



## AVIAN INFLUENZA

### Seminar to brief FAO's Permanent Representatives



FAO is organizing an inter-agency seminar on 14 May 2008 to brief FAO Permanent Representatives on the current status of avian influenza and lessons learned in efforts to prevent and control the disease.

The FAO Deputy Director-General will make the welcoming address and there will be presentations from OIE, WHO, Inter Agency coordination UNSIC and the Egypt's Ministry of Agriculture and Land Reclamation.

The seminar, which will be webcast live on FAO's corporate website ([www.fao.org](http://www.fao.org)), envisages a series of presentations, including an overview of lessons learned from four years of experience with HPAI in animals.

Among other areas covered will be experience with HPAI in humans, how to support a heavily-infected country, the importance of disease communication, and managing HPAI in socioeconomic production systems and biodiversity contexts. The preparation of the inter-ministerial conference to be held in Egypt in October 2008 will be addressed by a representative of the Egyptian government and by the inter-agency coordinator.

### Putting the brakes on avian flu

Small rings of designer DNA can block avian influenza virus from reproducing, according to a team of researchers at China's National Research Centre for Wildlife Borne Diseases. A report in *Science News* (28 April 2008) says the researchers found that treating chickens with such DNA rings — either by injection or by an inhaled mist — might help to slow the spread of the virus.

The DNA rings, called plasmids, can be mass produced cheaply by using bacteria to make copies. By designing the plasmids to target that segment of the avian influenza virus's genetic code that is nearly

*cont'd on page 2*

#### Contents

|  |    |
|--|----|
| Seminar to brief FAO's Permanent Representatives | 1  |
| Putting the brakes on avian flu                  | 1  |
| Most recent HPAI outbreaks 2006-2008             | 2  |
| H5N1 HPAI Global Overview: March 2008            | 3  |
| At a glance                                      | 9  |
| Summary of confirmed HPAI outbreaks              | 11 |

**AIDEnews is an ECTAD publication**

Editor: Phil Harris, Senior Communication Officer, ECTAD ([Phil.Harris@fao.org](mailto:Phil.Harris@fao.org))

cont'd from Page 1

identical among the virus's many mutant strains, the research team hopes to ensure that the plasmid would work against the many variants of avian influenza.

"The findings ... provide a basis for the development of small interfering RNAs as prophylaxis and therapy for avian influenza infection in birds and humans," write researcher Kai Zhou and colleagues in a paper to appear in an upcoming issue of *Journal of Biotechnology*.

Once inside the cells of the avian influenza virus, the DNA rings produce another kind of genetic code-carrying molecule called "short interfering RNAs" (siRNAs). The letters of genetic code in these siRNAs exactly match part of a gene in the virus's genome, so when the virus tries to replicate, the siRNAs can recognize and disable that viral gene, thus preventing the virus from reproducing.

For the full article, see [http://www.sciencenews.org/view/generic/id/31576/title/Tripping\\_up\\_avian\\_flu](http://www.sciencenews.org/view/generic/id/31576/title/Tripping_up_avian_flu)

## MOST RECENT HPAI OUTBREAKS 2006-08

Note: This list has been compiled on the basis of information up to 30 April 2008.

### 2008

|                 |  |
|-----------------|--|
| <b>April</b>    | Bangladesh, China, Egypt, India, Indonesia, Japan, Korea (Republic of), Russian Federation, Viet Nam |
| <b>March</b>    | <b>China (Hong Kong SAR)</b> , Lao PDR, Pakistan, Turkey,  |
| <b>February</b> | Myanmar, <b>Switzerland</b> , Ukraine, United Kingdom,   |
| <b>January</b>  | Israel, Saudi Arabia, Thailand   |

### 2007

|                 |                              |
|-----------------|------------------------------|
| <b>December</b> | Benin, Germany, Iran, Poland |
| <b>November</b> | Romania                      |
| <b>October</b>  | Afghanistan, Nigeria         |
| <b>August</b>   | France                       |
| <b>July</b>     | Czech Republic, Togo         |
| <b>June</b>     | Ghana, Malaysia              |
| <b>April</b>    | Cambodia, Kuwait             |
| <b>January</b>  | Hungary                      |

### 2006

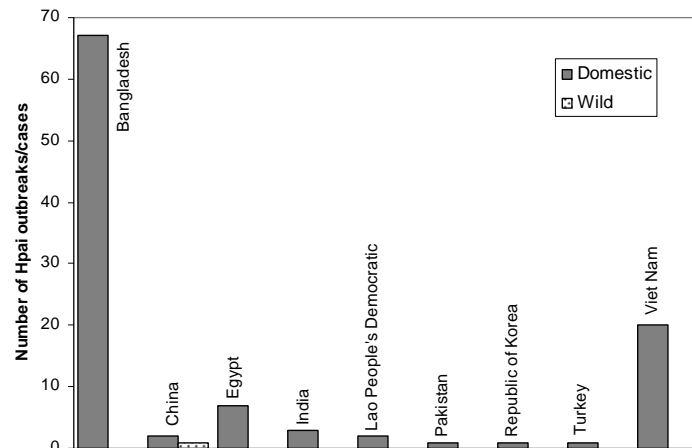
|                 |   |
|-----------------|---|
| <b>November</b> | Côte d'Ivoire   |
| <b>August</b>   | Sudan   |
| <b>July</b>     | <b>Spain</b>  |
| <b>June</b>     | <b>Mongolia</b> , Niger   |
| <b>May</b>      | Burkina Faso, Denmark   |
| <b>April</b>    | Djibouti, Sweden [H5], West Bank &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

*Green: wild birds only*

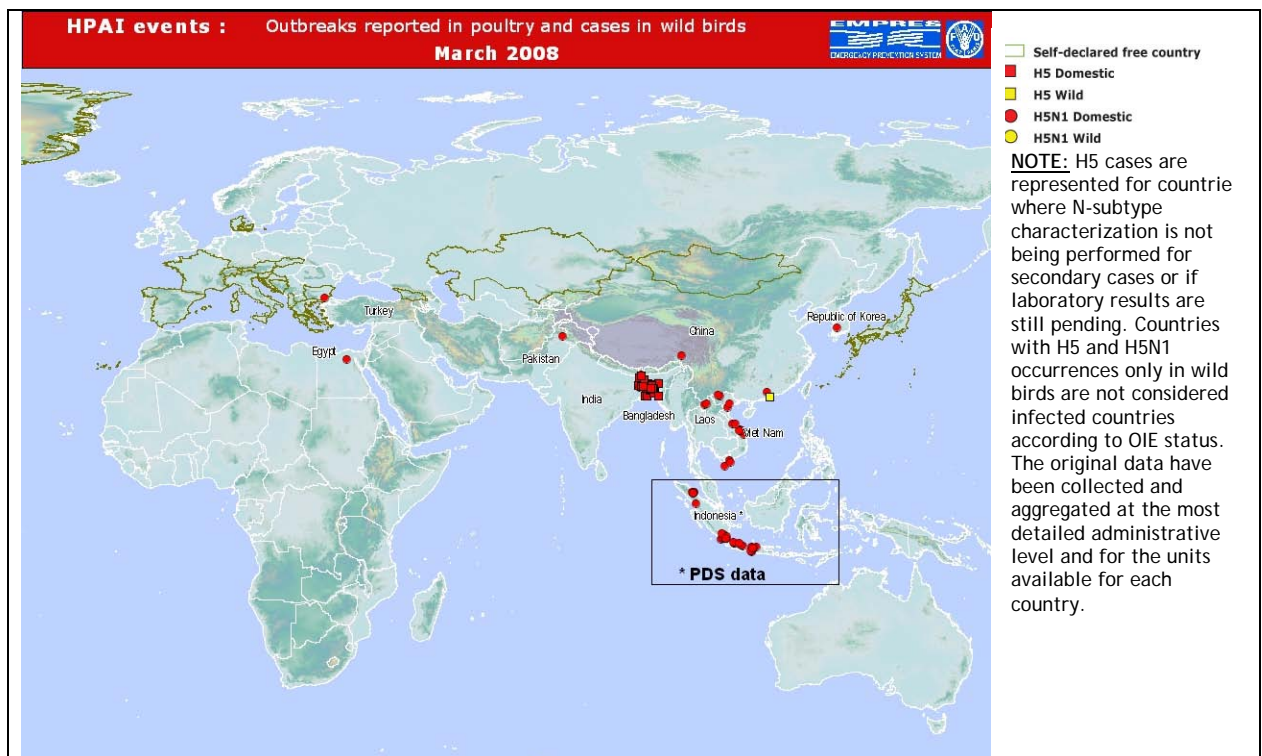
*Sources:* World Organisation for Animal Health (OIE), European Commission (EC), FAO and national governments

### I. WORLDWIDE SITUATION

Ninety nine outbreaks/cases of HPAI (H5N1) were reported worldwide in March 2008 in ten countries (Bangladesh, China, Egypt, India, Indonesia, Lao PDR, Pakistan, Republic of Korea, Turkey and Viet Nam). This compares with 359 outbreaks reported in March 2006 and 102 in March 2007. The geographical location of outbreaks in poultry and cases in wild birds is shown in Figure 1. Only one case was reported in wild birds.

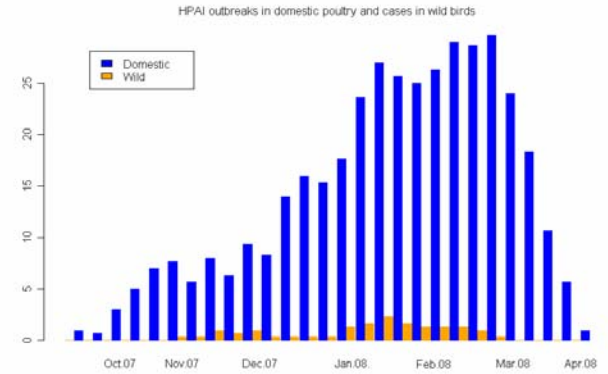
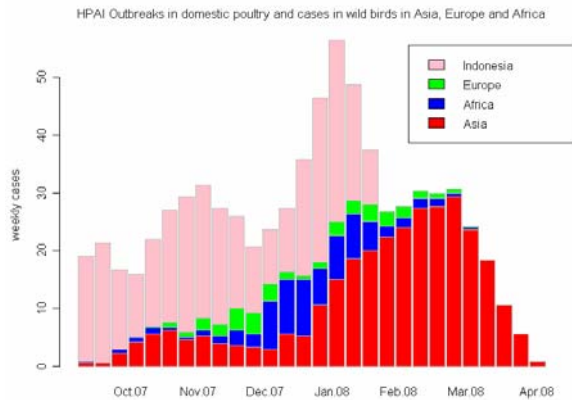


**Chart 1 HPAI (H5N1) outbreaks confirmed during March 2008** (excluding Indonesia)  
(Source: FAO EMPRES-i)



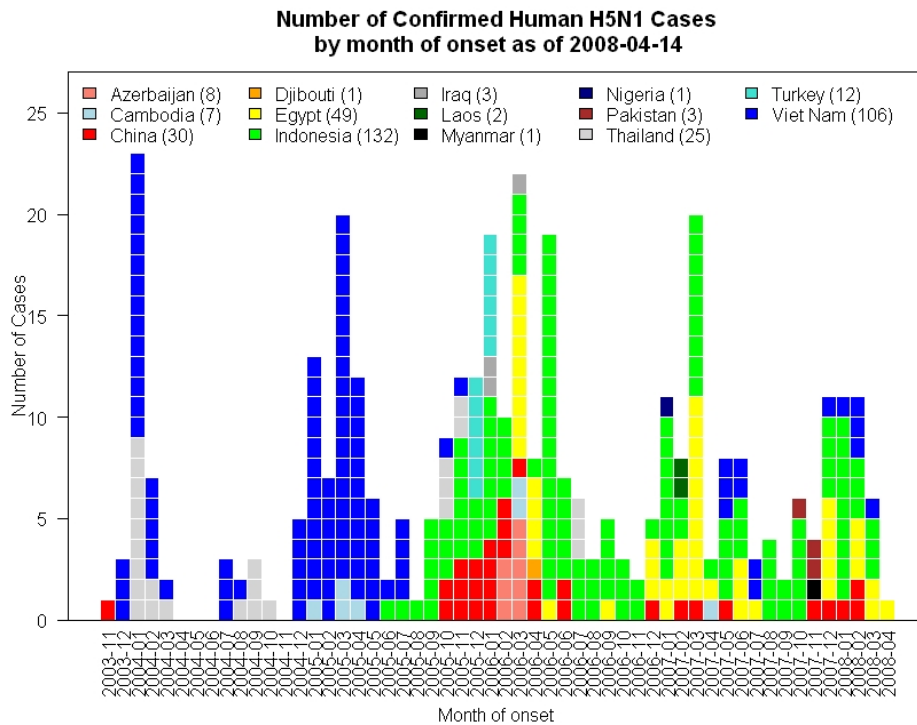
**Figure 1 HPAI (H5N1) outbreaks in poultry and cases of H5N1 infection in wild birds reported in March 2008** (Source: FAO EMPRES-i)

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 (H5N1) outbreaks in poultry and cases of H5N1 infection in wild birds per continent reported between October 2007 and March 2008** (Source: FAO EMPRES-i - No data available for Indonesia since February 2008)

**Chart 3 Number of HPAI (H5N1) outbreaks of HPAI in poultry and cases of H5N1 infection in wild birds reported between October 2007 and March 2008** (excluding Indonesia) (Source: FAO EMPRES-i)



**Chart 4 Current situation of H5N1 in humans** (Source: WHO)

## II. SITUATION BY CONTINENT/REGION

### AFRICA

In **Egypt**, Three HPAI cases in poultry were reported in household units and four at checkpoints/live bird markets; one of them was found while investigating one of the two confirmed human case of H5N1 infection reported to WHO during March.

**Nigeria** has not recorded any HPAI outbreak since October 2007. In a live bird market survey conducted by FAO ECTAD Unit and country counterparts, several samples revealed viruses of the H5N1 subtype. The tests were conducted at the Regional Veterinary Research Institute in Vom, Nigeria.

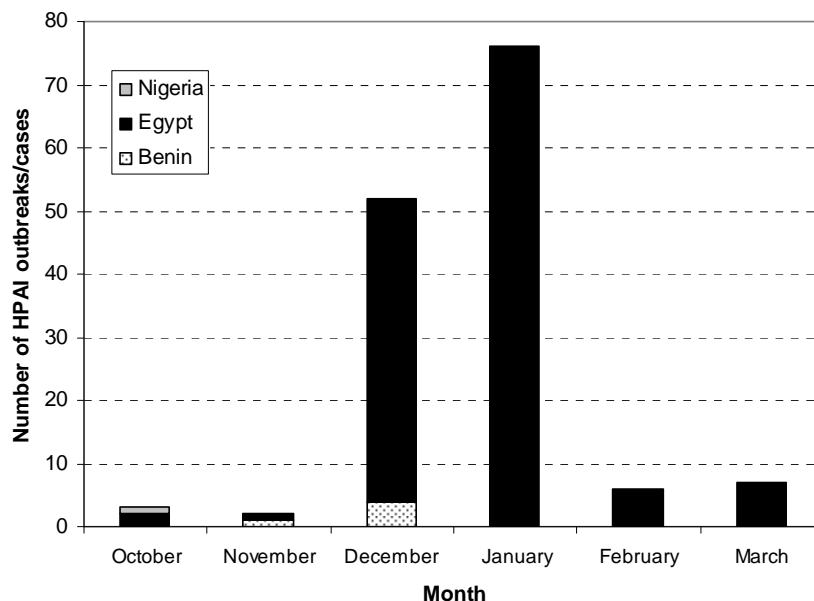
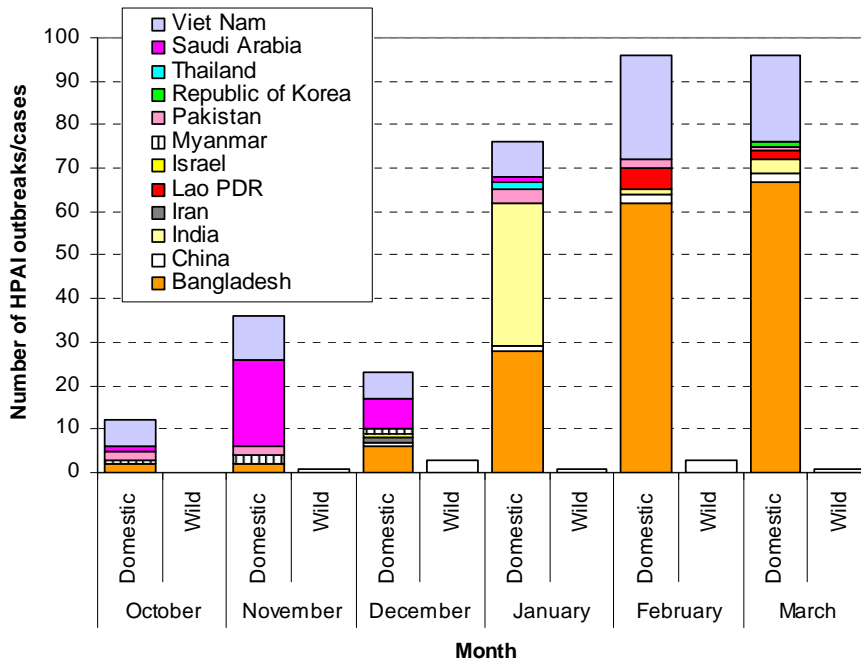


Chart 5 Number of outbreaks/cases of HPAI (H5N1) confirmed between October 2007 and March 2008 in Africa (Source: FAO EMPRES-i)

### ASIA

**Indonesia** is still experiencing the highest number of cases of HPAI type H5N1 in poultry worldwide. The situation remains critical despite major efforts to control HPAI, which has become deeply entrenched, with 31 out of 33 Indonesian provinces currently infected. The virus is endemic in Java, Sumatra, Bali and southern Sulawesi, with sporadic outbreaks reported from other areas. The high figure of reported cases for Indonesia in 2007-08 is largely due to the ongoing '*participatory disease search*' (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 is supported by FAO and is operating in 165 out of 448 districts and nine provinces in Java, Sumatra and Bali. Live bird market environmental sampling carried out in the Jakarta area showed that the environment in 11 out of 20 markets tested was infected with H5N1. It is planned to extend sampling to a further 65 markets. In addition, three human cases were reported in March 2008, two of them with fatal consequences.



**Chart 6** Number of outbreaks/cases of HPAI (H5N1) confirmed between October 2007 and March 2008 in Asia (excluding Indonesia) (Source: FAO EMPRES-i)

The endemic situation of HPAI in **Bangladesh** is of great concern. Control campaigns have so far not succeeded in interrupting virus transmission within districts. As of 31 March 2008, 274 outbreaks had been recorded in 47 out of 64 districts. These included outbreaks in commercial farms (232) and backyard (42). The total number of birds culled as of 31 March 2008 stood at 1.6 million. Eighty-three outbreaks were reported in March 2008, all in commercial farms; no outbreak was reported in backyard chickens. One new district (Brahmanbaria) was affected during this period. No human infection has been reported so far.

In **China**, HPAI outbreaks were reported in Xizang Zizhiqu Province (Tibet), affecting village chickens, and in Jinhuaixin market in Guangdong Province, where 114 chickens died and 518 were culled. One positive wild peregrine falcon (*Falco peregrinus*) was reported in Hong Kong SAR.

In January, the West Bengal state of **India** experienced the worst HPAI outbreak in that country to date, although it was apparently controlled through an aggressive depopulation campaign. After more than a month with no HPAI activity, re-infection (or maintenance of the virus) was reported in three West Bengal districts during March.

New outbreaks of HPAI were confirmed in the **Republic of Korea**, which started at the end of March in Kimje (Cholla Bukdo) on a layer chicken farm. The last reported outbreak in the country was in June 2006.

In **Lao PDR**, during the first week of March, two new outbreaks were reported in backyard poultry, clustered in the north of the country, close to the borders with China and Myanmar, in the same area as the five outbreaks reported in February.

In **Pakistan**, a commercial broiler farm was affected by H5N1 HPAI in North West Frontier province. The source of the outbreak was attributed to contact with wild species, but no proof offered.

Outbreaks in poultry have been reported regularly by **Viet Nam** (20 outbreaks in March), mainly in duck production systems, compared to three outbreaks in March 2007. Six affected *Owston's* palm civets (*Chrotagale owstoni*) were found in the Cuc Phuong National Park in Ninh Binh. In addition, there was one fatal human case reported to WHO.

Some Asian countries such as Cambodia and Iraq 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. **Iraq** also reported the laboratory results of surveillance activities for March. These data refer to all governorates except Kurdistan province, in the north of the country. All samples taken were negative [poultry farms (2,739), backyard poultry (4,606), game and wild birds (64), and markets and slaughterhouses (849)]. In addition, 732 visits were made to poultry markets, houses and marshes. The only

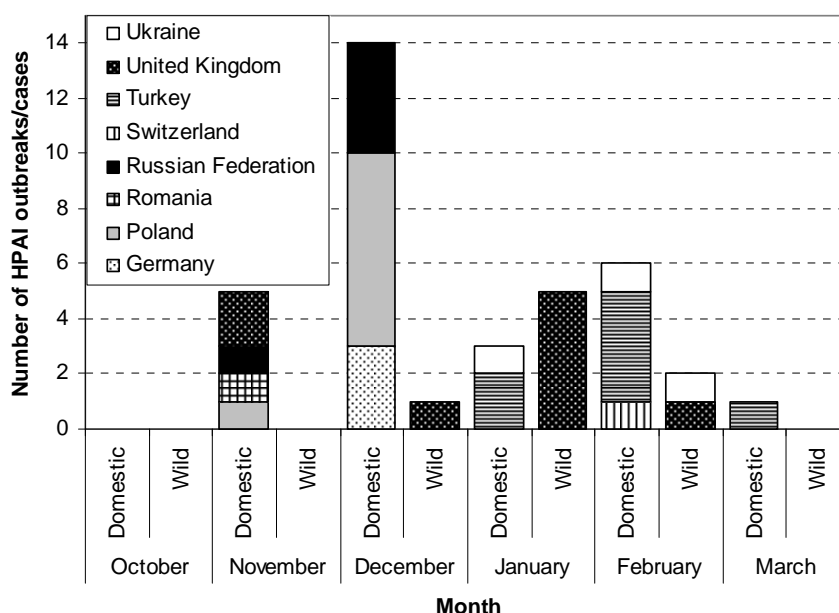
avian influenza virus identified was H9 in samples collected from poultry farms and markets and slaughter houses.

**Israel** has continued intensive surveillance activities to ensure that no HPAI or notifiable avian influenza (NAI) viruses were circulating in the poultry population. The surveillance was carried it in healthy flocks by serology (ELISA) and in flocks showing clinical signs by viral isolation and/or PCR. A total of 304 flocks were sampled (1,008 samples tested through viral isolation and 3,258 tested through PCR). All samples were negative for H5 and H7.

## EUROPE

In Europe, **Turkey** experienced one outbreak in backyard chickens in March. Unlike the February outbreaks along the Black Sea coast, this outbreak occurred inland in the European part of Turkey closer to the Mediterranean Basin, although its source was also attributed to contact with infected wild birds, through hunting and subsequent exposure of backyard poultry to wild bird leftovers.

Under the routine monitoring programme for avian influenza, a sample from a common pochard (*Aythya ferina*) collected in February at Lake Sempach, central **Switzerland**, tested H5N1 HPAI positive. This was a random finding with no other confirmed case and no signs of morbidity or mortality were observed in wild birds. The virus presented a high homology with a 2007 H5N1 HPAI isolate from Romania. Lake Sempach is Switzerland's most intensively monitored lake and since October 2007, some 200 birds have been sampled with negative results for H5N1.



**Chart 7** Number of outbreaks/cases of HPAI (H5N1) confirmed between October 2007 and March 2008 in Europe (Source: FAO EMPRES-i)

## III. CONCLUSIONS

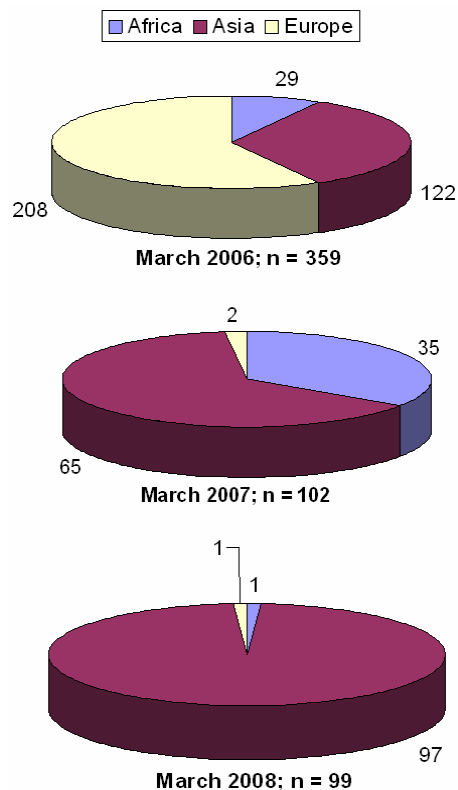
Eighty-nine percent of HPAI outbreaks (without including the household-based PDS data from Indonesia) continue to be reported in domestic poultry from infected/endemic countries (Indonesia, Bangladesh, Viet Nam and Egypt) with sporadic outbreaks in both domestic poultry and wild birds from other countries.

In looking at the month of March 2008, the number of outbreaks is similar to March 2007 but differs significantly from March 2006, when over three times more outbreaks were reported (Chart 8). Regionally, disease distribution during March 2008 changed dramatically compared with previous years, with most outbreaks being reported in Asia, and very sporadic incidence in Europe and Africa (Egypt). Previous years experienced similar number of outbreaks reported in Asia, but much higher number of cases in wild birds and poultry in Europe (2006) and Africa (2007).

Although there has been improvement in disease awareness, outbreaks/cases of HPAI are still likely to be under-estimated and under-reported in most affected countries because of the lack of systematic and effective disease surveillance systems, which may affect the shape of the distribution of outbreaks. It is also important to highlight that outbreaks reported from Indonesia are not included in Chart 8 in this issue of *AIDEnews*.

Nevertheless, the main trend to be highlighted is the number of cases/outbreaks in Europe, a region that, in general, continues to implement very effective surveillance programmes in both domestic and wild birds. The number of cases/outbreaks in March dropped from 208 (2006) to just two (2007) and one (2008). This may be the result of an overall lower amount of virus circulating in both the domestic and wild bird sectors inside and outside Europe.

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](http://www.fao.org/ag/againfo/programmes/en/empres/maps.html).



**Chart 8** Number and distribution of outbreaks of HPAI (H5N1) confirmed in March 2006, 2007 and 2008 (excluding Indonesia's PDS data) (Source: FAO EMPRES-I)

# AT A GLANCE

*The latest HPAI outbreaks for the period 17 March – 30 April 2008*

## **Note**

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

## **AFRICA**

### **Egypt**

On 21 April, FAO reported an outbreak of HPAI four days earlier among unvaccinated birds in the village of Ezbet Elheta, Elhosinia District, Sharkia Governorate.

## **ASIA**

### **Bangladesh**

FAO reported 17 April a steady decline in the number of HPAI outbreaks continues to decrease but said that two HPAI outbreaks had been confirmed in two previously affected districts, Chittagong and Gaibandha. As of April 17, there are confirmed cases of H5 infection on 286 farms in 47 districts.

### **China**

On 7 April, the Ministry of Agriculture confirmed that the disease that killed almost 300 poultry birds on 4 April in the Tibet Autonomous Region was HPAI H5N1.

### **India**

Between 19 March and 24 April, the Department of Animal Husbandry, Dairying and Fisheries (DAHDF) confirmed a number of HPAI outbreaks: on 24 April in the village of Nadilak, Tripura state; on 21 April in the village of Hatcarra, Tripura state; on 7 April in the village of Mohanpur, Tripura state; on 4 April in Mandalkupur, Nadia; on 3 April in the village of Salema, Tripura state; on 27 March among chickens in the village of Saheber Kamar, Jaipauri district, and in two villages in Nadia district, West Bengal; and on 19 March on a state poultry farm in English Bazar, Malda district.

### **Indonesia**

The weekly Participatory Disease Surveillance (PDS) report indicates that between 22 March and 19 April, slightly more than 4,000 interviews were carried out, 144 of which resulted HPAI positive, 77 in Java and 67 in Sumatra (67). Since the beginning of 2006, PDS FAO has carried out over 151,000 interviews, 3.4 percent of which have resulted in detection of positive HPAI cases. According to the previous PDS report covering the period from 8 March to 5 April, 146 out of almost 4,800 interviews, 146 resulted positive to HPAI: one in Bali, 102 in Java and 43 in Sumatra.

### **Japan**

The OIE reported 29 April an outbreak of H5N1 HPAI in wild swans on the shores of lake Towada in Akita prefecture. The birds had been found on 21 April.

### **Korea (Republic of)**

On 15 April, the OIE reported nine HPAI outbreaks. On 12 April, an HPAI outbreak started in a restaurant with backyard poultry in Keumsan-myun, Kimje, Cholla-Budko; On 9 April, five outbreaks started in Cholla-Budko (two layer chicken farms in Yongjimyun, Kimje, two layer chicken farms and an unspecified farm in Yongji-myun, Kimje, plus a parent stock chicken farm in Shinbuk-myun, Youngam, Cholla-Namdo); on 7 April an outbreak started in a duck-raising farm in Youngwon-myun, Jeongeup, Ch'ungch'ong-Budko; and on 6 April a duck raising farm was affected in Gobu-myun, Jeongeup, Cholla-Budko;

An HPAI outbreak started on 3 April on a duck-raising farm in Youngwon-myun, Jeongeup, Cholla-Budko. On 1 April, HPAI killed 2,380 birds out of 150,570 on a layer chicken farm in Kimje, Yongji-myun, Cholla-Budko.

### **Lao PDR**

FAO reported 20 March that 200 chickens died on 16 March in Ban Vieng Mai in Viang Phoukha district, Luang Namta province.

### **Viet Nam**

On 23 April, the OIE reported that it had been notified of five cases of HPAI: in Tan Loi hamlet, Can Tho province; in Phuoc Lap commune, Tan Phuoc district, Tien Giang; in Quang Nam province; in Tien Phuoc, Cam Tay hamlet, Tien Cam commune; and in Nui Thanh,, Quang Nam province.

On 3 April, the OIE reported that three of the 11 notifications of HPAI received had not come through the Department of Animal Health: on 3 April an outbreak among unvaccinated village chickens and ducks died in Tien Cuong, Phu Gia, Bao Thang, Lao Cai; on 24 March among unvaccinated village chickens and muscovy ducks in Phu Trung, Dai Hiep, Dai Loc, Quang Nam; and on 10 March among unvaccinated ducks died in Tan Tinh, Xuan Thuy, Le Thuy, Quang Nam.

## **EUROPE**

### **Russian Federation**

On 11 April, the OIE officially reported an outbreak of HPAI among unvaccinated backyard poultry (chickens, guinea fowls, muscovy ducks and ducks) in Vozdvizhenka, Ussuriysk, Primorskiy Kray.

### **Switzerland**

The OIE reported 31 March that the Swiss authorities had submitted notification of the discovery of H5N1 HPAI in one of the wild birds caught on 22 February in a fish trap on Lake Sempach. Two tufted ducks, one common pochard, one mallard and two great cormorants were released after sampling. At the time of sampling, the common pochard, the only bird of the group which subsequently tested positive, showed no clinical signs of the disease.

### **Turkey**

The country's Veterinary Laboratories Agency reported 14 April that phylogenetic analysis of the HA gene of a Turkish chicken isolate has placed it in a cluster with others in 2008 and late 2007 from the Czech Republic, Poland, Romania and United Kingdom. Nucleotide sequence comparisons indicate a 99.6 percent similarity with UK swan isolates.

On 18 March, the OIE reported an HPAI outbreak among backyard chickens that started on 9 March in Edirne, close to the border with Greece. Unlike previous outbreaks, the origin of infection is believed to be fomites (humans, vehicles, feed, etc.)

## SUMMARY OF CONFIRMED HPAI OUTBREAKS (as of 30 April 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

| <b>AFRICA</b> | 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              | <b>1 / 0</b>                 |
| Egypt         | 17 February 2006 | 17 April 2008    | Domestic poultry – wild birds | <b>50 / 22</b>               |
| 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 | <b>1 / 1</b>                 |
| Sudan         | 25 March 2006    | 4 August 2006    | Domestic poultry              | -                            |
| Togo          | 6 June 2007      | 20 July 2007     | Domestic poultry              | -                            |

| <b>ASIA</b>           | 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  | 14 April 2008         | Domestic poultry                                 | -                            |
| Cambodia              | 12 January 2004  | 6 April 2007          | Domestic poultry – wild birds                    | <b>7 / 7</b>                 |
| China                 | 20 January 2004  | 4 April 2008          | Domestic poultry – wild birds                    | <b>30 / 20</b>               |
| China (Hong Kong SAR) | 19 January 2004  | 10 March 2008         | Wild birds                                       | -                            |
| India                 | 27 January 2006  | 24 April 2008         | Domestic poultry                                 | -                            |
| Indonesia             | 2 February 2004  | April 2008 (PDS data) | Domestic poultry – pigs (with no clinical signs) | <b>133/ 108</b>              |
| Japan                 | 28 December 2003 | 24 April 2008         | Domestic poultry – wild birds                    | -                            |
| Kazakhstan            | 22 July 2005     | 10 March 2006         | Domestic poultry – wild birds                    | -                            |
| Korea, Rep. of        | 10 December 2003 | 25 April 2008         | Domestic poultry – wild birds                    | -                            |
| Lao, PDR              | 15 January 2004  | 2 March 2008          | Domestic poultry                                 | <b>2 / 2</b>                 |
| 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                                 | <b>1 / 0</b>                 |
| Pakistan              | 23 February 2006 | 3 March 2008          | Domestic poultry – wild birds                    | <b>1 / 1</b>                 |
| Thailand              | 23 January 2004  | 18 January 2008       | Domestic poultry – wild birds – tiger            | <b>25 / 17</b>               |
| Viet Nam              | 9 January 2004   | 29 April 2008         | Domestic poultry                                 | <b>106/ 52</b>               |

| <b>NEAR EAST</b>       | First outbreak   | Latest outbreak  | Animals affected to date                  | Human cases / deaths to date |
|------------------------|------------------|------------------|---|------------------------------|
| Iran                   | 2 February 2006  | 10 December 2007 | Domestic poultry - wild birds             | -                            |
| Iraq (H5)              | 18 January 2006  | 1 February 2006  | Domestic poultry – wild birds             | <b>3 / 2</b>                 |
| 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                          | -                            |

| <b>EUROPE</b>      | <b>First outbreak</b> | <b>Latest outbreak</b> | <b>Animals affected to date</b>                     | <b>Human cases / deaths to date</b> |
|--------------------|-----------------------|------------------------|---|-------------------------------------|
| 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                | <b>8 / 5</b>                        |
| 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        | 6 December 2007 (cat)  | Wild birds – domestic poultry – cat                 | -                                   |
| Russian Federation | 15 July 2005          | 8 April 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      | 22 February 2006       | Wild birds  | -                                   |
| Turkey             | 1 October 2005        | 9 March 2008           | Domestic poultry – wild birds                       | <b>12 / 4</b>                       |
| Ukraine            | 2 December 2005       | 11 February 2008       | Wild birds – domestic poultry – zoo birds           | -                                   |
| United Kingdom     | 30 March 2006         | 29 February 2008       | Wild birds – domestic poultry                       | -                                   |