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

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

Winter of 2020/2021 with focus on management of protected areas in the African Eurasian region. 12th February 2021

This statement, from the United Nations Environment Programme/Convention on Migratory Species (UNEP/CMS) and the United Nations Food and Agriculture Organization (FAO) Co-Convened Scientific Task Force on Avian Influenza and Wild Birds, is released in response to the large number of highly pathogenic avian influenza (HPAI) outbreaks in the northern winter of 2020/21 to inform stakeholders in governments, the poultry sector, disease control, wildlife management, site management and conservation sectors about HPAI viruses in wild birds and appropriate responses. Specific notes with a guide to existing guidance for those managing regionally and globally important sites for waterbirds, particularly in West Africa and along the African Eurasian flyways, are included.

KEY MESSAGES

1. *Typically, highly pathogenic avian influenza (HPAI) outbreaks are associated with intensive domestic poultry production and associated trade and marketing systems, with spread of HPAI virus via contaminated poultry, poultry products and inanimate objects, with wild birds now playing a role in the epidemiology of the disease.*
2. *Throughout the northern autumn and winter of 2020/21, multiple HPAI outbreaks at various scales caused predominantly by H5N8 HPAI, plus other subtypes, have occurred in poultry, zoological collections and wild birds. Analysis of the number of subtypes suggests that multiple European incursions of HPAI viruses occurred from wild migratory birds.*
3. *During this period the wild bird cases have included multiple reports of die-offs of waterbirds plus deaths of raptors. Sites of die-offs include Wetlands of International Importance (Ramsar Sites) for their waterbirds in West Africa, Europe and Asia.*
4. *Those authorities with responsibility for animal health are reminded of the importance of maintaining intensified surveillance and biosecurity to reduce risks, and of their international obligations to ensure responses do not include lethal responses to wild birds, nor actions which would cause detriment to wetlands including by the use of disinfectants.*
5. *Those with responsibilities for managing wetlands are reminded of the importance of minimising risks to sites from poultry and people, plus management options available to them, including the importance of good surveillance and data collection to enhance our understanding of the epidemiology of HPAI in wild birds.*
6. *This statement provides pointers to a range of guidance from intergovernmental bodies.*

Current situation

The northern autumn/early winter of 2020 saw incursion of HPAI viruses into Europe following deaths of wild birds and poultry in Russia and Kazakhstan during the preceding summer months. Multiple outbreaks in poultry, zoological collections and wild birds were reported across Europe, but predominantly in North West Europe including Germany, Netherlands, UK and Denmark. Wild bird die-offs were reported in barnacle geese *Branta leucopsis*, greylag geese *Anser anser*, Eurasian wigeon *Mareca penelope* and red knot *Calidris canutus*, with raptor cases in species such as common buzzard *Buteo buteo* and peregrine falcon *Falco peregrinus*. The predominant subtype still being reported in the African Eurasian region is H5N8 (including in southern Africa), but other subtypes including H5N5, N6, and N1 have been detected and have suggested multiple virus introductions into Europe. The latter H5N1 subtype is a different genotype to the 'Asian' subtype (*e.g.* clade 2.3.2.1c) which is associated with higher zoonotic potential.

The scale of mortality across Europe and parts of Asia, plus the findings of asymptomatic carriage of infection in some duck species has again indicated that wild birds can be both victims and vectors of infection. Lack of robust contextual information surrounding many of the wild bird deaths prevents good epidemiological understanding.

West Africa reported its first HPAI outbreak during the winter at a poultry holding in Thiès, some 70 km east of Dakar, Senegal, in December 2020. This outbreak, caused by H5N1, was followed in January 2021 by an outbreak of the same subtype in wild birds, predominantly great white pelican *Pelecanus onocrotalus* in the Djoudj UNESCO and Ramsar site, and was associated with high mortality of predominantly young birds. The sites are approximately 250 km apart and it is not known how infection reached the site. Subsequently mortality of pelicans has been recorded in the nearby Diawling UNESCO and Ramsar Site, Mauritania. The same subtype has been reported more recently in poultry in Nigeria, which has in previous years been a point of introduction and subsequent dissemination of HPAI viruses.

Recognition of the conservation and cultural importance of the waterbird sites in the region, has prompted the Task Force to issue this guidance both for those responding to outbreaks in wetlands settings and those needing to prepare for a possible outbreak.

Global situation updates, including in the rest of the African region, are provided regularly by FAO EMPRES here:

Also see the East Asian-Australasian Flyway Partnership website for updates from this flyway. Wild bird deaths have been reported in the Central Asian Flyway with die-offs in India related to H5N1 and H5N8 HPAI in bar-headed-geese *Anser indicus*, crows and herons, reported here. Information on wild bird mortality from this flyway is also reported on the Bird Count India website.

General recommendations for countries affected and/or at risk

Effective prevention and management of HPAI outbreaks requires a One Health approach to ensure appropriate attention to human, animal, and environmental health and coordination among agencies. Maintaining intensified surveillance and biosecurity, along with awareness raising by local authorities, is of utmost importance in high risk areas and at times of high risk.

Poultry: Responses to HPAI in poultry must follow official national regulations.

Wild birds and wetlands: There is no benefit to be gained in attempting to control the virus in wild birds through culling or habitat destruction. All those with responsibilities for animal health are reminded of advice of FAO and OIE, and international obligations under CMS and the Ramsar Convention, to ensure that there is no consideration of killing of wild birds, spraying toxic products or negatively affecting wetland habitats as disease control measures. For poultry disease control, focussing attention on wild birds, to the exclusion of other potential routes of transmission, 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. Importantly it can also result in negative conservation outcomes and loss of biodiversity with resultant negative impacts on human and domestic animal health.

Captive birds: There is no justification for any pre-emptive culling of zoological collections. Control measures for captive wild birds in places where virus is detected should be based on strict movement control, isolation and, only when necessary, limited culling of affected birds.

Guidance in relation to minimizing risks to wild birds

Substantial guidance already exists and this statement syntheses advice from the main intergovernmental health and conservation bodies to specifically help those involved in wetland and waterbird management and conservation.

Those managing important wetland sites are in key positions to both help reduce impacts of HPAI and also improve our collective understanding of the epidemiology of the disease in wild birds, and are encouraged to gather good data to help support that goal – as described later in this guidance.

Key guidance documents:

- Specific guidance for dealing with animal diseases in wetland settings, including avian influenza, is provided by the Ramsar Wetland Disease Manual Ramsar Technical Report No. 7 (2012).

- Ramsar Handbook No. 4 (2010) on 'Avian Influenza and Wetlands' provides a major source of information, including reducing risks at wetland sites: available in English, French and Spanish.

- FAO Animal Health Manual No. 5: Wild Birds and Avian Influenza (2007): available in English, French and multiple other languages.

- FAO Animal Health Manual No. 4: Wild Bird Highly Pathogenic Avian Influenza Surveillance (2006): available in English, French and multiple other languages.

Biosecurity of sites

HPAI viruses can reach new wetland sites by three main routes:

1. Movements of wild birds – either local movements (such as from poultry holdings/domestic settings including from 'bridge species' which may use domestic and wetland habitats) or longer distance movements including seasonal migration.
2. Direct contact between poultry and their products
3. People accidentally bringing infection into a site from either infected poultry sites/domestic settings or from other infected wild areas.

To reduce risks of introduction of virus to wetland areas, control measures should be particularly targeted at minimising risk from the latter two routes.

At times of high risk, *i.e.* prior to, or following, an outbreak of HPAI at a site, biosecurity should be increased to reduce risk of spread into, or out of, a wetland site. This can involve:

1. Increased biosecurity of local poultry holdings – importantly excluding/minimising contact with wild birds including 'bridge species'
2. Reducing human activity in, into and out of a wetland site
3. Disinfection of footwear or tyres etc. of those entering and exiting wetland areas (as appropriate)
4. Reducing other forms of disturbance that may encourage wild birds to fly to other areas.

See FAO Manual No. 165 (Section 1 in English and French) for the principles of biosecurity in the poultry context and the Ramsar Wetland Disease Manual for this in the context of wetlands (Section 3.2.4 p83-86).

Monitoring and surveillance of sites

Monitoring of sites is essential to determine if infection is present. Sick or dead birds should be reported to local authorities (veterinary services, public health officials, community leaders, etc.). These should be tested for avian influenza viruses.

Provision of a means of reporting of sick or dead birds should be introduced, *e.g.* telephone hotlines or means by which to share photographs such as citizen science platforms.

Action should be taken to raise awareness of site users and local inhabitants of importance of vigilance, biosecurity and the reporting mechanisms for sick or dead birds (Ramsar Wetland Disease Manual Communication and Public Awareness Section 3.5.1 p150-156 and FAO Manual No. 11 (English and French)).

If hunting is being undertaken at the site, collaboration with local hunters for testing of their birds can provide useful samples for surveillance. Note at times of high risk or following an outbreak at a site consideration should be given to suspension of hunting in sensitive areas both to reduce disturbance and to reduce possibilities of spreading infection from the wetland into the domestic setting from moving infected hunted birds.

See Ramsar Wetland Disease Manual Surveillance and Monitoring Section 3.3.1 p89-96 and FAO Manuals No. 4. (English and French) and No. 5. (English and French).

In the face of an outbreak, as well as testing of sick or dead birds and recording any rings or other tags, additional data such as the checklist suggested by the Ramsar Wetland Disease Manual Section 3.3.5 p 106-110, or Annex 1 of FAO Manual No. 4 (English and French) should be gathered to assist local authorities and to improve understanding of the epidemiology of the disease in wild birds.

Disinfection and sanitation

Disinfectants should not be introduced to wetland sites. Disinfectants may be used at key localised access points for personnel and possible fomites, such as footwear and tyres, as long as chemicals do not enter the water courses.

Spraying of birds or the environment with disinfectant, such as sodium hypochlorite or bleach, is considered potentially counter-productive, harmful to the environment and not effective from a disease control perspective.

See Ramsar Wetland Disease Manual Disinfection and Sanitation Section 3.4.1 p114-116.

Human health considerations

Despite the predominant strains of H5NX HPAI currently circulating in Europe and likely West Africa to be of relatively low zoonotic potential, strict health and safety measures should be employed for those handling infected birds and materials. This should include use of PPE (including face coverings) and regular and proper washing of hands. This should always be done after handling birds or other animals, when cooking or preparing animal products, and before eating. Medical attention should be sought immediately if any symptoms of fever are noted after contact with poultry, farmed birds, wild birds or other animals.

See Chapter 12 of FAO Manual No. 4 (English and French).

Carcasses of wild birds

To remove or not?

In natural settings, attempting to remove carcasses for disposal has the potential for creating greater problems caused by disturbance and displacement of birds, and potential for spread of infection by both the displaced birds and those personnel and vehicles involved in disease control measures.

If disposal of carcasses is deemed appropriate based on national legislation and a risk assessment which includes:

1. Scale of mortality (in comparison with historical 'normal' for the site)
2. Easy access to carcasses with minimal disturbance
3. Possibility of successful disposal
4. Minimal risks to biosecurity during disposal operations

carcasses can be collected for disposal.

How to dispose of wild bird carcasses

If decisions have been made to move and dispose of carcasses, primary consideration should be given to official means of disposal by local animal health authorities. Options include:

1. Burying – recognising problems with suitable sites in wetland areas, and need for avoidance of affecting water courses
2. Incineration
3. Composting.

See Ramsar Wetland Disease Manual Collection and Disposal of Carcasses Section 3.4.2 p117-120 or FAO guidance for poultry disposal (English and French).

Integrating disease planning into site management plans

See Ramsar Wetland Disease Manual Section 3.1.3 p63-66 plus Section 3.1.4 p67-71 on Contingency Planning which explain the value of integrating disease management into site management plans to reduce risks in the long term. Chapter 2 of the Ramsar Handbook No. 4 (English, French and Spanish) provides guidelines for reducing avian influenza risks at Ramsar sites and other wetlands of importance for waterbirds including zoning of activities.

FAO Manual No. 11 (English and French) provides the principles for contingency plans which can be adapted to suit natural settings.

The Scientific Task Force on Avian Influenza and Wild Birds

The United Nations Environment Programme/Convention on Migratory Species (UNEP/CMS) and the 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 the African Eurasian Waterbird Agreement (AEWA), BirdLife International, EcoHealth Alliance, International Council for Game and Wildlife Conservation (CIC), Ramsar Convention, Royal Veterinary College, Wetlands International, and Wildfowl & Wetlands Trust (WWT).

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RESOURCES

Key guidance documents

- Ramsar Wetland Disease Manual Ramsar Technical Report No. 7 (2012).
- Ramsar Handbook No. 4 (2010) on 'Avian Influenza and Wetlands' available in English, French and Spanish.
- FAO Animal Health Manual No. 5: Wild Birds and Avian Influenza (2007): available in English, French, and multiple other languages.
- FAO Animal Health Manual No. 4: Wild Bird Highly Pathogenic Avian Influenza Surveillance (2006): available in English, French, and multiple other languages.

Other FAO Guidelines

- FAO Animal Health Manual No. 11: Good Emergency Management Practice: The Essentials – English
- FAO Manuel de Santé Animale No. 11: Méthode de Bonne Gestion des Urgences: Les Fondamentaux – French
- FAO Animal Health Manual No. 165: Biosecurity for Highly Pathogenic Avian Influenza – available in French
- FAO Animal Health Manual No. 3: Preparing for Highly Pathogenic Avian Influenza – available in French and Spanish
- Focus On: Carcass management for small- and medium-scale livestock farms Practical considerations – available in French
- Focus On: Rational use of vaccination for prevention and control of H5 highly pathogenic avian influenza – available in French

Situation reports

- European Centre for Disease Prevention and Control Avian influenza overview August – December 2020
- FAO Focus On: 2016–2018 Spread of H5N8 highly pathogenic avian influenza (HPAI) in sub-Saharan Africa: epidemiological and ecological observations. FOCUS ON, No. 12, Aug 2018. Rome.
- FAO Focus on: Highly pathogenic H5 avian influenza in 2016 and 2017 – observations and future perspectives
- EMPRES Watch: Highly Pathogenic Avian Influenza (H5N1 HPAI) spread in The Middle East: risk assessment, 2016 - available in French
- H5N8 HPAI in Uganda - Further spread in Uganda and neighbouring countries. February 2017.
- 2016: EMPRES Watch: H5N8 highly pathogenic avian influenza (HPAI) of clade 2.3.4.4 detected through surveillance of wild migratory birds in the Tyva Republic, the Russian Federation – potential for international spread - available in French

OIE

- OIE Avian Influenza Portal

Multilateral Environmental Agreements on HPAI and wildlife health from Ramsar Convention, Convention on Migratory Species and the African Eurasian Agreement on Migratory Waterbirds (AEWA):

- Ramsar Resolution XI.12: Wetlands and health: taking an ecosystem approach
- Ramsar Resolution X.21: Guidance on responding to the continued spread of highly pathogenic avian influenza
- Ramsar Resolution IX.23: Highly pathogenic avian influenza and its consequences for wetland and waterbird conservation and wise use
- UNEP/CMS Resolution 12.06 Wildlife disease and migratory species
  UNEP/CMS Resolution 9.8: Responding to the challenge of emerging and re-emerging
  Diseases in migratory species, including highly pathogenic avian influenza H5N1
- UNEP/AEWA Resolution 4.15 Responding to the spread of highly pathogenic avian influenza H5N1