Department for Environment, Food and Rural Affairs
Animal & Plant Health Agency
Advice Services Team - International Disease Monitoring

Preliminary Outbreak Assessment #0

Highly pathogenic avian influenza (HPAI) in the UK, and Europe

26 October 2021 Ref: VITT/1200 HPAI in the UK and Europe

Disease Report

Since our last report on 15 September, there is evidence that there have been significant changes in the epidemiology of highly pathogenic avian influenza (HPAI) H5 in Europe. While there have been no further HPAI H5N8 outbreaks in captive birds in north-east France, Belgium and Luxembourg since our last report, HPAI H5N1 is spreading in wild birds (namely ducks including Eurasian wigeon and mallard) along the wildfowl migration flyway in northern Germany and Denmark. These species will migrate further west into GB, and many have already arrived with high numbers of wigeon still expected across GB, peaking in December. Furthermore, this H5N1 strain in wild birds requires full characterisation to determine the genetic relationships in comparison to H5N1 viruses detected in spring/summer to establish if they have derived from local recrudescence or relate to new introductions to Europe of a related or identical virus.

Situation Assessment

The epizootic of HPAI H5 infection in Europe over the autumn/winter season of 2020/2021 was unprecedented both in the number of virus genotypes including multiple neuraminidase (N) subtypes and the numbers and species of wild birds affected (IZSVe 2021a). There were numerous positive HPAI H5 incidents reported in domestic poultry and wild birds through spring and summer particularly in the low countries of north-west Europe and the Baltic Sea coast (namely the Netherlands, Finland and Sweden) with the main focus in Northern Europe. These events were most probably linked to extensive infection pressure from the winter period and environmental survival of virus including near to poultry production premises. The UK reported 24 outbreaks in poultry and captive birds during autumn/winter 2020/2021, as described fully in previous reports (Avian influenza (bird flu) in Europe, Russia and in the UK - GOV.UK (www.gov.uk)).

In the autumn period of 2021 the first H5N1 reported cases were in Barnacle geese (*Branta leucopsis*) in southern Finland in early September, perhaps representing the start of a new wave of HPAI spreading west in migratory waterbirds. Subsequently Germany has reported H5N1 HPAI to OIE in unidentified wild geese species at Pellworm (Schleswig-Holstein) on its north-west coast (Wadden Sea) detected on 14 October 2021. In addition, there are reports of further cases of H5N1 in wild ducks in north-west Germany

(Schleswig-Holstein), Denmark and the Netherlands, with a zoo affected in north-east Germany (Mecklenburg-Vorpommen) (FLI 2021). The duck species infected in Germany include Eurasian wigeon (*Mareca penelope*) and Mallard *(Anas platythynchos*) (IZSVe 2021b). Eurasian wigeon overwinter in large numbers across GB, peaking at over 300,000 birds every December, with numbers steadily increasing through October and November. Whilst some birds have now arrived in GB, the majority will follow in the next few weeks, having flown through areas in northern Europe now reporting H5N1 HPAI including the Wadden Sea bordering north-west Germany and Denmark.

Two poultry outbreaks of H5N1 has also been reported in Europe namely an outbreak of H5N1 in turkeys on 18 October 2021 in northern Italy and an outbreak in backyard birds in the Czech Republic at the end of September (PAFF 2021). Finland has also reported four events of H5N1 detected in late September in Ring-necked pheasants (*Phasianus colchicus*) including three groups of several thousand birds released as game birds earlier this year. Elsewhere in Europe, H5N1 has been detected in a White-tailed eagle (*Haliaeetus albicilla*) in Estonia in mid-October. Further east, Russia has reported 18 H5/H5N1 events in captive backyard/village birds and three H5 outbreaks in poultry farms starting late September/early October. Ukraine has reported an H5 outbreak in backyard birds detected in mid-October.

HPAI H5N8 has been reported in a flock of Canada geese (*Branta canadensis*) in Sweden in mid-October and in two wild birds and one backyard poultry premises in Estonia in late September and mid-October. Serbia and Montenegro reported three H5N8 events in Mute swans (*Cygnus olor*) detected in late September to mid-October.

The map below shows the distribution of HPAI H5 events in poultry, captive birds and wild birds in Europe reported in September and October to OIE. Those events reported in October are distinguished with dots and show the recent westward spread into north-west Europe since the H5N8 captive bird outbreaks in north-east France, Luxembourg and Belgium from September (described in our previous report).

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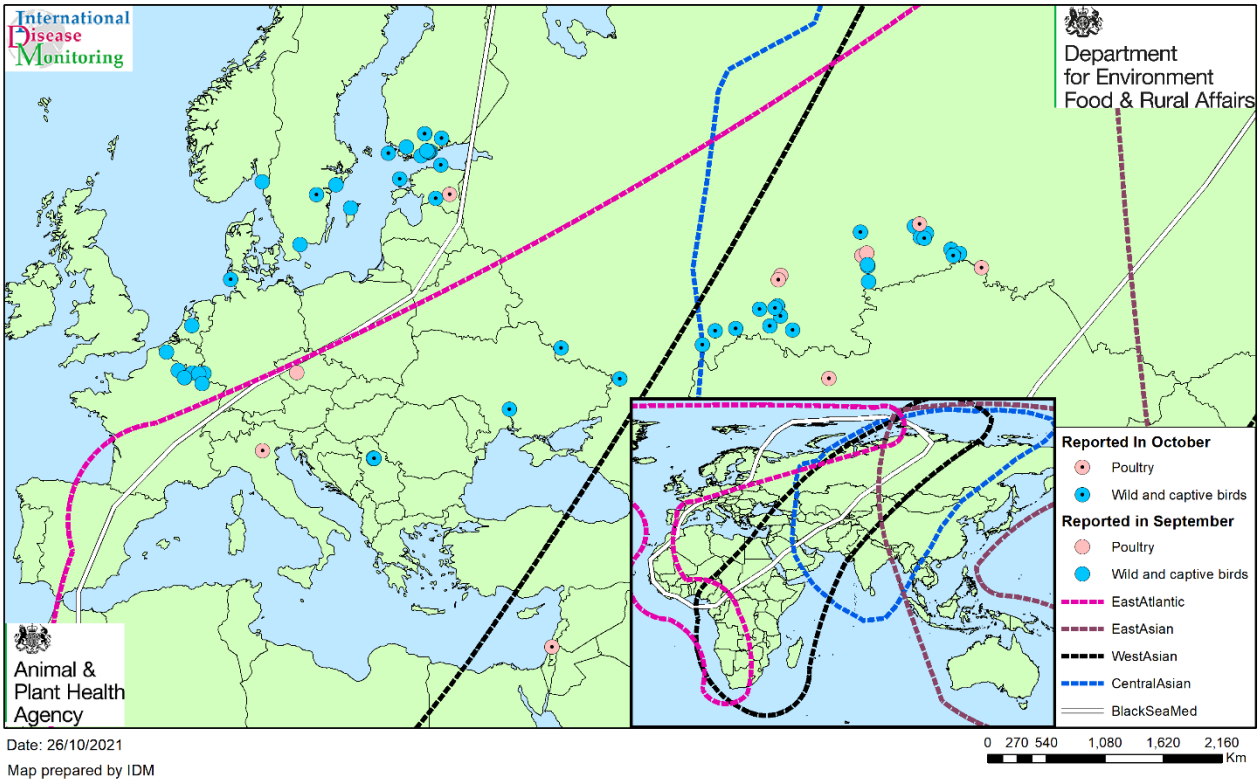
Map 1: HPAI outbreaks (from OIE) in poultry, captive and wild birds across Europe, 1 September 2021 to 26 October 2021.



Highly pathogenic avian influenza in Poultry, Captive and Wild birds
September - October 2021
Overlay: migratory bird flyways

OIE Data Only

Implications for the UK

The HPAI H5N8 outbreaks described in our last report on 15 September 2021 in backyard birds in Luxembourg, Belgium and France were probably due to residual infectivity from the 20/21 season. They appeared epidemiologically distinct from the usually coastal sites bias (associated with migratory bird stop overs) generally associated with the main autumn migration movements into GB; as such they suggest a relatively small risk to GB through the movement of wild water birds. However, there is now evidence that the risk of incursion of HPAI H5 in wild birds in GB is increasing. In particular, HPAI H5N1 is spreading in wild birds along the northern coast of Germany, southern Denmark (Wadden Sea) and the Netherlands which is on the migration route for migratory water birds flying to GB. In addition it should be noted that genetic diversity may be expected given the unprecedented diversity detected within virus subtypes during 2020/21. This H5N1 strain in wild birds in the Wadden Sea requires full characterisation to determine the genetic relationships in comparison to H5N1 viruses detected in spring/summer 2021 to establish if they have derived from local recrudescence or relate to new introductions to Europe of a related or identical virus.

Conclusion

There is evidence that there have been significant changes in HPAI H5 epidemiology in Europe to warrant increasing the risk of incursion of HPAI H5 via wild birds in GB from **LOW** (event is rare but does occur) to **MEDIUM** (event occurs regularly). The risk of poultry and captive bird exposure to HPAI H5 across the whole GB is still **LOW** (with **MEDIUM** uncertainty) **where biosecurity is sub-optimal,** and **LOW** (with **LOW** uncertainty) **where stringent biosecurity measures** are applied. We are in a period of rapid seasonal change with respect to these risks and will continue to closely monitor the situation. This increase in wild bird risk incursion coincides with the proposed decrease in threshold of collecting reported dead wild birds from five to just one from the list of target species, thereby increasing the sensitivity of detection of the wild bird surveillance scheme.

Given all the factors, with ongoing detections in wild bird populations not only in central Asia and southern Russia, but also nearer to GB in northern Germany, Denmark and the Netherlands together with the imminent arrival of more migratory waterfowl, the risk level to GB may well increase further through the autumn and into the winter.

It is particularly important that stringent adherence to good biosecurity practices is not only maintained but also reviewed for further improvement. Particular attention should by now have already been addressed to reviewing contingency plans, maintenance checks and repairs on roofs and fabric of buildings. Reinforcement of good biosecure behaviours and practices should now also be instilled into personnel to prevent disease being introduced to poultry and captive birds. Special consideration should be made when bringing in equipment and materials such as bedding and outer packages which may have become contaminated following environmental exposure.

If you keep poultry (including game birds or as pets), you should follow our biosecurity best practice advice, which can be found here: https://www.gov.uk/guidance/avian-influenza-bird-flu#biosecurity-advice .

Remain vigilant for any signs of disease in your flock and report any suspicious clinical signs of avian influenza to the Animal and Plant Health Agency. In England contact 03000 200 301. In Wales, contact 0300 303 8268. In Scotland, contact your local Field Services Office. Further information is available on GOV.UK including updated biosecurity advice for poultry keepers for England; https://gov.wales/avian-influenza for Wales and; http://gov.scot/avianinfluenza for Scotland.

The OIE/FAO International Reference Laboratory/UK National Reference Laboratory at Weybridge has the necessary ongoing proven diagnostic capability for these strains of virus, whether low or high pathogenicity AI, and continually monitors changes in the virus on a wide scale whilst utilising global networks to gain early insights to epidemiological trends and potential emergence of new genotypes which might change the risk profile. We will continue to report on any updates on the situation in Europe and, in particular, any

changes in disease distribution or wild bird movements which may increase the risk to the UK.

Any findings of dead wild birds of any species should be reported to the Wild bird Helpline (Tel: 03459 33 55 77 – please select option 7). It is advisable that you do not touch these birds.

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References

All outbreaks and cases were taken from the World Organisation for Animal Health (OIE). *Please note that changes in format and level of detail are due to the change of data source for this report, from EU's Animal Disease Notification System (ADNS) to World Organisation for Animal Health (OIE).*

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