

## Update on the Avian Influenza situation (As of 09/08/2004) – Issue no. 20



White ducks on sale at a market in Hanoi, 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

One month has past since what appeared as a “second wave” of avian influenza (AI) in several Asian countries. Cambodia and Lao PDR did not report any additional cases. China had only one outbreak and was contained. Additional outbreaks were announced in Viet Nam and Thailand. To understand the factors related to AI epidemic and to improve the quality of the information, FAO is launching sub-regional surveillance and diagnosis networks with national and international partners.

#### Country situation

**Thailand:** From 5 July 2004 to date, Thailand had 65 confirmed outbreaks of AI in 23 provinces: Ayuttaya, Chiang Rai, Sukothai, Utradit, Nakornsawan, Kampangpetch, Uthaitani and Pitsanuloke (Northern provinces); Patumtani, Angthong, Supanburi, Lopburi, Saraburi, Bangkok and Nontaburi (Central provinces); Choburi, Chachengsao, Nakornnayok and Prachinburi (Eastern provinces); NongKhai, KhonKhan (Northeastern provinces); Narathiwat, Songkhla (Southern provinces). As of 4 August, nine (these underlined above) underwent a 21-day surveillance period after counter-epizootic measures without reporting additional affected flocks or villages. The total numbers of poultry culled were 228,743, with the destruction of over 35,000 quail eggs. (04/08/04, Source: Government website, FAO, media website)

**Viet Nam:** In early July 2004, avian influenza was reported on 31 farms in 22 districts in the 11 provinces: Dong Thap, Vinh Long, Can Tho, Tien Giang, Bac Lieu, Hau Giang, Ba Ria Vung Tau, Tra Vinh, Ben Tre, Kien Giang and Long An. The results from samples taken from infected fowl in the south confirmed the presence of the H5N1 strain. The suspected AI outbreak in the northern Bac Ninh Province was confirmed as fowl cholera (*avian pasteurellosis*). Another AI outbreak was reported in southern Can Tho city on 3 August. All 600 affected chickens on farm in the city's Phong Dien District were culled. As of 29 July, the number of fowl affected by AI in Viet Nam was estimated as 63,000 (38,000 chickens, 13,000 ducks and 12,000 quails) on 30 small-scale farms. By 3 August, Viet Nam recognised seven provinces which have been tackling recurrences of AI had already met the conditions to declare themselves free of the disease while still maintaining surveillance measures. However, after the flood stricken provinces of Ha Giang, Cao Bang, Thai Binh, Ha Tay, Hai Duong, Phu Tho, Ninh Binh, Hoa Binh, Lao Cai and Hai Phong City, where poultry movements are expected to occur should require heightened vigilance since the risk of AI re-introduction is high. (04/08/04 Source: web media, Gphin).

**Malaysia:** A non-pathogenic H5 strain (different strain from the H5N1) was identified in exported ducks from a farm in Perak State, Malaysia to Singapore. Malaysia government immediately quarantined the farm. 300 samples were taken in two days and tested in the laboratory. The result shows that there was no AI outbreak in the farm. (06/08/04, Source: Web Media)

**South Africa:** HPAI H5N2 outbreak was detected in Somerset East area, Eastern Cape Province. Culling has begun on the two affected ostrich farms and on an additional 15 farms located within a 30-kilometer radius. A voluntary export ban has been enforced of all poultry and poultry products from South Africa abroad including to the European Union and Switzerland, the two biggest export markets for South Africa for poultry. (09/08/04, Web Media, Government)

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

### ➤ Viet Nam: summary of the Final Report on "Evolution and Impact of Avian Influenza Epidemic and Description of the Avian Production in Viet Nam"

*Dr. Patrice GAUTIER and collègues, VSF-CICDA (Vétérinaires sans frontières, Centre International de Coopération pour le Développement Agricole, Agronomists and Veterinarians united for rural farmers). The study was conducted by VSF with funding by the World Bank and the cooperation of the Ministry of Agriculture and Rural Development (Government of Viet Nam).*

This report is a descriptive study of the Vietnamese poultry sector and a retrospective study of the Highly Pathogenic Avian Influenza epidemic that affected Viet Nam during the winter of 2003-2004.

The objectives of this study were to analyse poultry sector and that of its stakeholders, to determine the links existing between them, to understand the means of contamination and spread of the disease, to describe its clinical characteristics and to assess the economic impact of this epidemic on different poultry producers.

Two teams from Vétérinaires Sans Frontières (VSF) were formed to carry out this study during the months of April and May 2004 with different missions:

- To describe the poultry sector through numerous encounters with production stakeholders.
- Work in two provinces in northern Viet Nam to take a "snapshot" of the epidemic and of its economic impact.

The poultry sector in Viet Nam can be described as:

- A production level heavily dominated by the family model with poor access to services, few sales or purchases of poultry, poor technical performances, an absence of sanitary and technical monitoring of the birds by public or private veterinarians.
- The remaining sector dedicated to poultry production (about 35 %) is shared with the public sector, that has experienced a decline for the past several years and a growing private sector with, in addition to farms belonging to large foreign commercial operators, a large and varied number of Vietnamese producers.
- There is a very significant movement of poultry throughout the whole country by distributors who supply producers with day-old chicks, and by collectors who buy poultry to sell at market. These movements are mostly carried out by motorbike. Such movements of birds appear very difficult to control or manage.

Retrospectively, the HPAI epidemic emerged from two probable cases in June and July 2003. Outbreaks at that time were contained quite rapidly, often by wholesale slaughter of affected birds. However, it was not to acquire accurate date on the origin of the virus implicated in the epidemic during the winter of 2003-2004. Beginning of the end of December 2003, its progression was exponential, contaminating 60 of the 64 provinces in just 2 months, leading to the destruction of 43.9 million birds and fatalities in 16 humans. Animal health services and other Vietnamese authorities, given the country's high level of decentralisation, were not able to deal with such a wildfire epidemic without external assistance.

Key factors identified by one of the VSF teams showed that:

- A high level of contagiousness within the infected areas, characterised by a high level of morbidity and mortality within affected flocks.
- One means of disease introduction into the area was particularly common: the importation of birds that were either sick or incubating the disease.
- Spread from neighbour to neighbour within villages was, linked to the close proximity between farms and the free movement of animals, equipment, and people throughout the village.
- Poorly standardised control methods instituted to the epidemiological and environmental situation of infected areas.
- The structural difficulty and resources available (number of people, absence of previously established instructions) to local animal health services to rapidly assess an emergency situation and institute counter-epidemic measures.
- An initial information shortage on the epidemiological situation, both among the animal health services and among the public at large.

The economic impact of the epidemic on the poultry sector was heavy at all levels: small-scale producers, industrial and semi-industrial farms, feedstuff manufacturers, the pharmaceutical industry, distributors, and collectors. It appears that the farmers worst affected were those for whom poultry farming represented a heavy individual investment, sometimes associated with heavy borrowing (Vietnamese family companies farming a few thousand birds).

Poultry production in Viet Nam has a strong potential for development particularly due to the continuing rise in demand for poultry products in the domestic market. Producers have demonstrated in the last few years that they can considerably develop their activity to comply with the market's needs but this growth should be matched with good management and regulatory oversight including methods of bird collection and transport to the markets. The Highly Pathogenic Avian Influenza epidemic that struck Viet Nam during the 2003-2004 winter also demonstrated the high vulnerability of producers to incursion of disease and the weaknesses of the animal health services. To be able to secure the development of poultry production, Viet Nam has an urgent and vital need to strengthen its veterinary services and to strengthen the linkages between veterinary services and production stakeholders. For this, all stakeholders need to realise the importance of working together.

### 3. Actions taken – follow-up

- **FAO Technical Consultation on the Control of Avian Influenza** was held in Bangkok, 21 - 23 July, 2004, with the participation of experts from OIE (Office International des Epizooties) and FAO Reference Laboratories, scientific and technical institutions, OIE, and FAO AGAH. The objective of the expert meeting was to prepare guiding principles for HPAI surveillance



and diagnostic networks in Asia. The issue on the use of vaccination was also covered. Responsibilities and activities of the national veterinary laboratories and surveillance teams which will participate to the network of the three Asian sub-regional (South-east, East and South) projects were outlined. The report 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”** was being held in Bangkok from 28 to 30 July, 2004. The objective of the meeting is to set up the South-east Asia sub-Regional Network for Laboratory Diagnosis and Surveillance to improve the quality of AI information, data and to support regional strategies for surveillance, control and prevention against the transboundary spread of avian influenza. The launching meeting was attended by representatives of the Royal Government of Thailand, by all ten beneficiary countries (including most of the Chief Veterinary Officers), the OIE, WHO (World Health Organization), ASEAN (Association of South East Asian Nations), JICA (Japan International Cooperation Agency), SEA-FMD (Southeast Asia Foot and Mouth Disease Campaign) and FAO personnel as well as international experts. The regional coordination centre for diagnostic laboratory and surveillance network for the sub-region is to be located in Thailand and endorsed by the beneficiary countries, OIE, FAO. The conclusion of the meeting will be shortly available on the FAO, Animal Health Service website.

- **Recent Missions (July – August):**

*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](mailto:Avian-Influenza-Registration@fao.org))*

**[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). 27-31/07/04

**[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), 02-07/08/04

**[Thailand]**

- Dr. J. Domenech, FAO AGAH (Rome) Chief, Animal Health Service, 26-31/07/04
- Dr. S. Desvaux (France) FAO consultant (Veterinary Epidemiologist), 20-31/07/04
- Dr. F. Dolberg (Denmark), Poultry Production Expert, 20-30/07/04
- Dr. T. Ellis (Hong Kong/China), Agriculture, Fisheries and Conservation Department, Epidemiology and Laboratory Diagnosis, 20-24/07/04
- Dr. L. Gleeson (Australia) Australia Animal Health Laboratory, CSIRO. FAO consultant (Epidemiology and emergency management), 20-30/07/04
- 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, 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). 20-24/07/04
- 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 - 19)  
(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))

### Helpful links:

FAO Avian Influenza fact sheet:

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

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](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](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](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/)

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](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](http://www.vetmed.ucdavis.edu/vetext/INF-PO_Biosecurity.html)

### **Contact person at FAO:**

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Hans Wagner (FAO Regional Office for Asia and the Pacific (RAP) - Bangkok)  
[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

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**Annex 1: Situation in Asian Countries (as of 09/08/2004)**

area	date of first 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 restrictions 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 23 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	The 21-day stand still orders of Chaohu city, Anhui province ended on 28/07/04

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 09/08/2004)**

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, as of 9 July 2004
	09/03/04	H7N3					
Netherlands				no		FAO; Government; ProMED; Gphin <sup>4</sup>	Suspected H7 sero-positive were false positive reactions in Lab.
South Africa		H6 (LP)	commercial poultry	no	25/03/04	ProMED	
		H5N2	ostrich farms	no	04/08/04 (Eastern Cape province)	Web Media (AFP), Government	HPAI outbreaks were reported from ostrich farms in Bedford/ Somerset East district; investigations are ongoing
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. 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 US\$130,000	Through DANIDA, in kind cooperation for AI control in 14 provinces (sprayers, protective clothing, diagnostic kits for local veterinarians)

(As of 03/08/04. source: FAO representation in Viet Nam, the World Bank website)

**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)