FAO AIDE news
Avian Influenza Disease Emergency

Update on the Avian Influenza situation (As of 14/07/2004) – Issue no. 18

Market in the Lao People's Democratic Republic, 2004 (Photo: R. Webb)

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. Current Status

- **Avian influenza in Asian countries far from over - Virus still circulating in the region · Proper use of quality vaccines an option · Biosecurity a must.**

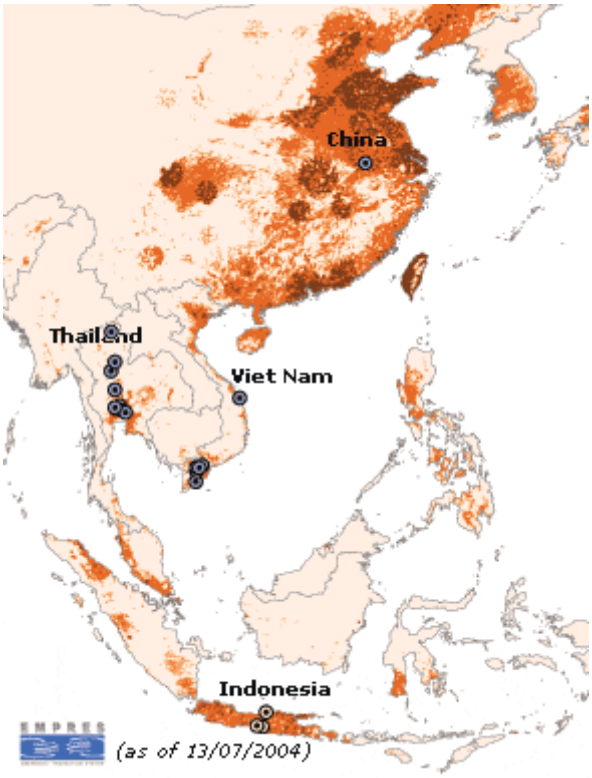
New outbreaks of the AI virus H5N1 in China, Thailand and Viet Nam confirm that viral activity is still present in the region. In the aftermath of the major outbreaks between January and March, affected countries succeeded greatly in bringing the disease under control but more may be required. The recent surge of new outbreaks (or improved surveillance) clearly demonstrate that the virus continues to circulate in parts of the region which are likely to continue in future, posing a continuing threat to animal and human health and thwarting restocking and rehabilitation initiatives for the poultry sector. It is very encouraging, however, that governments have reacted immediately to recent outbreaks and have officially informed international organizations in a timely manner. Key elements of a successful control strategy are: continued surveillance operations throughout all poultry production systems, strengthened biosecurity of commercial or local enterprises and a rapid response to outbreaks including stamping-out in affected areas, with proper disinfection, restriction of movement of animals and goods, and continuous public awareness campaigns. Targeted and strictly monitored vaccination using a quality assured vaccine remains a complementary option. Restocking should only be resumed if adequate preventive measures are put in place to preclude re-infection. Through several national and regional projects, FAO is closely monitoring the situation and is assisting countries in further improving surveillance and disease reporting.

2. Summary of the situation

- **China**: Dead chickens were found at a lakeside farm near the Chaohu City (Anhui province) on 03/07/04 and Avian Influenza (AI) H5N1 was confirmed by the National Reference Laboratory (Harbin). Nearly 10,000 poultry were culled and more than 100,000 chickens were vaccinated near the farm. (06/07/04 Source: Government, FAO, media websites)

- **Thailand**: Laboratory test results confirmed the H5 virus of AI in Ayudhaya, Pathum Thani, Sukhothai, Uttaradit, Nakorn Sawan, Arngthong, Supanburi and Chiang Rai provinces. In Pak Hai district of Ayudhaya province, 7,000 chickens died over a two-week period. The rest of the flock with over 44,000 birds were culled. At a farm in Tambon Bangkadi in Muang district of Pathum Thani province, more than 100 chickens out of 850 died gradually over the past month. The remaining birds were

subsequently culled. In Sukhothai and Uttaradit provinces, outbreaks were found in traditional farming system and nearly 2,000 chickens on the infected farms were culled. (14/07/04 Source: Government, FAO, media website, Gphin)



Recent AI outbreak locations and the poultry density in the area

- **Viet Nam**: The Ho Chi Minh City Animal Health Department found AI virus type H5 from samples taken from chickens in Dong Thap, quail in Vinh Long; layers in Bac Lieu; and ducks and geese in Can Tho and Quang Ngai provinces. Meanwhile, birds in provinces of Tien Giang, Long An, Ben Tre, Tay Ninh, An Giang and Ho Chi Minh City have been also found to be infected. In the Bac Lieu and Tien Giang provinces around 4,350 poultry have already died of the disease and 7,000 have been culled. Another 4,450 chickens were culled in the Tien Giang Province last week after bird flu legions were identified in the dead chickens. In Can Tho Province, 100 poultry were killed to contain further spread. Further tests are ongoing to determine the N antigenic component. In Bac Lieu province, the H5 virus was first detected when over 10 healthy fowl in a farm suddenly died on 12/06/04. The number of fowl deaths of the farm had increased up to 100 per day. Testing carried out on some 200 fowl was positive to AI H5 virus in an additional farm in the province, which had chickens dying several days before 17/06/04. On 3/07/04, a new area was found to be infected in the Gia Rai district (Bac Lieu province) in which 1,600 birds had to be destroyed. The situation is worsened by the fact that the number of fowl in southern provinces had increased very rapidly after the country's declaration of disease free status on 30/03/04. (13/07/04 Source: Gphin)

- **Indonesia**: AI outbreaks were found in Demak and Purworejo districts in Central Java and Gunung Kidul district in Yogyakarta in May 2004, and Tulungagung district in East Java in early June 2004. At present, 14 out of 33 provinces are affected covering 95 districts. (13/07/04, source: Government, FAO)

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

- **Indonesia: Avian influenza Vaccine Production and disease control**

A mission to Indonesia was undertaken by FAO consultant Dr. Larry Allen, from 3 April to 4 June - TCP/INS/3001(E).

Highly pathogenic avian influenza (HPAI) has been recognised in Indonesia officially since January 25, 2004 when it was reported to the International Office of Epizootics (OIE) by government officials in the Ministry of Agriculture. Since that time a control program has been initiated. A total of 54 AI viruses have been isolated from Indonesia since the epidemic began. Most of these 54 isolates were determined to be subtypes H5N1.

Indonesia applies a homologous vaccine to control HPAI. Current plan is to vaccinate all flocks twice a year. The Indonesian government has adopted the policy of providing free vaccine, and compensation of up to 2,000 Rupiah per bird lost to the epidemic, to the small commercial holdings and the backyard producers (poultry holders that have up to 15,000 layers or up to 10,000 broilers). The majority of the producers in Indonesia have 2,000 or fewer birds in their flock. As of the 31/05/04, approximately 20,950,870 birds have been vaccinated in 92 districts within 17 provinces. Three different isolates recovered from the current epidemic in Indonesia, all subtype H5N1, have been used for vaccine production as master seed stock in vaccine manufacture. Characterization is presently in process at the Weybridge Laboratory in the United Kingdom.

Post-vaccination surveillance sampling is being done. Titers obtained from serum samples are variable, but most indicate good serological responses with high titres However, significant numbers of birds do not show an immune response to AI virus which may indicate that birds were missed by the vaccination teams or poor vaccination application. It would be recommended that flocks receive two doses of quality assured vaccine at an approximate interval of 3-4 weeks, with subsequent targeted surveillance to evaluate response to the vaccine used. Sentinel chickens would be useful to place within vaccinated flocks, and monitored closely for evidence of viral persistence. Vaccination must accompany biosecurity to be fully effective.

However, live birds, poultry products and spent hens continue to be transported around the country without restrictions. Although immune by either a vaccination or by recovery from disease, spent hens may continue to shed virus and thus spread the virus to susceptible birds. Training in biosecurity methods should be made available for producers, their employees, supply service contractors such as feed distributors, egg packing facilities, hatchery operators, bird haulers, and others that have some type of direct contact with the poultry production industry.

- **Canadian control measures, strategy and outcome**

On 9 Mar 2004, Canada reported the diagnosis of Highly Pathogenic Avian Influenza (HPAI) - H7N3 - virus in Fraser Valley, British Columbia.

Canada used ‘stamping out’ campaign to deal with its HPAI infection earlier this year. The Canadian Food Inspection Agency (CFIA) controls were based on rapid detection of infected flocks by surveillance. Commercial and backyard flocks within the High Risk Region and commercial flocks within the Surveillance Region that were considered to be high risk contacts were targeted for active surveillance. Flocks considered to be high risk included direct contact flocks (e.g. those with shared ownership or equipment) and flocks located within 3 km of an infected farm. A sampling plan was implemented to enable disease detection with an estimated on-farm prevalence of 5% or higher. Owners of other commercial flocks in the Surveillance Region were interviewed by telephone and dead birds were collected and swabbed on a weekly basis. In addition, all birds intended to enter the market chain were tested prior to slaughter.

After detection of infection, rapid and humane destruction of infected flocks and effective biocontainment of infective material (carcasses, manure and contaminated feed) were priorities.

On 5 April 2004, the decision to depopulate all poultry within the Control Area, an estimated 19 million birds was made. By May 12, approximately 16 million birds had been slaughtered or euthanised within the Control Area. The depopulation of poultry farms within 3 km of infected premises was a priority to prevent local spread of infection between farms. Official Veterinary controls were also introduced to stop the movement of poultry, poultry products and contaminated equipment within the Control Area. Legal steps were also taken to require poultry owners to prevent unauthorized entry of people or vehicles to their property. Government and industry

worked closely together to improve industry awareness of HPAI and to promote general improvement and implementation of biosecurity measures.

The progression of the outbreak waned by the end of April, indicating that movement controls and pre-emptive slaughter of birds within 3 km of each infected premises were effective in limiting spread of the outbreak.

The CFIA required that before restocking could be undertaken, at least 21 days after the completion of cleaning and disinfection of the last infected premises in the region would be needed. Birds introduced into previously infected premises would be first tested for AI, and then tested each week for 4 weeks after restocking, unless the premises had been empty for a minimum of 60 days since cleaning and disinfection.

On July 9 the CFIA announced that it would allow restocking of remaining poultry premises within the Control Area. Approval had previously been granted (June 10) for restocking premises within the Control Area excluding the High Risk Region.

As of 13 July, official veterinary controls still prohibit the movement of hatching eggs and live poultry out of the Control Area, while federally graded table eggs and poultry meat may be moved out of the Control Area subject to official controls.

As a country that has stamped out HPAI, Canada is eligible to regain its disease free status later this year (i.e. 6 months after the slaughter of the last infected flock) maintaining at all times, adequate surveillance activities.

4. Related issues

- **Timor-Leste** (East Timor): For the last 18 months, the Australian Quarantine and Inspection Service (AQIS) have been supporting Timor-Leste with quarantine procedures and regular animal health surveys including a poultry survey. Poultry blood samples are being tested at the Australian Animal Health Laboratory for a range of diseases including AI. To date, no evidence of AI in Timor-Leste has been seen. Timor-Leste has imposed an import ban of fresh poultry products from AI affected countries. (03/07/04 Source: gphin)

5. Actions taken – follow-up

- **Recent Missions (June – July)**:

[**Region**]
- Dr. F. Dolberg (Denmark) FAO consultant (Poultry Production Expert), 6/06-12/07/04. (Mission to Cambodia, Indonesia, Lao PDR and Thailand).
- Dr. J. Domenech, FAO AGAH (Rome) Chief, Animal Health Service. 28/06-7/07/04. (Mission to Cambodia, Thailand and Viet Nam)
- Ms. H. Niggemann, FAO TCEO (Rome) SE Asia Operations Officer. 1-10/07/04. (Mission to Thailand and Viet Nam)
- Mr. M. Kodaira, FAO Liaison Office with Japan (Yokohama) Liaison Officer, Ongoing. (Mission to Viet Nam, Lao PDR and Cambodia)

[**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). Ongoing.

[**Indonesia**]
- Dr. L. Allen (USA) FAO consultant (Veterinary epidemiologist) 03/04-01/06/04
- Dr. J. Garcia (Mexico) FAO consultant (Vaccine Production) 05-20/06/04
- Dr. I. Douglas (Australia) FAO consultant (Veterinary Epidemiologist), Ongoing.
- 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), Ongoing.
- Dr. C. Benigno, FAO RAP (Bangkok) Animal Health Officer, 21-25/06/04.

[**Thailand**]
- Dr. S. Kahn (Canada/Australia) FAO Consultant (Programme Management and Coordination). To commence in the week of 19/07/04
- Dr. V. Martin, FAO AGAH (Rome) Animal Health Officer (Infectious Diseases Emergencies). To commence in the week of 19/07/04
- Dr. J. Domenech, FAO AGAH (Rome) Chief, Animal Health Service. 28/06-10/07/04. To commence in the week of 26/07/04

[**Viet Nam**]
- Dr. R. Jackson (New Zealand) FAO consultant (Veterinary Epidemiologist) 17/05 – 26/06/04
- Dr. H. Wagner, FAO RAP (Bangkok) Senior Animal Production and Health Officer. 04 -8/07/04

6. Resources available

Relevant articles / publications:

- 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

- 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

- 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 AIDE News (Vol. 1 - 17)
  (Available at: 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)

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 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/downld/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/

Contact person at FAO:

Juan Lubroth (FAO Headquarters – Rome)
juan.lubroth@fao.org

Vincent Martin (FAO Headquarters – Rome)
vincent.martin@fao.org

Hans Wagner (FAO Regional Office for Asia and the Pacific (RAP) - Bangkok)
hans.wagner@fao.org

Hilde Niggemann (Emergency Operations Service (TCEO), FAO Headquarters - Rome)
hilde.niggemann@fao.org for emergency fund raising and operational responsibilities

Supervision and Coordination:

J. Domenech, Chief, Animal Health Service (FAO Headquarters – Rome)
joseph.domenech@fao.org

Annex 1: Asian Countries affected (as of 14/07/2004)

area	date of official reporting to the OIE	type	animals affected	human case	last known case[1] (official/non)	current status	source[1]
Republic of Korea	17/12/03	H5N1	layer, duck; virus isolated: magpie	no	24/03/04		Government; media websites
Viet Nam	8/01/04	H5N1	chicken, quail, duck, muscovy duck	yes	05/07/04	Outbreaks found in the southern provinces	Media websites
Japan	12/01/04	H5N1	chicken, crow	no	05/03/04 (crow)	all the movement restriction lifted by 13/04/04	Government and media website
Taiwan province of China	20/01/04	H5N2 (LP[3])	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	14/07/04	Outbreaks eight Provinces	Government, FAO[2], media websites
Cambodia	24/01/04	H5N1	Chicken, duck, goose, turkey, guinea fowl, wild bird	no	09/05/04	Ban on poultry farming in all 12 locations lifted on 24/06/04	Government, FAO
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	An outbreak found in the Eastern province	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: Other Countries' situation (as of 14/07/2004)

area	date of official reporting to the OIE	type	animals affected	human case	last reported case	current status	source[1]
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)	USDA informed OIE the eradication of HPAI in Gonzales County, Texas on 01/04/04	Texas Animal Health Commission and USDA website; FAO
		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 (con-junctivitis)	29/04/04 (British Columbia)	Premises in the High-Risk Region are eligible to begin restocking as of 09/07/04	Government website
	09/03/04	H7N3					
Netherlands				no		Suspected H7 sero-positive were false positive reactions in Lab.	FAO; Government; ProMED; Gphin[4]
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 2

- 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 (epidemiologist and virologist) in Australia
		four-week long project working with the Disease Investigation Center's staff members to support finalizing writing the surveillance plan
China	$100,000	Vaccines and training
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

(As of 20/04/04. 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)