.00% n=4	N/A n=0	0.00% n=11
MT	32	0	0.00%	0.00% n=2	0.00% n=26	N/A n=0	0.00% n=4	N/A n=0
RO	359	0	0.00%	0.00% n=7	0.00% n=82	0.00% n=40	0.00% n=229	0.00% n=1
SE	80	0	0.00%	0.00% n=15	0.00% n=14	0.00% n=30	0.00% n=17	0.00% n=4
SK	38	0	0.00%	N/A n=0	N/A n=0	0.00% n=28	0.00% n=10	N/A n=0
<b>Legend</b>				Proportion statistically significantly lower than total proportion positive (p<0.05)	Proportion statistically significantly higher than total proportion positive (p<0.05)	No statistically significant difference	MS where no positives were found	

Table 7 displays the number of sampled and positive birds for each risk species (SANCO 2006, EFSA 2006) and MS. Species not sampled in any of the MS are not displayed. A green cell indicates that the species was sampled in the relevant MS and also contains the number sampled. A yellow cell indicates that the species tested positive for avian influenza, other than subtype H5 (including pending results and unknown subtypes). The aim of the table is to put the proportion of positives into the context of the sampling frame, taking into account the number of birds sampled and the number of MS that sampled this species and did, or did not detect positives.

Table 8 displays details on the origin and subtypes of species that tested positive for AI in this quarter. The majority of birds sampled, 4533 out of the total 23963, were Mallards (*Anas platyrhynchos*), followed by Wigeon (*Anas penelope*), and then White-fronted Goose (*Anser albifrons*), 1.66%, 0.4% and 2.3% for these species respectively tested positive for avian influenza.

Two out of three tested Black Swans (*Cygnus atratus*) were found positive in Italy and 29 out of 41 tested Common Tern (*Sterna hirundo*) species were also found to be positive in Poland. However, the majority of Common Terns tested were in Poland (35 of the total 41), and 34 of these birds

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tested were found dead in the same location, which was in a monitoring area (according to 2006/563/EC), on the same day. It was from this group that all 29 positive birds were found/recorded.



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**Table 7 Number sampled and positive by MS for birds listed as risk species**

1	Sampled	Anas Strepera = Bridge Species															1/20	Number positive/ Number sampled										Total* HPAI H5 +ves	Total* other +ves	Total* Birds Sampled		
	HPAI H5/ H5N1 positive	* Total excludes Switzerland (CH)																Total* HPAI H5 +ves	Total* other +ves	Total* Birds Sampled												
	Other positive	Member States**																			Total* HPAI H5 +ves	Total* other +ves	Total* Birds Sampled									
Species	AT	BE	BG	CY	CZ	DK	EE	FI	FR	DE	EL	HU	IE	IT	LV	LT	LU	MT	NL	PL				PT	RO	SK	SI	ES	SE	CH	UK	Total* HPAI H5 +ves
Anas acuta		14/24									1			29				1	15							1/11			1/86	0	16	167
Anas clypeata											4		2	1/80					8			2				217		4	0	1	317	
Anas crecca		1	4							14	21		2/94	9/256				1	21		38	7				2		52	0	11	511	
Anas penelope		28								91	9		17	4/425					3/1308		13							63	0	7	1954	
Anas platyrhynchos	56	2/168	28	1	4		2	2	22	3/761	45	267	51	29/1155				22	23/1179	35	2/88	52		17	312	10	77	1/256	0	60	4533	
Anas querquedula			1							12	6											2				1			0	0	22	
Anser albifrons albifrons																									44				0	0	44	
Anser anser						1				591				1					1/131	5		5			1/219	1	46	0	2	999		
Anser brachyrhynchus										2									3						2		26	0	0	31		
Anser erythropus																						1			2				0	0	3	
Anser fabalis										118		23							1/124	15									0	1	280	
Aythya ferina		7/27								23				66					2		2	5			9	31	27	0	7	161		
Aythya fuligula		1/34				1				57			1						4			2				79	1/28	0	2	127		
Branta bernicla										1									42								4	0	0	47		
Branta canadensis										1/259									9	5					4	1	83	0	1	361		
Branta leucopsis										100									436							77		0	0	613		
Branta ruficollis										18									2										0	0	20	
Cygnus columbianus										8				7							2								0	0	17	
Cygnus columbianus bewickii																											19	0	0	19		
Cygnus cygnus						101			17	37			47	1		1			1							1	351	0	0	557		
Cygnus olor	22	6	6		18	1/68			23	806	2	1/8		4		11	1	2	365	25		1		1/9	5	18	24	1/368	0	4	1768	
Fulica atra	1	2/36			2				14	152	7	3		1/156		1		1	74			12		1	18		27	70	0	3	548	
Larus canus						70			1	2			5	1					18	2							11	0	0	110		
Larus ridibundus		5		2	1	1/112			7	266	4		3	1/101					2/244	10				4/146	1	62	0	8	963			
Limosa limosa																		1										0	0	1		

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**Table 7 Number sampled and positive by MS for birds listed as risk species**

1	Sampled	<i>Anas strepera</i> = Bridge Species																				1/20	Number positive/ Number sampled		Total* HPAI H5 +ves	Total* other +ves	Total* Birds Sampled						
	HPAI H5/ H5N1 positive	* Total excludes Switzerland (CH)																															
	Other positive	Member States**																															
Species		AT	BE	BG	CY	CZ	DK	EE	FI	FR	DE	EL	HU	IE	IT	LV	LT	LU	MT	NL	PL	PT	RO	SK	SI	ES	SE	CH	UK				
<i>Netta rufina</i>											1										1						28				0	0	30
<i>Philomachus pugnax</i>			5																												0	0	5
<i>Pluvialis apricaria</i>			34																												0	0	34
<i>Vanellus vanellus</i>			50								20				2						3					3				0	0	78	

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**Table 8 Subtype and origin of positive birds, by species**

Species	Total sampled (excluding CH)	Total Positive	HPAI H5	HPAI H5N1	HPAI H7	LPAI H5	LPAI H7	LPAI Other	Subtype not determined	Live & Healthy positive birds	Diseased positive birds	Injured positive birds	Hunted & Healthy positive birds	Hunted & Diseased positive birds	No info origin positive birds	Dead positive birds	Member State Sampled	Member State Positive/ Sampled
																	Member State Sampled	Member State Positive/ Sampled
Anas acuta	167	16	0	0	0	1	0	5	10	15	0	0	1	0	0	0	BE (24); EL (1); ES (11); IT (29); MT (1); NL (15); UK (86)	BE (14/ 24); ES (1/ 11); UK (1/ 86)
Anas clypeata	317	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	EL (4); ES (217); IE (2); IT (80); NL (8); RO (2); UK (4)	IT (1/ 80)
Anas crecca	511	11	0	0	0	1	0	0	10	0	0	0	11	0	0	0	BE (1); BG (4); DE (14); EL (21); ES (2); IE (94); IT (256); MT (1); NL (21); PT (38); RO (7); UK (52)	IE (2/ 94); IT (9/ 256)
Anas penelope	1954	7	0	0	0	0	0	2	5	3	0	0	4	0	0	0	BE (28); DE (91); EL (9); IE (17); IT (425); NL (1308); PT (13); UK (63)	IT (4/ 425); NL (3/ 1308)
Anas platyrhynchos	4533	60	0	0	0	2	1	12	45	33	0	0	25	0	1	1	AT (56); BE (168); BG (28); CH (77); CY (1); CZ (4); DE (761); EE (2); EL (45); ES (312); FI (2); FR (22); HU (267); IE (51); IT (1155); MT (22); NL (1179); PL (35); PT (88); RO (52); SE (10); SI (17); UK (256)	BE (2/ 168); DE (3/ 761); IT (29/ 1155); NL (23/ 1179); PT (2/ 88); UK (1/ 256)
Anas sp.	411	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	AT (6); BG (12); DE (194); EL (3); ES (14); FR (27); IE (2); IT (23); LT (24); LV (2); PL (20); PT (71); UK (13)	DE (1/ 194)
Anas strepera	258	2	0	0	0	0	0	0	2	1	0	0	1	0	0	0	AT (1); BE (30); EL (2); ES (9); IT (74); NL (106); RO (28); UK (8)	IT (1/ 74); NL (1/ 106)
Anser albifrons	1401	32	0	0	0	2	0	1	29	32	0	0	0	0	0	0	BG (1); DE (171); FR (2); HU (11); IE (1); NL (1206); RO (7); UK (2)	DE (2/ 171); NL (30/ 1206)

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**Table 8 Subtype and origin of positive birds, by species**

Species	Total sampled (excluding CH)	Total Positive	HPAI H5	HPAI H5N1	HPAI H7	LPAI H5	LPAI H7	LPAI Other	Subtype not determined	Live & Healthy positive birds	Diseased positive birds	Injured positive birds	Hunted & Healthy positive birds	Hunted & Diseased positive birds	No info origin positive birds	Dead positive birds	Member State Sampled	Member State Positive/ Sampled
																	Member State Sampled	Member State Positive/ Sampled
Anser anser	999	2	0	0	0	0	0	0	2	2	0	0	0	0	0	0	CH (1); DE (591); DK (1); ES (219); IT (1); NL (131); PL (5); RO (5); UK (46)	ES (1/ 219); NL (1/ 131)
Anser fabalis	280	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	DE (118); HU (23); NL (124); PL (15)	NL (1/ 124)
Arenaria interpres	55	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	BE (54); NL (1)	BE (1/ 54)
Aythya ferina	161	7	0	0	0	0	0	0	7	7	0	0	0	0	0	0	BE (27); CH (31); DE (23); ES (9); IT (66); NL (2); PT (2); RO (5); UK (27)	BE (7/ 27)
Aythya fuligula	127	2	0	0	0	0	0	0	2	1	0	0	1	0	0	0	BE (34); CH (79); DE (57); DK (1); IE (1); NL (4); RO (2); UK (28)	BE (1/ 34); UK (1/ 28)
Branta canadensis	361	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	DE (259); ES (4); NL (9); PL (5); SE (1); UK (83)	DE (1/ 259)
Columba palumbus	41	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	DE (11); DK (13); ES (7); IE (3); IT (1); NL (1); RO (4); SE (1)	ES (1/ 7)
Cygnus atratus	5	2	0	0	0	2	0	0	0	0	0	0	0	0	0	2	IT (3); UK (2)	IT (2/ 3)
Cygnus olor	1768	4	0	0	0	1	1	1	1	0	0	0	0	0	0	4	AT (22); BE (6); BG (6); CH (24); CZ (18); DE (806); DK (68); EL (2); ES (5); FR (23); HU (8); IT (4); LT (11); LU (1); MT (2); NL (365); PL (25); RO (1); SE (18); SI (9); UK (368)	DK (1/ 68); HU (1/ 8); SI (1/ 9); UK (1/ 368)
Cygnus sp.	363	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	AT (38); CH (1); DE (245); IT (1); LV (1); PL (17); PT (7); RO (1); SE (2); SK (6); UK (45)	DE (1/ 245)

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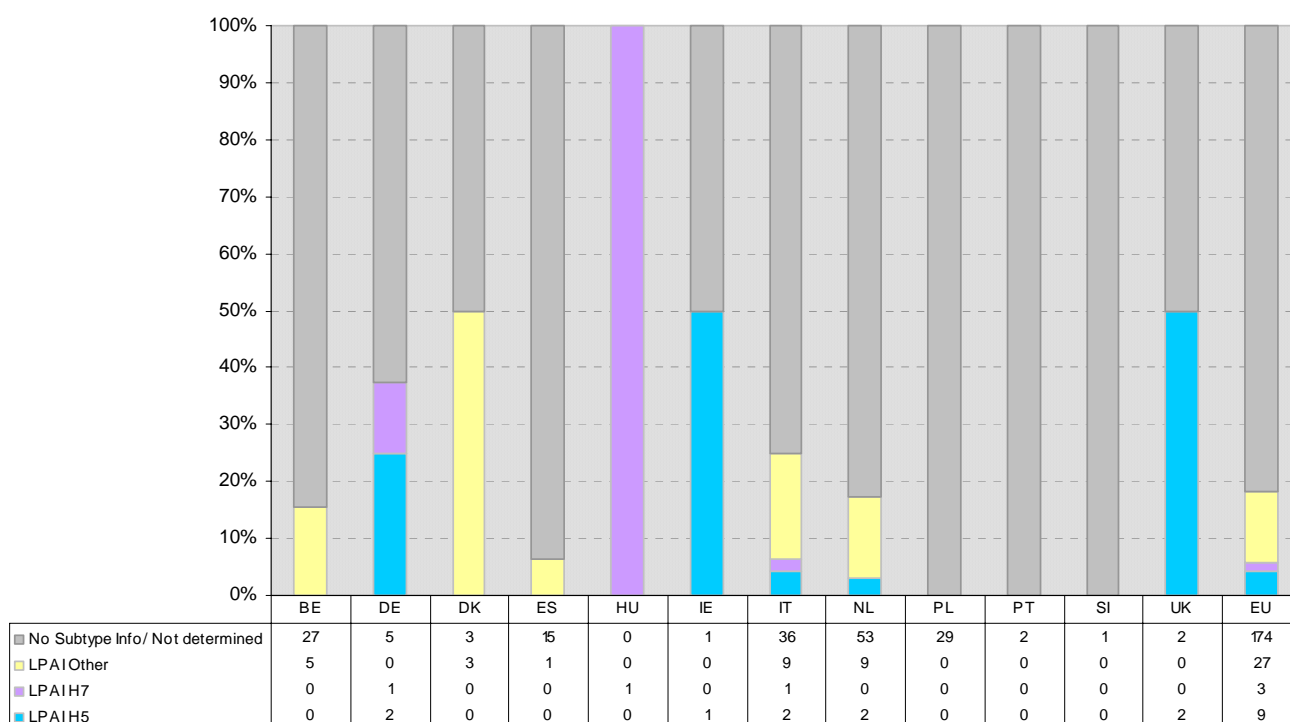
Species	Total sampled (excluding CH)	Total Positive	HPAI H5	HPAI H5N1	HPAI H7	LPAI H5	LPAI H7	LPAI Other	Subtype not determined	Live & Healthy positive birds	Diseased positive birds	Injured positive birds	Hunted & Healthy positive birds	Hunted & Diseased positive birds	No info origin positive birds	Dead positive birds	Member State Sampled	Member State Positive/ Sampled
																	Member State Sampled	Member State Positive/ Sampled
Fulica atra	548	3	0	0	0	0	0	0	3	2	0	0	1	0	0	0	AT (1); BE (36); CH (27); CZ (2); DE (152); EL (7); ES (18); FR (14); HU (3); IT (156); LT (1); MT (1); NL (74); RO (12); SI (1); UK (70)	BE (2/ 36); IT (1/ 156)
Haematopus ostralegus	64	5	0	0	0	0	0	0	5	5	0	0	0	0	0	0	BE (54); MT (1); NL (7); UK (2)	BE (5/ 54)
Larus argentatus	278	6	0	0	0	0	0	2	4	3	0	0	3	0	0	0	DK (103); ES (115); IE (5); IT (1); NL (37); SE (1); UK (16)	DK (3/ 103); ES (3/115)
Larus argentatus michahellis	45	2	0	0	0	0	0	0	2	2	0	0	0	0	0	0	ES (12); IT (33)	ES (2/ 12)
Larus marinus	159	1	0	0	0	0	0	1	0	1	0	0	0	0	0	0	DE (65); DK (71); NL (18); UK (2)	DK (1/ 71)
Larus ridibundus	963	8	0	0	0	0	0	1	7	8	0	0	0	0	0	0	BE (5); CH (1); CY (2); CZ (1); DE (266); DK (112); EL (4); ES (146); FR (7); IE (3); IT (101); NL (244); PL (10); UK (62)	DK (1/ 112); ES (4/ 146); IT (1/ 101); NL (2/ 244)
Phalacrocorax carbo	282	1	0	0	0	0	0	0	1	0	0	0	0	0	0	1	AT (2); BG (1); CH (3); DE (78); DK (2); EL (8); ES (149); FR (1); IE (4); IT (33); UK (4)	ES (1/ 149)
Platalea leucorodia	30	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	ES (30)	ES (1/ 30)
Species unknown	1123	3	0	0	0	0	0	1	2	3	0	0	0	0	0	0	BG (20); CY (46); DE (108); ES (127); HU (8); IT (1); LV (11); NL (552); PL (91); PT (89); RO (3); UK (67)	NL (3/ 552)
Sterna hirundo	41	29	0	0	0	0	0	0	29	0	0	0	0	0	0	29	BU (1); DK (1); PL (35); UK (4)	PL (29/ 35)

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**Table 8 Subtype and origin of positive birds, by species**

Species	Total sampled (excluding CH)	Total Positive	HPAI H5	HPAI H5N1	HPAI H7	LPAI H5	LPAI H7	LPAI Other	Subtype not determined	Live & Healthy positive birds	Diseased positive birds	Injured positive birds	Hunted & Healthy positive birds	Hunted & Diseased positive birds	No info origin positive birds	Dead positive birds	Member State Sampled	Member State Positive/ Sampled
																	Member State Sampled	Member State Positive/ Sampled
Streptopelia decaocto	74	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	CY (3); EL (12); ES (17); FR (3); HU (9); IT (3); PT (8); RO (18); UK (1)	ES (1/17)
Sylvia atricapilla	52	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	CY (2); ES (50)	ES (1/50)

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**Figure 4: Proportion of positives sampled by subtype and MS**

Figure 4 shows the number of birds found positive by subtype and MS. No birds sampled across MS between January and March 2007 tested positive for subtypes HPAI H5, H5N1 or HPAI H7. For most of the positive samples reported, the subtype was not determined or no subtype information was given, but where the subtype was determined the most common reported subtype was LPAI Other.

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