

# The Ramsar Convention's approach to avian influenza issues

*Dr Nick Davidson, Deputy Secretary General  
Ramsar Convention on Wetlands*

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This paper summarises the focus and contents of Ramsar Resolution on avian influenza adopted by the 150 member countries to the Ramsar 9<sup>th</sup> meeting of the Conference of the Parties (COP9), Kampala, Uganda, November 2005; clarifies some issues of waterbird 'flyways' and corrects some widespread misconceptions; and identifies 10 key information needs.

## **Ramsar COP9**

At COP9 Parties recognised that Highly Pathogenic Avian Influenza (HPAI), and particularly the H5N1 strain, raises significant issues for the implementation of the Convention. They considered the matter as an urgent and emerging issue, and during COP9 developed and adopted Resolution IX.23: "*Highly pathogenic avian influenza and its consequences for wetland and waterbird conservation and wise use*". A lead role at COP9 and subsequently has been taken by Scientific & Technical Review Panel member David Stroud (UK), who also represents Ramsar on the Avian Influenza Task Force convened by CMS.

Resolution IX.23 focused on issues and risks to the commitments of Parties to the conservation and wise use of wetlands, and notably those concerning migratory waterbirds, but many issues and approaches are highly relevant to biodiversity concerns more generally. In Resolution IX.23 Parties *inter alia*:

- ◆ Recognised that the HPAI) H5N1 outbreaks since late 2003 have been historically unprecedented in their geographical scope and virulence; have had major impacts on rural livelihoods linked to the keeping of domesticated birds (mainly poultry), and on nature conservation values (including major mortality of waterbirds on at least three Ramsar sites), and that the westward spread through Eurasia has affected an increasing number of countries;
- ◆ Were conscious of the global health, social and economic consequences of a human influenza pandemic if the current subtype of HPAI either genetically reassorts or adaptively mutates into a form transmissible between humans;
- ◆ Noted the particular difficulties that developing countries face in responding adequately to the current spread of HPAI, especially given the significance in many countries of both domesticated and wild birds as the basis of rural livelihoods; but

- ◆ were mindful that all currently known cases of human infection with the current strain of HPAI have been through contact with, or by consumption of, infected poultry, and none through contact with wild birds; but
- ◆ Recognised that public attitudes and support for wetland conservation, particularly Ramsar sites and other wetlands of importance for waterbirds, could be negatively affected by concerns as to the possible role of waterbirds in the spread of HPAI;
- ◆ Noted that HPAI is considered to have been spread between countries by a number of different vectors, including
  - through the movement of poultry, other avian livestock and cage birds and associated activities to service the respective industries
  - through both the legal and illegal trade in birds, and
  - through migrating waterbirds;
- ◆ But also noted that the relative significance of these different modes of spread have varied, and that evidence of causal links in many cases is weak or lacking;
- ◆ Greatly welcomed the major involvement in this issue of the Food and Agriculture Organisation (FAO), the World Health Organisation (WHO), and the World Organisation for Animal Health (OIE); and
- ◆ Recognised that there are significant benefits from international cooperation, although development of surveillance schemes and contingency planning will need to be determined nationally.

In Resolution IX.23, Parties expressed concern that in many countries there is a significant lack of information and, in some countries, public misunderstanding, on important issues related to the spread of HPAI, the risks it may pose, and how to anticipate and respond to outbreaks of HPAI.

The Resolution recognised the particular importance of extensive and long-term data sets relating to bird movements and waterbird counts as an essential information resource, since this allows exploration of possible scenarios of the current HPAI spread, including identification of areas of higher relative risk along migratory flyways, and their role in helping to inform possible policy responses to outbreaks, but also recognised the need urgently to access and analyze such data, networks, and other information and to fill outstanding gaps in scientific understanding of these factors.

Contracting Parties recognized that there were many ongoing national actions and plans for monitoring wetlands and waterbird populations for HPAI; and affirmed the need to strengthen research and monitoring related to waterbird migration and trade in waterbirds, as well as disease processes in wild bird populations, especially that research identified by the Scientific Task Force on Avian Influenza. They stressed that key to this is rapid and continued sharing of information given the potential significance of this information in terms of bird conservation and

population regulation. This would enable or improve risk assessments and support countries to be better prepared to improve conservation of waterbirds and future management of avian disease outbreaks. The need to develop a long-term funding regime to secure long-term monitoring of waterbird populations *inter alia* via the International Waterbird Census and its derived outputs, and as a means of informing a wide range of national and international conservation policies, including risk assessment for HPAI, was identified.

Through Resolution IX.23 Parties:

- ◆ Called for fully integrated approaches to address HPAI by bringing ornithological, wildlife, and wetland management expertise together with those traditionally responsible for public health and zoonoses;
- ◆ Supported the conclusions of WHO, FAO and OIE that attempts to eliminate HPAI in wild bird populations through lethal responses such as culling are not feasible and may exacerbate the problem by causing further dispersion of infected birds; and
- ◆ Emphasised that destruction of wetland habitats with the objective of reducing contact between domesticated and wild birds does not amount to wise use as urged by Article 3.1 of the Convention, and that this also may exacerbate the problem by causing further dispersion of infected birds.

Parties stressed the importance of developing and implementing national contingency or action plans related to the potential risk of disease transmission, and the need for national preparedness to instances of detection of HPAI in birds, notably wetland-dependent species. They also noted the essential need for adequate standards for farming and aquaculture, and the need to develop strategies that limit the risk of disease transmission between wild and domestic birds through enhanced biosecurity.

Parties urged the STRP, working with the Scientific Task Force on Avian Influenza, to provide relevant input on practical measures to reduce the risk of disease transmission between wild, captive and domesticated birds, to those agencies developing contingency and wetland management plans related to HPAI. They requested the Secretariat working with the STRP to assist in sharing information, including practical advice that will assist countries to respond to this serious and rapidly developing situation, and to report back on progress to the Standing Committee and to COP10 (2008)

### **Waterbird flyways: some concepts and misconceptions**

“Flyway” is the concept developed to describe areas of the world used by migratory waterbirds, and is defined under the Ramsar Convention (Annex to COP7

Resolution VII.11) as the migration routes(s) and areas used by waterbird populations in moving between their breeding and wintering grounds.

But, it is important to be aware that each individual species and population migrates in a different way and uses a different suite of breeding, migration staging and wintering sites, so a single flyway is composed of many overlapping migration systems of individual waterbird populations and species, each of which has different habitat preferences and migration strategies.

From knowledge of these various migration systems, it is often (but not always) possible to group the migration routes used by waterbirds into broad flyways, each of which is used by many species, often in a similar way, during their annual migrations; but there are usually no clear separations between flyways, and overlaying migration routes of species in different waterbird families indicates considerable differences in movement patterns, such that defining a single inter-taxon flyway envelope, except in the very broadest geographical sense, can be misleading. Nevertheless, the 'flyway' is a valuable concept for permitting the biology and conservation of many waterbirds, as with other migratory species, to be considered in broad geographical units into which the migrations of species and populations can be more or less readily grouped.

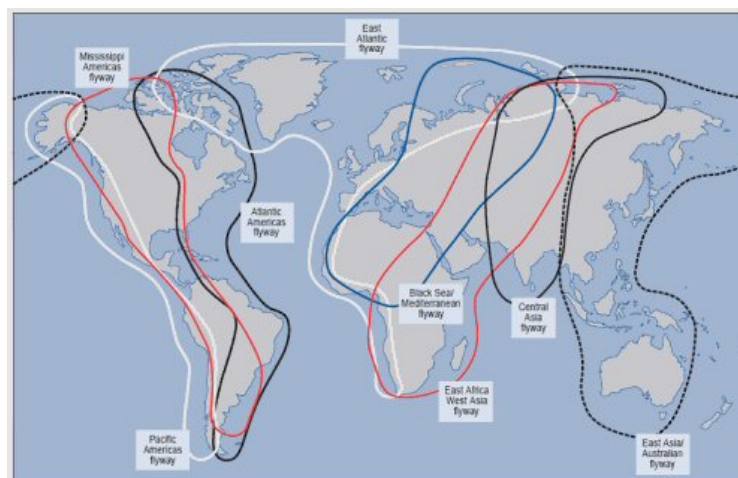


Figure 1. Global flyways defined for migratory Charadrii (shorebirds/waders). Source: International Wader Study Group (2002) *International Wader Studies* 12.

One global waterbird flyways map (Figure 1) has been particularly widely used in HPAI discussions and reporting, but there are risks of misinterpretation in risk assessment and other analyses in applying it to all migratory waterbirds. This is because it is specifically relevant only to Charadrii (shorebirds or waders), which have not been implicated as H5N1 carriers. It is important to also focus on the migration routes those taxa which have been found to carry H5N1, such as Anatidae (ducks, geese and swans). Their migration routes and flyway envelopes are rather

different from shorebirds (see examples in Figure 2), and for some species birds move on a very broad migration front rather than separating into distinct biogeographic populations.

a)

b)

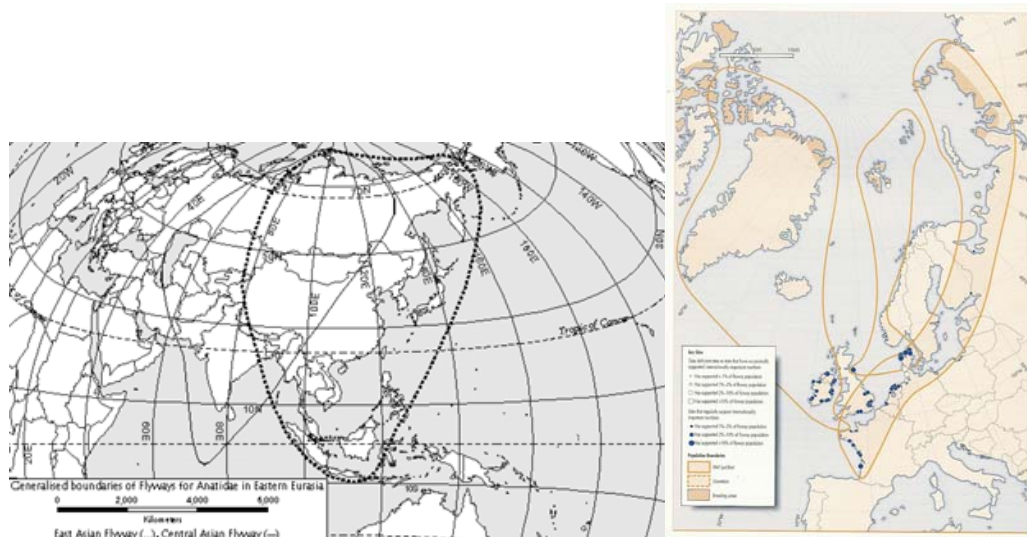


Figure 2. Examples of migration routes for Anatidae species: a) generalised Eastern Eurasia Anatidae flyways (source: Wetlands International *East Asia Anatidae Atlas*); and b) flyways for separate biogeographic populations of the Brent Goose (source: Wetlands International *Atlas of Anatidae populations in Africa and Western Eurasia*).

### 10 key information needs for waterbirds (and other wild species)

Ramsar's experts have identified the following as being where there is a key need for better information and analyses to inform risk assessment, contingency planning and decision-making on HPAI. These are:

1. Good international analysis and syntheses of the vast body of bird ringing recovery data that exists, leading to:
2. Global synthesised flyway maps for other waterbird groups/regions (in addition to shorebirds).
3. International synthesis of information concerning migration phenology. What species arrive in which country in which month? Much (scattered) national info exists but hardly collated internationally other than for a few species. This has policy relevance in terms of identifying high risk periods.
4. Immediate surveillance for AIVs in the vicinity of past and current HPAI outbreaks - to establish actual infection levels in wild birds using these areas.
5. Long-term monitoring (surveillance) for AIVs at strategically important mixing areas for many species and populations on migration (e.g. Waddensea, Gulf of Sivash etc.).

6. Better international co-ordination of existing AIV surveillance activity and reporting.
7. Experimental studies of infection processes following H5N1 infection in a range of wild ducks species (all studies to date have involved domestic ducks), especially looking at viral shedding periods where birds are not lethally affected.
8. Better consolidated information on international poultry trade routes (both legal - and as far as it can be ascertained - illegal).
9. Field studies to develop practical guidance on ways and means of reducing contact between wild waterbirds and domestic poultry, especially those suitable for use in developing countries (village poultry situations).
10. Studies of the behaviour of resident birds (e.g. crows, pigeons etc.) that associate with people and may act as a bridge between waterbirds and poultry, with the aim of developing practical guidance on ways and means of reducing this risk.

Better international co-ordination of existing HPAI surveillance activity is especially important. Better near-real time information is needed on what surveillance is occurring, especially information on those species that are being sampled, as well as any negative results (which in this context are as important as positives).

There is an urgent need for a clearing house mechanism for rapid reporting of HPAI surveillance data, so all can obtain consolidated information on which species have been assessed, numbers and locations. For example, at present, no information is widely available for European countries on what species were assessed for AIV last year (October-December). This would help answer whether HPAI is becoming increasingly prevalent in wild birds – or if it is just an artefact of increased surveillance and the testing of dead birds? Such key information would support to the development of a more strategic international approach to HPAI surveillance along flyways.