



# Current Situation on Avian Influenza and the pandemic threat

IVth Joint EC/ECDC/WHO Workshop on  
Pandemic Influenza Preparedness  
Luxembourg, 25 September 2007

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# Current Situation on Avian Influenza and the pandemic threat

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- 1. Situation in poultry**
- 2. Situation in humans**
- 3. Global surveillance, benefits and virus sharing: an update**



# Current Situation on Avian Influenza and the pandemic threat

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## 1. Situation in poultry



# Situation in poultry

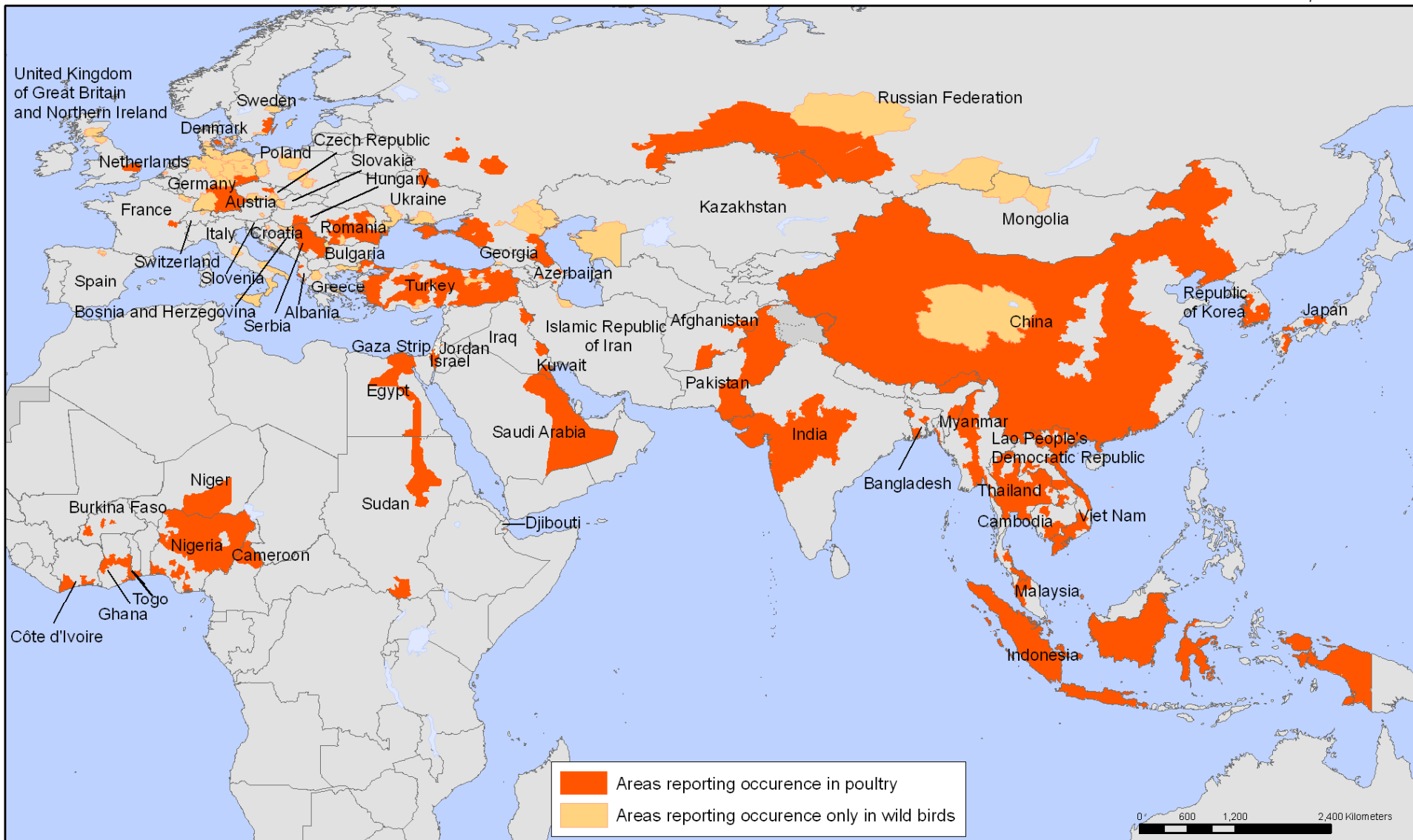
- Since 2004, 58 countries reported poultry or wild bird outbreaks (20 countries affected in 2007)
- >240 Mio poultry died or have been culled worldwide since the start of the panzootic in late 2003
- Internal movement of poultry, particularly through live bird markets and illegal movement across international borders are major contributors to the spread of the disease.
- Wild birds play minor role though implicated in transmission of H5N1 over long distances



# Situation in poultry

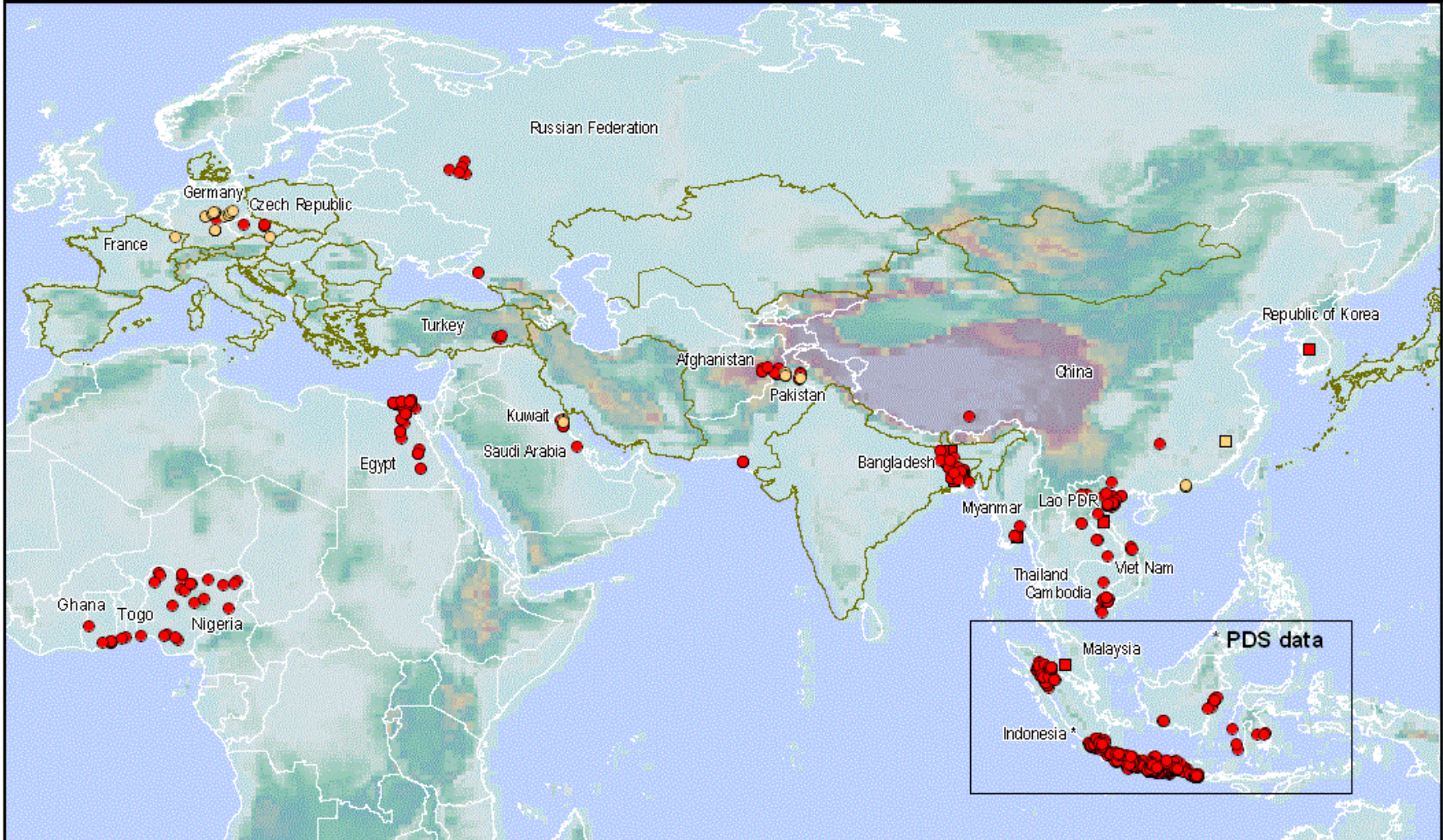
- Success in 2006
  - Disease eliminated from newly-infected countries
  - Substantial fall in HPAI incidence in most previously affected countries
- Limitations
  - H5N1 still circulating in some parts of Asia and Africa
  - Permanent risk of infection/re-infection of new countries
- Ongoing need for improvement & vigilance
  - Public awareness, surveillance, family flocks, compensation
  - Recurrent outbreaks in countries with high biosecurity





# HPAI outbreaks : Outbreaks reported in poultry and cases in wild birds

## Six Months Period ( 19 February - 19 July 2007)



### Legend

#### HPAI Occurrences

- Self Declared Free Country
- H5N1 Domestic
- H5 Domestic
- H5N1 Wild
- H5 Wild

*This map represents occurrences of HPAI observed from 19 February to 19 July 2007. H5 cases are represented in this map only for countries in which H5N1 is known to be endemic and where N-subtype characterization is not being performed for secondary cases. Countries with HPAI occurrence only in wild birds are not considered as infected according to OIE status. The original data have been collected and aggregated at the most detailed administrative level and for the units available for each country.*

*NOTE: FAO compiles information from numerous sources (FAO representatives or country missions, FAO reports, OIE, official government sources, EC, Reference laboratories and others) and produces these composite maps in a representative effort to provide full and accurate information. Omissions and errors are regretted, but FAO welcomes messages to that effect with supporting documentation to make the required changes based on FAO validation and verification procedures. Send messages to [EMPRES-livestock@fao.org](mailto:EMPRES-livestock@fao.org)*

# Asia

- In terms of achieving sustainable control and eradication of H5N1 Asia is still the region of greatest concern
- During the last three years significant progress has been made
- Of 4 countries with widespread disease in poultry, 3 have achieved success:
  - PR China has controlled the disease in many provinces
  - Thailand and Vietnam have had long periods without reports of outbreaks
- Indonesia still has widespread disease
- Other Asian countries eg. India, Myanmar, may have eliminated disease although virus may still be circulating





# Europe

- Several countries with well-developed, commercial, poultry sectors eradicated the disease
- Other countries suffered outbreaks that were difficult to control although all ultimately eliminated the disease.
  - Turkey: in 2006, 53 of 81 provinces had outbreaks in backyard flocks; in 2007, outbreaks in backyard flocks were detected early and controlled.
- Some countries experienced re-introduction (eg. Hungary, Russia)
- Several countries identified H5N1 in wild birds without disease in poultry



# Latest reported H5N1 in poultry or wild birds in the European Region

Source: OIE

Date	Country
Sep-07	Germany
Sep-07	Russian Federation
Aug-07	France
Jul-07	Czech Republic
<b>Mar-07</b>	<b>Turkey</b>
Feb-07	Hungary
Feb-07	UK
Jul-06	Spain
Jun-06	Romania
Jun-06	Ukraine
May-06	Denmark
May-06	Poland
Apr-06	Croatia
Apr-06	Slovenia
Apr-06	Switzerland

Date	Country
Apr-06	Israel
Apr-06	West Bank & Gaza
Mar-06	Albania
Mar-06	Georgia
Mar-06	Greece
Mar-06	Italy
Mar-06	Serbia
Mar-06	Sweden
Mar-06	Kazakhstan
<b>Feb-06</b>	<b>Azerbaijan</b>
Feb-06	Austria
Feb-06	Bosnia/ Herzegovina
Feb-06	Slovakia
Feb-06	Bulgaria



# Africa

- Egypt and West Africa are the main areas outside Asia with a serious and protracted problem for H5N1 control
- In Nigeria, deficiencies in disease reporting in smallholder production and village poultry. Control efforts should be sustained and surveillance capacity enhanced.
- In Egypt, the virus has become endemic despite mass culling, restrictions on breeding and vaccination in 2006.
- H5N1 disease status of several countries difficult to determine due to lack of adequate surveillance data



# Main Measures on Animal Side depending on status

- Country is disease free:
  - Contingency plan development and testing
  - Strengthen surveillance
- Small number of outbreaks:
  - Enhance surveillance
  - Stamping out the foci
  - Ring vaccination
  - Culling should be accompanied by compensation
- More extensive dissemination
  - Wide area vaccination

Source: The global strategy for prevention and control of H5N1 HPAI, OIE/FAO



# Forward look

## (by implementation of OIE/FAO Global Strategy)

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- Countries with widespread outbreaks:
  - Reduced disease incidence in medium term
  - Eradication or in confined areas in the long term
- Countries with sporadic outbreaks:
  - Disease eradicated or limited to occasional outbreaks in short to medium term
- All countries at high risk of H5N1 incursion:
  - Strong surveillance systems in short term
  - Capacity in early detection and response



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## 2. Situation in humans

Epidemiology and virology update on global  
H5N1 cases. 19 September 2007



# H5N1 Risk Factors for People

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- Most common: direct exposure to sick and dying poultry
- Uncommon: close contact with an infected person
  - But so far no sustained community outbreaks
- Uncertain: Exposure to contaminated environmental surfaces
- Few cases: No known exposure

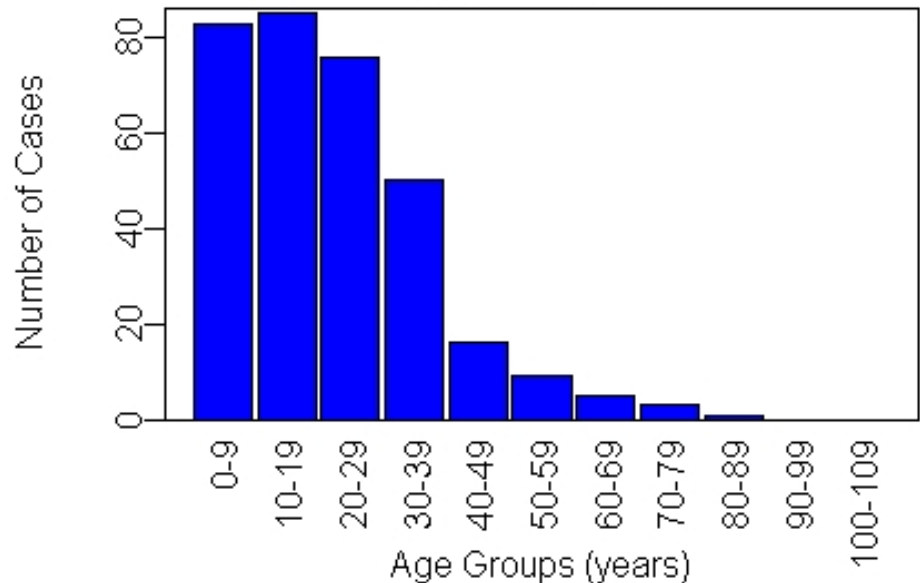


# Confirmed Human H5N1 Cases Reported to WHO

As of 19 Sept 2007

- Since November 2003, cases in 12 countries.
- 328 confirmed cases
  - Age range 3 mo-81yrs (median 19 yrs)
  - 25% in under 10's
  - 52.5% female
- In 2007, most cases in
  - Indonesia (47.7%)
  - Egypt (30.8%)

**Confirmed Human H5N1 Cases  
Distribution of Age Groups  
All Countries**





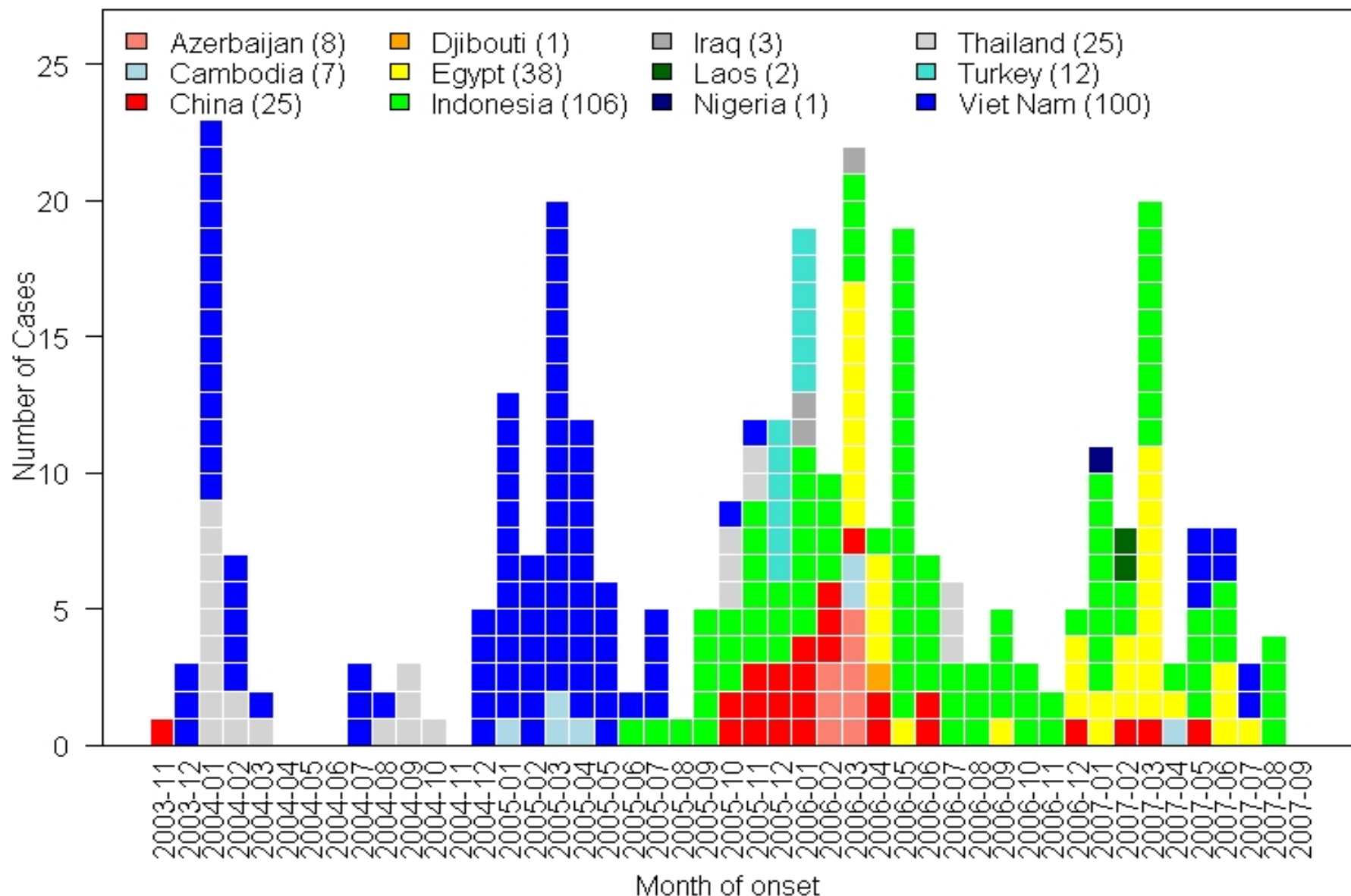
# Confirmed Human H5N1 Cases Reported to WHO

As of 19 Sept 2007

- 200 deaths (61% CFR)
  - 50% in under 20's
  - In countries with >10 cases, Indonesia has the highest CFR (80.1%)
- Days from onset to hospital admission 0-20  
(median 4.0, n=227)
- Days from onset of symptoms to death 1-30  
(median 9.0, n=175)



## Number of Confirmed Human H5N1 Cases by month of onset as of 2007-09-10






# WHO/Europe - Avian Influenza Infections A/H5N1 in Humans

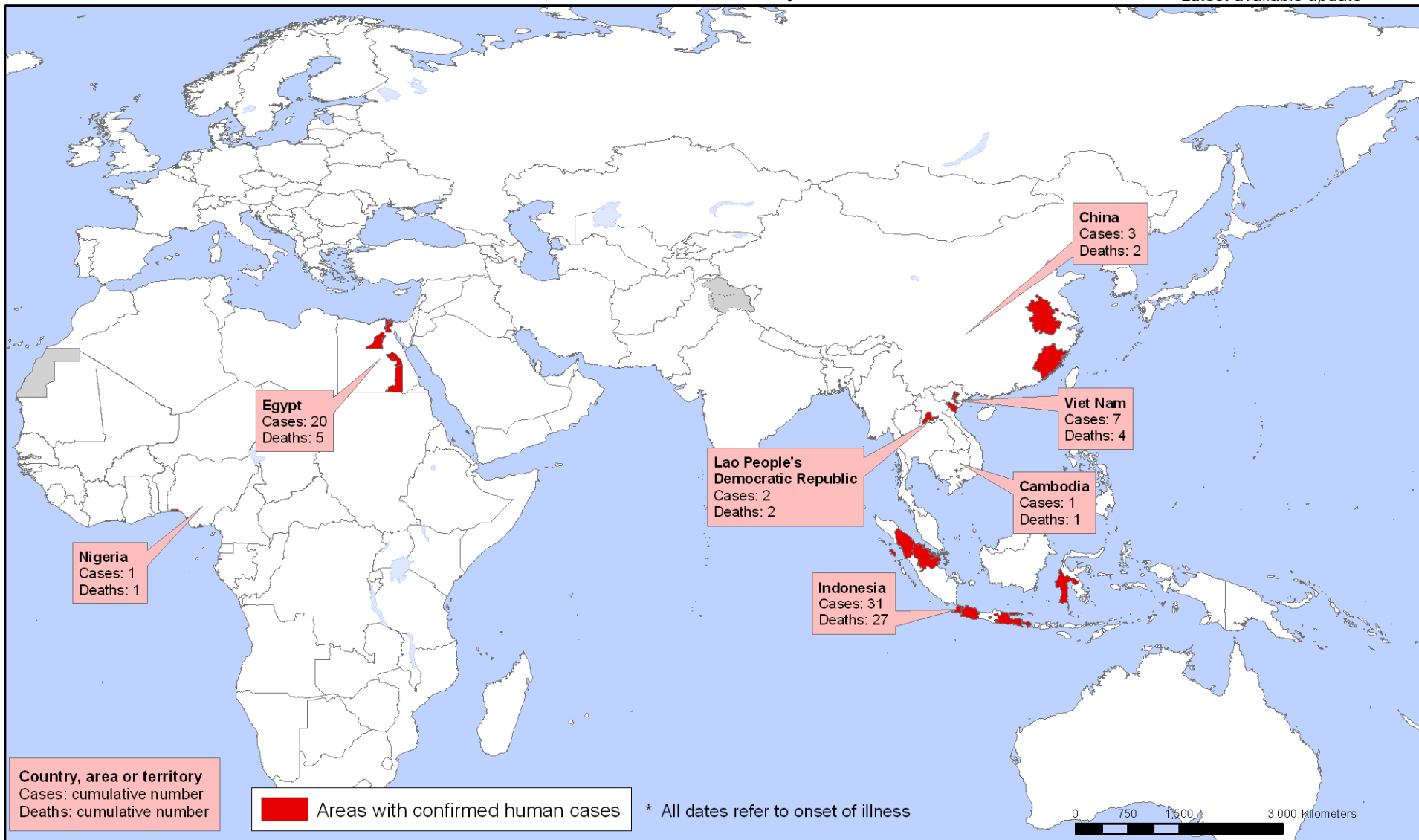
Areas affected since 05 January 2006 - Status as of 06 September 2006



## Legend

-  Country with WHO confirmed human cases
-  Area with WHO confirmed human cases
-  Number of WHO confirmed human cases

0 80 160 320 Kilometers



# Situation Analysis (19 September 2007)

## Unchanged

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- Phase 3 (pandemic alert)
- Person to person transmission through close contact indicated in some cases
- No indication of increased transmissibility from person-to-person



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## **3. Global surveillance, benefits and virus sharing: an update**



# Resolution WHA60.28: *Pandemic influenza preparedness: sharing of influenza viruses and access to vaccines and other benefits*

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- Steps by WHO to ensure sharing of viruses for assessment of the pandemic risk, development of pandemic vaccines AND equitable sharing of benefits.
  - Establish international stockpile of H5N1 vaccine
  - Establish mechanism for equitable distribution of pandemic vaccines
  - Revision of the Global Influenza Surveillance Network (GISN)



# Preparation for an Intergovernmental Meeting (IGM), November 2007

- Interdisciplinary working group (IDWG):
  - Reviewed TOR for NIC, H5 Ref Labs and WHO CC
  - Proposed standard terms and conditions for sharing viruses between originating countries and WHO CC
  - Proposed oversight mechanism
- Next steps:
  - Documents will be published on WHO website
- This meeting: technical briefing
  - Briefing note and WHA60.28 provided as hand-outs
  - **Briefing tomorrow from 13.30-14.15 in M6**





# Guidance (1). WHO web site:

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

## Surveillance

- WHO guidelines for investigation of human cases of avian influenza A(H5N1)  
January 2007  
[http://www.who.int/entity/csr/resources/publications/influenza/WHO\\_CDS\\_EPR\\_GIP\\_2006\\_4/en/index.html](http://www.who.int/entity/csr/resources/publications/influenza/WHO_CDS_EPR_GIP_2006_4/en/index.html)

## Diagnosis and virology

- Collecting, preserving and shipping specimens for the diagnosis of avian influenza A(H5N1) virus infection. Guide for field operations  
October 2006  
[http://www.who.int/entity/csr/resources/publications/surveillance/WHO\\_CDS\\_EPR\\_ARO\\_2006\\_1/en/index.html](http://www.who.int/entity/csr/resources/publications/surveillance/WHO_CDS_EPR_ARO_2006_1/en/index.html)
- Recommendations and laboratory procedures for detection of avian influenza A(H5N1) virus in specimens from suspected human cases  
Revised August 2007 [http://www.who.int/csr/disease/avian\\_influenza/guidelines/labtests/en/index.html](http://www.who.int/csr/disease/avian_influenza/guidelines/labtests/en/index.html)
- WHO criteria for accepting positive PCR test results of H5 infection in humans from national reference laboratories  
Amendment 30 August 2007 [http://www.who.int/csr/disease/avian\\_influenza/guidelines/labcriteria/en/index.html](http://www.who.int/csr/disease/avian_influenza/guidelines/labcriteria/en/index.html)
- Towards a unified nomenclature system for the highly pathogenic H5N1 avian influenza viruses [http://www.who.int/csr/disease/avian\\_influenza/guidelines/nomenclature/en/index.html](http://www.who.int/csr/disease/avian_influenza/guidelines/nomenclature/en/index.html)
- WHO procedures for obtaining release of H5N1 sequences to the public domain  
August 2006 [http://www.who.int/entity/csr/disease/avian\\_influenza/guidelines/h5n1sequences2006\\_08\\_23/en/index.html](http://www.who.int/entity/csr/disease/avian_influenza/guidelines/h5n1sequences2006_08_23/en/index.html)



# Guidance (2)

## Case management

- Avian influenza, including influenza A (H5N1), in humans: WHO interim infection control guideline for health care facilities  
Revised 10 May 2007 WORLD HEALTH ORGANIZATION - WESTERN PACIFIC REGION  
[http://www.who.int/csr/disease/avian\\_influenza/guidelines/infectioncontrol1/en/index.html](http://www.who.int/csr/disease/avian_influenza/guidelines/infectioncontrol1/en/index.html)
- Clinical management of human infection with avian influenza A (H5N1) virus  
15 August 2007 [http://www.who.int/csr/disease/avian\\_influenza/guidelines/clinicalmanage07/en/index.html](http://www.who.int/csr/disease/avian_influenza/guidelines/clinicalmanage07/en/index.html)

## Pandemic preparedness

- Global pandemic influenza action plan to increase vaccine supply  
September 2006  
[http://www.who.int/entity/csr/resources/publications/influenza/WHO\\_CDS\\_EPR\\_GIP\\_2006\\_1/en/index.html](http://www.who.int/entity/csr/resources/publications/influenza/WHO_CDS_EPR_GIP_2006_1/en/index.html)
- WHO strategic action plan for pandemic influenza  
2006-2007 [http://www.who.int/entity/csr/resources/publications/influenza/WHO\\_CDS\\_EPR\\_GIP\\_2006\\_2/en/index.html](http://www.who.int/entity/csr/resources/publications/influenza/WHO_CDS_EPR_GIP_2006_2/en/index.html)
- WHO Interim Protocol: Rapid operations to contain the initial emergence of pandemic influenza  
Updated May 2007 [http://www.who.int/csr/disease/avian\\_influenza/guidelines/draftprotocol/en/index.html](http://www.who.int/csr/disease/avian_influenza/guidelines/draftprotocol/en/index.html)
- The role of National Influenza Centres (NICs) during interpandemic, pandemic alert and pandemic periods  
Interim Document, May 2007 [http://www.who.int/csr/disease/avian\\_influenza/guidelines/RoleNICsMay07/en/index.html](http://www.who.int/csr/disease/avian_influenza/guidelines/RoleNICsMay07/en/index.html)



# Thank you for your attention

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***[www.euro.who.int/flu/](http://www.euro.who.int/flu/)***

***[cbr@euro.who.int](mailto:cbr@euro.who.int)***



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