

Summary of animal health information relevant to human exposure to avian influenza H5N1 in Indonesia

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H5N1 situation in animals

- Total poultry population of country
 - **Broilers** 972,221,463
 - **Layers** 95,477,601
 - Duck 34,612,057
 - **Kampung chickens** **317,420,086**
 - **Total** 1,419,731,207

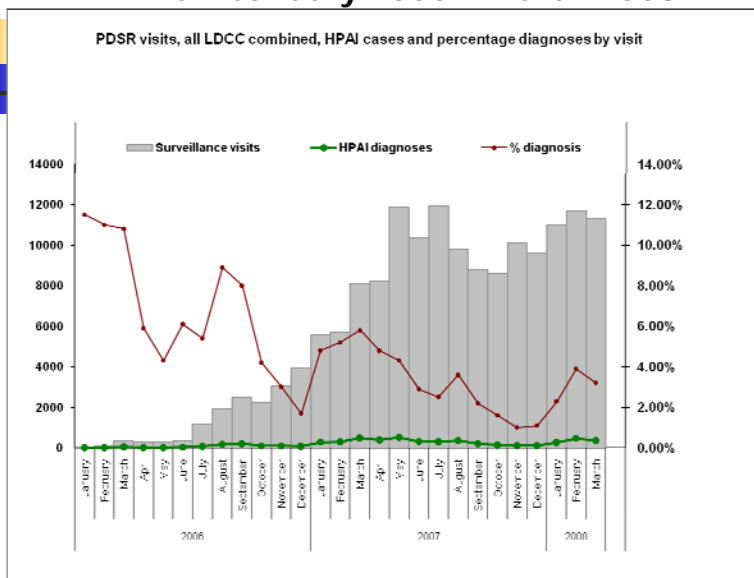
■ *source: *Ministry of Agriculture of Indonesia, 2007 and **Ministry of Internal Affairs of Indonesia, 2008*

H5N1 situation in animals

- Geographical distribution and timeline of animal outbreaks
 - First identified late 2003
 - Reported to OIE on February 2004
 - 31 of 33 provinces have reported H5N1 cases in poultry
 - H5N1 infection has been reported in chickens, ducks, quails, cats.
 - All poultry sectors affected

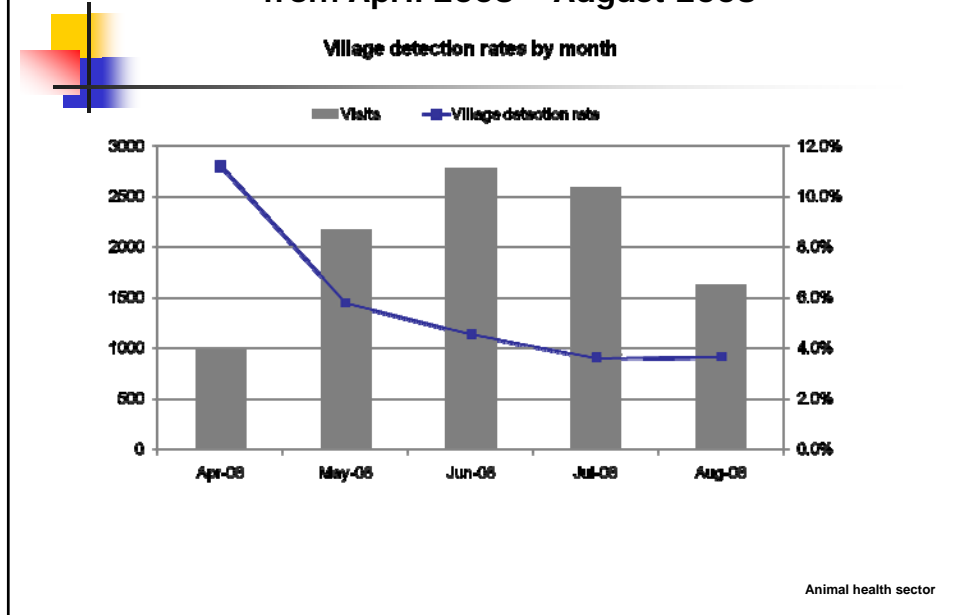
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Outbreaks by month: PDSR detections from January 2006 – March 2008

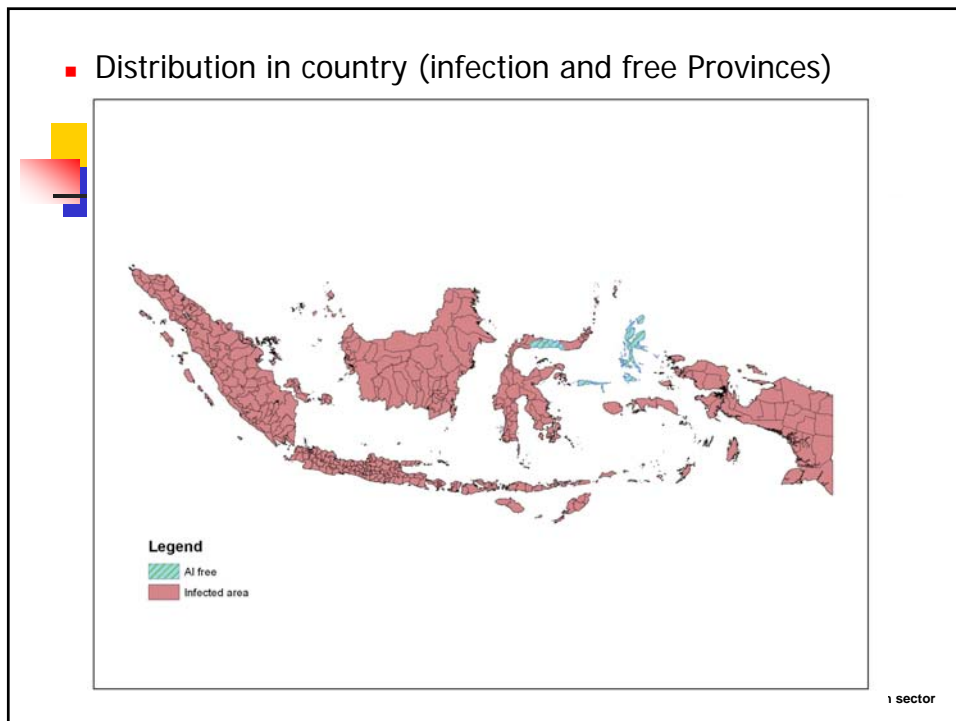


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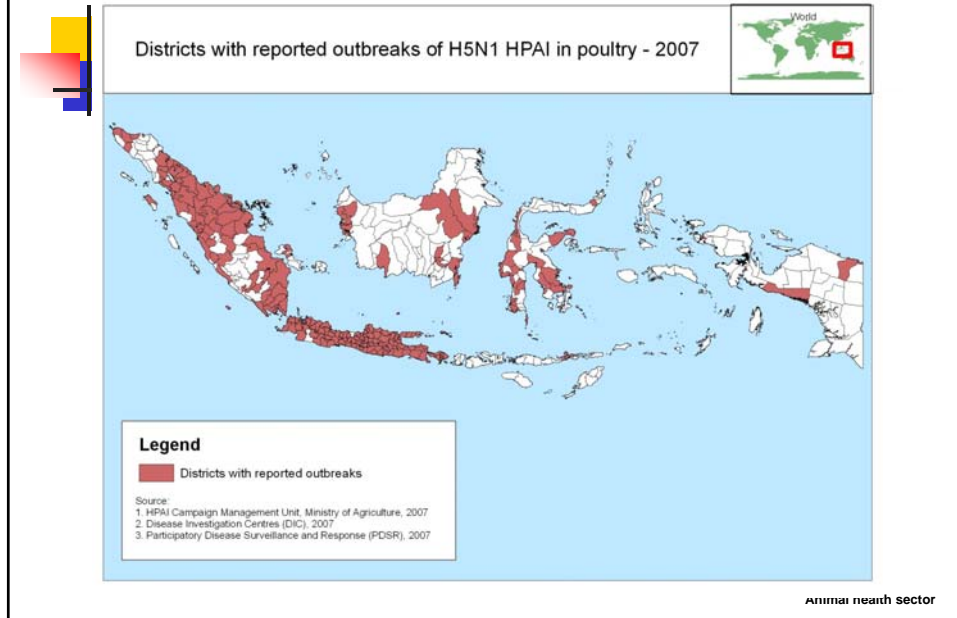
Outbreaks by month: PDSR detections from April 2008 – August 2008



■ Distribution in country (infection and free Provinces)



Districts reporting H5N1 outbreaks



Evaluation of level of outbreak reporting & possible constraints to reporting

- In general, good reporting of outbreaks in village-based poultry via PDSR-LDCC reporting system
- Limited transparency of outbreak reporting with commercial poultry industry
- Compensation policy does not include commercial poultry
- Immediate compensation not routinely available, even for village poultry



H5N1 control measures: Village-based poultry

- **Goal:** Rapid, coordinated and efficient action to STOP the transmission of the virus to other birds, animals and people.
- **Key Activities:**
 - Coordination with local authorities
 - Case investigation and diagnosis
 - Focal culling and disposal of infected flocks
 - Tracing of possible infection
 - Decontamination (cleaning and disinfection)
 - Movement control
 - Confinement and restocking
 - 14 day confinement of village flocks
 - Restocking after 60 days IF outbreak has been controlled
 - Community-based Information, Education and Communication (IEC) activities

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H5N1 control measures in poultry

- Vaccination
 - Mass vaccination in mid 2004
 - Inactivated H5N1 local isolate
 - Free of charge
 - Backyard and small scale farms
 - Sector 1 and 2
 - At their own cost
 - Coverage estimated 90% in commercial layer and 100% in breeding flocks
 - 2006-targetted vaccination high risk areas
 - Registered vaccines (H5N1, H5N2, H5N9)
 - Limited success thus far due to concerns over vaccine efficacy, coverage and lack of consensus approach
 -Recommendation from Offlu project and national experts (vaccine and vaccination strategy)



Country-specific risks (1)

- Increased risk to both village poultry populations and humans in greater Jakarta area
 - Massive concentration of poultry and humans in western Java
 - Confluence of poultry products into the greater Jakarta area – increased risk to both village poultry populations and humans....poultry movement map
 - Majority of Indonesian human H5N1 cases in western Java

- Tremendous size and variety challenge control
 - 235 million people
 - Over 17,000 islands
 - Over 170 languages
 - Decentralized governance – 448 district authorities
 - Over 1.4 billion poultry produced each year

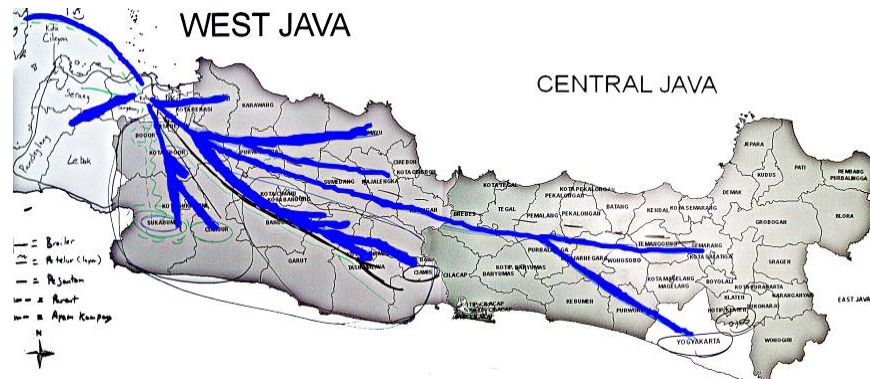
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Country-specific risks (2)

- Markets-Poultry Collector Facilities-transport-traders
 - Surveillance poultry collector facilities in Jakarta in 2007 (The Netherlands-DGLS-Jakarta Provincial Livestock Services)
 - In 29 out of 40 collector houses sentinel chicken died within three months (25 within first month)
 - Dead sentinel chicken were positive for AI (PCR and virus isolation)
 - Collector houses are contaminated with H5 AI strain
 - Follow up surveillance starts June 2008
 - Surveillance direct on incoming poultry
 - Identify sources of poultry
 - LBM environmental study in western Java (WHO-FAO-Bbalitvet)
 - Transport study-on going planning discussion with The Netherlands Bilateral Project

Poultry Movements



Virus affecting both humans and local poultry may not be locally produced, but instead introduced from outside sources

AH/PH collaborations

- Animal health and human health authorities are working together
- Improved human case investigations to increase understanding of human risk factors (PDSR-DSO-Health Center), district and sub district level
- Improved communication on outbreaks and human cases (CMU/MoA-Command Post/MoH), central level
-collaboration requires strengthening

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Acknowledgements

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 - Epi Team
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- The Netherlands-Indonesia Bilateral Project

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