FAOAIDEnews
Avian Influenza Disease Emergency

Situation Update 50
11 February 2008

Bangkok Conference on Avian Influenza

H5N1 may not bring pandemic, but remains major concern

Bangladesh: FAO/Astrid Tripodi

Scientists attending a major international conference on avian influenza in Bangkok towards the end of January generally agreed that while they are today less concerned about H5N1 presenting an imminent pandemic risk, H5N1 virus entrenchment continues in parts of China, Viet Nam, Indonesia and Egypt, and possibly also in Nigeria, Bangladesh and the Black Sea basin.

The conference, the *Bangkok International Conference on Avian Influenza 2008: Integration from Knowledge to Control*, held in the Thai capital from 23 to 25 January 2008, was organised by Thailand's National Center for Genetic Engineering and Biotechnology (BIOTEC) and the National Science and Technology Development Agency (NSTDA) as a forum for world scientific experts and scientists working in affected areas to share knowledge, experiences and expertise. The meeting offered participants an opportunity to bring themselves up to date with the latest on HPAI research and disease control and prevention, both on human and poultry health aspects. Keynote addresses were delivered by some of the world's most eminent experts in the field, including Robert Webster of St Jude Children's Research Hospital (United States), Albert Osterhaus of the Erasmus Medical Centre (Netherlands), Kennedy Shortridge of the University of Hong Kong (PR China), Yoshihiro Kawaoka of the University of Wisconsin-Madison (United States) and Peter Palese of Mount Sinai School of Medicine (United States).

Representing FAO, Scott Newman, Les Sims and Vincent Martin addressed the meeting, a measure of the major contribution FAO continues to make to the international fight against avian influenza in poultry.

Arguing that because pandemic influenza is now recognised in the short term as a non-eradicable zoonosis of grave destructive potential, Shortridge called for international unity, cooperation and universal prevention. Other speakers voiced a pressing need to actively focus more on the "big picture", noting that although H5N1 may not bring a pandemic, the progressive encroachment of poultry by wild bird-carried avian influenza viruses remains a major concern.

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Others referred to changes in time in strategies to control and prevent HPAI H5N1, with the phenomenon illustrated in the presentation of Dr Nguyen Tren Dzung, Head of the Virology Department at the National Institute for Veterinary Research in Hanoi.

He explained how Viet Nam had initially undertaken a cautiously prepared and well-executed country-wide vaccination scheme, starting at the end of 2005, which had effectively disrupted H5N1 virus transmissions to humans and rendered the disease in poultry manageable for some time. However, today H5N1 has not been eradicated from the entire country and the H5N1-clade 1 virus continues to circulate in the Mekong delta, while poultry in the Red River basin have suffered and are suffering incursions by clade 2.2 and 2.3.4 viruses (Fujian strain) from China.

In the Mekong delta virus circulation is mainly in free-ranging ducks; in the Red River basin, outbreaks are associated with the local abundance of small and backyard holdings, live bird markets, and the trade and traffic in live birds arriving from China. Thus, the Viet Nam example indicates that local factors and stakeholders become more and more important in situations where the disease persists, with a need for approaches to HPAI H5N1 control and prevention which involve smallholders and address more specifically duck flocks.

HPAI risk management from the bottom up

FAO studying pro-poor disease mitigation options

There is a striking paradox in HPAI risk assessment: most backyard holdings seem to escape HPAI infection more so than larger-scale commercial premises, yet none of the backyard holdings worry about biosecurity measures. This suggests that taking a backyard or pro-poor perspective on HPAI risk assessment and management may actually yield valuable insights that could otherwise go unnoticed.

A workshop on avian influenza and other transboundary animal diseases in Southeast Asia organised by FAO, the Royal Veterinary College (RVC) of London and the Agricultural Research Centre for International Development (CIRAD) from 21 to 22 January 2008 in Bangkok, took exactly such a bottom-up approach.

The workshop brought together more than 50 scientists from various disciplines to share their research and try to come up with science-based disease risk management solutions in Southeast Asia. Abstracts of the 37 papers presented during the workshop (most of them on HPAI) are available at http://www.hpai-research.net.

Joachim Otte and Anni McLeod are responsible for FAO's contribution to an HPAI research project in the Mekong region of Viet Nam funded by the UK Department for International Development (DFID)[1], concentrating on the institutional arrangements most suited for disease control in different production and socioeconomic settings.

In Egypt, the backyards extend to roof-tops
(Gisa: FAO/Paolo Pagani)

FAO aims to help the relevant authorities devise an effective, efficient and socially-just disease risk management strategy.

Otte and McLeod see the DFID project as an opportunity to promote the idea of bottom-up self-directed poverty alleviation through improved market access, although this view of pro-poor HPAI management met with mixed feelings during the Bangkok workshop, with Vietnamese participants saying they were not convinced about the potential for the demand-oriented approach.

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Nevertheless, in group discussions there was general support for disease management directed at livelihoods. Data from Viet Nam were presented suggesting that because poor people are particularly reliant on livestock, with the poorest rural strata depending on poultry for income generation, a smallholder-centred approach is critical on both technical and socio-economic grounds.

There was also agreement on the need to recognise the strong interactions between species and diseases (e.g. pig and poultry markets directly affect each other), and that efforts made to manage the risk of one disease (including surveillance, biosecurity and risk communication) often have positive 'spillovers' for the control of others.

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MOST RECENT HPAI OUTBREAKS 2006-08

Note: This list has been compiled on the basis of information up to 11 February 2008.

2008

February	Bangladesh, **China (Hong Kong SAR)**, India, Lao PDR, Turkey, Ukraine, United Kingdom, Viet Nam
January	China, Egypt, Indonesia, Israel, Saudi Arabia, Thailand

2007

December	Benin, Germany, Iran, Myanmar, Poland, Russian Federation
November	Pakistan, Romania
October	Afghanistan, Nigeria
August	France
July	Czech Republic, Togo
June	Ghana, Malaysia
April	Cambodia, Kuwait
March	Korea (Republic of)
January	Hungary, Japan

2006

November	Côte d'Ivoire
August	Sudan
July	**Spain**
June	**Mongolia**, Niger
May	Burkina Faso, Denmark
April	Djibouti, Sweden [H5], West Bank & Gaza Strip
March	Albania, Austria, Azerbaijan [H5], Cameroon, **Croatia**, **Greece**, Jordan, Kazakhstan, Serbia, **Slovenia**, **Switzerland** [H5]
February	**Bosnia-Herzegovina**, **Bulgaria**, **Georgia**, Iraq [H5], **Italy**, **Slovakia**

***Green**: wild birds only*

Sources: World Organisation for Animal Health (OIE), European Commission (EC), FAO and national governments

I. WORLDWIDE SITUATION

Eleven countries in Africa, Asia and Europe reported H5N1 HPAI during January 2008: Bangladesh, China, Egypt, India, Pakistan, Saudi Arabia, Thailand, Turkey, United Kingdom, Ukraine and Viet Nam. 147 outbreaks/cases of H5N1 HPAI were reported worldwide in January 2008 in countries that are shown in Chart 1 (as compared to 102 in 2006 and 119 in 2007). The geographical location of outbreaks/cases is shown in Figure 1.

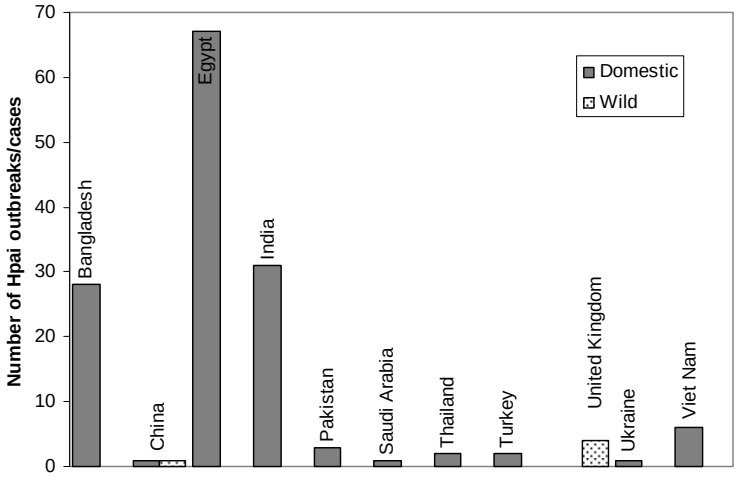

Chart 1 **H5N1 HPAI outbreaks confirmed during January 2008** *(Source: FAO EMPRES-i)*

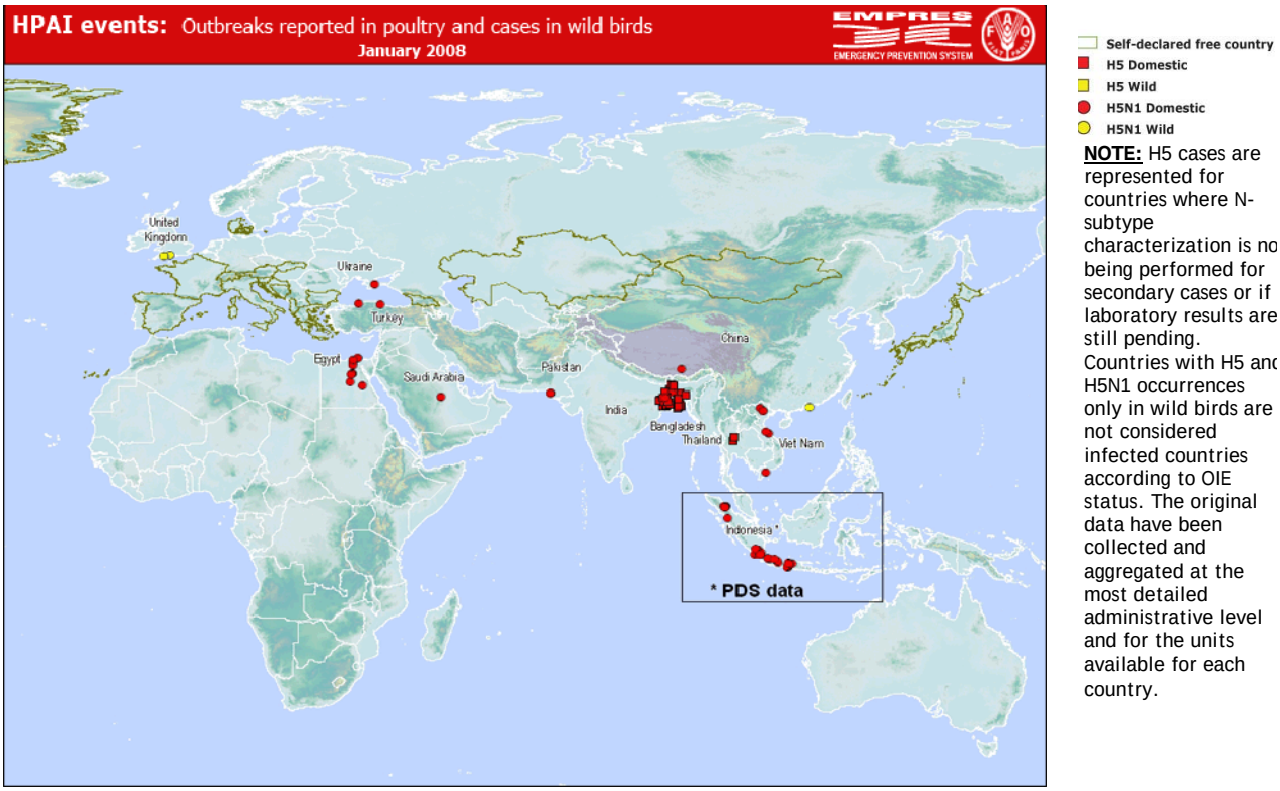

Figure 1 **H5N1 HPAI outbreaks in poultry and cases of H5N1 infection in wild birds reported in January 2008** *(Source: FAO EMPRES-i)*

The evolution of the number of reported cases over the last six months by continent and by species group (wild or domestic) is represented in Charts 2 and 3, respectively.

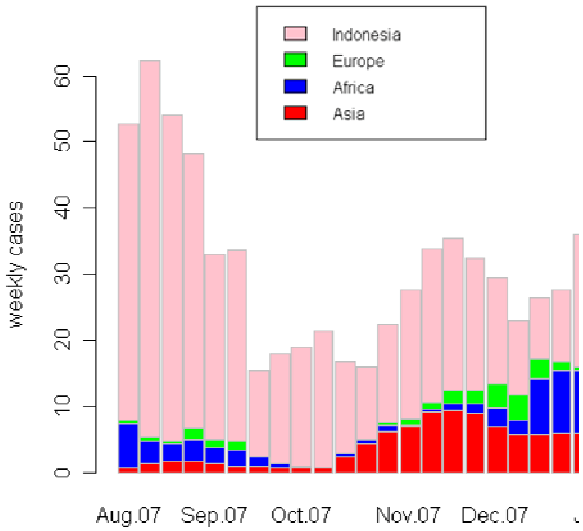

Chart 2
HPAI outbreaks (domestic and wild birds) per continent reported between August 2007 and January 2008
(Source: FAO EMPRES-i)

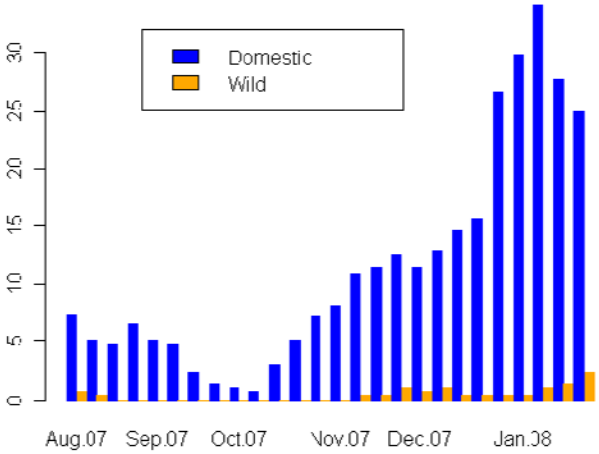

Chart 3
Number of H5N1 HPAI outbreaks of HPAI in poultry vs cases of H5N1 infection in wild birds reported between August 2007 and January 2008, (without considering Indonesia's PDS data)
(Source: FAO EMPRES-i)

II. SITUATION BY CONTINENT/REGION

AFRICA

In Africa, **Egypt** reported 67 HPAI outbreaks during January 2008 in all poultry production sectors (parent, layer and broiler farms, as well as backyard/rooftop) (Chart 4).

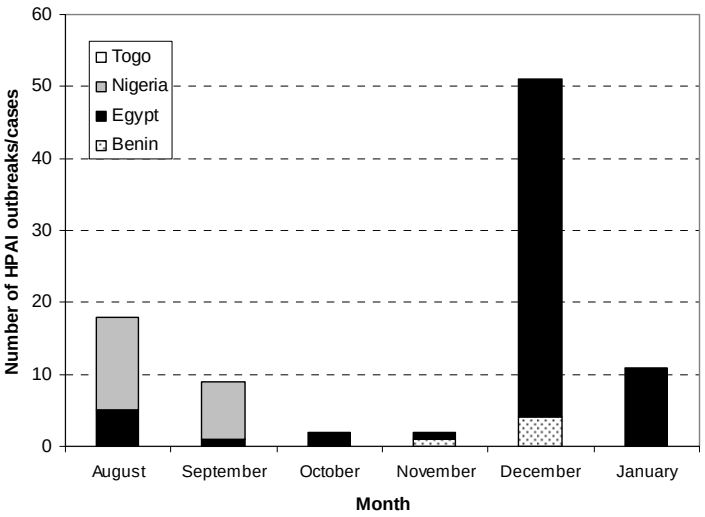

Chart 4 **Number of outbreaks/cases of H5N1 HPAI confirmed between August 2007 and January 2008 in Africa** *(Source: FAO EMPRES-i)*

ASIA

Indonesia is still experiencing the highest number of cases of HPAI type H5N1 in poultry worldwide. The high figure of reported cases for Indonesia in 2007-08 is largely due to the roll-out of a *'participatory disease surveillance'* (PDS) programme that uses participatory techniques combined with an influenza type A rapid test to identify cases of HPAI in backyard village-type poultry production environments (Figure 1 and Chart 2). The programme operates in 157 districts in Java, Sumatra and Bali.

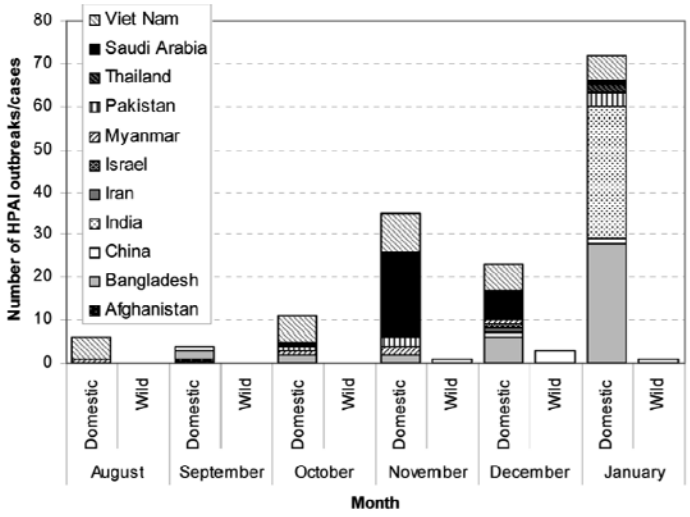

Chart 5 **Number of outbreaks/cases of HPAI (H5N1) confirmed between August 2007 and January 2008 in Asia (without considering Indonesia's PDS data)**
(Source: FAO EMPRES-i)

The H5N1 virus is actively circulating in other hotspots in Asia such as **Bangladesh**, **China, Pakistan, Saudi Arabia, Thailand** and **Viet Nam**.

Outbreaks in poultry were reported repeatedly by **Viet Nam**, mainly in unvaccinated duck production systems. The country's first avian influenza vaccination campaign for 2007 was completed in September for 63 provinces, where a total of 164.47 million poultry were vaccinated (87.42 million chickens, 73.15 million mallard-type ducks and 3.90 million muscovy ducks). More than 42 million doses of vaccine were administered by private livestock firms. Analysis of post-vaccination surveillance data in 41 provinces and cities indicated a protection rate of 65.4 percent (47,037 tested samples) and 72.05 percent based on tested flocks (1,753 tested flocks). Analysis of post-vaccination surveillance data on 15 breeding farms managed by the central government showed that the overall protection rate was 81 percent (3,474 tested samples). Based on serological testing (haemoagglutination inhibition test (HI)), analysis of serum samples for virus activity in unvaccinated domestic waterfowl (ducks and muscovy ducks) showed that the overall positive rate was 4.58 percent (14,427 tested samples) and 13.95 percent based on tested flocks (681 tested flocks). Based on real-time reverse transcriptase Polymerase Chain Reaction (RT-PCR) of swab samples taken from markets and slaughtering points in 25 provinces and cities, the overall rate for virus occurrence was 1.75 percent.

The enzootic situation in **Bangladesh** is of concern, with H5N1 HPAI the number of districts affected rising to 30 out of 64 districts in January 2008**.** During the month, culling operations were carried out on 28 poultry farms. Surveillance and control campaigns have so far not succeeded in interrupting virus transmission between districts.

In **China**, an HPAI outbreak was reported in Tibet which affected broiler chickens and ducks. A wild bird death (a Black-crowned Night Heron) was reported in Hong Kong SAR.

India experienced the worst HPAI epidemic ever in January. 31 outbreaks were reported in 14 districts of West Bengal State, and a 5-km wide poultry depopulated zone was created along the borders of neighbouring states (Assam, Bihar, Jharkhand and Orissa) in an attempt to prevent the spread of HPAI into these states.Through a strategy of culling on infected farms, the spread of virus has been stopped and the disease is considered to be under control.

In **Pakistan**, two commercial broiler farms were affected by HPAI in Karachi.

In **Thailand**, after six months with no reported outbreaks, a new incursion of H5N1 affected native chickens in Pichit and a commercial farm in Nakhon Sawan Provinces.

Some Asian countries such as **Cambodia** and **Lao PDR** did not experience outbreaks of HPAI in January 2008, but they report regularly about the negative results obtained from all samples submitted from suspect cases. **Cambodia** is using an animal health hotline activity to receive reports from the field on suspicious outbreaks or cases of HPAI. **Lao PDR** reports on its regular passive surveillance (laboratory results of suspicious poultry mortality events) and active surveillance (ongoing in 23 high-risk districts in 10 provinces, and consisting of weekly monitoring and sampling in all live bird markets and monthly monitoring with sampling every three months in all commercial farms). **Iraq** also reported the laboratory results of surveillance activities for the month of January. These data refer to all the governorates of Iraq except Kurdistan province. All samples from poultry farms (525), backyard poultry (4,130), game & wild birds (1,270), and markets & slaughter houses (727) returned negative.

EUROPE

In Europe, **Turkey** experienced two outbreaks in backyard chickens at two separate locations close to the Black Sea coast. Both outbreaks are believed to be due to contact with infected wild birds. **Ukraine** reported an outbreak in a poultry farm in Crimea, and the **United Kingdom** found an additional four H5N1-positive swans at the swannery in Dorset, England.

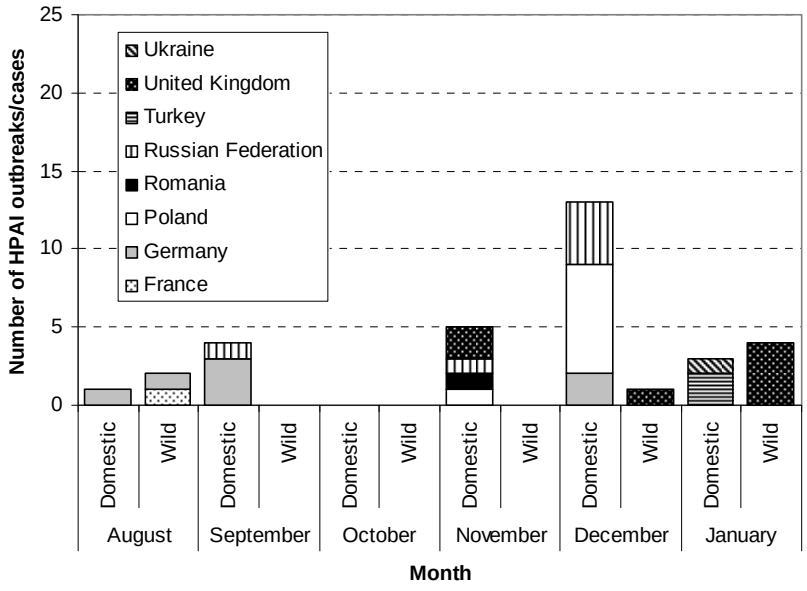

Chart 6 **Number of outbreaks/cases of H5N1 HPAI confirmed between August 2007 and January 2008 in Europe** *(Source: FAO EMPRES-i)*

NEAR AND MIDDLE EAST

The **Saudi Arabia** reported a single HPAI outbreak in a layer farm in January 2008, compared with 20 and 7 outbreaks reported in November and December 2007, respectively.

III. CONCLUSIONS

December 2007 and January 2008 are months in which an increase in the number of HPAI cases in poultry and humans in endemic countries is to be expected. Increased production and marketing in response to festivities at the end of the year could play a determinant role in the increase in number of cases. This epidemiological trend has been observed since January 2004.

The HPAI outbreaks in Europe observed at the end of the year 2007 and beginning of 2008 in domestic birds in Poland and Germany again raise questions about maintenance mechanisms (i.e. potential reservoirs of infection). These outbreaks apparently were not associated with wild bird cases as was seen during the winter of 2006 when there was a high number of cases in wild birds. It has been demonstrated in some regions such as Asia that infected domestic duck populations that have been raised freely and allowed to mix with other species play an important role in the maintenance of H5N1 HPAI virus and its transmission to other poultry species. A similar epidemiological situation could happen in Europe and this has to be investigated as a matter of urgency.

Increasing surveillance in targeted species to detect disease/infection and monitoring coverage of vaccination in poultry populations are crucial for effective control of H5N1 HPAI outbreaks. However, during January, confirmed outbreaks in backyard poultry in the north central part of Turkey and in Crimea, Ukraine, have been associated with the movements of migratory birds to their wintering grounds or movement caused by extreme weather conditions in the Black Sea region.

To determine the real situation of HPAI worldwide and its evolution during 2007, it is important to understand and evaluate the different avian influenza surveillance systems implemented in different countries. Evaluation of the sensitivity of the surveillance systems and methods, i.e. PDS, carried out by the veterinary services, and inputs from poultry owners is needed – including potential biases that focus on one particular sector over another, inclusion of markets and different susceptible species, including wild birds.

Sporadic outbreaks in both wild birds and domestic poultry continue to be reported and the spatial distribution of the disease continues to be wide in many countries, particularly developing countries.

Analysis of data concerning real infection remains very difficult, with the number of outbreaks/cases likely to be underreported even though detection and reporting capabilities have improved significantly. Regionally, the disease continues to be distributed mostly in Asia, with some sporadic incidence in Europe and multiple outbreaks reported from Egypt, Africa. In 2006 there was a higher incidence in Europe especially of cases in wild birds and lower in Africa, while in 2007 the distribution of cases by continent was very similar.

An animated map showing the evolution of outbreaks over the last six months including January 2008 is available at: www.fao.org/ag/againfo/programmes/en/empres/maps.html.

AT A GLANCE

The latest HPAI outbreaks for the period 1 February – 11 February 2008

Note
AIDEnews publishes reports of **confirmed HPAI cases** using the following sources: OIE, European Commission, FAO and national governments.

ASIA

Bangladesh
By 11 February 2008, according to the ministry, the following districts were affected: Dhaka, Gazipur, Narayangonj, Tangail, Jamalpur, Jessore, Noakhali, Gaibandha, Magura, Rajbari, Nilfamari, Dinajpur, Rangpur, Joypurhat, Lalmonirhat, Thakurgaon, Naogaon, Bogra, Feni, Pabna, Kurigram, Moulavibazar, Barisal, Rajshahi, Barguna, Natore, Patuakhali, Netrokona, Bhola, Khulna, Manikganj, Gopalganj, Mymensingh, Sylhet, Kushtia, Jhinaidah, Narsingdi, Bagerhat, Chittagong and Kishoreganj.

China
The Hong Kong Agriculture, Fisheries and Conservation Department reported that a black-crowned night heron found on 29 January 2008 in Southern District; a Great Egret found on 4 January 2008 in Tam Kon Chau, Yuen Long District; a Great Heron found on 9 February 2008 in Lok Ma Chau, Yuen Long District; and an oriental Magpie Robin found on 11 February 2008 in Cheung Sha Wan wholesale food market, Kowloon, tested positive for H5N1.

India
The Department of Animal Husbandry, Dairying and Fisheries issued notifications between 25 January and 2 February 2008 that the following districts in West Bengal had tested positive for the H5 strain of avian influenza in rapid tests conducted at the High Security Animal Disease Laboratory (HSADL):
Bankura, Birbhum, Burdwan, Coochbehar, Dakshin Dinajpur, Hooghly, Howrah, Malda, Murshidabad, Nadia, Paschim Medinipore, Purulia, South 24 Parganas.

Indonesia
By 5 February 2008, the country's participatory disease surveillance (PDS) programme had carried out 134,265 interviews, of which 3.4 percent had resulted in the detection of positive HPAI cases.

Pakistan
FAO reported 4 February 2008 that a suspected HPAI outbreak in the Southern port city of Karachi had been confirmed. A broiler farm had reported high mortality on 30 January. Karachi is one of the country's largest commercial layer rearing areas and most are vaccinated against H5; however, no vaccination is practised in broilers.

Viet Nam
Viet Nam reported 1 February 2008 that an outbreak in Hong Thuy commune, Le Thuy district, Quang Binh province, which started on 16 January and affected unvaccinated ducks, had been confirmed. Another outbreak in Thinh Dan, Thai Nguyen City, Thai Nguyen province, which started on 21 January had also been confirmed.

The Department of Animal Health reported 11 February 2008 that there had been a new outbreak of HPAI among unvaccinated ducks in a household in Thang Loi ward, Song Cong town, Thai Nguyen province.

EUROPE

Serbia
FAO reported 8 February 2008 that on 2 February the National Reference Laboratory for Avian Influenza and Newcastle Disease – Veterinary Specialized Institute Kraljevo had carried out sampling for avian influenza in wild swans on the Danube River, in an area bordering Croatia (Apatin and Backa Palanka towns). Serological tests (hemagglutination inhibition) had shown positive for antibodies against H5 serotype in two birds, both of which had been ringed, one in Serbia, one in Poland. ELISA tests were used for the same samples and both tested positive for antibodies against influenza type A, subtype H5.

One of the two swans also tested positive for antibodies against Newcastle Disease. Real time RT-PCR results were negative for all samples taken. The Veterinary Directorate decided to conduct further sampling and testing of the flocks. Seven additional samples were taken on 6 February, and results are pending.

Turkey

On 4 February 2008, Turkey that a second HPAI outbreak had been reported in a backyard flock kept outdoors in Yorukler village, Ondokuzmayis district, Samsun province, in the Black Sea region. FAO, OIE and Turkey had reported 21 January that backyard poultry had been affected by HPAI in Sazkoy village, Caycuma, Zonguldak, about 250-300 km north of Ankara and close to the Black Sea.

SUMMARY OF CONFIRMED HPAI OUTBREAKS IN AFFECTED COUNTRIES

(as of 11 February 2008)

Sources: OIE, European Commission (EC), FAO and national governments – WHO for human cases/deaths
Note: Highlighted countries indicate those in which there has been only one officially confirmed outbreak or occurrence

AFRICA	First outbreak	Latest outbreak	Animals affected to date	Human cases / deaths to date
Benin	7 November 2007	15 December 2007	Domestic poultry	-
Burkina Faso	1 March 2006	20 May 2006	Domestic poultry - wild birds	-
Cameroon	21 February 2006	28 March 2006	Domestic poultry – wild birds	-
Côte d'Ivoire	31 March 2006	9 November 2006	Domestic poultry – wild birds	-
Djibouti	6 April 2006	6 April 2006	Domestic poultry	**1 / 0**
Egypt	17 February 2006	31 January 2008	Domestic poultry – wild birds	**43 / 19**
Ghana	14 April 2007	13 June 2007	Domestic poultry	-
Niger	6 February 2006	1 June 2006	Domestic poultry	-
Nigeria	16 January 2006	6 October 2007	Domestic poultry – wild birds	**1 / 1**
Sudan	25 March 2006	4 August 2006	Domestic poultry	-
Togo	6 June 2007	20 July 2007	Domestic poultry	-

ASIA	First outbreak	Latest outbreak	Animals affected to date	Human cases / deaths to date
Afghanistan	2 March 2006	2 October 2007	Domestic poultry – wild birds	-
Bangladesh	5 February 2007	8 February 2008	Domestic poultry	-
Cambodia	12 January 2004	6 April 2007	Domestic poultry – wild birds	**7 / 7**
China	20 January 2004	21 January 2008	Domestic poultry – wild birds	**27 / 17**
Hong Kong SAR	19 January 2004	11 February 2008	Wild birds	-
India	27 January 2006	2 February 2008	Domestic poultry	-
Indonesia	2 February 2004	29 January 2008 (PDS data)	Domestic poultry – pigs (with no clinical signs)	**126 / 103**
Japan	28 December 2003	30 January 2007	Domestic poultry – wild birds	-
Kazakhstan	22 July 2005	10 March 2006	Domestic poultry – wild birds	-
Korea, Rep. of	10 December 2003	8 March 2007	Domestic poultry – wild birds	-
Lao, PDR	15 January 2004	8 February 2008	Domestic poultry	**2** / **2**
Malaysia	19 August 2004	2 June 2007	Domestic poultry – wild birds	-
Mongolia	10 August 2005	5 June 2006	Wild birds	-
Myanmar	8 March 2006	23 December 2007	Domestic poultry	**1 / 0**
Pakistan	23 February 2006	28 November 2007	Domestic poultry – wild birds	**1 / 1**
Thailand	23 January 2004	18 January 2008	Domestic poultry – wild birds – tiger	**25 / 17**
Viet Nam	9 January 2004	11 February 2008	Domestic poultry	**102 / 48**

NEAR EAST	First outbreak	Latest outbreak	Animals affected to date	Human cases / deaths to date
Iran	2 February 2006	10 December 2008	Domestic poultry - wild birds	-
Iraq (H5)	18 January 2006	1 February 2006	Domestic poultry – wild birds	**3 / 2**
Israel	16 March 2006	1 January 2008	Domestic poultry	-
Jordan	23 March 2006	23 March 2006	Domestic poultry	-
Kuwait	23 February 2007	20 April 2007	Domestic poultry – wild birds - zoo birds	-
Saudi Arabia	12 March 2007	29 January 2008	Domestic poultry	-
West Bank & Gaza Strip	21 March 2006	2 April 2006	Domestic poultry	-

EUROPE	First outbreak	Latest outbreak	Animals affected to date	Human cases / deaths to date
Albania	16 February 2006	9 March 2006	Domestic poultry	-
Austria	10 February 2006	22 March 2006	Wild birds – cats	-
Azerbaijan	2 February 2006	18 March 2006 (H5)	Wild birds – domestic poultry – dogs	**8 / 5**
Bosnia-Herzegovina	16 February 2006	16 February 2006	Wild birds	-
Bulgaria	31 January 2006	9 February 2006	Wild birds	-
Croatia	21 October 2005	24 March 2006	Wild birds	-
Czech Republic	27 March 2006	11 July 2007	Wild birds – domestic poultry	-
Denmark	12 March 2006	26 May 2006	Wild birds – domestic poultry	-
France	17 February 2006	14 August 2007	Wild birds – domestic poultry	-
Georgia	23 February 2006	23 February 2006	Wild birds	-
Germany	8 February 2006	25 December 2007	Wild birds – domestic poultry – cats – stone marten	-
Greece	30 January 2006	27 March 2006	Wild birds	-
Hungary	4 February 2006	23 January 2007	Wild birds – domestic poultry	-
Italy	1 February 2006	19 February 2006	Wild birds	-
Poland	2 March 2006	16 December 2007	Wild birds – domestic poultry	-
Romania	7 October 2005	27 November 2007	Wild birds – domestic poultry – cat	-
Russian Federation	15 July 2005	19 December 2007	Domestic poultry – wild birds	-
Serbia	28 February 2006	16 March 2006	Wild birds – domestic poultry	-
Slovakia	17 February 2006	18 February 2006	Wild birds	-
Slovenia	9 February 2006	25 March 2006	Wild birds	-
Spain	7 July 2006	7 July 2006	Wild birds	-
Sweden	28 February 2006	26 April 2006 (H5)	Wild birds – domestic poultry - game birds - mink	-
Switzerland	26 February 2006	30 March 2006 (H5)	Wild birds	-
Turkey	1 October 2005	8 February 2008	Domestic poultry – wild birds	**12 / 4**
Ukraine	2 December 2005	11 February 2008	Wild birds – domestic poultry – zoo birds	-
United Kingdom	30 March 2006	February 2008	Wild birds – domestic poultry	-