

Update on the Avian Influenza situation (As of 04/10/2004) – Issue no. 23



Ducks in a farm in Bandar Lampung, Indonesia (Photo: Dr. I. Douglas)

The information summarized below is gathered from official and non official sources, which are quoted in the text. AIDE news is prepared by the FAO Technical Task Force on Avian Influenza.

1. Latest information on Avian Influenza

Additional outbreaks of H5N1 Highly Pathogenic Avian Influenza (HPAI) were suspected and/or confirmed in Thailand. Human cases were also reported in Thailand and Viet Nam during this review period. FAO issued Recommendations on the Prevention, Control and Eradication of Highly Pathogenic Avian Influenza in Asia.

Country situation

Thailand: Suspected cases of HPAI infection were reported on 29/09/04 in native chickens in Roi Et Province. The Thai Ministry of Public Health announced the deaths of an 11 year old girl in Kamphaeng Phet Province on 12/09/04 and the mother eight days later. The mother was confirmed to have been infected with H5N1. The girl raised poultry at home, all of which died the previous month. However, the mother who lived in Bangkok had no contact with the affected chicken. The aunt and her six year old son who lived with the girl have been hospitalised and the aunt has been confirmed to be infected with HPAI. This family cluster of four cases is under investigation to determine whether human-to-human transmission has occurred. A nine-year-old girl in Phetchabun Province died on 02/10/04, was confirmed to have been infected by the H5N1 virus. She had helped pluck feathers from slaughtered chickens that her family had raised. As at 30/09/04, 27 provinces are subject to the 21 day-surveillance period imposed by the Department of Livestock Development (DLD), Ministry of Agriculture and Cooperatives. (04/10/04, Source: Government, FAO, WHO, media website)

Viet Nam: A new case of AI outbreak was reported in Hau Giang Province on 13/09/04 where more than 1,000 ducks were culled. Outbreaks were also reported in Quoc Oai, Ha Tay Province on 29/08/04 and in Long Bien market, Hanoi on 27/08/04. Flocks of 558 chickens and 242 ducks were destroyed. A 14-month-old boy from Ha Tay Province who was hospitalised in Thanh Tri District in Hanoi and died on 05/09/04, tested positive for AI. (30/09/04 Source: Government, FAO, media website).

Cambodia: Cambodia has detected a new outbreak in chickens. More than 600 chickens fell ill and started dying on 19/09/04 on a farm at Kien Svay District in Kandal Province, near the Cambodian capital. The farm had 4,500 one-month old chickens. All chicks were bought from Takhmao District in the same province. About 2,300 chickens died, and the remaining 2,200 birds were culled. The farm is located six kilometres east of Phnom Penh. A quarantine zone has been set up in a three-kilometre radius around the infected area for at least 30 days. Testing by the Pasteur Institute in Phnom Penh confirmed that the strain was H5N1. Preliminary investigations by Government authorities traced the disease back to a pond near the farm. The pond was frequented by wild birds. It is suspected that the farm's owner used water from the pond for the chickens. (23/09/04 Source: Government, FAO, media website).

Malaysia: Three chickens died in Jalan Bayam Guchil Village on 19/09/04, about six kilometres away from where the first HPAI outbreak was detected. Two more cases were found on 23/09/04 in Kelantan state which is under quarantine. The infection was detected in a total of 11 chickens in two villages, both within districts of Kelantan State. All birds within a one-kilometre radius were culled as part of the control measures. Authorities have set up roadblocks at Kelantan state borders to ensure that the disease does not spread to other states.

Swallows were found dead on Layang-Layang Island, Spratlys, and five Malaysian sailors who fell ill with flu-like symptoms after coming across the dead swallows underwent tests on 24/09/04 in Kota Kinabalu, Sabah state, Borneo Island. The sailors and samples from dead birds collected by the sailors tested negative to HPAI. Some commercially-bred swallows have been raised around Kota Baharu, the Kelantan Veterinary Services Department has been taking blood samples of the swallows since February to ensure the birds are free from AI infection and the results have been negative.

Malaysia sent a team of senior agriculture officials to Thailand in the week of 20 September for urgent talks on tightening border controls against the spread of HPAI. (25/09/04, Source: media website)

Indonesia: In Kranggan Harjo, Toroh district, Grobogan regency, Central Java province, deaths of 350 chickens were reported. Officials were prompted to urge further vaccinations. Tests on dead birds confirmed H5N1 strain on 29/09/04. (04/10/04, Source: media website)

South Africa: In Eastern Cape Province, near Fort Brown north of Grahamstown, 4,000 ostriches were culled on 21/09/04 on a farm where clinical cases of H5N2 infection were found. The farm had exchanged birds with farms in the area of the initial outbreak prior to the quarantine measures. (22/09/04, Source: media website)

2. Recommendations on the Prevention, Control and Eradication of HPAI in Asia

> Press release: Virus will not be eradicated in the near future, FAO/OIE say - New FAO guidelines published, supported by OIE

The avian influenza epidemic in Asia is a "crisis of global importance" and will continue to demand the attention of the international community for some time to come. Recent outbreaks in China, Viet Nam, Cambodia, Malaysia and Thailand show that the virus continues to circulate in the region and will not probably be eradicated in the near future. More research is urgently needed as the role of wildlife, domestic ducks and pigs in transmitting the virus among animals is still not fully understood. A permanent threat to animal and human health continues to exist.

While much progress has been made in early detection and reaction, countries still need to step up proactive surveillance and control measures. Major investments are required to strengthen veterinary services, in particular for surveillance, early warning, detection, reporting and response and for the rehabilitation and restructuring of the poultry sector.

The newly published FAO Recommendations on the Prevention, Control and Eradication of Highly Pathogenic Avian Influenza (HPAI) in Asia, prepared in close collaboration with OIE, reviews the factors that should be taken into account in designing and implementing control programmes. It explains how countries could adopt a strategy that is appropriate to their individual situation and needs.

In response to recent controversies on vaccination against bird flu, FAO and OIE reiterated that the slaughter of infected animals is the best way of controlling and ultimately stamping out the disease. However, FAO/OIE acknowledged that this policy

may not be practical or adequate in some countries because of social and economic reasons or because of high viral challenge due to infection in villages, wild birds or domestic waterfowl. In such cases, countries wishing to eradicate the disease may choose to use vaccination as a complementary measure to the stamping out policy.

Vaccines, if used, should be produced in accordance with international guidelines prescribed in the OIE Manual of Diagnostic Tests and Vaccines for Terrestrial Animals. The OIE Terrestrial Code states that a country may be considered free from HPAI based on the absence of virus irrespective of whether vaccination has been carried out. Therefore, the two organisations confirm that the use of vaccines does not imply automatic loss of export markets. It has been shown that the use of such vaccines does not only protect healthy birds from disease but also reduces viral load excreted by infected birds and thus the likelihood of transmission of the virus to other birds and to humans. However, the decision on whether to use vaccines has to be made by each country based on its own circumstances ... Vaccination should be carried out under the supervision of official veterinary services and be accompanied by parallel surveillance strategies. This would include the capacity of the veterinary services to identify and monitor the circulating virus as well as the response to vaccination...

The full text is available on: <http://www.fao.org/newsroom/en/news/2004/50961/index.html>

➤ **FAO Recommendations on the Prevention, Control and Eradication of Highly Pathogenic Avian Influenza (HPAI) in Asia**

The newly published "FAO Recommendations on the Prevention, Control and Eradication of Highly Pathogenic Avian Influenza (HPAI) in Asia" is an FAO position paper based on peer reviewed papers, meetings with government officials and expert consultations including OIE and WHO experts. The document includes: **Factors to consider in determining the appropriate strategy for control** (the level of infection; the presence of wildlife reservoirs; farming and marketing systems; likelihood of infection or reinfection in countries or compartments; involvement in international trade; animal health infrastructure; economic, political and social issues; public health issues); **Economic political and social issues** (reasons for economic appraisal; estimating benefits of control strategies; estimating costs of control strategies; political and social consequences); **Disease control** (general principles - regional cooperation; emergency response to/contingency planning for virus incursions; understanding the viruses; measures for prevention, control and eradication of HPAI - enhanced biosecurity at poultry farms and associated premises; control of movement of birds and products that may contain virus, including controls at the interface of infected and uninfected areas; controlling movement of items from infected zones in an outbreak; border controls; changes to industry practices to reduce risk; destruction of infected and at-risk poultry - methods used for the destruction of poultry; disposal of carcasses and potentially infective material in a biosecure and environmentally acceptable manner - removal of carcasses; removal of faeces and litter; cleaning and disinfection); the use of vaccines (general; conclusions from international and regional meetings relating to vaccination; vaccines in use today; vaccine administration; assessing whether to vaccinate; birds to be vaccinated; the implication of vaccination for exporting countries; public health factors relating to use of vaccines); **Adoption of the most appropriate control strategies** (basic principles; disease eradication; moving from control to eradication; developing a vaccination element in a control strategy); **FAO conclusions and recommendations**; sources of information. The AIDEnews will introduce these recommendations by topics in the next issues.

The full text of the Guiding Principles is available on:

EMPRES Information System (EMPRES-i) > Disease Recognition module > Avian Influenza

http://www.fao.org/ag/AGA/AGAH/EMPRES/tadinfo/e_tadAVI.htm at Relevant articles/publications:

or <http://www.fao.org/docs/eims/upload/165186/FAOrecommendationsonHPAI.pdf> (233KB)

3. Surveillance and Post-epidemic rehabilitation activities – What next?

- **National workshops of TCP/RAS/3010 - Emergency Regional Support For Post-avian Influenza Rehabilitation** were held in Phnom Penh, Cambodia and Hanoi, Viet Nam on 1-3 and 8-10 September 2004 to recommend strategies for recovery and rehabilitation.

Cambodia: The workshop focussed on AI epidemiology. Several of the points raised clearly reflected broader thinking and long term strategic focus on the way forward in the control of the disease. HPAI is regarded as one element of the factors affecting the development of the poultry sector in this country. The control of AI is part of the national strategy for controlling infectious diseases in livestock and poultry. The report of the socio-economic study in holistic approach, showed the role of poultry in household livelihoods (backyard poultry contributes about 12% to household income); the impact of HPAI in terms of loss of profit over a period of six months and extended loss of markets; increased pig prices as a result of reduced poultry demand; impact on other sectors (traders, consumers) in the market chain, and on farmers whose flocks were and were not infected.

The poultry sector in Cambodia does not appear to be changing its structure as a result of HPAI outbreaks (12 outbreaks in all). Roughly 90% of chickens and 70% of ducks are said to be raised in backyard systems. It is possible to identify four sectors by farm size and commercialisation – backyard; small commercial; medium commercial; large commercial, or three sectors - backyard, commercial/private, vertically integrated. The commercial, vertically integrated sector implements some on-farm biosecurity measures but not strictly and risk management is not homogeneous. Backyard flocks in Cambodia import very few birds. There has been some restocking, but farmers with backyard flocks have not bought many more birds than usual and appear for the most part, to be breeding replacements. Currently there is great interest in preserving native birds and selectively breeding them. There is a relatively new industrial poultry sector with investments by international firms through contractual arrangements with local poultry farmers. If poultry production in Cambodia is found to be competitive, this sector is likely to grow.

Some biosecurity issues such as the role of middlemen in the epidemiology of HPAI were raised. While birds mainly move out of backyard farms (replacements are bred, not bought), middlemen and their vehicles and equipment move from farm to market to farm. Previous work on disease ecology in FAO has identified geographical location/length of the market chain as an important factor in contributing to risk of spread of disease. Risks arise perhaps primarily from middlemen and their equipment coming onto the farm to buy birds. Therefore, farms apparently in the same production sector but with different trading patterns, may be at different levels of risk. There is the need to inform farmers and others about the usefulness of better biosecurity. The Department of Animal Health and Production (DAHP) has made a video film for extension purposes (awaiting approval for release) showing some low cost and practical measures that can be taken by small commercial farmers to control the disease.

Cambodia is an importer and not an exporter of poultry, recognises the importance of regional biosecurity. The government realises that it cannot conduct a unilateral surveillance effort. Cambodia wishes to improve its recognition and reporting of major infectious diseases at field level, and sees HPAI as one of four diseases that it would like to tackle. If HPAI is seen as one important livestock disease rather than the priority disease, then measures used for HPAI control would also need to be considered for foot-and-mouth disease, classical swine fever and Newcastle disease.

There were considerable discussions about using credit to boost the development of the poultry sector. Cheap loan for farmers was a popular subject of discussion among government employees at the workshop. A number of non-governmental organizations in Cambodia use different forms of microcredit facilities. Microcredit schemes and savings groups do not usually use subsidised credit – in fact, interest rates may be at the level of bank rates or higher – but they provide lending terms that suit the users and their business enterprises (no security or group security, repayment periods that take into account the livestock production cycle) and are often linked to training so that enterprises funded from loans have a greater chance of success.

Viet Nam: The report of the socio-economic study took a broad but slightly different approach to the one in Cambodia.

Four sectors were identified – backyard, small commercial, commercial and industrial. Scavenging birds exists in all four sectors identified – mostly in the backyard sector but also in small and larger commercial poultry production systems. In the commercial sector, it seems mainly to be ducks that scavenge.

The financial impact from each control measure of HPAI was discussed.

Three months after the first outbreak, 70% of survey farms had restocked to half of original farm capacity. The lack of safe birds for restocking is still considered to be a major constraint. Industry contracted farms had been fully restocked. A shift towards pig production (and to a lesser extent towards cattle production) among poultry producers was observed as a diversification strategy. 17% of depopulated farmers interviewed suggested that they would not return to poultry production. It was revealed that 1/3 of casual labour in survey farms was released in the 3 months following the outbreaks. However, it was hard to assess whether the outbreak analysed has caused a shift in the overall structure of the poultry sector.

Very little information on impact of the AI outbreaks along the market chain was presented or documented. The World Bank earlier in the year, made some estimates of total losses. A study under this FAO Technical Cooperation Programme (TCP) project purposively sampled farmers who had culled or depopulated, while other studies were made to complement this study. National statistics have also been compiled suggesting that in total, nearly 44 million poultry (chickens, quail and water birds) may have died or had been killed. Almost all 64 provinces experienced AI outbreaks and the eight most heavily affected provinces, suffered losses of between 18% and 98% of total bird population.

Approaches to outbreak control were dealt with at provincial level, following broad guidelines from Department of Animal Health (DAH). However, there seems to be a disconnection between the biosecurity measures recommended by the DAH (the central system) and the practical possibilities in backyard systems identified by provincial veterinary staff. The importance of a well defined national contingency plan and good understanding of control procedures at local level was stressed. It was also suggested that the need to boost the local emergency response capabilities to any emerging disease – e.g. waiting for laboratory confirmation before taking precautionary measures, may be an unnecessary delay.

Viet Nam has implemented a compensation plan for AI. However, it is organised at the discretion of individual provinces and the details vary by province. Only farmers whose birds are culled by government order are compensated, for part of the loss of birds and eggs destroyed. The value given for each bird varies by province but the same price is usually paid for all kinds of poultry. Farmers have access to small bank loans (up to VND 20 million - \$1300 - possibly to be raised to VND 50 million) without security, at a monthly interest rate of 1-1.15%. About 80% of farm households have accessed a loan at some time. After the AI outbreaks earlier in the year, loans have been rescheduled for 12 months or more. Commercial producers would have been able to reschedule back debts to mitigate the impact of the first outbreaks, but if they

were affected again after restocking they could face serious debt problems. Geographic relocation of larger farms has been suggested as part of a long term sector strategy and appears to have taken place on a small scale. FAO has commissioned a study on compensation policy as part of its support to Avian Influenza Emergency Recovery Project (AIERP).

Three more national workshops and a regional workshop are to be run by the end of October, 2004 under this TCP. A further workshop is planned on the economics of AI control strategies.

4. Actions taken – follow-up

- **FAO Regional Animal Production and Health Commission for Asia, the Far East and the Southwest Pacific (APHCA) 28th Session** (26/09–1/10/2004, Chiang Mai, Thailand) will also discuss on HPAI epidemiology and control in the region.
- **FAO expert meeting on HPAI surveillance networks for Southeast Asia, East Asia and South Asia will be held at FAO, Rome on 4-6 October 2004**
- **Recent Missions (September - October):**

We will be grateful if other organizations/countries could send us information on their assistance missions to the countries concerned. (e-mail to: Avian-Influenza-Registration@fao.org)

[Region]

- Dr. Shetty, (India) FAO consultant (Poultry Production Expert), To commence in the week of 04/10/04
- Dr. P.Gautier, (France) Participating workshops (Poultry Production Expert), Ongoing (Lao PDR and Thailand)
- Dr. F. Dolberg (Denmark) FAO consultant (Poultry Production Expert), Ongoing (Mission to Cambodia, Indonesia, Lao PDR and Thailand).
- Dr. Wantanee Kalpravidh, FAO RAP (Bangkok), Project Co-ordinator, Ongoing (Mission to Cambodia, Viet Nam, Lao PDR, Chiang Mai/Thailand)
- Dr. C. Benigno, FAO RAP (Bangkok) Animal Health Officer, Ongoing (Mission to Cambodia, Viet Nam, Lao PDR, Indonesia)

[Cambodia]

- Dr. A. McLeod, FAO AGAL (Rome) Senior Officer (Livestock Policy). 1-3/09/04
- Dr. Y. Froehlich (France) FAO consultant (Project Technical Adviser), Ongoing.

[Indonesia]

- GuerneBleich, Emmanuelle, FAO AGAP (Rome) Animal Production Officer (Small Animals), To commence in the week of 03/10/04
- Dr. S. Morzaria, FAO Consultant, 15 – 20/09/04
- Dr. J. Lubroth, FAO AGAH (Rome) Senior Officer (EMPRES). 18-25/09/04

[Lao PDR]

- Dr. L. Huaguang (USA/China) FAO TCDC expert (Laboratory diagnostics), To commence in the week of 11/10/04
- Ms. E. Bautista (Philippines) FAO TCDC expert (Project finance & administration officer), Ongoing

[Malaysia]

- Dr. H. Wagner, FAO RAP (Bangkok), Senior Officer, RAP, 6–8/09/04

[Singapore]

- Dr. S. Morzaria, FAO Consultant, WHO Expert Consultation on Outbreak Communications, 21-23/09/04

[Thailand]

- GuerneBleich, Emmanuelle, FAO AGAP (Rome) Animal Production Officer (Small Animals), To commence in the week of 03/10/04
- Dr. J. Lubroth, FAO AGAH (Rome) Senior Officer (EMPRES). 25-28/09/04

[Viet Nam]

- Dr. A. McLeod, FAO AGAL (Rome) Senior Officer (Livestock Policy), 8-10/09/04

5. Resources available

Relevant articles/publications:

- FAO-EMPRES (Emergency Prevention System against transboundary animal and plant pests and diseases) Avian Influenza website:
http://www.fao.org/ag/AGA/AGAH/EMPRES/tadinfo/e_tadAVI.htm
- FAO Recommendations on the Prevention, Control and Eradication of Highly Pathogenic Avian Influenza (HPAI) in Asia
<http://www.fao.org/docs/eims/upload/165186/FAOrecommendationsonHPAI.pdf> (233KB)
- Guiding Principles : Highly Pathogenic Avian Influenza Surveillance And Diagnostic Networks In Asia (FAO Expert Meeting 21-23 July 2004, Bangkok)
<http://www.fao.org/ag/againfo/subjects/en/health/diseases-cards/Guiding%20principles.pdf>
- FAO/OIE Emergency Regional Meeting on Avian Influenza Control in Animals in Asia (26-28 February 2004, Bangkok). The full text of the final report is available on:
http://www.fao.org/ag/againfo/subjects/en/health/diseases-cards/HPAI_Bangkok.pdf
- China-ASEAN Special Meeting on HPAI Control. Beijing (2 March 2004)
The full text of the Joint Press Statement "China-ASEAN Special Meeting on HPAI Control" is available on AIDEnews issue 8 pages 4 - 5:
<http://www.fao.org/docs/eims/upload/153869/AVIbull008.pdf>
- FAO/OIE/WHO Technical Consultation on the Control of Avian Influenza (3-4 February 2004, Rome) The full text of the Conclusions and recommendations is available on:
http://www.fao.org/newsroom/common/ecg/36647_en_experts.pdf
- Manual on the preparation of national animal disease emergency preparedness plans
<http://www.fao.org/docrep/004/x2096e/x2096e00.htm>
- The use of vaccination as an option for the control of Avian Influenza (I. Capua, S Marangon) – 71st OIE General Session (May 2003). Available at:
http://www.fao.org/docs/eims/upload/153564/A_71_SG_12_CS3E.pdf
- Information for shipping international diagnostic specimens to the International Reference Laboratories (see appendix 2 of AIDEnews issue 5 or 6, available at:
<http://www.fao.org/ag/AGA/AGAH/EMPRES/index.asp>)
- FAO EMPRES Manual on procedure for disease eradication by stamping out
(Available at: <http://www.fao.org//DOCREP/004/Y0660E/Y0660E00.HTM>)
- FAO AGAH Avian Influenza website:
http://www.fao.org/ag/againfo/subjects/en/health/diseases-cards/special_avian.html
- FAO AIDEnews (Vol. 1 - 22)
(Available at: http://www.fao.org/ag/AGA/AGAH/EMPRES/tadinfo/e_tadAVI.htm)
- FAO AIDEnews maps
(Available at: http://www.fao.org/ag/AGA/AGAH/EMPRES/maps/e_maps.htm)

Helpful links:

OIE Manual of Diagnostic Tests and Vaccines for Terrestrial Animals 2004 - CHAPTER 2.1.14. Highly Pathogenic Avian Influenza http://www.oie.int/eng/normes/mmanual/A_00037.htm

Proposed new chapter for The OIE Terrestrial Animal Health Code [Chapter 2.1.14.] Avian Influenza: http://www.oie.int/eng/AVIAN_INFLUENZA/safety.htm click the link to the proposed new chapter submitted in May 2004

OIE Update on Avian Influenza in Animals in Asia web site:
http://www.oie.int/download/AVIAN%20INFLUENZA/A_AI-Asia.htm

OIE Technical Disease Cards:
http://www.oie.int/eng/maladies/fiches/a_A150.htm

WHO Avian influenza web site:
http://www.who.int/csr/disease/avian_influenza/en/

Updated Information for Travellers about Avian Influenza A (H5N1)
<http://www.cdc.gov/travel/other/h5n1apr2004.htm>

Foreign Animal Diseases (1998) United States Animal Health Association. "The Gray Book" http://www.vet.uga.edu/vpp/gray_book/FAD/avi.htm

AUSVETPLAN including HPAI Disease strategies and Operational procedures
<http://www.aahc.com.au/ausvetplan/>

Avian Influenza - Disease and Control Strategies and Contingency Planning (intervet)
<http://www.avian-influenza.com/>

Avian Influenza - Its Causes, Effects & Control (Antec International)
<http://www.antecint.co.uk/main/avianflu.htm>

Biosecurity for the Birds (USDA Animal and Plant Health inspection Service, Veterinary Service) <http://www.aphis.usda.gov/vs/birdbiosecurity/>

Biosecurity for Poultry Flocks (Joan S. Jeffrey, University of California, Davis, School of Veterinary Medicine) http://www.vetmed.ucdavis.edu/vetext/INF-PO_Biosecurity.html

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Annex 1: Situation in Asian Countries (as of 04/10/2004)

area	date of first official reporting to the OIE	type	species affected since the start of the outbreak	human case	Latest information ¹⁾		
					last known case suspected and/or confirmed	source of the latest information and OIE declaration	comments
Republic of Korea	17/12/03	H5N1	layer, duck; virus isolated: magpie	no	24/03/04	Government; media websites. Declared to OIE	AHD/MAF informed OIE the negative result of the final serological testing of the sentinel birds on 19/07/04
Viet Nam	8/01/04	H5N1	chicken, quail, duck, muscovy duck	yes	13/09/04	FAO ²⁾ , Media websites	Five human cases confirmed since July 04
Japan	12/01/04	H5N1	chicken, crow	no	05/03/04 (crow)	Government and media website; Declared to OIE	All the movement restrictions lifted by 13/04/04
Taiwan Province of China	20/01/04	H5N2 (LP ³⁾)	chicken, duck, pheasant	no	09/03/04	Meeting report, media website. Declared to OIE	
Thailand	23/01/04	H5N1	virus isolation: chicken, duck, goose, quail, turkey, stork	yes	29/09/04	Government, FAO, media websites. Declared to OIE	Limited human-to-human transmission have occurred
Cambodia	24/01/04	H5N1	Chicken, duck, goose, turkey, guinea fowl, wild bird	no	19/05/04	Government, FAO. Declared to OIE	A new outbreak was found near Capital
Hong Kong SAR	26/01/04	H5N1	Peregrine falcon	no			
Lao, PDR	27/01/04	H5N1	Chicken, duck and quail	no	13/02/04	Government, FAO	
Pakistan	28/01/04	H7N3 H9N2 (LP)	layer; broiler	no	July 04	Government, FAO	
Indonesia	06/02/04	H5N1	Chicken, duck and quail	no	August 04	Government, FAO, media websites	
China	06/02/04	H5N1	virus isolation: chicken, duck, goose, quail, pigeon, pheasant, black swan	no	06/07/04	Government, FAO, media websites. Declared to OIE	Export ban of poultry products from Anhui Province was lifted on 31/08/04.
Malaysia	19/08/04	H5N1	chicken, fighting cocks (?)	no	23/09/04	Government, media websites. Declared to OIE	Entire Kelantan State is under quarantine.

1) Official (OIE) and unofficial information (ProMED, press agencies, FAO tracking systems...)

2) FAO: FAO representative in concurrence with Government sources

3) LP: low pathogenic strain

4) Gphin: Global Public Health Intelligence Network (Health Canada)

Annex 2: Situation in other Countries (as of 04/10/2004)

area	date of official reporting to the OIE	type	species affected since the start of the outbreak	human case	Latest information ¹⁾		
					last known case suspected and/or confirmed	source of information and its OIE declaration	comments
United States of America	11/02/04	H7N2 (LP)	Chicken	no	11/02/04 (Delaware)	Delaware Department of Agriculture Statement; FAO.	Final report submitted to OIE on 15/05/04
		H2N2 (LP)	Chicken	no	03/02/04 (Pennsylvania)	Pennsylvania Department of agriculture website; ProMED	
	23/02/04	H5N2	Chicken	no	Late February (Texas)	Texas Animal Health Commission and USDA website; FAO. Declared to OIE	USDA informed OIE the eradication of HPAI in Gonzales County, Texas on 01/04/04; 17/08/04
		H7N2 (LP)	Chicken	no	09/03/04 (Maryland)	Maryland Department of Agriculture News Release; FAO; Declared to OIE	Final report submitted to OIE on 15/05/04
		H7N3 (LP)	non-commercial	no	22/06/04 (Texas)	Texas Animal Health Commission website	
		H3N2	Turkey	no	17/09/04 (Missouri)	ProMED	
Canada	19/02/04	H7N3 (LP)	Chicken	yes (conjunctivitis)	29/04/04 (British Columbia)	Government website. Declared to OIE	CFIA informed OIE that the identified zone is no longer considered as infected, as of 9 July 2004
	09/03/04	H7N3					
South Africa		H6 (LP)	commercial poultry	no	25/03/04	ProMED	
	06/08/04	H5N2	ostrich farms	no	21/09/04 (Eastern Cape province)	Web Media	HPAI outbreaks were reported from ostrich farms in Eastern Cape province
Egypt		H10N7 (LP)	wild duck	yes	18/04/04 (from survey sample)	ProMED	

1) Official (OIE) and unofficial information (ProMED, press agencies, FAO tracking systems...)

2) FAO: FAO representative in concurrence with Government sources

3) LP: low pathogenic strain

4) Gphin: Global Public Health Intelligence Network (Health Canada)

Annex 3

- Donor Assistance –

Many institutions and governments have committed emergency assistance funds to help control HPAI outbreaks. FAO AIDE news is collecting information on donor assistance (financial, in kind or technical assistance) through FAO representations in Asian countries. FAO recognises that the tables below may be incomplete. We thank all donors and governments for their cooperation in providing additional complementary information.

Recipient countries:

Cambodia

Donors	Amount (US\$)	Description
FAO TCP	\$390,000	TCP/CMB/3002 Emergency assistance for the control of avian influenza
ADB*	\$91,940	Non-Trust Fund, under general coordination of FAO (for training, equipment and public awareness activities)
Australia	\$50,000	AusAID through FAO Trust Fund (OSRO/CMB/402/AUL)
China	\$50,000	Direct contribution to government (no details given)
France	\$57,600	French Cooperation through FAO Trust Fund (OSRO/CMB/403/FRA)
Germany	\$50,000	GTZ through FAO Trust Fund (OSRO/CMB/401/GER)
Japan	\$56,000	Non-Trust Fund, grant assistance for grass-roots human security project for antiviral medicines & equipment
	\$402,176	MoFA through FAO Trust Fund (OSRO/RAS/401/JPN, total \$1,610,083)
WHO	\$3,000	PPE supplies/training, lab training for DAHPs investigating teams and Human Flu Vaccine purchase.

*: Asian Development Bank

(As of 03/04/04. source: FAO representation in Cambodia)

China

Donor	Amount (US\$)	Description
FAO TCP	\$390,000	TCP/CPR/3004 Emergency assistance for the control of avian influenza

(As of 14/04/04. source: FAO Emergency Operations Service)

Indonesia

Donors	Amount (US\$)	Description
FAO TCP	\$390,000	TCP/INS/3001 Emergency assistance for the control of avian influenza
Australia	\$250,000	Human health protection through WHO Provide training (2 virologists) in AAHL, Geelong, Australia - dispatch 3 epidemiologists working with the Disease Investigation Center's staff members to assist the surveillance action plan - dispatch 1 virologist for bench training in DIC R-III, R-IV and R-VI (18 vets and assistants) - Provide training (2 field veterinarians) on HPAI in AVA, Singapore
China	\$100,000	Vaccines, training, public awareness at off farm
Germany	\$61,000	OSRO/INS/402/GER through FAO Trust Fund. Four trainings on clinical & gross pathology diagnosis (total 222 veterinarians)
Japan	\$78,906	MAFF provided protective gear through grass roots aid fund
	\$113,000	Public awareness campaign activities
	\$10,000	Through JICA/Indonesia on diagnostic training (24 veterinarians)
	\$402,117	MoFA through FAO Trust Fund (OSRO/RAS/401/JPN, total \$1,610,083)
Netherlands		May provide veterinary experts in support of FAO operations.
USA		Support through the provision of laboratory analysis available in Atlanta
World Bank		- AI workshop in Bengkulu - training for field officers & farmers on clinical signs, vaccination & biosecurity measures in Bengkulu (3 districts)

(As of 27/07/04. source: FAO representation in Indonesia)

Lao PDR

Donors	Amount (US\$)	Description
FAO TCP	\$390,000	TCP/LAO/3001 Emergency assistance for the control of avian influenza
ADB	\$50,000	Direct procurement of Personnel, Protective clothing and equipment
Australia		Through AusAID to invite two government veterinarian for training course
China	\$50,000	Re-establishing poultry breeding farms
France	\$53,745	For surveillance activities (OSRO/LAO/401/FRA)
Japan	\$404,040	MoFA through FAO Trust Fund (OSRO/RAS/401/JPN, total \$1,610,083)
	\$50,000	Through JICA
USA	\$250,000	Direct contribution to WHO Regional Office (Manila)
WHO		Support for one veterinarian for a 2 month mission

(As of 14/04/04. source: FAO Emergency Operations Service, JICA)

Pakistan

Donors	Amount (US\$)	Description
FAO TCP	\$390,000	TCP/PAK/3002 Emergency assistance for the control of avian influenza
China	\$50,000	For strengthening the diagnostic/samples analysis capacities of the national labs.

(As of 28/04/04. source: FAO representation in Pakistan)

Thailand

Donor	Amount (US\$)	Description
FAO		Technical advice of experts
Japan		Experts & standard Antigen/reagents to assist AI typing/sub-typing.

(As of 08/03/04. source: FAO representation in Thailand)

Viet Nam

Donors	Amount (US\$)	Description
FAO TCP	\$390,000	TCP/VIE/3003 Emergency assistance for the control of avian influenza
ADB	\$ 50,000	Protective gear
EC	\$968,000	Protective clothing, lab equipment
Germany	\$ 60,000	laboratory diagnostic equipment
Japan	\$200,000	Tamiflu (anti-viral drug)
	\$401,750	MoFA through FAO Trust Fund (OSRO/RAS/401/JPN, total \$1,610,083)
WHO		Unspecified
World Bank	\$170,000	Formulation mission for Avian Influenza Emergency Recovery Project
	\$5,000,000	Avian Influenza Emergency Recovery Project for strengthening disease surveillance and diagnostic capacity; strengthening the poultry sector infrastructure to better cope with serious disease outbreaks; and safeguarding human health by improving public awareness and information
Denmark	nearly \$130,000	Through DANIDA, in kind cooperation for AI control in 14 provinces (sprayers, protective clothing, diagnostic kits for local veterinarians)
AFD		Assessment mission to support the HPAI situation in Viet Nam and to provide recommendations for short and long term by Agence Française de Développement (AFD), Centre de coopération internationale en recherche agronomique pour le développement (CIRAD) and Vétérinaires Sans Frontières (VSF) was funded by AFD
Republic of Korea	\$30,000	to study measures to prevent and control bird flu

(As of 17/09/04. source: FAO representation in Viet Nam, the World Bank website, VSF)

Regional

Donor	Amount (US\$)	Description
FAO TCP	\$400,000	TCP/RAS/3004 Emergency regional coordination assistance for control of avian influenza in southeast Asia
FAO TCP	\$400,000	TCP/RAS/3006 Diagnostic Laboratory and Surveillance Network Coordination for Control and Prevention of Avian Influenza in Southeast Asia
FAO TCP	\$400,000	TCP/RAS/3007 Diagnostic laboratory and surveillance network coordination for control and prevention of avian influenza in East Asia
FAO TCP	\$400,000	TCP/RAS/3008 Diagnostic laboratory and surveillance network coordination for control and prevention of avian influenza in South Asia
FAO TCP	\$400,000	TCP/RAS/3010 Emergency regional support for post-avian influenza rehabilitation

(As of 14/06/04. source: FAO Emergency Operations Service)