

## FAO AIDE news

Avian Influenza Disease Emergency

### Update on the Avian Influenza situation (As of 28/07/2004) – Issue no. 19



Ducks on the bike, Viet Nam  
(Photo: H. Wagner)

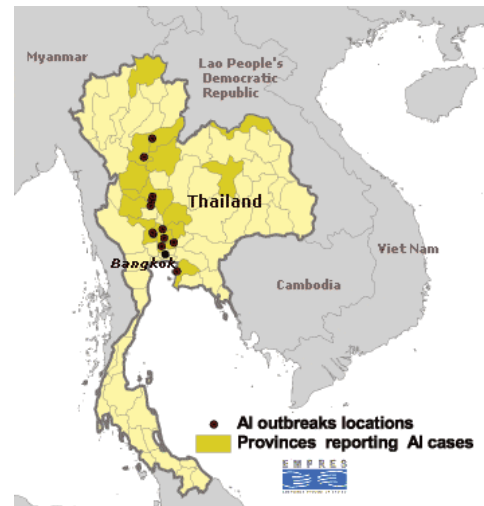
The information summarized below is gathered from official and non official sources, which are quoted in the text. AIDE news is prepared by the FAO Technical Task force on Avian Influenza.

## 1. Latest information on Avian Influenza

Avian influenza devastated poultry farms throughout Asia earlier this year, and has been notified again during the month of July in several countries including Thailand, Viet Nam, China and Indonesia. The reasons for the re-emergence of the disease at this period of the year is still unexplained but field epidemiological investigations carried out since the beginning of the crisis should eventually assist in better understanding the origin of the disease and its main features. Vaccination, which is already in use and encouraged in countries such as China and Indonesia could be applied in other affected countries if the disease becomes established. The possibility of using vaccination as a tool to curb the spread of the disease is currently being studied by national authorities of Thailand and Viet Nam.

### Country situation

**Thailand:** Since 05/07/04, avian influenza (AI) was confirmed in 18 provinces including Ayudhaya, Pathum Thani, Sukhothai, Uttaradit, Nakorn Sawan, Arngthong, Supanburi and Chiang Rai, Chonburi, Satun, Nong Khai, capital Bangkok, Nonthaburi and Phitsanulok provinces (see map on the right), with cases being investigated in 20 others. Several large scale duck farms have been affected and consequently depopulated. The government has set up a national-level committee, the National Veterinary Council, to study possible strategies against avian influenza and given it two months to decide on introducing bird-flu vaccination in critical areas. The committee will review on: the disease situation; epidemiological factors especially the transmission mechanism between flocks as well as to humans; poultry production systems; current control measures and possibility to apply more stringent control measures such as biosecurity in some sectors; the possibility to control and monitor outcomes of vaccination; and possible impact of vaccination in Thailand. The Government will only consider vaccination once it is confident that it poses no harm to humans. Thailand had ordered its livestock officials nationwide to employ the three preventive measures to the bird flu situation: educating owners of poultry farms about the disease and how to comply with the government's orders and measures; collecting samples of dead fowl and tracing for



AI confirmed provinces in Thailand  
since 05/07/04

indigenous chickens to look for any suspicious signs; and cleaning markets and places where poultry are sold. About 200,000 birds have been culled. (26/07/04 Source: Government, FAO, media website)

**Viet Nam:** Since 01/07/04, outbreaks of avian influenza H5N1 have been found in 11 provinces including the city of Can Tho and the provinces of Bac Lieu, Hau Giang, Tra Vinh, Dong Thap, Vinh Long, Tien Giang, Ba Ria Vung Tau, Kien Giang, Ben Tre and Long An. There is also a suspected outbreak in Bac Ninh province in northern Viet Nam. At least 2,000 chickens infected with the H5 strain of the avian influenza virus were destroyed in Bac Ninh on July 27.

About 50,000 poultry including 35,000 chickens and ducks and 13,000 quails died/have been culled since the end of June. The culling policy is still in place but reduced to 1 km radius. Local farmers were called to register their fowl numbers to facilitate the control of poultry and potential outbreaks in the province. In order to curb the potential spread, the Animal Health Department has asked cities and provinces nationwide to strengthen surveillance on transport and trade of poultry and their eggs. Under this scheme, fowl and eggs in provinces stricken by bird flu are not allowed to be transported out of the localities for 21 days.

In the north, Hanoi and 21 Northern provinces are stepping up their preventive measures. By 25/07/04, city officials have set up 16 animal checkpoints; disinfected all poultry farms, markets, and slaughter houses. These operations will be repeated once a week over the next month.

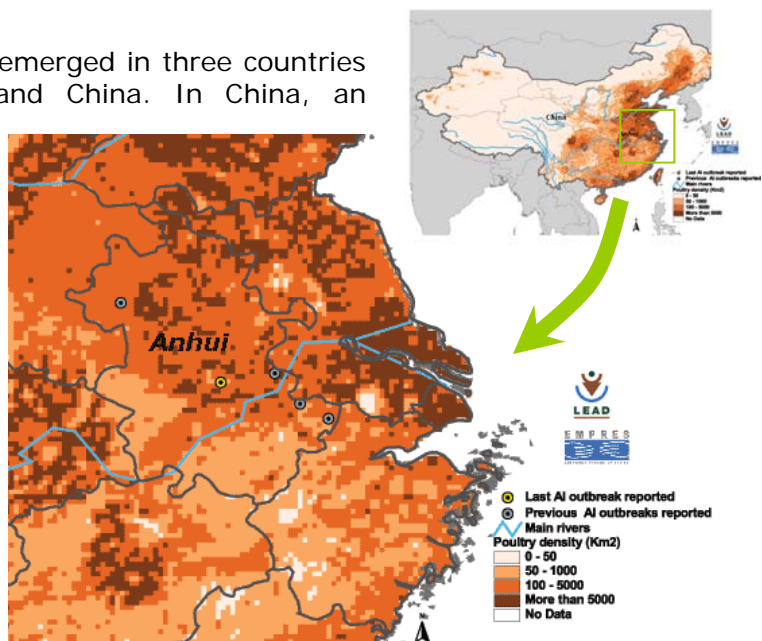
The department also allowed two foreign owned companies - A Thai company and an US company - to test 50,000 doses of chicken flu vaccinations against virus type H5 in breeding chickens. The Ho Chi Minh City Service was also allowed to test vaccinations against virus H5N1. Viet Nam had used a vaccine in February during the peak of the outbreak. A conference of scientists and poultry farmers was convened in Hanoi on 20/07/04 to discuss a possible vaccination programme. (26/07/04 Source: web media, Gphin).

## 2. Post-epidemic surveillance and rehabilitation activities – What next?

### ➤ **China: Surveillance and control of Avian Influenza in China (FAO project: TCP/CPR/3004)**

In July 2004, Avian Influenza re-emerged in three countries including Viet Nam, Thailand and China. In China, an isolated outbreak was detected in the eastern province of Anhui located on the Yangtze River just inland from Jiangsu and Zhejiang Provinces. Four outbreaks of Highly Pathogenic Avian Influenza (HPAI) had already been reported in February 2004 and were all located at some distance from the July outbreak.

The current foci, now under control, occurred on a relatively isolated farm producing broilers in Chaohu City, Juchao District. The farm was apparently



recently established and showed a relatively low level of biosecurity, allowing birds to roam outdoors during the day and enabling contacts with wild birds seen around the farm. The latter have been incriminated as the possible origin of the outbreak although it cannot be proven.

The birds on the farm were not vaccinated despite vaccination being widely used in the region to control and prevent the occurrence of the disease. Indeed, China uses vaccination not only in case of emergency situations but also on a regular basis in different types of production systems to avoid the negative impact of the disease. Vaccination is encouraged and subsidised by national authorities and the vaccine, produced by seven different plants, is used on a voluntary basis.

The procedures used to stamp out the disease on these infected premises were appropriate and the application of restriction and control of movements adequate. Within a 10 km radius, 23 markets, 7 roadside markets, 180 sale stands and 83 slaughter rooms were closed to poultry and disinfected. According to the national control policy, poultry were culled within a 3 km radius and vaccination was applied within a 5 km zone. The location of the farm and its relative isolation (a single entrance road leads to the farm) facilitated the control of movements onto and off the farm. As of today (three weeks after the detection of the disease), no new outbreaks have been reported in the province or elsewhere in the country.

Through the assistance provided under the national TCP project, it is foreseen that national authorities will strengthen their active surveillance system and more particularly the active search for viral infection in targeted risk areas such as live bird markets where the mixing of species of different origins is practised. Areas of high poultry density, mixed farming systems (waterfowl and terrestrial poultry) with low biosecurity standards and areas of known significant wild bird populations located on migration flyways should also be targeted. The results of the work carried out during the expert meeting held in Bangkok (21-23 July 2004) will assist in developing a sound strategy for monitoring the situation in the field.



*Inspection post at outbreak site (Anhui province)*

- **Pakistan:** Field samples were sent to the laboratory from Karachi, Multan, Rawalpindi Mansehra, and Abbottabad areas both through official channels as well as directly from the farmers. In June, 802 blood samples, 641 cloacal samples, 48 morbid material samples were examined by the laboratory. The data has shown overall control of HPAI in Karachi area. However, there are still small pockets of low pathogenic AI virus infection. There were isolation of AI H7 and H9 type viruses from some cases in the Province of Punjab and NWFP. (02/07/04 Source: FAO)

### 3. Actions taken – follow-up

- **FAO Technical Consultation on the Control of Avian Influenza** was held in Bangkok for the period of 21 - 23 July 2004 with the participation of experts from laboratories, scientific institutions, OIE and FAO AGAH.

Following the Avian influenza crisis in Asia, FAO decided to fund a series of national projects and three sub-regional projects (see previous issues of AIDEnews) with the objective of fostering regional networking in epidemiology and laboratory diagnosis through better information sharing and commonly agreed surveillance and monitoring approaches and also to define better control strategies. To ensure the long term sustainability of these networks, regional specialised bodies, such as ASEAN (Association of South East Asian Nations), will have to be identified and the responsibility will be progressively transferred to them. Regional Reference Laboratories and Regional Epidemiology Centres will also take part of the

implementing role and should become key actors in the mid- and long-term. Before starting the networking activities, it was deemed necessary to define the tools that will be used for laboratory diagnosis, surveillance, field diagnosis, data management and data analysis. It was therefore decided that FAO would convene an expert meeting of experts to define some guiding principles to be used in the implementation phase of the regional projects.

The objective of the expert meeting was to prepare guiding principles for HPAI surveillance and diagnostic networks in Asia and for the use of vaccination for the national veterinary laboratories and surveillance teams which will participate to the network of the three Asian sub-regions (South-east, East and South). During three days, experts debated on the different approaches that could be used in Asian countries and developed different scenarios according to the sanitary status of these countries (affected/non-affected), trade opportunities, cultural practices, epidemiological risk of incursion and spread of the disease. They also took into account the different control options already in use at national level. These guiding principles which have been developed during this three-day workshop will be considered by Chief Veterinary Officers and diagnostic and epidemiology experts of participating countries at the South East Asia Project Inception Workshop which will be held 28-30 July in Bangkok. This meeting will develop an agreed action plan based on implementation of the guiding principles by diagnostic and surveillance networks.

The conclusion and the recommendation of the meeting will be available on FAO AGAH website.

- **The Launching Meeting for TCP/RAS/3006 “Diagnostic Laboratory and Surveillance Network Coordination for Control and Prevention of Avian Influenza in Southeast Asia”** is being held in Bangkok on 28-30 July 2004. The meeting was attended by the Chief Veterinary Officers from the region, Heads of the National Veterinary Laboratories and Surveillance teams from ten countries of the Region (Cambodia, East-Timor, Indonesia, Lao PDR, Malaysia, Myanmar, Papua New Guinea, Philippines, Thailand, Viet Nam), experts from OIE and FAO reference laboratories and collaboration centres, experts from WHO, ASEAN representations (Livestock Working Group), JICA (Japan International Cooperation Agency) and SEA-FMD representation, FAO experts from Rome and Bangkok. The objective of the meeting is to set up a sub-regional (South-east Asia) network of national veterinary diagnostic laboratories and surveillance teams, in order to improve the quality of the laboratory diagnosis and the understanding of the epidemiological situation. The conclusion of the meeting will be shortly available on the FAO, Animal Health Service website.
- **Indonesia: the launching meeting of the Japan/FAO joint emergency programme for the control of avian influenza OSRO/RAS/401/JPN emergency assistance for Bali and Lampung:** The launching ceremony together with the mid-term reporting meeting was organized in the Ministry of Agriculture with the attendance of Japanese Embassy, FAO and Indonesian government on 15 July 2004. In Bali, Balinese people have their unique farming system and living style, where chickens are raised together with pigs. In Sumatra, there is an urgent need to protect the large island from further spread of HPAI from Lampung. The government of Japan through FAO project OSRO/RAS/401/JPN assists Bali and Lampung provinces to the amount of US\$ 402,117 covering technical assistance by International Consultants, capacity building through workshops and training, and improvement of laboratory equipment.
- **Recent Missions (July – August):**  
[Region]  
- Dr. F. Dolberg (Denmark) FAO consultant (Poultry Production Expert), Ongoing (Mission to Cambodia, Indonesia, Lao PDR and Thailand).

- Mr. M. Kodaira, FAO Liaison Office with Japan (Yokohama) Liaison Officer, 3-15/07/04. (Mission to Viet Nam, Lao PDR and Cambodia)
- Ms. H. Niggemann, FAO TCEO (Rome) SE Asia Operations Officer. 1-10/07/04. (Mission to Thailand and Viet Nam)
- Dr. J. Domenech, FAO AGAH (Rome) Chief, Animal Health Service. 28/06-7/07/04 (Mission to Cambodia, Thailand and Viet Nam).

**[Cambodia]**

- Dr. Y. Froehlich (France) FAO consultant (Project Technical Adviser), Ongoing.
- Dr. S. Desvaux (France) FAO consultant (Veterinary Epidemiologist), Ongoing.
- Dr. C. Benigno, FAO RAP (Bangkok) Animal Health Officer, 28/06-1/07/04.

**[China]**

- Dr. L. Sims (Australia), FAO consultant (Avian Influenza Disease Management), Ongoing.
- Dr. V. Martin, FAO AGAH (Rome) Animal Health Officer (Infectious Diseases Emergencies). 12-20/07/04.

**[The Democratic People's Republic of Korea]**

- Dr. L. Sims (Australia), FAO consultant (Avian Influenza Disease Management). To commence in the week of 26/07/04

**[Indonesia]**

- Mr. Y. Endo, FAO Liaison Office with Japan (Yokohama) Director, to commence in the week of 16/08/04
- Dr. I. Douglas (Australia) FAO consultant (Veterinary Epidemiologist), 14/06-26/07/04
- Dr. C. Benigno, FAO RAP (Bangkok) Animal Health Officer, 5-8/07/04

**[Lao PDR]**

- Dr. R. Webb (Australia) FAO consultant (Epidemiology and programme management), Ongoing.
- Ms. E. Bautista (Philippines) FAO TCDC Consultant (Project finance & administration officer), Ongoing.
- Dr. Lu Huaguang (USA/China) FAO TCDC Consultant (Laboratory diagnostics), 20/06-20/07/04

**[Mongolia]**

- Dr. L. Sims (Australia), FAO consultant (Avian Influenza Disease Management), to commence in the week of 02/08/04

**[Thailand]**

- Dr. J. Domenech, FAO AGAH (Rome) Chief, Animal Health Service, Ongoing.
- Dr. S. Desvaux (France) FAO consultant (Veterinary Epidemiologist), Ongoing.
- Dr. F. Dolberg (Denmark), Poultry Production Expert, Ongoing.
- Dr. T. Ellis (Hong Kong/China), Agriculture, Fisheries and Conservation Department, Epidemiology and Laboratory Diagnosis, Ongoing.
- Dr. L. Gleeson (Australia) Australia Animal Health Laboratory, CSIRO. FAO consultant (Epidemiology and emergency management), Ongoing.
- Dr. F. Guo (China), FAO project coordinator. TCP/RAS /3007, 20- 24/07/04
- Dr. R. Jackson (New Zealand), Epidemiology, 20 – 24/07.04.
- Dr. P. Kitching (Canada/UK), Canadian Food Inspection Agency, Epidemiology and Laboratory Diagnosis, 20- 24/07/04.
- Dr. S. Marangon (Italy), Istituto Zooprofilattico Sperimentale Delle Venezie, Epidemiology and Laboratory Diagnosis, 20- 24/07/04.
- Dr. M. Nunn (Australia), Department Of Agriculture, Fisheries and Forestry, Epidemiology and emergency management, 20-31/07/04.
- Prof. D. Pfeiffer (UK), the Royal Veterinary College, University of London. Epidemiology, 20- 24/07/04
- Dr. D. Senne (USA), National Veterinary Service Laboratory, Animal and Plant Health inspection Service, Epidemiology and Laboratory Diagnosis, 20- 24/07/04.
- Dr. A. Turner (Australia), Epidemiology, 20- 24/07/04.
- Dr. S. Kahn (Canada/Australia) FAO Consultant (Programme Management and Coordination). 19 – 31/07/04.

- Dr. L. Sims (Australia), FAO consultant (Avian Influenza Disease Management). 20-24/07/04e.
- Dr. V. Martin, FAO AGAH (Rome) Animal Health Officer (Infectious Diseases Emergencies), 20-23/07/04.

**[Viet Nam]**

- Dr. C. Benigno, FAO RAP (Bangkok) Animal Health Officer, 14-16/07/04.
- Dr. H. Wagner, FAO RAP (Bangkok) Senior Animal Production and Health Officer. 04-8/07/04

## 4. Resources available

### Relevant articles/publications:

- FAO AGAH website: <http://www.fao.org/ag/againfo/subjects/en/health/default.html>
- FAO/OIE Emergency Regional Meeting on Avian Influenza Control in Animals in Asia (26-28 February). The full text of the final report is available on: [http://www.fao.org/ag/againfo/subjects/en/health/diseases-cards/HPAI\\_Bangkok.pdf](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  
The full text of the Conclusions and recommendations is available on FAO website: [http://www.fao.org/newsroom/common/ecg/36647\\_en\\_experts.pdf](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](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 AIDE News (Vol. 1 - 18)  
(Available at: [http://www.fao.org/ag/AGA/AGAH/EMPRES/tadinfo/e\\_tadAVI.htm](http://www.fao.org/ag/AGA/AGAH/EMPRES/tadinfo/e_tadAVI.htm))
- FAO AIDE News maps  
(Available at: [http://www.fao.org/ag/AGA/AGAH/EMPRES/maps/e\\_maps.htm](http://www.fao.org/ag/AGA/AGAH/EMPRES/maps/e_maps.htm))

### Relevant Web sites:

FAO Avian Influenza fact sheet:

<http://www.fao.org/ag/againfo/subjects/en/health/diseases-cards/avian.html>

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](http://www.oie.int/eng/AVIAN_INFLUENZA/safety.htm) click the link to the proposed new chapter submitted to the OIE International Committee 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](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](http://www.oie.int/eng/maladies/fiches/a_A150.htm)

WHO Avian influenza web site:

[http://www.who.int/csr/disease/avian\\_influenza/en/](http://www.who.int/csr/disease/avian_influenza/en/)

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[hans.wagner@fao.org](mailto:hans.wagner@fao.org)

Hilde Niggemann (Emergency Operations Service (TCEO), FAO Headquarters - Rome)

[hilde.niggemann@fao.org](mailto:hilde.niggemann@fao.org) for emergency fund raising and operational responsibilities

### **Supervision and Coordination:**

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**Annex 1: Situation in Asian Countries (as of 28/07/2004)**

area	date of official reporting to the OIE	type	animals affected	human case	Latest information		
					last known case	source	comments
Republic of Korea	17/12/03	H5N1	layer, duck; virus isolated: magpie	no	24/03/04	Government; media websites	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	26/07/04	Media websites	Outbreaks were found in 11 southern provinces since 01/07/04
Japan	12/01/04	H5N1	chicken, crow	no	05/03/04 (crow)	Government and media website	all the movement restriction lifted by 13/04/04
Taiwan Province of China	20/01/04	H5N2 (LP <sup>3</sup> )	chicken, duck, pheasant	no	09/03/04	Meeting report, media website	
Thailand	23/01/04	H5N1	virus isolation: chicken, duck, goose, quail, turkey, stork	yes	26/07/04	Government, FAO <sup>2</sup> , media websites	Outbreaks were found in 18 Provinces since 05/07/04
Cambodia	24/01/04	H5N1	Chicken, duck, goose, turkey, guinea fowl, wild bird	no	09/05/04	Government, FAO	Ban on poultry farming in all 12 locations lifted on 24/06/04
Hong Kong SAR	26/01/04	H5N1	Peregrine falcon	no	28/01/04 (Falcon)	Meeting report, media websites	
Lao, PDR	27/01/04	H5N1	Chicken, duck and quail	no	02/03/04	Government, FAO	
Pakistan	28/01/04	H7N3 H9N2 (LP)	layer	no	End of January	Government, FAO	
Indonesia	06/02/04	H5N1	Chicken, duck and quail	no	June 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	

1) Official (OIE) and non official Information (ProMED, press agencies, FAO tracking systems...)

2) FAO: FAO representative in concurrence

3) LP: low pathogenic strain

**Annex 2: Situation in other Countries (as of 28/07/2004)**

area	date of official reporting to the OIE	type	animals affected	human case	Latest information		
					last known case	source	comments
United States of America	11/02/04	H7N2 (LP)	Chicken	no	11/02/04 (Delaware)	Delaware Department of Agriculture Statement; FAO	
		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	USDA informed OIE the eradication of HPAI in Gonzales County, Texas on 01/04/04
		H7N2 (LP)	Chicken	no	09/03/04 (Maryland)	Maryland Department of Agriculture News Release; FAO	
		H7N3 (LP)	non-commercial	no	22/06/04 (Texas)	Texas Animal Health Commission website	
Canada	19/02/04	H7N3 (LP)	Chicken	yes (conjunctivitis)	29/04/04 (British Columbia)	Government website	CFIA informed OIE that the identified zone is no longer considered as infected, with effect from 9 July 2004
	09/03/04	H7N3					
Netherlands				no		FAO: Government; ProMED; Gphin <sup>4</sup>	Suspected H7 seropositive were false positive reactions in Lab.
South Africa			commercial poultry	no	25/03/04	ProMED	
Egypt		H10N7 (LP)	wild duck	yes	23/05/04 (from survey sample)	ProMED	

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. Nevertheless, we wish to 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
Denmark	nearly US\$130,000	Through DANIDA, in kind cooperation for AI control in 14 provinces (sprayers, protective clothing, diagnostic kits for local veterinarians)

(As of 14/06/04. source: FAO representation in Viet Nam)

**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/3010 Emergency regional support for post-avian influenza rehabilitation

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