TF Statement: New outbreaks of HPAI in Central Europe

The presence of Highly Pathogenic Avian Influenza (HPAI) H5N1 in Europe has been evident during recent weeks in the form of outbreaks in poultry and die-offs in wild birds. The Scientific Task Force (TF) on Avian Influenza and Wild Birds would like to comment on these recent outbreaks.

Once again there has been considerable speculation about the possible role of wild birds in spreading the disease, as well as contracting it. The Task Force recognizes that each poultry outbreak and wild bird mortality event must be thoroughly investigated before "ruling out" or "ruling in" transmission via wild birds. However evidence from around the world, summarized at the recent Task Force Workshop in Scotland last month, demonstrated that movement of poultry and poultry products continue to be a major factor in the transmission of HPAI H5N1 infection within and between countries.

The Task Force would also like to emphasize some relevant ornithological facts about those wild bird species perceived to be at higher risk of contracting and carrying HPAI. First, for a better understanding of the potential role of wild birds in the transmission of this virus and in transporting it over large distances, it is important to note that not all wild birds are migratory and that even migratory birds do not fly long distances in all times of the year. Wild ducks and geese in Europe are mostly migratory, Whooper (*Cygnus cygnus*) and Bewick Swans (*Cygnus columbianus bewickii*) are migratory, but the Mute Swan *Cygnus olor* (the most affected species in Europe) is not principally a migratory species. In many places in Europe these swans are year-round resident birds. They can be sensitive to extreme cold and will sometimes move in response to cold weather, but not usually in spring and summer. Greylag Goose *Anser anser,* one of the other affected species in Germany, is the least migratory amongst wild goose species in Europe and the only goose species originally breeding in this part of the continent. Some other species, including Canada Goose (also affected), have been introduced in Europe and these populations are not migratory. Infected young birds (like in the case of the Mute Swans in France) are not fledged yet and can therefore not migrate.

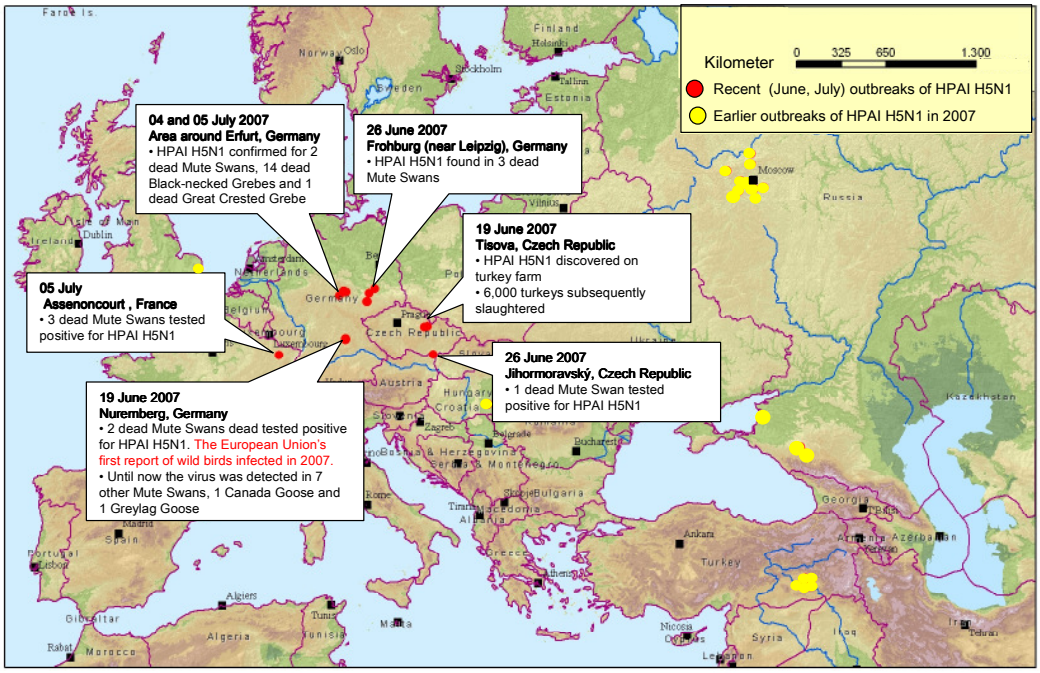
Secondly, most migratory birds have a defined migration period. For most wild ducks, coming to Europe for breeding, this Spring migration ends in March or first half of April. In the breeding season most wild birds are fairly resident or move small distances. The breeding season starts after the spring migration and in Europe this typically covers the months of (April-) May-June-July. This is the season during which these species are most dispersed and they generally do not congregate in large groups. After breeding some wild duck species gather at moulting sites, to change their (flight) feathers, before starting Autumn migration to the wintering areas. Thus the European Summer and late spring is the least likely period of the year to see large scale or long distance movements of wild birds or to see significant numbers of birds arriving in Europe at all.

Thirdly, some wild swan, goose and duck species have been demonstrated in laboratory conditions to be able to be infected and shed virus some days before showing signs of infection, but subsequently dying. Such findings suggest some waterfowl species could spread HPAI H5N1 virus between limited geographic

regions, but results do not suggest that these species would be long-term reservoirs for this virus (Brown, Stallknecht & Swayne on ProMed).

Finally, wild duck (and 'wild bird' in general) is an interesting concept in many countries in Europe, since increasingly, 'domestic (feral) individuals' of 'wild species' are found in the field, especially close to human habitation. Many of these individuals – especially Mallard *Anas platyrynchos* - are 'farmed' every year and released into the wild for hunting purposes. These individuals do not usually demonstrate migratory behaviour, but are resident.

Outbreaks of HPAI H5N1 in Europe (2007)



Homepage of the Friedrich-Löffler-Institut at
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FLI Wusterhausen, Stand 11.07.07
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Germany and France are applying the precautionary measures set out under European Union legislation.

The German Friedrich Loeffler Institute later found out that the deadly bird flu strains discovered in the Czech Republic were similar to that found in southern Germany—and were caused most likely by a common origin.

Phylogenetic analysis of the Czech virus reveals closest genetic similarity to recent viruses isolated from poultry and 'captive hunting' falcons in Kuwait in March 2007. Viruses obtained from wild birds in Germany and France are genetically similar to the virus from the Czech Republic indicating a more widespread geographical dispersal of the virus within central and western Europe, and are similar to viral strains reported in 2006 from Bangladesh, Pakistan and Azerbaijan. However, they are less closely related to other viruses isolated from both wild birds and poultry during the outbreaks in EU Member States in 2006 — and are distinct from the viruses obtained during outbreaks in Hungary and the UK at the beginning of 2007.

These data suggest

- **An epidemic wave from one or more point sources of infection most likely from the turkey outbreak but careful examination of bird movements over this period are essential to the analysis and interpretation.**

- **Wild birds are mostly either healthy (un-infected) or dead and therefore unlikely to be a source of spreading HPAI.**

- **The recent outbreaks are observed in mostly non-migrant species and during the non-migratory period and can therefore hardly be connected to bird migration. Hence, poultry transport must be in focus.**

- **Still, there are more questions than answers.**

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AIWEb at www.aiweb.info, ProMed at http://www.promedmail.org and DEFRA at
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Scientific Task Force on Avian Influenza and Wild Birds

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