



Scientific Task Force on Avian Influenza and Wild Birds statement on:

H5N8 Highly Pathogenic Avian Influenza (HPAI) in poultry and wild birds

3rd December 2014

This statement, from the UN CMS/FAO Co-Convened Scientific Task Force on Avian Influenza and Wild Birds is released in response to the recent H5N8 HPAI developments (November 2014) to inform stakeholders in governments, poultry sector, disease control, wildlife management, site management and conservation sectors about the potential interaction between wild birds and H5N8 HPAI virus and appropriate ways of taking action.

KEY MESSAGES

1. *Highly pathogenic avian influenza (HPAI) outbreaks are most frequently associated with intensive domestic poultry production and associated trade and marketing systems.*
2. *In 2014 multiple outbreaks of H5N8 HPAI occurred in domestic poultry in the Republic of Korea with subsequent outbreaks in Japan, China, Germany, the Netherlands and the United Kingdom. Most detections have been at relatively biosecure poultry production facilities but with some detections in wild bird species – with wild birds possibly being infected by poultry and vice versa.*
3. *Typically, spread of HPAI virus is via contaminated poultry, poultry products and inanimate objects although wild birds may also play a role.*
4. *The Scientific Task Force on Avian Influenza and Wild Birds, co-convened by the United Nations Environment Programme/Convention on Migratory Species (UNEP/CMS) and the Food and Agriculture Organization (FAO), urges agencies and organisations to:*
 - a. *conduct thorough epidemiological evaluation to determine the true source of the virus including possible transmission through national and international poultry trade, and mechanisms of transmission among domestic and wild birds;*
 - b. *regardless of the source of infection, focus disease control actions on affected farms, with the aim of minimising the risk of disease spread to other poultry farms and/or wildlife, ensuring that affected and nearby farms are biosecure to prevent wildlife-poultry contact;*
 - c. *ensure there is no consideration of killing of wild birds or negatively affecting wetland habitats as disease control measures; and*
 - d. *recognise that focussing attention on wild birds, to the exclusion of other potential viral vectors, can misdirect critical resources away from effective disease control and result in continued spread among poultry populations and economic losses to farmers and national income, as well as negative conservation outcomes and loss of biodiversity.*

Current situation

Publications report the detection of H5N8 HPAI virus in domestic poultry in China in 2010¹. In mid-January 2014, the Republic of Korea reported the first of a large number of poultry outbreaks of H5N8 HPAI in chickens, domestic ducks and domestic geese. The virus was then responsible for outbreaks in poultry in Japan (April 2014), in China (September 2014), and more recently (November 2014) in closed and semi-closed poultry production systems in Germany, then the Netherlands and United Kingdom.

During the numerous Republic of Korea outbreaks, in early 2014, a number of wild birds were reported as having died from H5N8 HPAI including Baikal Teal (*Anas formosa*) and Bean Geese (*Anser fabalis*) with isolations subsequently from a range of waterbird species including Common Coot (*Fulica atra*), Tundra Swan (*Cygnus columbianus*), Greater White-fronted Goose (*Anser albifrons*), Mallard (*Anas platyrhynchos*), Common Teal (*Anas crecca*) and Chinese Spot-billed Duck (*Anas zonorhyncha*). In November 2014, the virus was isolated from faecal samples from two Tundra Swans in Japan. The first wild bird detection in Europe was from a Common Teal shot on 16th November approximately 50km from the German poultry outbreak reported on 6th November, with the Netherlands reporting the virus in faecal samples from two Eurasian Wigeon (*Anas penelope*) on 1st December.

What is the role of wild birds in H5N8 HPAI?

Prior to the Chinese report of the virus in poultry in 2010, global wild bird surveillance efforts have not detected this particular strain of avian influenza virus in wild birds. It seems likely that the virus originated in poultry and has probably been able to spill into wild birds and back into poultry, with more typical anthropogenic transmission routes involved too. Although this remains speculative, such a pattern was also seen with H5N1 HPAI virus.

With respect to the western European H5N8 HPAI poultry outbreaks, investigations are underway to try to determine the source of the virus. There is speculation that the virus has been spread from eastern Asia via wild birds. Firstly, it should be noted that direct migration by wild birds from eastern Asia (e.g. China or Korea) to western Europe would be highly unusual. Flyways are characteristically 'north – south' (with some areas of 'overlap' of contiguous flyways at higher latitudes), and waterbirds breeding in northeast Asia tend to migrate southwards into east and southeast Asia, and not into Europe. Movement of the virus from eastern Asia into western Europe via wild birds within an apparently short timeframe would be extraordinary, particularly in the absence of extreme weather conditions during this time.

Over longer time frames and breeding seasons there would be a possibility of westward movement of circulating AI viruses moving between contiguous populations and flyways. In this scenario, even in regions where wild bird surveillance data are lacking, it might be expected that poultry outbreaks of the virus would have occurred across Eurasia if this virus was circulating widely in wild birds. To date, this has not happened, and the potential remains for anthropogenic introduction of the virus, to any part of the world, including Europe, with subsequent spread to wild birds.

¹ Zhao et al. (2013). *Veterinary Microbiology* 163, 351-357

H5N8 and human health

Unlike H5N1 HPAI, H5N8 has not been shown to infect humans and, on the basis of current knowledge, it is considered a low public health risk although appropriate hygiene measures should be taken.

What actions should be taken?

Poultry farms and markets

In accordance with FAO and OIE guidance, most H5N8 HPAI disease control measures should focus on poultry farms and bird markets including quarantine, stamping out, strict biosecurity, cleaning and disinfection, and trade and movement restrictions. If implemented properly, these steps will help control outbreaks and prevent the spread of the virus. Outreach and communication allied industries of the poultry sector would be indispensable for compliance and preventing economic losses.

Wild birds

To protect wild birds and prevent them from being involved in any onward spread of virus, all efforts should be taken at poultry farms and during disease control operations to reduce environmental contamination and risks to wild birds, particularly in wetland areas which can be particularly sensitive and contain susceptible bird species.

Measures should be taken to keep wild birds away from the infected farms *e.g.* by reducing any attractants such as food and open water, and, where appropriate, increasing deterrents such as scaring devices (*e.g.* flags) in the immediate vicinity of affected farms. Away from affected farms, disturbance to wild birds should be minimised, to allow them to remain in these lower risk areas.

Despite a recent publication on H5N8² suggesting otherwise, killing wild birds should *not* be considered as a control measure as this is diversionary, impractical, inefficient and contrary to the advice of all the major animal health agencies. Similarly, negatively affecting wild bird habitat, by *e.g.* applying disinfectants to the natural environment including wetlands, is not advisable, as this is ineffective against the virus and can harm the environment, wildlife and fisheries. Such measures are also contrary to conservation commitments accepted by Contracting Parties to both the Convention on Migratory Species and the Ramsar Convention on wetlands.

Disproportionately blaming wild birds for the introduction and spread of HPAI viruses, to the exclusion of other possible routes of transmission (as has happened during previous outbreaks of H5N1 HPAI), can lead to less focused disease control activities, potential spread of virus and dismissal of accountability of responsibilities. The media, academics and human and animal health agencies are requested to act responsibly when considering the role of wild birds in avian influenza, and avoid implicating them as the source of the virus if the evidence does not support this.

² Kang et al. (2015). *Emerging and Infectious Diseases* 21, Number 2 – February 2015

The Scientific Task Force on Avian Influenza and Wild Birds

The United Nations Environment Programme/Convention on Migratory Species (UNEP/CMS) and Food and Agriculture Organization (FAO) co-convened the Scientific Task Force on Avian Influenza and Wild Birds in 2005. It works as a communication and coordination network and continues to review the role of wild birds in the epidemiology of AI and the impact of the disease on wild birds, promoting a balanced opinion based on currently available evidence. Task Force observers include the United Nations Environment Programme, World Health Organisation and World Organisation for Animal Health (OIE). Task Force members include FAO, CMS, and African Eurasian Waterbird Agreement, BirdLife International, Ecohealth Alliance, International Council for Game and Wildlife Conservation, Ramsar Convention, Royal Veterinary College, Wetlands International, and Wildfowl & Wetlands Trust.

FURTHER INFORMATION

OIE: H5N8 Q&A

<http://www.oie.int/en/for-the-media/press-releases/detail/article/questions-and-answers-on-high-pathogenic-h5n8-avian-influenza-strain-update-27112014/>

FAO: This FAO Manual provides practical guidance for wild bird surveillance techniques:

<http://www.fao.org/docrep/010/a1521e/a1521e00.htm>

Ramsar Convention: The Ramsar Wetland Disease Manual provides specific practical guidance on preventing and controlling avian influenza and a range of other wetland-related disease issues:

<http://www.wwt.org.uk/rwdm>

<http://strp.ramsar.org/strp-publications/ramsar-technical-reports/rtr-no.7-ramsar-wetland-disease-manual-guidelines-for-assessment-monitoring-and-management-of-animal-disease-in-wetlands-2012>

Ramsar's Handbook on avian influenza and wetlands provides a major source of information, including a risk assessment for wetland managers and dealing with the media: <http://ramsar.rgis.ch/pdf/lib/hbk4-04.pdf>

Multilateral Environmental Agreements on HPAI from Ramsar Convention, Convention on Migratory Species and the African Eurasian Waterbird Agreement:

http://ramsar.rgis.ch/pdf/res/key_res_x_21_e.pdf

http://ramsar.rgis.ch/pdf/res/key_res_ix_23_e.pdf

http://www.cms.int/sites/default/files/document/Res_9_08_Wildlife_Disease_En.pdf

http://www.cms.int/sites/default/files/document/CP8Res_8_27_Avian_Influenza_eng_0.pdf

http://www.unep-aewa.org/sites/default/files/document/res4_15_responding_threat_ai_final_0.doc