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et  
l'agriculture

Organización  
de las  
Naciones  
Unidas  
para la  
Agricultura  
y la  
Alimentación

## CONFERENCE

### Thirty-third Session

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### FAO AND THE AVIAN INFLUENZA CRISIS

#### A. BACKGROUND

1. Although the H5N1 avian influenza (AI) virus has existed since 1996, the true crisis in Asia started in early 2004 with the almost simultaneous declaration that the disease was killing hundreds of thousand of chickens and ducks in ten countries. As per 1 November 2005, there have been 122 human cases with 62 fatalities, and more than 140 million dead or culled birds. Economic losses to the Asian poultry sector are estimated to be at least US\$10 billion. Avian Influenza, due to Highly Pathogenic Avian Influenza (HPAI) H5N1 sub-type (HPAI-H5N1), is threatening the livelihood of hundreds of millions of poor livestock farmers, jeopardizing smallholder entrepreneurship and commercial poultry production, and seriously impeding regional and international trade and market opportunities.
2. Since July 2005, reports in Kazakhstan, Mongolia, Russia, China (Xisang and Xinjiang Autonomous Regions), Turkey, Romania and Croatia on HPAI outbreaks confirm the geographical expansion of the disease from East and Southeast Asia in a northern and south-westerly direction with increasing evidence on the role of migratory birds in this process.
3. One of the main aspects of the HPAI crisis is the risk of a major international human pandemic evolving from HPAI-H5N1. Since the beginning of epizootic, FAO, in conjunction with the World Organisation for Animal Health (OIE), has considered that the best way of preventing a human influenza pandemic is to control the disease at its source – in poultry.

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## **B. FAO'S RESPONSE**

4. FAO reacted immediately, with an international emergency consultation held in Rome with OIE, WHO, country Ambassadors, scientists and veterinary specialists, in early February 2004. Since then, FAO emergency funding totalling more than US\$7.5 million was earmarked to support emergency projects to control HPAI and establish regional networks for surveillance, diagnostics and disease information in South East and East Asia in 2004, South Asia and South-Eastern Europe, Middle East, North Africa, West Africa, and East Africa in 2005. FAO is also investing in defining the role of wild birds in the introduction of AI viruses to new areas.

5. National and global HPAI control strategies have been prepared and inter-agency coordination promoted. A technical HPAI Task Force was established in early February 2004 within FAO under the leadership of the Animal Health Service Chief, composed of staff from various services across the Organization and from the Regional Office in Bangkok. The functions of the Task Force are to compile, analyse and communicate all relevant information, to undertake disease intelligence operations, and to prepare, negotiate and implement project proposals at national, regional and international levels for the short, medium and long term.

## **C. INFORMATION AND COMMUNICATION**

6. “*FAO AIDE News*” provides up-to-date information on the HPAI situation in affected countries, risk analyses, and advice. To date, 34 issues have been published and are distributed electronically around the world.

7. A web-page on AI was developed on the FAO-AGA website and a dedicated issue of the EMPRES Bulletin was published. Numerous press releases (some in conjunction with international partners – OIE and/or WHO) have been published and media contacts made.

8. Three seminal documents have been produced: (1) “*FAO Guiding Principles for HPAI Diagnosis and Surveillance* (October 2004), with support from OIE; (2) “*FAO Recommendations for the Prevention, Control and Eradication of HPAI in Asia*”, and (3) “*FAO/OIE Global Strategy for the Progressive Control of Avian Influenza*” (all available of the FAO Avian Influenza website).

## **D. COORDINATION AND MEETINGS**

9. Over 20 meetings and international conferences were organized jointly by FAO and the OIE, in collaboration with the WHO. These included:

- FAO/OIE Emergency Expert Consultation on the Control of Avian Influenza - Rome; 3-4 February 2004
- FAO/OIE Regional Meeting on Avian Influenza Control in Animals in Asia - Bangkok, 26-28 February 2004
- Avian Influenza Research Consortium (FAO, OIE, WHO, CSIRO/AAHL-Australia), Melbourne, 20-22 October, 2004
- Second FAO/OIE Regional Meeting on Avian Influenza Control in Asia, Ho Chi Minh City, 23-25 February 2005.
- OIE/FAO and WHO International Scientific Conference on Avian Influenza. Paris, 7-8 April 2005

- FAO/OIE/WHO Consultation on Avian Influenza and Human Health: Risk Reduction Measures in Producing, Marketing, and Living with Animals in Asia. Kuala Lumpur, 4-6 July, 2005.
- World Bank / European Commission - Avian Influenza Technical Discussions and Coordination Meeting - the joint activities between FAO, OIE, and WHO. Washington, DC, 3 August 2005.
- Establishment with the OIE of the OFFLU Network on Avian Influenza expertise. April 2005.
- FAO/OIE/WHO Meeting on Avian Influenza and Human Pandemic Influenza, Geneva, November 7-9, 2005

#### **E. TECHNICAL AND OPERATIONAL ASSISTANCE AND UNDERSTANDING OF THE EPIDEMIOLOGY OF THE CRISIS**

10. At the onset of the crisis, FAO allocated US\$5.5 million to enable the execution of 14 emergency Technical Cooperation Projects (TCPs) under the auspices of the Emergency Centre for the Control of Transboundary Animal Diseases (ECTAD), operated under the responsibility of FAO's Chief Veterinary Officer (CVO).

11. The establishment of ECTAD and of the CVO position in December 2004 by the Director-General was intended to enhance the visibility and efficiency of FAO's central role in assisting member countries in their efforts to combat these type of dangerous animal health crises.

12. FAO mobilised donor support to complement its TCP resources inputs: the Organization implemented a programme on HPAI detection, control and prevention funded by Japan; several governments provided emergency funds to assist FAO's efforts in the affected regions by providing personal protection equipment, laboratory diagnostic supplies and equipment, communication and surveillance equipment, as well as funding for a series of studies in Viet Nam, Thailand, Mongolia, Lao, Cambodia, and Italy on disease epidemiology, risk analysis, vaccination schemes in ducks, and socioeconomic impact assessments.

13. The national TCP projects assessed the disease situation and provided support to diagnostics and surveillance, guidance in the design of disease control strategies, contingency planning, and provided equipment and laboratory consumables. Strong capacity building components were systematically included, as well as economic impact and policy studies. Numerous technical expert missions were undertaken, including those to assist in the development of national control strategies.

14. In 2004, three regional TCP projects were prepared for Southeast Asia, East Asia, and South Asia (implementation in 2005). In 2005, five additional regional TCP projects were approved for the Middle East, South Europe and Africa (East, West, North). The primary objectives of these TCPs are to improve the quality of surveillance and diagnosis of AI and to improve transparency of the information and international reporting. The TCPs have two closely linked components: one network of national epidemiology surveillance teams and one network of national laboratories (supported by OIE/FAO reference laboratories).

#### *The Emergency Centre for Transboundary Animal Diseases (ECTAD)*

15. The international coordination facility at FAO was strengthened with the creation of the Emergency Centre for Transboundary Animal Disease (ECTAD). A multidisciplinary task force was established to support design and implementation of FAO's HPAI control operations. The HPAI Task Force liaises with the ad-hoc Epidemiology Consortium (Australia, France, UK, USA

and New Zealand) to mobilize cutting edge international knowledge in support of the control effort. ECTAD resources were also used to develop mapping capabilities within FAO to interpret disease information or rumour tracking in conjunction with ecological (wetlands), soil use (rice) or social factors (poverty) in order to gain understanding of disease dynamics and possible intervention measures. FAO offers the ECTAD platform to donors as a highly visible operational and strategic instrument for international action against HPAI at its source, i.e. in domestic poultry.

16. OIE and FAO established, in April 2005, the OFFLU Network of Expertise on Avian Influenza that will link ECTAD, regional, and national activities with OFFLU experts for joint missions, advice, collaboration and assistance.

### *Epidemiological Analysis, Disease Intelligence*

17. Since the onset of the epidemic in early 2004, epidemiological data and information were collected and derived from a number of sources including: official information on outbreaks reported to OIE; published scientific papers; official government disease reports; reports from FAO's and outside consultants; news articles; regular updates and risk assessments; spatial and temporal analyses of risk factors in the occurrence of HPAI, carried out jointly with National Veterinary Services in affected countries. The results of these studies, such as the ones carried out in Vietnam and Thailand, have been instrumental in understanding the epidemiology, ecology, and genetic relationships of HPAI viruses in the region.

### *Social and Economic Impacts*

18. Social and economic impacts of Avian Influenza control are systematically addressed in programme delivery. The objective is to identify social and economic impacts of alternative avian influenza control programmes; market chain and compensation practice analyses were initiated in Vietnam and poultry sector compartmentalization studies in Thailand. Close interaction in this work between the public (livestock services) and the private sector (industrial to small-scale and civil society) is crucial. Socio-economic impact analysis is differentiated for different farming systems ranging from large commercial, medium and small-scale commercial systems to the mixed farming systems in rural communities.

### *Basic and Applied Research*

19. From the beginning of the crisis, FAO has called on wildlife veterinarians and other scientists to provide information on the role of wild birds in the epidemic. Several independent studies, including field studies carried out by FAO, identified the commercial duck as a reservoir and maintenance host for the H5N1 virus. These findings proved significant in defining a research programme to better understand the biological mechanisms of their role and to develop intervention measures. The programme addressed the immune response in domestic ducks, the response to different vaccination regimes, the validation of diagnostic assays, and the survival of the virus in different water types. In addition, the development of more sensitive, inexpensive, robust, field-based diagnostic tools is envisaged, as are vaccines that immediately protect after their administration. In addition, oral or eye-drop applied vaccines need to replace current injection-based vaccination regimes. The identification of the role of other species (e.g. swine and ferrets) in viral activity, and a better knowledge of the molecular basis for host range, virulence factor genes, and virus mutations are objectives of the research. Priority target of the research attention is, however, on the role of wild birds in the transcontinental movement of the virus.

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### *Training and Capacity Building*

20. Through the TCPs and with additional assistance from donors, over 120 workshops have been conducted and over 3 480 individuals have benefited from such training (February 2004 - September 2005).

## **F. THE GLOBAL STRATEGY FOR HPAI CONTROL**

21. In the context of the FAO/OIE agreed “Global Framework for the Progressive Control of Transboundary Animal Diseases (GF-TADs)”, and in collaboration with WHO, FAO and OIE have developed a Global Strategy for Highly Pathogenic Avian Influenza (HPAI). This document provides the conceptual and strategic bases for international, regional and national action to reduce/eliminate the risk of avian influenza for humans and poultry. The document provides approaches and implementation plans for the control of the disease.

### *Major elements of the Global Strategy:*

22. *Immediate to short term* (1-3 years): reduce the risk to humans by preventing further spread of HPAI in those countries that are currently infected. The control measures of choice are culling of infected poultry, biosecurity and movement control, combined with strategic vaccination of domestic poultry and ducks.

23. *Short to medium* (4-6 years): where HPAI continues circulating, large-scale vaccination to reduce the incidence of the disease, strict post-vaccination monitoring to progressively confine the disease and establishing disease-free compartments and/or zones.

24. *Medium to long term* (7-10 years): consider all control measures, including vaccination, zoning and compartmentalization. For the long-term success of this strategy, restructuring of the poultry sectors in the affected regions will need to be considered (i.e. separation of species, confinement).