Key government obligations and recommendations in response to the current HPAI crisis

Ruth Cromie
Convention on Migratory Species
COP-Appointed Councillor for Wildlife Health

Co-ordinator of the
CMS FAO Scientific Task Force on Avian Influenza and Wild Birds

Research Fellow
Spring 2005 the HPAI wild bird story begins...

- H5N1 HPAI responsible for first major outbreak in wild birds at Lake Qinghai, China, killing ~6000 migratory and resident wild birds
H5N1 HPAI in poultry and wild birds 2003-2008

H5N1 HPAI spread by:
- Poultry
- Poultry products
- Traded birds
- People
- Wild birds

Map showing the spread of H5N1 HPAI in poultry and wild birds from 2003 to 2008.
We should not forget the scale of wild bird mortality from this ‘novel’ virus

Summer 2007:
Germany
~300 pairs Black-necked Grebes
100% Breeding population

May/June 2005:
Qinghai Lake, China
>6,000 birds died
(Chen et al 2006)

July 2005:
Lake Chany, Russia
>5,000 wild birds
Pochard
Mallard
Teal

Summer 2006:
Tuva Republic, Russia
>3,100 wild birds
100% Great Crested Grebe

Winter 2005/2006:
Azerbaijan
~26,000 wild birds
???
How did this happen?

• Wild bird farming?
• Grazing domestic ducks in wetlands?
Genie was out of the bottle...
H5N1 HPAI – unprecedented One Health issue

Potential for pandemic – massive social consequences – loss of life, food security, livelihoods, economy etc. etc.

Local and national economies
Livelihoods
Risks to wetlands

Conservation consequences

Ecosystem

H5N1 HPAI – unprecedented One Health issue
‘One Health’ framework

An integrated, unifying approach that aims to sustainably balance and optimize the health of people, animals, and ecosystems. It recognizes the health of humans, domestic and wild animals, plants, and the wider environment (including ecosystems) are closely linked and interdependent.

OHHLEP (2022)
Human health
Livestock health
Wildlife health
HPAI
As a consequence, Multi-lateral Environmental Agreements responded:

- 2005 AEWA MOP3 Resolution 3.18
- 2008 AEWA MOP4 Resolution 4.15
- 2006 CBD Decision VIII/32
- 2005 Ramsar COP9 Resolution IX.23
- 2008 Ramsar COP10 Resolution X.21
- 2005 CMS COP8 Resolution 8.27
- 2008 CMS COP9 Resolution 9.8
Aims and Objectives

1. Ensure international efforts to contain H5N1 HPAI do not overlook wildlife and other environmental considerations

2. Issue advice on spread and conservation impact of H5N1 HPAI based on best scientific knowledge (counter misinformation)

3. Provide information and guidance for policy and decision makers
**Summer 2021:** unusual cases of H5N1 HPAI in remote Scottish islands, UK

Banyard et al. Viruses 2022, 14(2), 12; [https://doi.org/10.3390/v14020212](https://doi.org/10.3390/v14020212)

**December 2021:** Transatlantic spread

Caliendo et al. Sci Rep 2022 12, 11729 [https://doi.org/10.1038/s41598-022-13447-z](https://doi.org/10.1038/s41598-022-13447-z)
2022 summer outbreaks in European seabird breeding colonies

- Northern Gannets – mass mortality multiple locations
- Great Skuas – up to 80% losses in colonies
- Terns spp. – high mortalities chicks and adults
- Guillemots etc. etc. etc.
Scientific Task Force on Avian Influenza and Wild Birds statement on:

H5N1 High pathogenicity avian influenza in wild birds - Unprecedented conservation impacts and urgent needs

1. Key messages
2. Situation update
3. Guidance on responses
4. Further information
Current situation
Focus on government obligations under 2024 CMS Resolution 14.18

AVIAN INFLUENZA

Adopted by the Conference of the Parties at its 14th Meeting (Samarkand, February 2024)

Noting the significant work under CMS on avian influenza,

Recalling Resolution 12.6 Wildlife Disease and Migratory Species, and the resolutions on wildlife disease and avian influenza which were consolidated into it and repealed by COP12;
Resolution 8.27 Migratory Species and Highly Pathogenic Avian Influenza; Resolution 9.8 Responding to the Challenge of Emerging and Re-emerging Diseases in Migratory Species, including Highly Pathogenic Avian Influenza H5N1, and Resolution 10.22 Wildlife Disease and Migratory Species,

Aware that the spillover of the A/goose/Guangdong/1996 lineage of H5 highly pathogenic avian influenza virus (hereinafter HPAI virus) from the poultry sector has subsequently caused significant and concerning mortality in waterbirds, seabirds, raptors and avian scavengers as well as a number of mammal species on multiple continents and further concerned about future spread to other populations of migratory and other species already under multiple pressures,

Aware that via spillback events, HPAI virus has had major impacts on livelihoods and economies related to poultry production,
Governments should undertake

1. **cross-sectoral, multi-stakeholder planning and preparedness**

2. development and implementation of *national wildlife contingency plans for HPAI*

3. **full engagement of environment sections of government** to take responsibility for wildlife aspects of HPAI

4. **robust outbreak investigation**

5. **integrated population monitoring** to measure impacts of the disease
Responses to HPAI in wildlife must not be inappropriate

*Essential to have appropriate outreach / messaging*

1. **No lethal responses** (such as culling of wildlife)

2. **No use of disinfectants** or other measures in wild settings that may affect habitat quality

3. **No destruction** or substantive modification of *habitats* with the objective of reducing contact between domesticated and wild birds
1. **research** into HPAI in wild birds and mammals including determination of impacts of HPAI outbreaks

2. **long-term monitoring** of migratory bird populations and movements, with focus on enhanced assessment for those species affected by HPAI

3. **robust surveillance programmes with conservation objectives** for HPAI - also preventing delays in diagnosis/research due to regulations on national borders

4. Integrating, sharing and **analysing existing data sets** on population movements and dynamics for risk assessments

5. **early warning systems**

6. **international cooperation in surveillance** and risk assessments across flyways

7. **improving rapid wildlife reporting systems**
Further ways to reduce risks

1. **preventing spillover from poultry to wildlife** and reducing risks to both sectors by
   - enhancing biosecurity measures,
   - implementing adequate **farming and aquaculture standards**
   - **vaccinating** domestic birds
   - **better planning** as well as reforming and **reassessing intensive production**

2. **mitigating high risk activities** for virus exchange between livestock, wildlife and people by e.g.
   - restricting the grazing of domestic ducks in natural wetlands
   - addressing risks associated with **high-risk markets and trade** of wild birds

3. strictly applying internationally agreed **quarantine/health standards** for cross-border transport of birds and their products and **prevent illegal transportation** of birds and their products

4. **maintain ecosystem integrity** to reduce wild and domestic interfaces.
Importance of protected areas for reducing disease risks

Potential Effects of Habitat Change on Migratory Bird Movements and Avian Influenza Transmission in the East Asian-Australasian Flyway

John Y. Takekawa 1,2,3,a, Diann J. Prosser 1, Jeffery D. Sullivan 4, Shengli Yin 3,4,a, Xinxin Wang 4, Geli Zhang 2,3 and Xiangming Xiao 4

Abstract
Wild wetlands, and especially migratory bird habitats, have been identified as critical for avian influenza (H5N1). This study explores the potential effects of habitat change on migratory bird movements and avian influenza transmission in the East Asian-Australasian Flyway (EAAF), where extensive habitat conversion has occurred. Rapid environmental changes in the EAAF, driven by human activities, may influence bird movements and disease transmission. The study aims to assess the impacts of habitat modification on avian influenza risk and to recommend strategies for conserving migratory bird habitats to reduce disease risks.
Most conversions to HPAI occur in intensive poultry production systems; increase in outbreaks with growth of poultry sector

(Dhingra et al. 2015, Front Vet Sci; Reperant et al. 2012 Curr Top Microbiol Immunol)

Thanks to Thijs Kuiken, Erasmus Medical Centre, Netherlands
How can we reduce chance of future HPAI viruses spilling over from poultry into wildlife?

ourworldindata.org, fao.org/faostat, 10.1126/science.adf0956

Kuiken & Cromie 2022, DOI: 10.1126/science.adf0956
Wider context of wildlife health

For HPAI – obligations to maintain ecosystem resilience (even creating new protected areas?) has multiple benefits including

• Reduces risks of serious impacts
• Improves chances of recovery of populations
Key take home messages

Guidance

• Essential for environment sections of government and agencies to take responsibility for wildlife

• Preparedness and planning is key – test plans

• No inappropriate responses

• Take wider pressures off wildlife to promote resilience and recovery from HPAI