



Convention on the Conservation of Migratory Species of Wild Animals

Secretariat provided by the United Nations Environment Programme



International Scientific Task Force on Avian Influenza (AI) to analyse links between Migratory Water Birds and AI

A new Scientific Task Force on Avian Influenza (AI), composed of representatives and observers from the principal international organizations concerned with migratory species issues, met on October 18 in Bonn, Germany, in an atmosphere of increased concern that, while it is not clearly established how the disease is spreading, migratory birds may be a contributing factor to the spread of the highly pathogenic Avian Influenza (HPAI) strain A/H5N1.

As there is no one organization dedicated to studying and monitoring specifically the complex links between human health and that of animals and the environment¹, the Scientific Task Force was convened in late August by the UNEP Convention on Migratory Species (CMS) to ensure that international efforts to contain HPAI H5N1² did not overlook vital information concerning migratory species and other environmental considerations including the economic impact³ on those areas where migratory birds support the livelihoods of local populations.

Confirmation of recent outbreaks of H5N1 in Rumania has focused attention of health officials on the Danube delta, which contains Europe's largest wetlands and is a major migratory area for wild birds coming from Russia, Scandinavia, Poland and Germany and flying to warmer non-breeding (wintering areas) in North Africa including the Nile delta, and Western Europe.

While there is a possibility of transmission of the virus through contacts at stop-over sites between birds from Southwest Siberia and other species migrating to western Europe from other areas, the likelihood of this possibility is difficult to estimate because of lack of detailed information on the migratory routes of many species of birds, an accurate quantification of the number of birds involved, or precise information on the veterinary and epidemiological aspects of the AI, all of which are crucial to a credible risk assessment. Task Force fears the paucity of reliable information could lead to actions by well-meaning organizations and individuals, which could have unfortunate and possibly disastrous long-term consequences for conservation, especially some of the species which already have small populations and are considered globally threatened."

Members of the Task Force caution against premature finger-pointing at migratory wild birds, indicating that more needs to be known about their precise migratory routes and where they stop, and to understand which species may be more susceptible to such a virus. And thereafter, which of these

¹ The UN Food & Agriculture Organization (FAO) monitors the production of livestock and crops, but is not mandated to monitor threats or dangers to or from wild animals and plants. (FAO has established an Avian Flu Technical Task Force in order to closely monitor the current situation in Asia, and provide technical support for handling the crisis and facilitate communication between relevant international organizations.) The World Health Organization (WHO) only intervenes in countries threatened by disease when officially invited to do so, and the World Animal Health Organization has a limited volunteer committee to consider wildlife related diseases.

² Influenza A (H5N1) virus – also called “H5N1 virus” – is an influenza A virus subtype that occurs mainly in birds. The influenza virus was first isolated when it caused the first known mass death of wild birds (terns) in South Africa in 1961. Like all bird flu viruses, H5N1 virus could circulate over several years among birds worldwide, is very contagious among birds, and can be deadly. <http://www.cdc.gov/flu/avian/gen-info/facts.htm>

³ Economic impact may include everything from poverty, civil unrest and large-scale human migration, to pollution of water; interruption of plant pollination, removal of pests from crops and forest species and control of invasive plant species; disruption of sustainable development practices; and bankrupting of small farm holdings.

species are able to survive the attack of the virus, and, if fit enough to migrate, able to carry the virus, if at all. And if they can carry it, whether they could spread it to other species or to poultry.

The guiding principle of the Task Force is that the best chance of avoiding a further mutation of A/H5N1 that could lead to a pandemic affecting millions of humans is to take measures addressing the root causes and based on the best possible knowledge.

The Task Force emphasizes the need for a global approach to the thorough analysis of the relationship between AI and migratory birds, noting that while the better-known migration links are with Africa, which along with South and Southeast Asia, represents one of the main non-breeding (wintering) areas for species breeding in Southwest Siberia and Central Asia, any examination of the relationship between AI and migratory birds must be based on a world-wide analysis, addressing not only the whole of Asia, Africa, Oceania and Europe, but also North America (Alaska and Canada).

Therefore the focus of the October 18 meeting was the need to quickly research and establish the data and analysis required to enable or improve risk assessment by:

1. clarifying the virus behaviour in (i) different water bird populations, especially viral incubation periods, the infectious period in birds and the symptoms affecting individual wild birds, as well as determining their survival rate; and (ii) in the aquatic habitats which are breeding, staging and non-breeding (wintering) grounds for the birds;
2. establishing informed assessment of the possibility or likelihood of transmission from wild populations to domestic flocks including other non-water bird species found near poultry areas;
3. identifying the nature of migratory routes and timings for key migratory species to expand and/or refine existing ecological monitoring of these populations;
4. developing a combined risk assessment based on the known behaviour of the virus, risks of transmission, routes and timing of migratory species, as well as known poultry husbandry techniques;
5. improving farming standards and developing strategies to limit the risk of any disease transmission between domestic and wild birds.

It was at the same time agreed that priority action to try to confine and solve the problem should address the root causes of the insurgence and spread of the epidemic, which are clearly to be found in rural poultry practices, the movement of domestic poultry, and farming methods, as well as in global and domestic trade of wild animals. Measures recommended by the Task force include:

- regulation of animal markets;
- improved standards in poultry farms, farming and marketing practices and enhanced quality control of animal vaccines;
- precautionary suspension or restriction of the global wild bird trade;
- global surveillance of avian influenza in wild birds;
- identification of the precise migratory routes of waterbirds and highest risk locations along different flyways, including breeding, staging and non-breeding (wintering) sites;
- avoiding counter-productive measures like culling wild birds, or destroying their habitats.

A new meeting of the Task force is planned at the beginning of November 2005.

The Avian Influenza epidemic and its linkages with wild birds and their natural habitats is on the agenda of three major intergovernmental meetings to be held in the coming weeks:

- 3rd Meeting of the Parties to the Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA MOP3), 23-27 October 2005, Dakar, Senegal
http://www.unep-aewa.org/meetings/en/mop/mop3_docs/mop3.htm
- 9th Meeting of the conference of the Contracting Parties to the Ramsar Convention on Wetlands (Ramsar COP 9), 8-15 November 2005, Kampala, Uganda
http://www.ramsar.org/index_cop9_e.htm
- 8th Meeting of the Contracting Parties to the Convention on the Conservation of Migratory Species of Wild Animals (CMS COP8), 20-25 November 2005, Nairobi, Kenya
http://www.cms.int/bodies/COP/cop8/cop8_mainpage.htm

On Saturday November 19, immediately before CMS COP8, the Convention on Migratory Species will host a roundtable discussion on *MIGRATORY SPECIES AS VECTOR OF DISEASES: MYTH OR REALITY?* at which internationally-recognized experts and scientists will discuss and help clarify the role migratory birds

play in the transmission of the avian flu to animals and humans. The roundtable is being held at UNEP Headquarters in Nairobi, Kenya.

For further information and/or requests for interviews, please contact:

Paola Deda
Inter-agency liaison officer
UNEP/CMS Secretariat
Convention on the Conservation of Migratory Species
Martin-Luther-King str., 8
D-53175 Bonn, Germany
Tel: +(49)228-815-2462
Fax: +49-(0)228-815-2449
E-mail: pdeda@cms.int
Website: www.cms.int

Members of the Task Force

Robert Hepworth, Executive Secretary, Professor Colin Galbraith, Chairman of the CMS Scientific Council, and Marco Barbieri, Scientific and Technical Officer, UNEP Convention on Migratory Species (CMS), <http://www.cms.int/>

Bert Lenten, Executive Secretary and Sergey Dereliev, Scientific & Technical Officer, Agreement on the Conservation of African-Eurasian Migratory Waterbirds (AEWA), <http://www.unep-aewa.org/about/introduction.htm>

John O'Sullivan, International Treaties Advisor and CMS Scientific Councillor for birds, Birdlife International <http://www.birdlife.org/>

Niels Kanstrup, President, CIC Migratory Birds Commission, CIC - International Council for Game and Wildlife Conservation (CIC) (also representing the Federation of Associations for Hunting and Conservation of the EU (FACE)) <http://www.cic-wildlife.org>

Peter Bridgewater, Secretary General, Nick Davidson, Deputy Secretary General and David Stroud, Scientific and Technical Review Panel, Ramsar Convention on Wetlands <http://www.ramsar.org>

Ward Hagemeijer, Programme Head Biodiversity Conservation, Jan Veen, Associate Expert and Taej Mundkur, Asia-Pacific Migratory Waterbird Conservation Strategy Coordinator, Wetlands International <http://www.wetlands.org/>

William Karesh, DVM, Director of the Field Veterinary Program of the Wildlife Conservation Society <http://www.wcs.org/> [Observer]

Willem Schoustra, FAO http://www.fao.org/ag/againfo/subjects/en/health/diseases-cards/special_avian.html [Observer]

Pierre Quiblier, WHO-UNEP Health and Environment Linkages Initiative (HELI) <http://www.who.int/> [Observer]

Relevant Links

AVIAN FLU AND WILD BIRDS <http://www.wetlands.org/IWC/Avianflu/default.htm>

Avian Influenza: How can we protect human, livestock and wildlife health from Avian Influenza?
World Conservation Society Fact Sheet <http://www.wcs.org/media/file/avian-influenzamigratorybirdsauq2005factsheetupdatev2.pdf>

Avian Influenza:

Its significance for the conservation of wild birds and the role of hunting
Joint Position Statement of CIC and FACE
<http://www.cic-wildlife.org/index.php?id=170>

"Avian influenza" interview with Taej Mundkur of Wetlands International and André Farrar from the Royal Society for the Protection of Birds in the United Kingdom (Singapore Radio International)
15 October 2005
<http://www.rsi.sg/english/perspective/view/2005101518163/1/.html>

BirdLife International: Statement on Avian Influenza ("Bird 'flu")
14 October 2005
http://www.birdlife.org/action/science/species/avian_flu/index.html

Guidelines for Member States enhanced surveillance for avian influenza viruses in wild birds in the European Union – September 2005 to January 2006
<http://europa.eu.int/rapid/pressReleasesAction.do?reference=MEMO/05/304&format=HTML&aged=0&language=EN>

Key facts about Avian Influenza (Bird Flu) and Avian Influenza A (H5N1) Virus Centers for Disease Control and Prevention
<http://www.cdc.gov/flu/avian/gen-info/facts.htm>

Potential risk of Highly Pathogenic Avian Influenza (HPAI) spreading through wild water bird migration (1 September 2005)
<http://www.fao.org/ag/againfo/subjects/documents/ai/AVIbull033.pdf>

Wild birds and Avian Influenza
http://www.fao.org/ag/againfo/subjects/en/health/diseases-cards/avian_HPAIrisk.html

Avian influenza - fact sheet http://www.who.int/csr/don/2004_01_15/en/

The World Health Organization (WHO), The Office International des Epizooties (OIE) and the Food and Agriculture Organization (FAO) all concur that "the control of avian influenza infection in wild bird populations is not feasible and should not be attempted."
http://www.who.int/csr/don/2005_08_18/en/index.html

"The Human-Animal Link" [William B. Karesh](#) and [Robert A. Cook](#), *Foreign Affairs*, [July/August 2005](#)
<http://www.foreignaffairs.org/20050701faessay84403/william-b-karesh-robert-a-cook/the-human-animal-link.html>

"Where Avian Flu Pandemic Looms, A Global Effort Is Underway"

<http://www.wcs.org/353624/avianflupandemiclooms>**Bird Experts Warn Against Culling Wild Birds to Control Flu**

Environment News Service (ENS) , 21 October 2005

CAMBRIDGE, UK, October 20, 2005 (ENS) - The world's top bird conservation organization warned today that attempts to control the avian influenza virus by culling wild birds could spread the virus even more widely.

More: <http://www.ens-newswire.com/ens/oct2005/2005-10-20-02.asp>

Threat to rare birds as avian flu spreads

By David Evans , Reuters (UK) , 21 October 2005

PARIS (Reuters) - Avian flu, believed to be carried south from China and Siberia by migrating wildfowl, threatens to push some of the world's rarest birds toward extinction, conservation groups said on Thursday.

More: http://today.reuters.co.uk/news/newsArticle.aspx?type=scienceNews&storyID=2005-10-20T130932Z_01_MOL047169_RTRIDST_0_SCIENCE-BIRDFLU-CONSERVATION-DC.XML

Backgrounder

Avian influenza was first identified over 100 years ago during an outbreak in Italy. Since then, the disease has cropped up at irregular intervals in all world regions. In addition to the current outbreak in Asia, recent epidemics have occurred in Hong Kong in 1997-1998 and 2003, in the Netherlands in 2003, and in the Republic of Korea in 2003.

Once domestic birds are infected, avian influenza outbreaks can be difficult to control and often cause major economic impacts for poultry farmers in affected countries, since mortality rates are high and infected fowl generally must be destroyed -- the technical term is "culled" -- in order to prevent the spread of the disease. http://www.fao.org/ag/againfo/subjects/en/health/diseases-cards/avian_bq.html

Migratory birds are perceived by some as a potential threat to animal and human health, as they carry several infectious agents, which they may spread along their migratory pathways.

Over the last few years, there have been a series of outbreaks of the Highly Pathogenic Avian Influenza (HPAI) virus, H5N1¹, among domestic poultry in China, Japan, South Korea and Southeast Asia, resulting in the culling of several million poultry. In May-July of this year, an outbreak of the same virus at Qinghai Hu Lake in China affected at least three species of water birds and caused the second-largest-ever number of deaths (6,000) among wild birds. A second outbreak at lakes in the north of Mongolia, in which Highly Pathogenic Avian Influenza (HPAI)-H5N1 was also identified, caused the deaths of 90 water birds.

Since May 2005, the virus has expanded to Russia and Kazakhstan, where outbreaks were reported in poultry as well as in wild birds. Most water bird populations that breed in central Asia are migratory, using loosely organised flyways, where many species follow similar migratory paths. Breeding populations in central Asia may migrate southwest into southern Europe (the Black Sea/Mediterranean flyway) or eastern Africa (West Asia-East Africa flyway), or migrate south to southern Asia (Central Asian flyway), or to East and Southeast Asia and Australasia (East Asian-Australasian Flyway). They may also mix with birds in the East Atlantic flyway (which breed in northern Asia and spend the non-breeding, northern winter period in western Europe and western Africa); the Central Pacific flyway (those breeding in East Asia and migrating south to the Pacific Islands and Australasia); and the Pacific Flyway (those breeding in East and Far East Asia and migrating east to North America).

There are several species of conservation concern that frequent the sites or areas that have been affected by H5N1, including: the Bar-headed Goose (5,000 individuals out of a global population of 52,000-60,000 have already died from AI in the current epidemic), Lesser White-fronted Goose, Swan Goose, Red-breasted Goose, Oriental Stork and Siberian Crane. Even species currently not threatened could potentially suffer considerable mortality that would significantly worsen their conservation status.

Note on possible transmission of AI through bird trade

<http://www.wetlands.org/IWC/Avianflu/default.htm>

The interaction between humans and wild and pet birds and their products in a number of ways increases the possibility of dissemination of diseases within a country and around the world. This is illustrated by the following examples:

BIRD TRADE - domestic and international trade in wild and cage birds - involves millions of individuals annually, and the frequent occurrence of mixed markets could allow virus to pass between species and cross borders.

- There is reason to believe that the trade in laughing thrushes (*Garrulax spp*¹⁵) could provide a potential avenue for dissemination of avian influenza virus from China to Indonesia—a spread that does not lend itself to explanation by natural migration, especially in light of the fact that there are no reported outbreaks in either Malaysia or the Philippines.
- In 2005, H5N1 type A influenza virus was isolated from two mountain hawk eagles *Spizaetus nipalensis* illegally imported to Belgium from Thailand; it was believed that the birds may have been fed on infected chicken meat.
- Another highly pathogenic paramyxovirus for domestic poultry entered Italy through a shipment of parrots, lovebirds, and finches for the pet trade that had been imported from Pakistan.

TRADE OF BIRD PRODUCTS – the trade of bird meat and meat products, eggs and egg products, feathers are capable of carrying viruses, for example, in 2003-2004, infected domestic duck meat exported from China to Korea and Japan was found to contain H5N1

Note on traditional poultry farming practices and regulating the new western trend to high-density livestock rearing

The spread of avian flu in Asia over the past two years has been correlated with areas of high populations and high human-to-poultry contact. The locales of recent outbreaks of avian influenza correspond to very high density of the poultry population. In the West, the problem is quite different and relates to the rise of high-density, or factory farming.

Traditional (Asian) farming methods, where by custom the animals live in close, often unsanitary, quarters with people, and where few can afford to adopt higher hygiene standards, provide the conditions for viruses to accumulate mutations and spread rapidly, which may eventually result in an outbreak of infectious disease. Frequent contact with domestic animals, poor animal sanitation and poor personal hygiene will then spread the disease among animals and humans.

Recommended changes include segregation of bird varieties by fencing off poultry and animals, especially free-range chickens and wetland dwelling ducks and geese, and reducing interaction between animals and humans, as well as regulation of wet markets in many countries, where animals and poultry are slaughtered in the open and in unsanitary conditions. On-going scrutiny of farming and animal husbandry practices, of regulatory and inspection regimes, of general codes of practice are vital. Controls and testing of movements of live poultry and eggs within and between countries need to be stepped up.

ⁱ Influenza A (H5N1) virus – also called “H5N1 virus” – is an influenza A virus subtype that occurs mainly in birds. It was first isolated from birds (terns) in South Africa in 1961. Like all bird flu viruses, H5N1 virus can over time circulate among birds worldwide, is very contagious among birds, and can be deadly. <http://www.cdc.gov/flu/avian/gen-info/facts.htm>

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D-53175 Bonn, Germany
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Website: www.cms.int