

HPAI outbreaks reported in this publication refer to officially confirmed cases only. The information is compiled from the following sources: World Organisation for Animal Health (OIE), national governments and their ministries, and the European Commission (EC) – these sources are responsible for any errors or omissions.

The fight against HPAI in Cambodia continues

According to the World Health Organization (WHO), from 2005 until 25 February 2011, a total of thirteen human cases of H5N1 Highly Pathogenic Avian Influenza (H5N1 HPAI) have been confirmed in Cambodia. Of these, eleven have resulted in death.

An earlier study notes that the first H5N1 HPAI outbreak in poultry was reported in late January 2004. This outbreak affected a chicken layer unit with 7,500 birds in the vicinity of Phnom Penh, Cambodia's capital. Since then, outbreaks in poultry have continued to occur mostly in provinces bordering Viet Nam. In fact, it is in these provinces that 25 of 27 poultry outbreaks and 11 of 13 confirmed human cases have occurred.

The connection between disease outbreaks in animals and onset of illness in humans is explained by direct contact of the victims with infected animals. More specifically, handling sick birds during food preparation or while tending care are the most often cited practices believed to facilitate interspecies transmission. Also, children playing with infected chickens and ducks have been reported as a likely source of infection.



In Southeast Asia the presence of agro-livestock farming systems involving the combination of paddy rice production, domestic waterfowl and poultry in the river deltas is ubiquitous. These conditions contribute to the maintenance of pockets of infection given that H5N1 HPAI thrives in the presence of water, hot temperatures, bird feces, ducks, and chickens.

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Editor: Sigfrido Burgos, ECTAD Communication Unit (sigfrido.burgos@fao.org)

Meanwhile, national and international health agencies have come to realize that mass or targeted vaccinations of poultry against H5N1 HPAI is one of the many measures in a disease control portfolio that need to be implemented in tandem with others, such as biosecurity enhancements, live mixed-bird market cleanups, public awareness raising, and public-private partnerships.

As Southeast Asian countries continue their fight against this pernicious zoonotic disease, it has become clear to animal health officials and policymakers that control or mitigation of H5N1 HPAI can only be successfully attained with appropriate and sustained availability of resources (e.g. human, physical, economic) and strong political support at the highest echelons of power.



The success stories that have emerged from many countries around the world point out that combining and coordinating existing and functional mechanisms at national, regional, and international levels for control and surveillance emerging disease threats of animal origin may have exceedingly positive outcomes.

The Food and Agriculture Organization (FAO) representation in Cambodia hosts an office of the Emergency Centre for Transboundary Animal Diseases (ECTAD). For its part, ECTAD has been deeply involved in technical and non-technical activities in the fight against H5N1 HPAI over the last five years. Some of these include aid coordination and distribution, capacity-building exercises, surveillance, liaising with local authorities, and elaboration of reports, among others.

FAO of the UN is an institutional partner of World Veterinary Year (Vet2011).

For more information, please contact: Lotfi.Allal@fao.org

MOST RECENT H5N1 AI OUTBREAKS 2006-2011

Note: This list has been compiled on the basis of information up to 28 February 2011.

2011

February Bangladesh, China (Hong Kong SAR), Egypt, India, Japan,
Korea (Republic of), Myanmar, Viet Nam, West Bank
January Cambodia, Indonesia

2010

October Nepal
June Russian Federation
May China, Israel, **Mongolia**
April Lao PDR
March Bhutan, **Bulgaria**, Romania

2009

March Germany

2008

November Thailand
September Togo
July Nigeria
June Pakistan
May United Kingdom
March Turkey
February **Switzerland**, Ukraine
January Saudi Arabia

2007

December Benin, Iran, Poland
October Afghanistan
August France
July Czech Republic
June Ghana, Malaysia
April Kuwait
January Côte d'Ivoire, Hungary

2006

August Sudan
July **Spain**
June Niger
May Burkina Faso, Denmark
April Djibouti, Sweden
March Albania, **Austria**, Azerbaijan, Cameroon, **Croatia**, **Greece**, Jordan,
Kazakhstan, Serbia, **Slovenia**
February **Bosnia-Herzegovina**, **Georgia**, Iraq, **Italy**, **Slovakia**

Green: areas which never had reported outbreaks in poultry

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

AT A GLANCE

The latest HPAI outbreaks for the period 1 – 28 February 2011

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

AFRICA

Egypt

A total of 39 H5 HPAI positive cases were reported in 11 governorates: Behera (3), Beni Suef (2), Dakahlia (6), Fayoum (8), Gharbia (5), Kafr el sheikh (4), Menoufia (4), Minya (1), Qalyubia (2) Sharqia (3) and Sixth of October (1) Governorates (number of outbreaks in brackets). Nearly 100,000 birds were culled. Of the 39 outbreaks, 27 were in backyard poultry (chickens, ducks, geese, turkeys) and 12 were in commercial chicken farms; and 8 outbreaks in commercial farms occurred even though they had been vaccinated (Behera (1), Fayoum (4), Menoufia (1), Sharqia (2)).

NEAR EAST

West Bank

An outbreak of H5N1 HPAI occurred on 27 February in a turkey farm with 2,000 birds of 65-days-old in Sealet al Harthieh, Jenin Governorate. Mortality reached 100 percent within three days, samples tested positive for H5N1 by PCR.

ASIA

Bangladesh

A total of 55 H5N1 HPAI outbreaks occurred in: Barisal (3), Chittagong (6), Dhaka (37), Khulna (3), Rajshahi (3), Rangpur (2), Sylhet (1) Divisions (number of outbreaks in brackets). Most of the outbreaks were in commercial poultry farms with two outbreaks in backyard poultry. More than 170,000 birds died or were destroyed. Nearly 600 crows (*Corvus spp.*) were found dead in two places in Barisal Division (Amtali Upazilla and Patuakhali Sadar Upazila) and H5 avian influenza infection was confirmed by RT-PCR in samples taken from Patuakhali Sadar Upazila.

Cambodia

A total three cases of human H5N1 virus infection were reported in February 2011 in Banteay Meanchey Province and Phnom Penh Municipality. The investigation revealed that they were exposed to sick and/or dead poultry.

China (Hong Kong SAR)

A duck carcass found dead at a beach near Po Chue Tam, Yeung Hau Temple, Tai O on 3 February 2011 tested positive for H5N1.

India

H5 HPAI outbreak occurred in a government duck breeding farm in Agartala City, Tripura State on 3 February. A total of 2,198 out of 4,293 susceptible birds died, with the rest being culled.

Indonesia

The Participatory Disease Surveillance & Response (PDSR) programme through 33 Local Disease Control Centres covers 71,604 villages in 85 percent of Indonesia's 448 districts and municipalities in 29 of its 33 provinces. During January 2011, PDSR conducted surveillance in 1,809 villages (2.5 percent). The overall HPAI incidence was 1.9 infected villages per 1,000 villages under surveillance.

Japan

H5N1 HPAI outbreaks were reported in 12 farms in 6 prefectures (Aichi, Mie, Miyazaki, Nara, Oita and Wakayama), approximately 950,000 birds were destroyed. Meanwhile, 32 wild birds that were found weakened or dead in 11 prefectures (Fukushima, Hokkaido, Hyogo, Kagoshima, Kyoto, Miyazaki, Nagasaki, Oita, Tochigi, Tokushima, Tottori) during February, 27 tested positive for H5N1 avian influenza and another 5 tested positive for H5 waiting for N typing. Species include: great crested grebe (*Podiceps cristatus*), greater Scaup (*Aythya marila*), little grebe (*Tachybaptus ruficollis*), Mandarin duck (*Aix galericulata*), peregrine falcon (*Falco peregrinus*), tundra swan (*Cygnus columbianus*), whooper swan (*Cygnus cygnus*), grey heron (*Ardea cinerea*), hooded crane (*Grus monacha*), Ural owl (*Strix uralensis*) and crow (*Corvus spp.*). There were two outbreaks reported in captive birds, one of which occurred in a flock of swans in an amusement park. A total of 338 captive waterfowl were culled.

Korea, the Republic of

A total of seven outbreaks of H5N1 HPAI were confirmed in poultry farms in two provinces ("do"). The farms affected were in (number of outbreaks in brackets): Gyeonggi-do (2) and Gyeonggi-do (5).

Myanmar

Another H5 HPAI outbreak occurred in a layer chicken farm in Sagaing State on 20 February. A total of 626 out of 6,700 chickens died within five days. The rest were culled as a part of control measures.

Viet Nam

A total of eleven outbreaks in five provinces were reported in the north and the central regions: three outbreaks in the Red River Provinces of Ha Nam, Nam Dinh and Vinh Phuc; eight outbreaks in the North Eastern Provinces of Thai Nguyen, Lang Son and Quang Ninh; and one outbreak in Kon Tum Province in the Central Highland. More than 12,700 birds were affected.

SUMMARY OF CONFIRMED HPAI OUTBREAKS (As of 28 February 2011)

Sources: OIE, European Commission (EC), FAO and national governments – WHO for human cases/deaths

Note: H5N1 unless otherwise indicated. Highlighted countries indicate those in which there has been only one officially confirmed H5N1 outbreak or occurrence. Dates of the last outbreak within this year are in bold.

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	31 January 2007	Domestic poultry – wild birds	-
Djibouti	6 April 2006	6 April 2006	Domestic poultry	1 / 0
Egypt	17 February 2006	27 February 2011	Domestic poultry – wild birds – donkeys*	122 / 40
Ghana	14 April 2007	13 June 2007	Domestic poultry	-
Niger	6 February 2006	1 June 2006	Domestic poultry	-
Nigeria	16 January 2006	22 July 2008	Domestic poultry – wild birds	1 / 1
Sudan	25 March 2006	4 August 2006	Domestic poultry	-
Togo	6 June 2007	8 September 2008	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	28 February 2011	Domestic poultry	1 / 0
Bhutan	18 February 2010	14 March 2010	Domestic poultry	-
Cambodia	12 January 2004	28 January 2011	Domestic poultry – wild birds	13 / 11
China	20 January 2004	9 May 2010 wild birds	Domestic poultry – wild birds	40 / 26
China (Hong Kong SAR)	19 January 2004	3 February 2011	Domestic poultry – Wild birds	-
India	27 January 2006	3 February 2011	Domestic poultry	-
Indonesia	2 February 2004	January 2011	Domestic poultry – pigs (with no clinical signs)	171/ 141
Japan	28 December 2003	28 February 2011	Domestic poultry – wild birds – raccoons (no clinical signs)	-
Kazakhstan	22 July 2005	10 March 2006	Domestic poultry – wild birds	-
Korea, Rep. of	10 December 2003	24 February 2011	Domestic poultry – wild birds	-
Lao PDR	15 January 2004	27 April 2010	Domestic poultry	2 / 2
Malaysia	7 August 2004	2 June 2007	Domestic poultry – wild birds	-
Mongolia	10 August 2005	3 May 2010	Wild birds	-
Myanmar	8 March 2006	20 February 2011	Domestic poultry	1 / 0
Nepal	8 January 2009	25 October 2010	Domestic poultry	-
Pakistan	23 February 2006	17 June 2008	Domestic poultry – wild birds	3 / 1
Thailand	23 January 2004	10 November 2008	Domestic poultry – wild birds – tiger	25 / 17
Viet Nam	9 January 2004	27 February 2011	Domestic poultry	119/ 59

NEAR EAST	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	18 January 2006	1 February 2006	Domestic poultry – wild birds	3 / 2
Israel	16 March 2006	2 May 2010	Domestic poultry – Emu (zoo)	-
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	27 February 2011	Domestic poultry	-

* Journal of Biomedical Science : <http://www.jbiomedsci.com/content/17/1/25>

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	Wild birds – domestic poultry – dogs	8 / 5
Bosnia-Herzegovina	16 February 2006	16 February 2006	Wild birds	-
Bulgaria	31 January 2006	29 March 2010	Wild birds	-
Croatia	21 October 2005	24 March 2006	Wild birds	-
Czech Republic	20 March 2006	11 July 2007	Wild birds – domestic poultry	-
Denmark	12 March 2006	22 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	10 January 2009 mallard, wild	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	22 December 2007	Wild birds – domestic poultry	-
Romania	7 October 2005	27 March 2010	Wild birds – domestic poultry – cat	-
Russian Federation	15 July 2005	5 June 2010 wild birds	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	9 October 2009 (H7)	Poultry	-
Sweden	28 February 2006	26 April 2006	Wild birds – domestic poultry – game birds – mink	-
Switzerland	26 February 2006	22 February 2008	Wild birds	-
Turkey	1 October 2005	9 March 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	22 May 2008 (H7N7)	Wild birds – domestic poultry	-

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