

Rapid Risk Assessment for spread of Highly Pathogenic Avian Influenza (HPAI) H5N1 from wild birds to poultry from the shooting of wild waterfowl and wild game (including formerly captive) birds

28 September 2022

Summary

This rapid risk assessment is looking at the 3 main shooting activities (wildfowling, driven game shooting during their open seasons and shooting woodpigeon at any time under a general licence) which could lead to the immediate long-distance dispersal of wild birds, and how that could impact on the geographic spread of wild birds infected with highly pathogenic avian influenza virus (HPAIV).

The partridge, duck and goose open seasons started on 1 September and the pheasant open season will start on 1 October. The grouse and snipe open season started on the 12 August during the unprecedented situation that HPAI H5N1 was present in wild seabirds breeding at coastal sites around much of Great Britain (GB) ([rapid risk assessment dated 23 August 2022](#)). While wild seabirds have now dispersed from their breeding grounds, HPAI H5N1 has been maintained in GB wild bird populations.

Expert opinion (Defra's Ornithologists Expert Panel, 2016)¹ during the HPAI H5N8 epizootic of 2016/2017 was that wildfowling, or more general shooting of ducks and geese, would not significantly increase the risk for immediate long distance spread of avian influenza infected wild birds, due to the low number of guns. Driven game shoots are considered a lower risk due to the usual location and limited dispersal of managed wild game. Shooting woodpigeon under a general licence is considered to be lower still, as the general licence only authorises shooting in England around crops, fruit and vegetables, and around livestock foodstuffs in order to prevent serious damage. Devolved administrations issue equivalent general licences. The unusual length of the 2021/2022 epizootic with HPAI H5N1 present in breeding wild birds over the summer and the unprecedented 'order shift' of HPAI into seabird species (gulls, gannets, auks and terns) means it is timely to reassess this risk.

At this unprecedented late stage in the HPAI season (28 September), for poultry premises there is a LOW (for stringent biosecurity) to MEDIUM (for sub-optimal biosecurity) risk of

¹ Ornithologists Expert Panel, comprising experts from BTO, RSPB, WWT, JNCC, SNH, BASC, SG, WG, APHA, DAERA, NRW, NE and others, met on 19 December 2016.

exposure of poultry to HPAI H5 from the wild birds present. There has been sustained circulation of HPAI H5N1 in wild bird species including seabirds at coastal sites and also some resident wild bird species (mallard ducks, Canada geese, moorhens, mute swans, and raptors) at some inland sites. The risk of HPAI H5N1 in wild birds across GB is currently (29 September 2022) at MEDIUM although it is recognised that there may be geographic variation, based on proximity to aggregation/coastal breeding sites. Furthermore, large numbers of wild migratory water birds (ducks, geese and swans) will be arriving in GB in the coming weeks to overwinter, and some have already arrived.

The release of game birds within an avian influenza restriction zone is not allowed, although shooting is permitted, but at this time of year, the majority of game birds (for shooting) have already been released and are no longer considered captive birds. This assessment will cover both the geographical movement of infected wild birds over distances which would bring them into contact with poultry and to cover the risk of fomite transmission as a result of shooting activities. The risks from releasing formerly captive wild gamebirds (which started in early summer) and risks from gathering up (starting in late January/early February) are not within the scope of this assessment.

The risk assessment concluded there was a very low additional risk nationally above the background risk (low for stringent biosecurity to medium for sub-optimal biosecurity) to poultry premises or captive birds posed by allowing shooting of wild game in autumn 2022, outside of disease restriction zones (protection or surveillance zone). At sites local to the shoot, the risk to poultry with poor biosecurity may be elevated through driven game shooting.

Driven game shooting

It is concluded here that there is a very low risk of spread of wild birds infected with HPAI H5N1 over long distances or into new areas from driven game shooting. It is acknowledged that, given the large number of pheasants potentially infected at a pheasant shoot, the activity of driven game shooting will present a high risk of increasing the geographic spread of wild birds infected with HPAI H5N1 over short distances (300 to 400 yards) although this does not add to the national risk. While many of these pheasants may return to their feeding sites some may not and their carcasses would serve as a source of viruses to scavenging wild mammals (foxes and badgers) and birds (gulls, crows, raptors) outside the driven shooting area. Furthermore, the pheasants having been driven into new areas may then interact with local poultry where biosecurity is sub-optimal, thus raising the risk of exposure of those poultry. However, given the ongoing presence of HPAI H5N1 in wild birds already (risk level is currently medium), and the current medium risk of infection of poultry with poor biosecurity, the additional risk to poultry nationally is very low.

Wildfowling

It is concluded that the activity of wildfowling presents a very low risk of increasing (above existing levels) the geographic spread of wild birds infected with HPAI H5N1 over long distances or into new areas.

Pigeon shooting

It is concluded that the activity of pigeon shooting presents a very low risk for dispersal of disease because of the suspected resistance of this species to infection.

Risk questions

What is the likelihood of increasing the risk to poultry in GB through geographical spread of wild birds infected with avian influenza as a result of shooting certain wild birds (wild birds and waterfowl as game) in Autumn 2022?

Are there specific geographic areas or types of activity where this risk would be significantly increased in Autumn 2022?

Assumptions

This assessment does not consider the risk to public health of handling shot game birds or consumption of meat from infected birds.

The assessment does not consider the risk posed to the wider wild bird population through the active release of gamebirds. This will be covered elsewhere.

The law protects all wild birds and states that they cannot be killed or taken except in certain circumstances, for example, during the open seasons for huntable species or under the authority of a licence. Gamebirds can only be killed or taken at certain times of the year, known as the 'open season'. The open season is different for different species of gamebird. It is assumed that people will only be shooting or disturbing wild birds and gamebirds in accordance with the law and with consideration for the welfare for the birds.

When shooting, hunters need to be careful about good hygiene, particularly if shooting within or near to areas currently subject to restrictions due to HPAI H5N1.

The movement of gamebird meat / carcasses is not covered by any requirements for the restriction zones.

Users of the countryside are unlikely to effectively cleanse and disinfect their vehicles, footwear, clothes or equipment when entering or leaving land occupied by livestock and poultry. While gundogs may act as fomites, enabling the mechanical transport of virus on fur and skin and should be washed (with a pet appropriate shampoo) after being out, it is unlikely this is done in a systematic way.

People comply with whatever measures are in force in the affected area. These vary between outbreaks but may include restricting access to Infected Premises, or specific rules for disinfection.

Hazard identification

The hazard identified is the avian influenza virus, HPAI H5N1 subtype, as the predominant subtype isolated from the UK during the current season to date (H5N8 was detected in one mute swan in November 2021, but not since).

Elsewhere, earlier in the season, HPAI H5N8 was detected in domestic poultry in Albania and Denmark, and in wild birds in Denmark, France, the Netherlands, Serbia and Montenegro, Slovakia, Denmark and Sweden. H5N5 was detected in wild birds in Norway and H5N2 in was detected in domestic birds in Poland, and wild birds in Germany and Serbia, and H5N3 in wild birds in Germany. These findings in Continental Europe become more significant for the UK following the start of the migratory period (typically September). The World Organisation for Animal Health/World Health Organisation Reference Laboratory (WOAH/WHO RL) in Weybridge has undertaken some sequence analysis of the GB HPAI H5N1 virus; it is concluded that whilst there are notable differences to contemporary H5Nx viruses, the currently circulating GBH5N1 virus demonstrates no strong correlates for specific increased affinity for humans.

There are gaps in knowledge with regards to whether there are species of wild waterfowl that may not show clinical signs of infection; the increasing proportion of *Accipitriformes* and *Passeriformes* that have been infected with the virus suggests that the virus could circulate in non-migratory wild birds. There is also limited information regarding H5Nx infection in pigeons, although there has been observable morbidity and/or mortality in the small number of cases reported this 2021/22 season, but they are still considered more resistant to infection.

Likelihood of spill-over from infected poultry back to wild birds is not considered to add significantly to the background risk. Poultry keepers have been responding swiftly to the first clinical signs in the birds and the disease control measures are designed to stop spread from carcasses and to dispose of them safely.

Cases of HPAI in wild birds in both coastal and inland locations have continued to be detected through the summer which is unprecedented (Figure 1). Expert opinion is that the virus will retain infectivity in the environment at low temperatures. As we progress through the autumn season and into winter, decreased temperatures, reduced sunlight intensity and shorter day length will enhance virus survival in the environment with increased exposure of poultry through ranges and fomites for example. However, there is good confidence that given the coverage of wild bird submissions and the positive cases (Figure 2) the surveillance system will broadly be able to detect the areas with greatest infection pressure, even if there is some nuance to the detail of individual bird numbers.

Figure 1: Map of Great Britain showing the relative density of HPAI H5 findings in wild birds as shading from June to September 2022, and the most recent findings reported in since June as black dots. Inset map shows the relative densities of HPAI H5 findings in wild birds from October 2021 to September 2022.

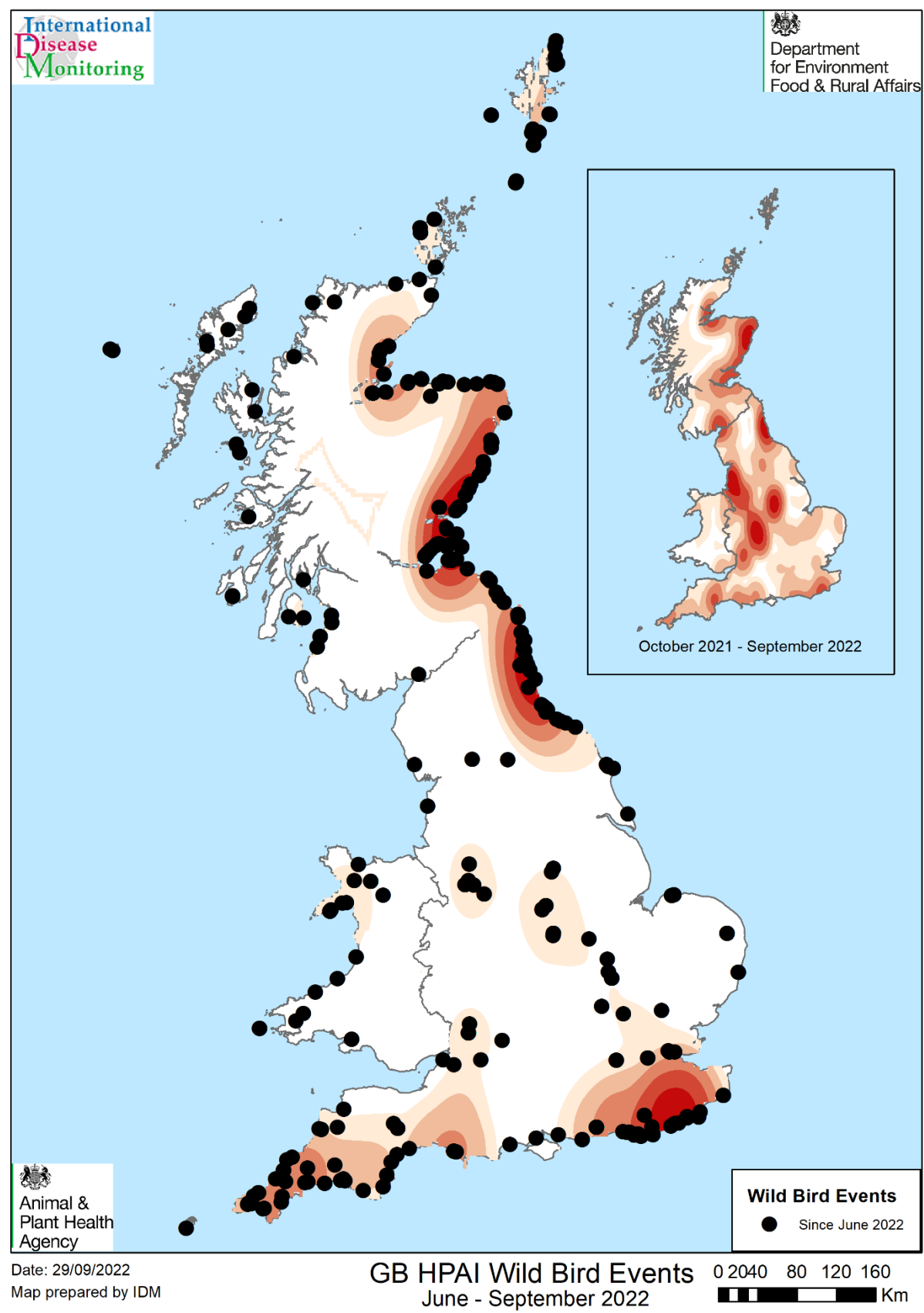
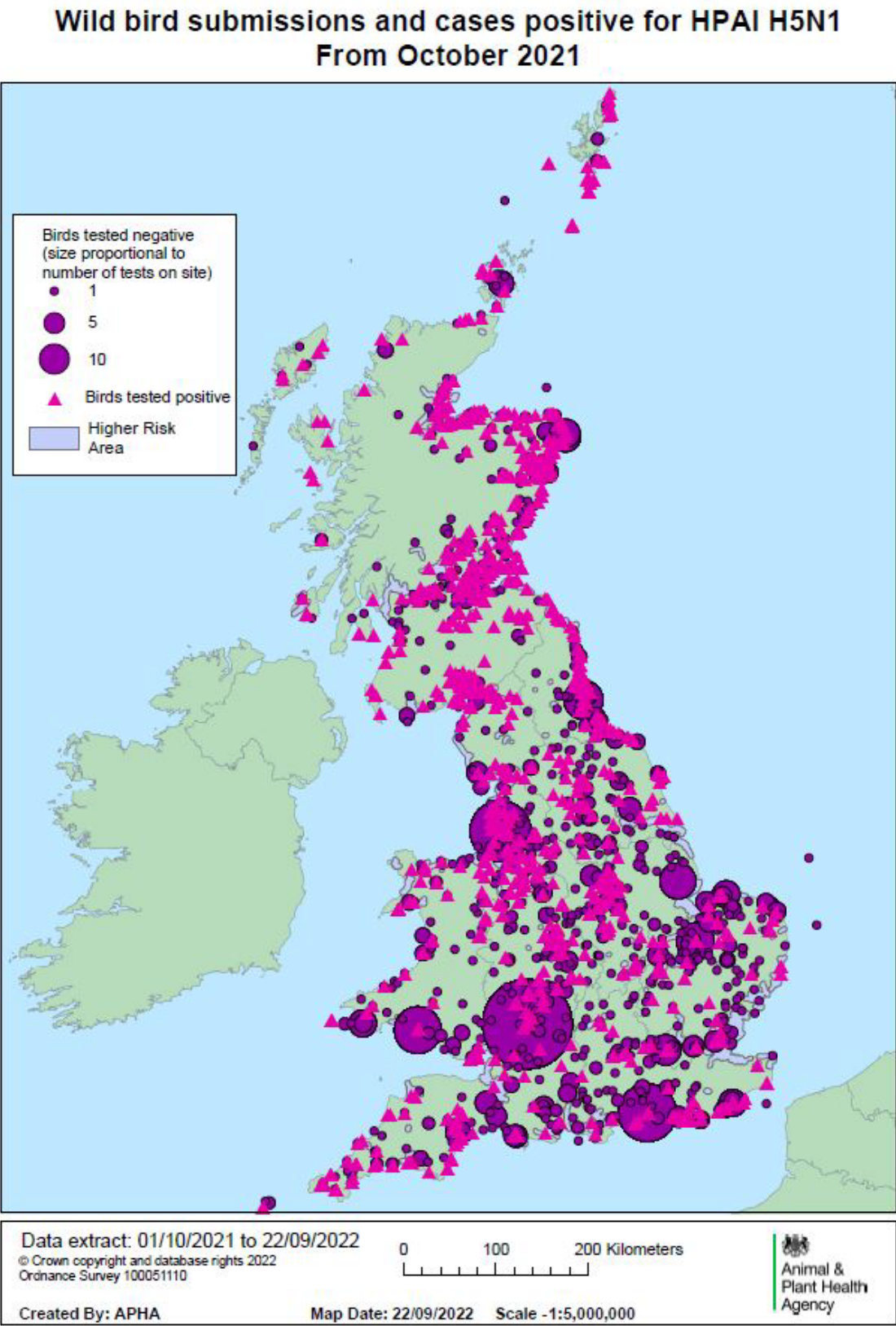


Figure 2: Map of wild bird submissions, higher risk areas and cases positive for HPAI H5N1 from October 2021 to 22 September 2022.



Risk assessment

Background

The first report this (2021/22) season of HPAI H5N1 in the UK was in a wild bird rescue centre in Worcester on 26 October 2021. To 28 September 2022 HPAI H5N1 has been confirmed at 132 poultry and captive bird premises in England, 11 premises in Scotland (including one in the Shetland Islands) and seven premises in Wales. Migratory wild waterfowl will be returning in large numbers from September through to December. Since the start of this avian flu season in October 2021, up to 28 September 2022, there have been 1,710 HPAI H5 detections in wild birds, in 406 locations involving 59 species in 82 counties. The species of wild birds affected by HPAI in mainland Great Britain have varied throughout the current 2021 to 2022 season, including a greater variety of wild bird species overall compared to previous seasons. An increasing proportion of birds of prey/raptor species (Accipitriformes) and other resident species (Passeriformes, Columbiformes) have become infected as the outbreak has progressed. Over the summer, many seabirds including gannets, gulls, terns, guillemots and great skua have become infected in an unprecedented epizootic. Given the continuing reports of wild bird cases of HPAI H5N1 across GB, the domestic poultry and captive bird populations in GB remain under infection pressure, which we have not previously observed prior to the migration of wild birds to the UK. Sedentary birds (such as black headed gulls) may play a role as fomites in the mechanical spread of virus to inland locations. The risk of HPAI H5 infection in wild birds in GB was reduced from high to **MEDIUM** on 23 May 2022 as a result of the decreasing infection pressure in wild bird species and the reduced environmental contamination/virus survivability due to warmer temperatures and extended periods of high intensity sunlight. The 2021 to 2022 HPAI season has had an uncharacteristically long tail to the epizootic in GB with an order shift in the species of birds affected, as described in [preliminary outbreak assessments](#), and an unprecedented third peak in wild birds across Europe over the summer, with seabirds heavily represented, likely due to breeding patterns for that time of year (see Figure 3 for recent reports in Europe).

The risk of HPAI exposure to poultry and captive birds across the whole of GB has remained at **LOW** (with low uncertainty) for poultry with stringent biosecurity measures) but was recently raised to **MEDIUM** (with medium uncertainty) where biosecurity is sub-optimal.

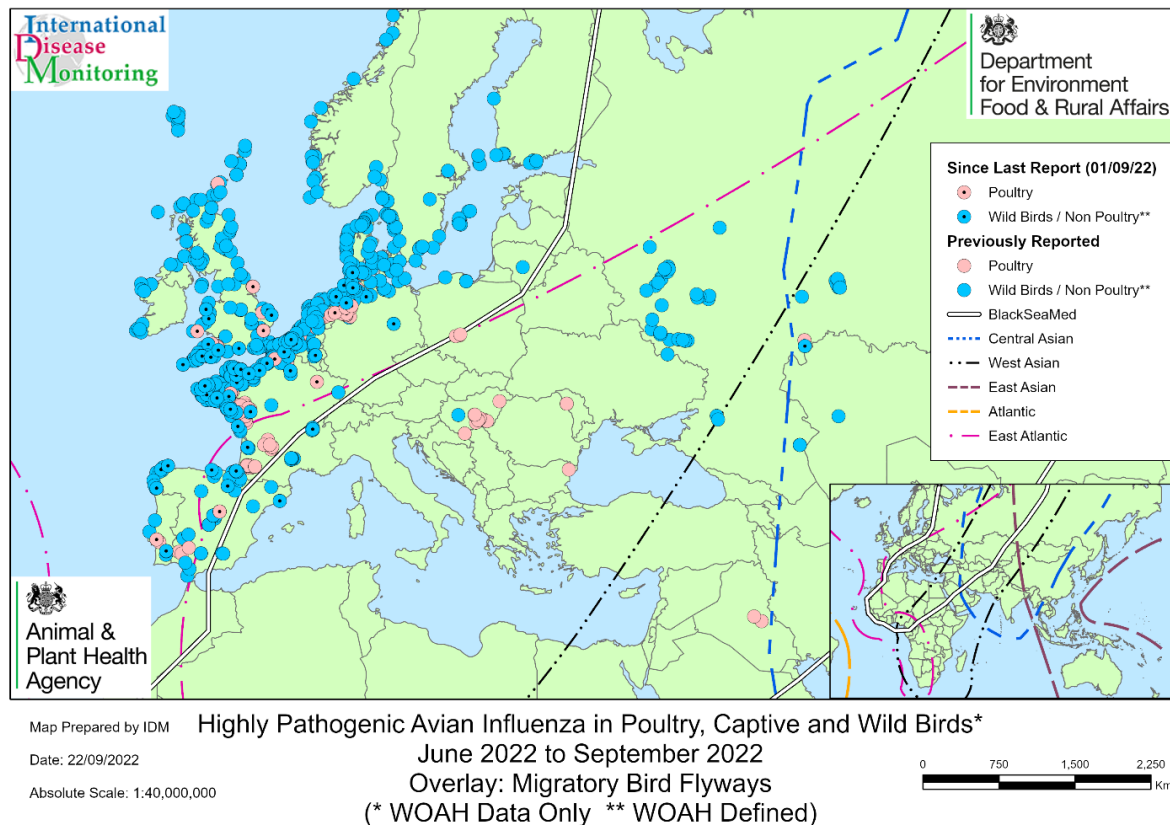
Although the GB-wide Avian Influenza Protection Zone (AIPZ) was lifted on 16 August 2022, a regional AIPZ was subsequently declared in Cornwall, Devon and parts of Somerset on 31 August 2022, and a regional AIPZ was subsequently declared in Norfolk, Suffolk and parts of Essex on 27 September 2022, and both remain in place.

The Avian Influenza Prevention Zone (AIPZ), when enacted, allows the shooting of wild (including formerly captive) birds to take place. Therefore, it is reasonable to review the risk for such events taking place given the new evidence pertaining to this season's AI events.

Most of the recent wild bird cases in Europe are in north-western Europe (and the Iberian Peninsula), running along the English Channel through the northern coast of France and Belgium into The Netherlands, northern Germany and as far east as Denmark (Figure 3). The presence of HPAI in wild birds in northern Europe at this time of year (September) is of concern as a potential source of infection for ducks, geese and swans migrating west to GB now and over the next few weeks, many of them flying through the Baltic and west through the Netherlands to GB. Over the summer there have been reports of wild bird cases in northern Norway, Svalbard, Iceland and off Greenland (Jan Mayen Island for example), through which many geese and swans will be currently flying into the UK and may be exposed to virus via any remaining seabirds. These include whooper swans, Greenland barnacle geese, pink-footed geese and Greenland white-fronted geese from Greenland and Iceland, and Solway Barnacle geese from Svalbard. In addition, HPAI H5N1 was circulating in wild geese and ducks in North America during the 2022 winter/spring, with potential for carriage of H5N1 virus to their breeding sites in north-west Greenland where, over the summer, mixing may have occurred with light-bellied brent geese which will currently be returning to their wintering sites in Republic of Ireland.

All cases of HPAI H5 that have been reported by WOAHA since 01 September 2022 have been of the subtype H5N1. Throughout this 2021 to 2022 epizootic, several HPAI subtypes have been reported in Europe including H5N1, H5N8 and H5N2 in domestic poultry and wild birds. Furthermore, HPAI subtypes H5N3 and H5N5 have also been reported, in wild birds only, across Europe. This evident circulation of several HPAI subtypes within Europe poses potential for either new subtypes entering Great Britain due to migratory waterfowl in the coming months, or potential mutation and modification of the virus.

Figure 3: Map of Europe showing the HPAI outbreaks and cases in poultry (pink) and non-poultry (blue) between 1 June 2022 and 23 September 2022. Reports from September are shown with central black dots.



There are considered to be 3 main types of shooting that could impact on the geographic spread of wild birds infected with HPAIV.

1. Those where wild waterfowl are shot during their flight from resting areas (wildfowling) and which for the purposes of this assessment includes shooting ducks and geese generally, but also birds such as snipe;
2. Those where wild birds (such as grouse which are hefted on moorland), and formally captive wild birds (such as pheasants and partridges) are driven and shot (driven game shooting) and,
3. Shooting woodpigeon under a general licence to prevent serious damage.

The game drives use beaters, and dogs are likely to be present at all types of shoot to collect the dead birds. This risk of infection of dogs through infected birds is not considered here, although it is noted that many wild carnivores have been infected globally through scavenging infected wild bird carcasses.

Entry assessment

The probability of entry of HPAI H5 virus into GB considers the likely introduction of infection from the areas with high infection pressure into other wild birds, as well as the entry of new viral strains from outside GB. At this stage of the season (October), wild migratory ducks and geese are beginning to arrive in GB in large numbers. However, this summer has been unprecedented with HPAI H5N1 circulating in wild birds across much of the coastal areas of GB. Therefore, the focus in the entry assessment is on the (high) probability that HPAI H5 is still circulating in wild birds in GB as well as the probability that further HPAI H5 is introduced to GB by migratory birds.

Over the summer months, HPAI H5 virus has been observed to be circulating in sea birds such as gannets, auks, skuas, terns and gulls which have now dispersed. Throughout August and September HPAI H5N1 has been observed in waders, raptors and gamebirds at inland locations.

The overall national risk of wild birds in GB being infected is currently MEDIUM (occurs regularly in GB). It is anticipated this risk will increase in the coming months. The virus will continue to circulate in wild birds in GB over the next months, and infection rates have not appeared to fall significantly prior to migratory waterbirds returning to the UK to overwinter in the autumn. An HPAI epizootic of this length of time and affecting so many species of different habitats has not been recorded before. Wild pheasants infected with HPAI H5N1 were detected in Autumn 2021 in Wrexham, North Yorkshire and Cumbria which coincided with the arrival of migratory birds in October, November and December. In Autumn 2022, infected wild pheasants have already been detected in late August and early September in Norfolk, Cornwall and Cheshire. Furthermore, two premises containing gamebirds were infected in August and September 2022 whereas no game premises were infected in 2021 until February 2022 when there were three infected premises. This highlights that HPAI H5N1 is already present in gamebirds before the migratory birds arrive.

Migratory waterfowl are arriving in GB and will reach a peak in numbers in December / January. Most of the recent wild bird cases in Europe are in north-western Europe (and the Iberian Peninsula), running along the English Channel through the northern coast of France and Belgium into The Netherlands, northern Germany and as far east as Denmark (Figure 3). The presence of HPAI in wild birds in northern Europe at this time of year (September) is of concern as a potential source of infection for ducks, geese and swans migrating west to GB now and over the next few weeks, many of them flying through the Baltic and west through the Netherlands to GB. Over the summer there have been reports of wild bird cases in northern Norway, Svalbard, Iceland and off Greenland (Jan Mayen Island for example), through which many geese and swans will be currently flying into the UK and may be exposed to virus via any remaining seabirds. These include whooper swans, Greenland barnacle geese, pink-footed geese and Greenland white-fronted geese from Greenland and Iceland, and Solway Barnacle geese from Svalbard. In addition, HPAI H5N1 was circulating in wild geese and ducks in North America during the 2022 winter/spring, with potential for carriage of H5N1 virus to their breeding sites in north-west

Greenland where, over the summer, mixing may have occurred with light-bellied brent geese which will currently be returning to their wintering sites in Republic of Ireland.

As the season progresses, migratory waterfowl are expected to become more gregarious and will be mixing with resident wild waterfowl. Expert opinion (Defra's Ornithologists Expert Panel, 2016) considered that these birds will be mixing and travelling short distances to feed or between roosts and feeding areas.

Exposure assessment

The pathways by which shooting could increase the risk to poultry or captive birds being infected with HPAI H5N1 are:

- increased human activity in the countryside in areas populated by quarry species including walking and driving vehicles over potentially contaminated land
- dispersal of bird populations outside of their normal home range
- gundogs as mechanical vectors
- handling and removal of carcasses of shot birds, possibly transporting them over a long distance and/or putting them into the food chain/incorrectly disposing of feathers or offal
- operatives who work in the poultry industry and engage in shooting activity without total separation of activities (including dogs)

These pathways will have varying degrees of risk level, and some elements will also apply to the actions of other people enjoying countryside pursuits, not just for shooting activities.

The risk to public health through handling these shot birds is not considered here. It is important to emphasise that the strain involved in the current cases in GB is considered to present a very low risk to public health. However, HPAI H5N8 virus circulating last season did cause spill-over events into foxes and seals and HPAI H5N1 virus circulating this season has spilled over into foxes and seals in Europe and foxes, skunks, coyotes, racoons, seals, otters in the USA and Canada. The naturally infected foxes showed neurological signs. Therefore, the risk to the general public is still considered by the UK Health Security Agency (UKHSA) to be very low and not negligible.

Wildfowling

The main quarry are wild geese and ducks which are mostly migrants; travelling from the higher latitudes, Scandinavia, and continental Europe, including the Low Countries, in the autumn and returning to their breeding grounds in the spring. These birds are highly mobile. Generally, depending on location, geese fly in at day-break to their feeding grounds and return to roost far out on the mudflats at dusk. Some duck species usually come in at dusk to feed and spend the night on pools and other waterbodies, returning to mudflats or other roost sites at dawn. It is likely that infection with HPAI H5Nx has an impact on the fitness of certain wild waterfowl based on observed mortality (as described

above), but there is a high level of uncertainty around this at present, and it would not apply to all birds in a population, or equally to all species.

Infection with HPAI H5N1 (without clinical signs) in wild waterfowl which are disturbed by shooting activities even over a short distance, may present a risk to poultry premises in the area, but this may not significantly increase the overall risk of exposure of poultry of MEDIUM (with stringent biosecurity) to HIGH (biosecurity breaches). None the less, both wild ducks and geese visiting poultry premises, and the bridging species flying over or visiting sites, play an important role.

Expert opinion (Defra's Ornithologists Expert Panel, 2016) is that the relatively low level of normal wildfowling activity has a minimal impact on immediate long distance dispersal of birds around a region, above their normal daily movements, with a likely local and temporary redistribution of birds. Wildfowling tends to be based close to the roosting areas and will shoot individual birds in flight with accuracy rather than random shooting at a group of nesting birds. Therefore, this activity represents a very low risk of increasing (above existing levels) the geographic spread of wild birds infected with avian influenza over long distances or into new areas.

Driven game shooting

This form of shooting is usually confined to pheasant, partridge and grouse shooting. The gamebird open season for grouse starts in England, Scotland and Wales on 12 August, and in pheasants and partridges on 1 October.

On the shoot day, a team of shooters, or 'guns', line out at numbered pegs. A group of beaters and their dogs move through areas of woodland or covert, flushing the game birds ahead of them. When the birds break cover and fly high over the line of Guns they may be shot. Shot game is retrieved quickly by pickers-up and gundogs directed to where the shot game falls. Expert opinion considers that these birds usually fly a distance of 300-400 yards from one area of cover to another and are not flying over long distances. A large number of people will be involved in a shoot of this sort. This activity will disturb birds deliberately over a relatively short distance, but the birds will often return to the same area later, as they are fed by the game keeper. Current AIPZ requirements, where implemented, are for these birds to be fed under a roof and to avoid contact with wild birds at this time. Where practicable, fresh treated water should be supplied.

Pheasants are known to be highly susceptible to HPAI H5N1. Partridges may be more resistant (based on fewer reports of cases), and susceptibility of the red grouse is not known. Therefore, pheasants will likely show clinical signs when infected with HPAI H5N1 and will be unlikely to fly when clinically affected. Just because birds are susceptible to the virus does not preclude their spreading the virus as evidenced by the spread by gannets and great skuas which are also highly susceptible species. Thus, recently infected pheasants will not show signs and will still be able to fly and will therefore carry infection over distances of 300 to 400 yards if driven with increased likelihood of contact with wild birds outside the release area. The large scale of the current HPAI H5N1 epizootic has meant some released pheasants have become infected in GB. Given the large number of

pheasants potentially infected at a pheasant shoot, it is considered that the activity of driven game shooting will present a high risk of increasing the geographic spread of wild birds infected with HPAI H5N1 over short distances (300 to 400 yards) with lower risks of spread over longer distances. While many of these pheasants may return to their feeding sites some may not, and their carcasses would serve as a source of viruses to scavenging wild mammals (foxes and badgers) and birds (gulls, crows, raptors) outside the driven shooting area. While some pheasants could spread disease over the 300-400 yard distance without shooting activity, the activity of driven shooting would drive all the birds to that distance thus enhancing spread. Furthermore, the pheasants having been driven into new areas may then interact with local poultry where biosecurity is sub-optimal, thus raising the risk of exposure of those poultry. At sites local to the shoot, the risk to poultry with poor biosecurity may be elevated through driven game shooting. However, given the ongoing presence of HPAI H5N1 in wild birds already (risk level is currently medium), and the current medium risk of infection of poultry with poor biosecurity, the additional risk to poultry nationally is **very low**.

Pigeon shooting

Pigeons are considered a major agricultural bird pest. Shooting wood-and feral pigeons is authorised under a general licence issued by the licencing authorities in England, Wales, Scotland and Northern Ireland. Individuals do not have to apply for these licences but must follow the conditions governing when and how they can undertake lethal control of wild birds. Individuals who cannot comply with the conditions of a general licence may apply to the licencing authority for a bespoke general licence.

Pigeons have not been identified as a species which is playing an active role in the transmission of avian influenza viruses to other bird species. From almost 4,000 reports of HPAI H5 in wild birds globally in the 2021 to 2022 season, only ten of these reports have concerned pigeons or doves. Of these three were in the UK (Llangadog, Crimond, Leeds) and the other seven were in Belgium, France, Germany, Norway, Russia, Spain and Canada. Thus, pigeons have been found to be infected occasionally and may act as transporters of fomites so they cannot be entirely ruled out.

The licence user must have made reasonable endeavours to use alternative lawful methods before engaging in lethal control of wood pigeon. Non-lethal scaring will be in place at this time of year on agricultural crops. Where appropriate, this may be supplemented by lethal shooting to increase its effectiveness; under a General Licence for those species listed upon it; individual licence for others; and open season for some (geese and duck species, Schedule 2 of the Wildlife and Countryside Act, 1981).

Non-lethal scaring is designed to deter birds from the crop and thus will increase local movements. Lethal control of wood pigeons can only be undertaken to prevent serious damage and may also increase local movements. However, unless undertaken in a highly co-ordinated and intensive way over a wide area it is unlikely to increase dispersal of birds to greater distances; they tend to remain in the same area, but frequency of movement increases.

This activity is considered to present a very low risk for dispersal of disease because of the refractivity of this species to infection. There is often mention of the impact of such activities on non-target avian species, and disturbance caused to these. Expert opinion (Defra's Ornithologists Expert Panel, 2016) is that there is little evidence either way.

Other wild bird control

Gulls cannot be lethally controlled under a general licence in England. Individuals wishing to control gulls must apply to Natural England for a licence.

Certain corvid species can be controlled under the general licence. Shooting the birds themselves, when the carcasses are not retrieved, may leave a source of contamination for scavengers, particularly mammals such as foxes or birds of prey where spill-over of HPAI H5N8 has been observed in the last season and H5N1 spill-over has been observed this season in the Netherlands.

Use of dogs

We are not aware of any dogs becoming infected with avian influenza by retrieving shot wildfowl or gamebirds. Although dogs are not natural hosts for avian influenza, a large number of carnivorous mammals (foxes, skunks, coyotes, racoons, seals, otters) that scavenge bird carcasses have been infected this season particularly in Canada and the USA. All precautions should be taken to reduce exposure to shot bird carcasses and dogs should not be allowed to eat shot wild bird carcasses. Poultry farmers with dogs should also be aware of both the fomite risk and the direct infection risk (e.g., they should not take their dog for walks where it will come into contact with wild waterfowl, and then allow the dog close contact with the farmed flocks).

Use of decoys

The use of live birds as decoys for shooting is illegal under the Wildlife and Countryside Act, 1981. Some licensed live decoys may be used in Larsen traps, but these are unlikely to be moved from their current sites. Plastic decoys should be cleaned between use.

Consequence assessment

The current HPAI H5N1 virion is highly infectious and pathogenic to poultry, and it is assumed poultry are infected given exposure. Each new infected premises with domestic poultry present, which are considered commercial, can lead to trade measures and movement restrictions which has an impact on our wider ability to trade in poultry and poultry-related products with third countries.

Risk management options

In addition, there are a number of good practices to follow which can help limit any potential increase in the risk of spreading the virus:

- Hunters' associations should inform their members about how to recognise the presence of avian influenza in wild birds, bearing in mind that most wildlife do not show external clinical signs of the disease; one important indicator of the possible presence of avian influenza is multiple deaths of birds in or close to the same location.
- Found dead birds should not be handled without proper protection such as gloves (or plastic bags or other forms of hand protection). See <https://www.britishgameassurance.co.uk/fsa-advice-on-avian-flu-wild-game-birds-home-preparation/>.
- Regular cleansing and disinfection of equipment including clothing and boots, particularly if the person has any contact with a poultry premises.
- All hunters should report findings of any dead wild birds. In particular, any wild ducks, wild geese, swans, gulls or birds of prey to the Defra helpline (Tel: 03459 33 55 77); they will arrange for the transport of targeted carcasses to laboratories for analysis.

Final risk level

The activities described in this rapid risk assessment do not significantly increase the risk level already present, as it is considered there is a very low level of wide dispersal of infected wild birds as a consequence of these activities.

These activities do not significantly increase the risk for long distance dispersal beyond routine movement of infected wild birds, if present. However, these activities could increase the risk locally to other flocks, if there was a high prevalence of avian influenza present in the wild birds.

Conclusion

Expert opinion (Defra's Ornithologists Expert Panel, 2016) agreed that in this scenario, wildfowling or more general shooting of ducks and geese would not significantly increase the risk for immediate long distance geographic spread of avian influenza infected wild birds. The evidence supporting this opinion has not changed from 2016 to present. There is already a LOW to MEDIUM risk of exposure of poultry from the wild birds present, depending on biosecurity. It is concluded that while driven game shoots may present a high local risk of spreading HPAI if infected pheasants are present, the additional risk to poultry over a wider geographic area is very low. Wildfowling and shooting of ducks and geese, and woodpigeon shooting are considered to be very low risks. Other wild bird control activities used on a poultry farm should be carried out with care ensuring carcasses are collected and disposed of safely to avoid attracting gull or corvid species. Any of these activities would, nevertheless, increase the risk of localised spread if carried out within a restricted area where there is known infection present and particularly if there are no C&D

measures in place. This assessment is not considering the public health risk associated with collecting or handling game bird or waterfowl carcasses.

References

Defra's Ornithologists Expert Panel (2016), comprising experts from BTO, RSPB, WWT, JNCC, SNH, BASC, SG, WG, APHA, DAERA, NRW, NE and others, met on 19th December 2016.

Wildlife and Countryside Act (1981)

<https://www.legislation.gov.uk/ukpga/1981/69/schedule/2>