



NGO INVOLVEMENT IN THE IMPLEMENTATION OF NATIONAL STRATEGIES FOR HPAI CONTROL IN INDONESIA

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It is generally accepted that the most important element in addressing the potential threat of emergence of a human pandemic influenza virus is to control HPAI in poultry

POULTRY IN INDONESIA

POULTRY TYPE	POPULATION (Birds)
Broiler Chicken	972,221,463
Layer Chicken	95,477,601
Native Chicken	317,420,086
Duck	3,461,057
TOTAL	1,388,580,207



NATIONAL STRATEGIC PLAN for HPAI CONTROL IN INDONESIA

1. strict biosecurity application



2. selective depopulation in infected areas

NATIONAL STRATEGIC PLAN for HPAI CONTROL IN INDONESIA

3. vaccination



4. movement control

NATIONAL STRATEGIC PLAN for HPAI CONTROL IN INDONESIA

5. surveillance and tracing



6. public awareness

NATIONAL STRATEGIC PLAN for HPAI CONTROL IN INDONESIA

7. restocking



9. monitoring, reporting and evaluation



8. stamping out in newly infected areas

HPAI SITUATION IN INDONESIA

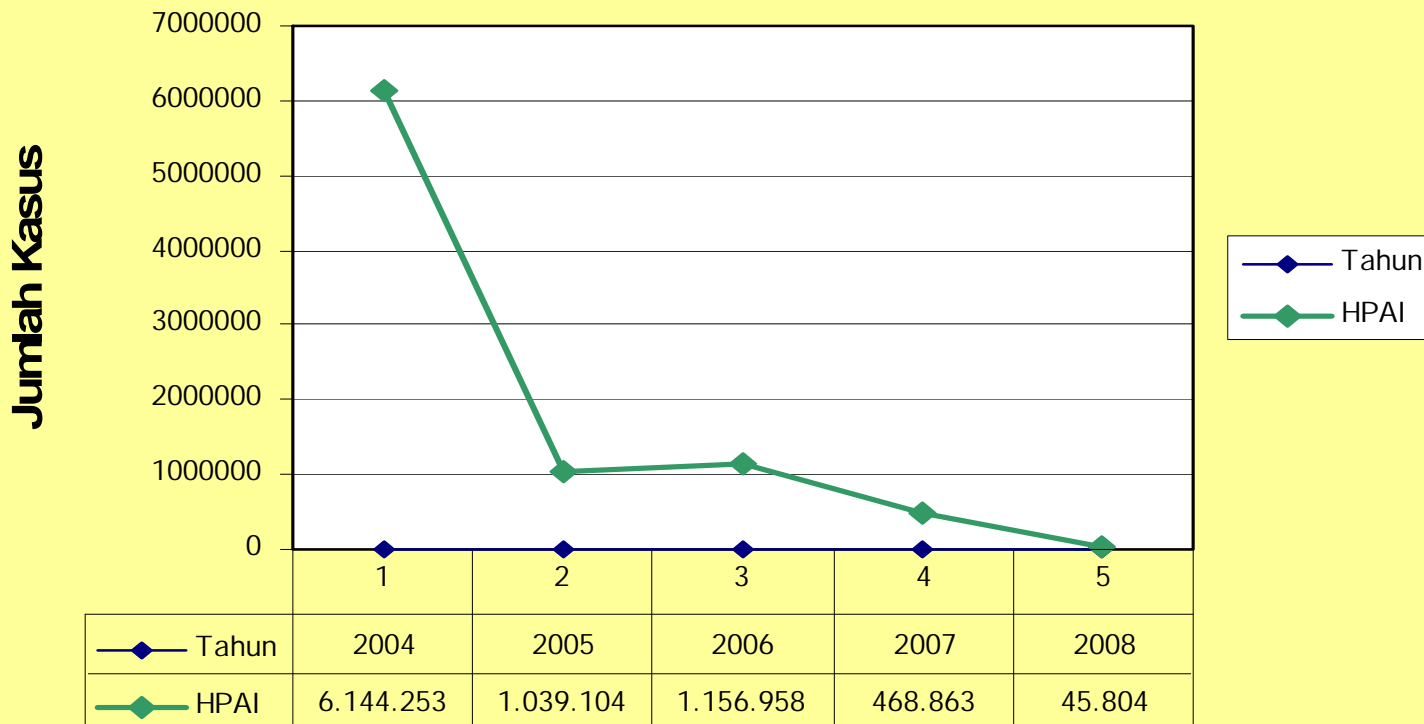


HPAI Endemic Areas in Indonesia (In Poultry)

Source: Ministry of Agriculture, Indonesia

HPAI SITUATION IN INDONESIA

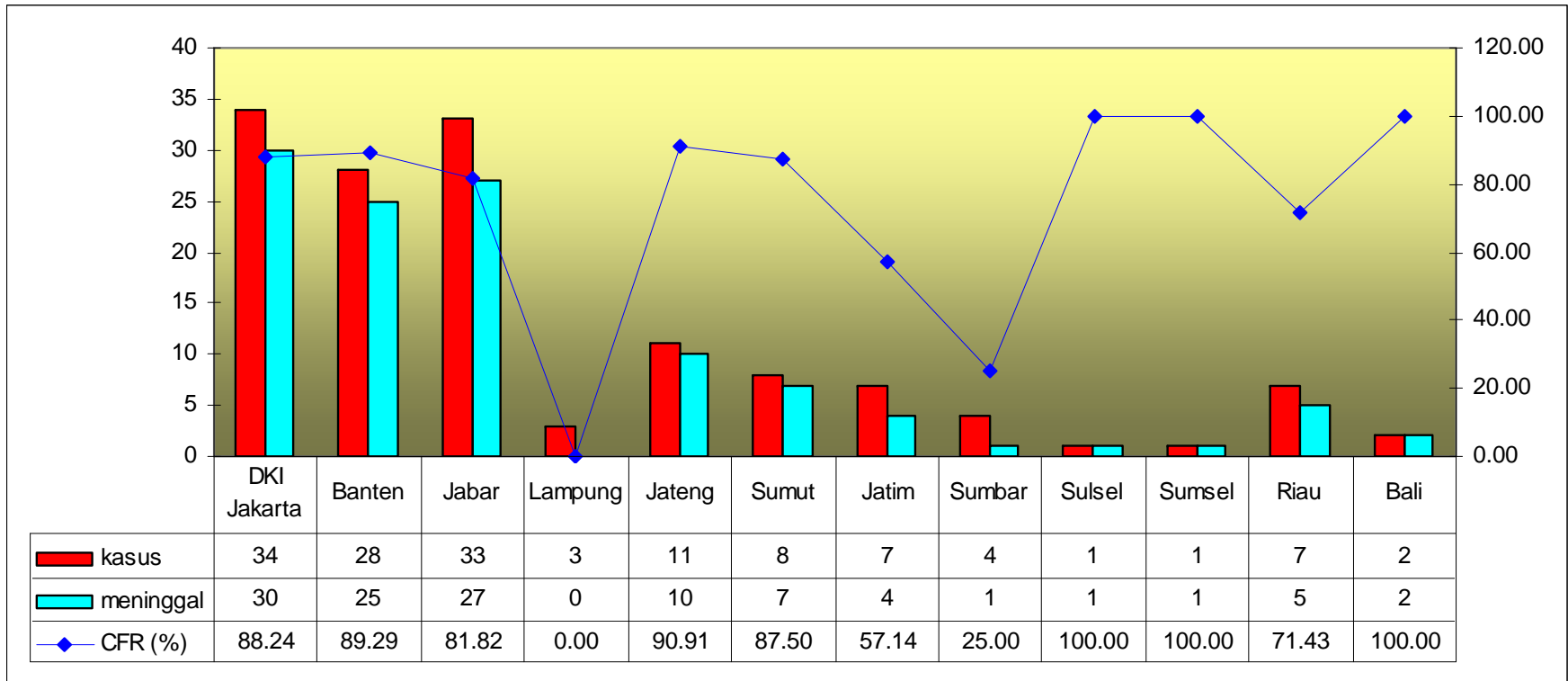
Jumlah Kasus Avian Influenza di Indonesia Tahun 2004-2008



HPAI Poultry Cases in Indonesia based on Livestock Services Report 2004-2008

Source: Ministry of Agriculture, Indonesia

HPAI SITUATION IN INDONESIA

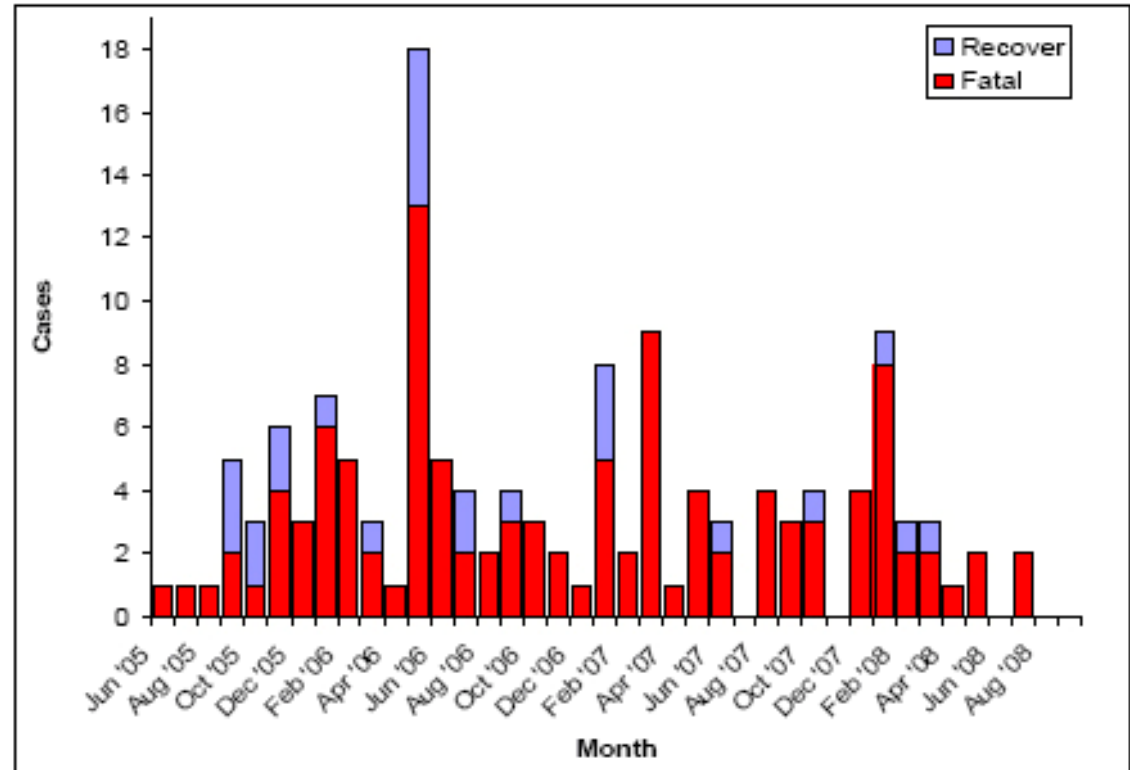


HPAI Human Cases in Indonesia by Province (August 2008)

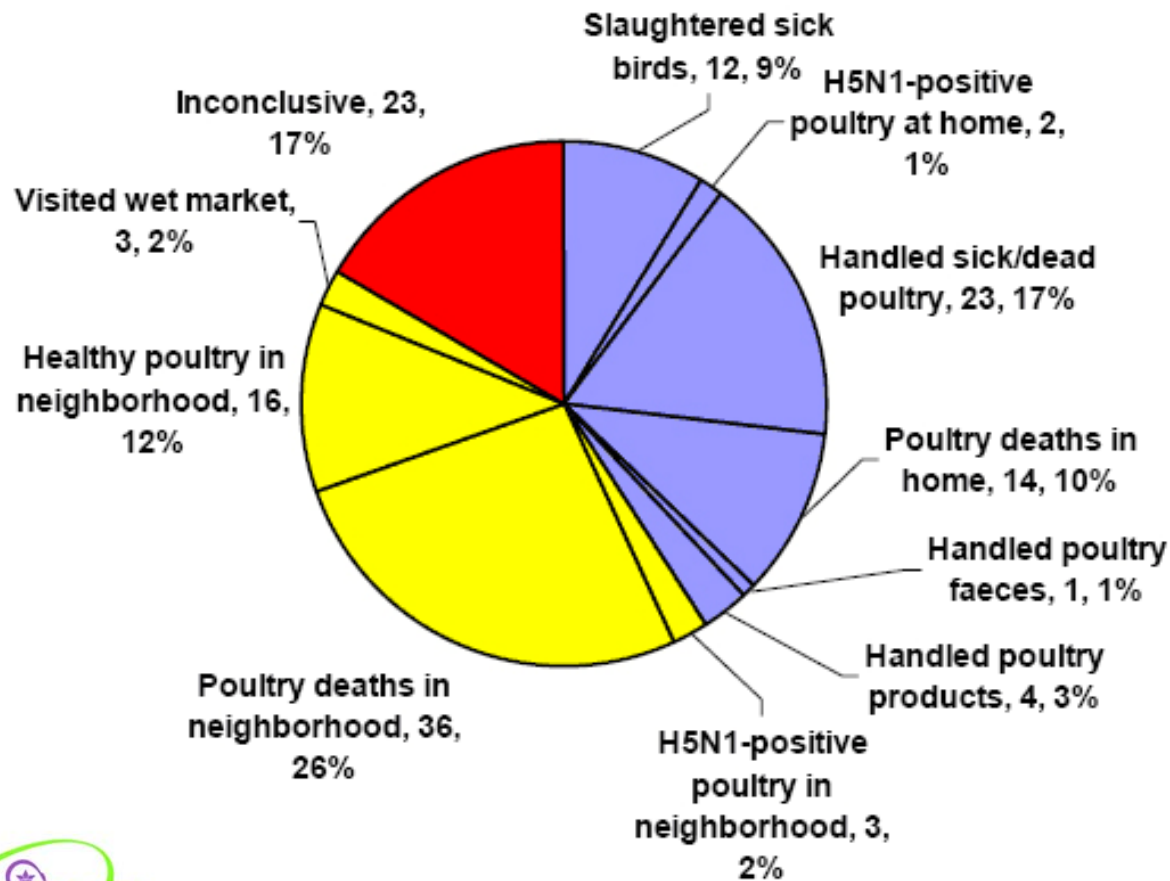
HPAI SITUATION IN INDONESIA

July 2009

- ❖ 115 fatal human cases
- ❖ World's Highest Cases



HPAI SITUATION IN INDONESIA



Legend

- Blue** : direct contact with H5N1 infected bird
- Yellow** : exposed from environment with H5N1 infected bird
- Red** : unknown source

Exposure Risk Factors (Human Cases)

Source: Ministry of Health, Indonesia



Why?



OBSTACLES OF HPAI CONTROL IN INDONESIA

❖ Weakness of Veterinary Services

- Weak regulations
- Limited budget
- Wide responsibility

❖ Lack of Risk Communication Skill

❖ Technical Decision vs Political Interest

❖ Complex Market Chain

❖ Knowledge Gaps

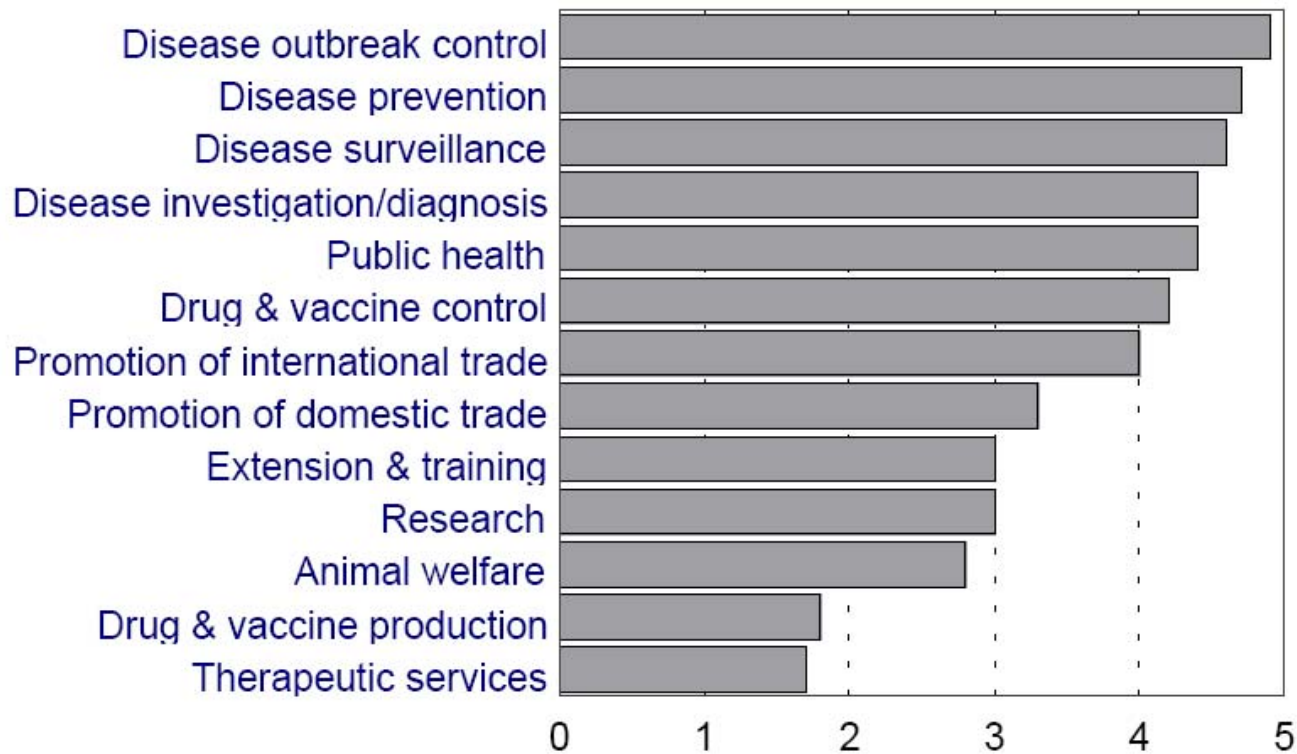
- Virus Ecology
- Epidemiology
- Ekonomi veteriner studi



NGO INVOLVEMENT

State responsibilities

Score: 0 = not the state's responsibility, 5 = high priority



NGO INVOLVEMENT

Center for Indonesian Veterinary Analytical Studies (CIVAS)

- ❖ Veterinary based NGO
- ❖ Focus on animal health and food safety issues



In collaboration with:

Indonesia

- Ministry of Agriculture
- National Commite for HPAI Control
- Local Goverment
- Universities

International Agencies

- FAO
- Wageningen, Netherland
- USDA
- CSU

A review of free ranging duck farming system in Indonesia and assessment of their implication in the spreading of the highly pathogenic (H5N1) Strain of Avian Influenza

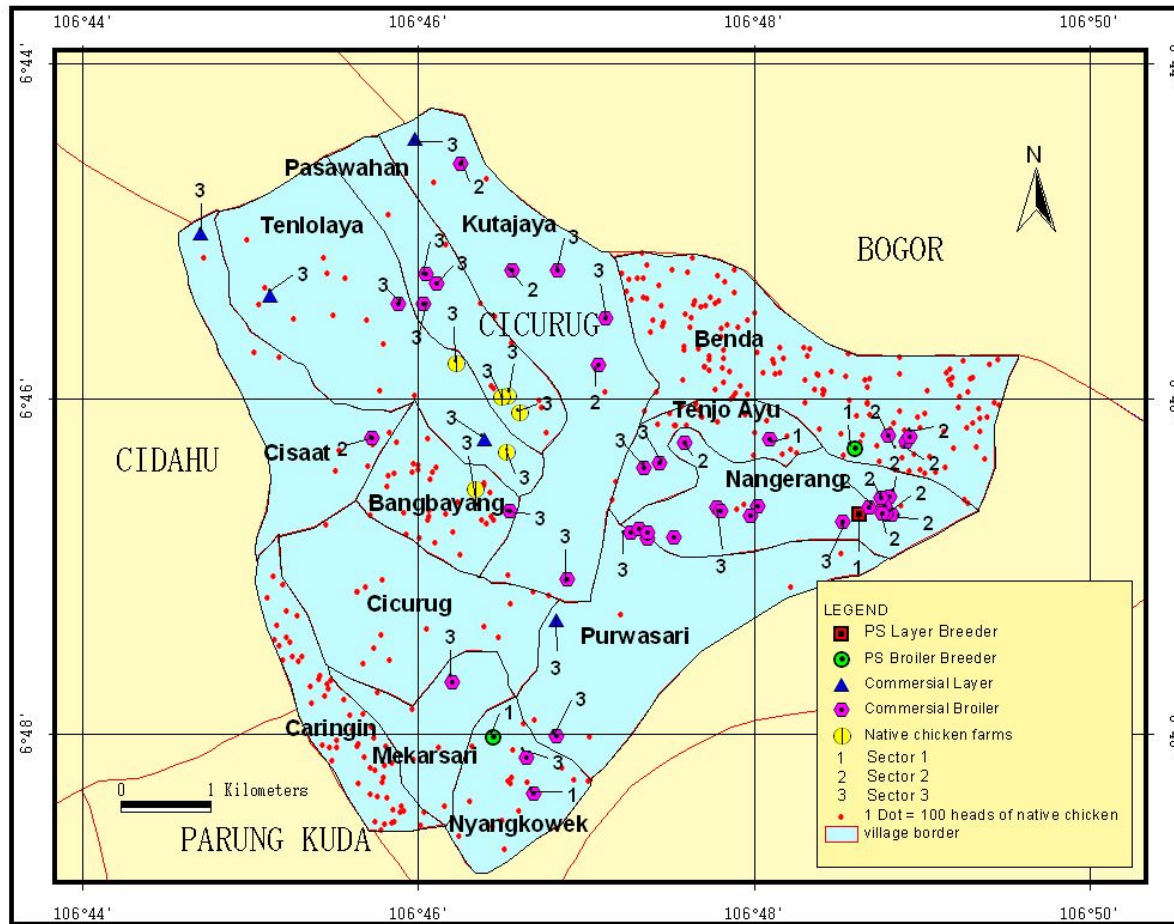
- Collaboration: FAO, Livestock Services of Pematang, Brebes, Cirebon, Subang, and Tangerang District
- Objective : to study systems of free-range duck farming and identify risk factors for HPAI virus spread.
- Method : questionnaire-based interviews with free-range duck farmers and district government officers
- Result : 86% of respondents (129 farmers) applied free-range duck farming with additional feed
15% (10 farmers) applied fully free-range duck farming (without additional feed)
6% (4 farmers) applied free-range duck farming within a fenced area with additional feed.
- Identification of risk factors in free-range duck farming in Indonesia concludes that the system has high potential in spreading HPAI viruses.



Inventory Study of The Poultry Sector in Sukabumi District

- Collaboration : Ministry of Agriculture, Livestock Services of Sukabumi District, Wageningen International
- Objective : to study poultry farming systems
to identify sector 1, 2, and 3 farms and estimate poultry population in sector 4
to identify routes of poultry movement and collect demographic data of citizens in Sukabumi District.
(as reference to determine areas and farms selected for AI Field Trial Vaccination in Sukabumi District)
- Method : visit all sector 1, 2, and 3 poultry farms in four subdistricts in Sukabumi district
collect information on the population of sector 4 poultry from each village in all surveyed subdistrict.
collect information from every farmer using a questionnaire.
collect the coordinate location with GPS unit
- Result : Poultry farms in Sukabumi district includes all sectors (sector 1, 2, and 3).
Commercial broiler chicken farms → 64.7%
Commercial layer chicken farms → 13.7 %

Inventory Study of The Poultry Sector in Sukabumi District



Distribution of Poultry Farms in Cicurug Subdistrict, Sukabumi District by Farm Type and Poultry Sector

Monitoring of AI Virus Circulation in Poultry Collecting Facilities (PCFs) and Poultry Slaughtering Facilities (PSFs) in Sukabumi District

- Collaboration: Ministry of Agriculture, Livestock Services of Sukabumi District, Wageningen International
- Objective : to detect the presence of AI viruses in PCFs and PSFs
- Method : Seven sentinel chickens were placed in PCFs.
Samples were collected from sentinels.
Sampling schedule
serum samples were collected every 15 days until day 90
cloacal and tracheal swab samples → sick/dead sentinels and at the end of the study period.
- Result : All samples were negative, indicating that all PCFs and PSFs observed were free from AI virus circulation.



Avian Influenza Field Trial Vaccination

Collaboration : Ministry of Agriculture, Livestock Services of Sukabumi District, Wageningen International

Objective : to evaluate the efficacy of AI vaccination programs in field conditions using locally produced AI vaccines.

Method :

- ❖ Two groups of farms, a control group and a treatment group.
- ❖ Control farms were farms applying their own AI vaccination program using their own procedures.
- ❖ Treatment farms were farms applying AI vaccination programs as determined by the study. Ring vaccination was conducted for sector 4 poultry that are in a 1 km radius around treatment farms after socialization and education on avian influenza was given in villages.
- ❖ Virus detection was conducted using sentinel chickens placed in both control and treatment farms.

Result :

- In layer chicken farms, vaccination programs in treatment farms produced better antibody titers compared to control farms.
- The overall antibody titer in layer treatment farms reached the protective value throughout the production period.
- In native chicken farms, vaccination programs in both farm groups weren't significantly different and all had low antibody titers.
- Sentinel chickens could be used safely to monitor virus circulation in the field.

Avian Influenza Surveillance in Poultry Collecting Facilities in DKI Jakarta Province

- Collaboration : Ministry of Agriculture, DKI Jakarta Livestock, Fishery, and Marine Services, Wageningen International
- Objective : to detect the presence of AI viruse in PCFs in DKI Jakarta province
to identify risk factors of AI infection in PCFs.
- Method : place 7 – 8 sentinel chickens in 40 PCFs in DKI Jakarta for 3 month
Sample analysis:
rt-PCR for cloacal and tracheal swab samples from sick or death sentinel chickens.
Data collection → questionnaire
- Result : AI viruses (H5) were found in 84.2% of PCFs involved in the surveillance.
Poultry health management and biosecurity → haven't been done properly and maximally → not effective to prevent AI virus introduction and spread in PCFs.
- Recommend : further study → source of virus
improvement of husbandry management, poultry health management, and biosecurity and hygiene practices



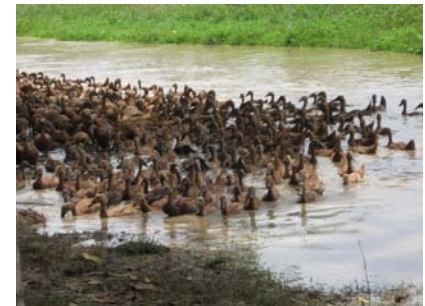
Avian Influenza Virus Detection in Free-range Duck Farms in Tangerang, Subang and Indramayu Districts

Collaboration: Animal Health Directorate, Directorate General of Livestock, Ministry of Agriculture; Livestock Services of Tangerang, Subang, and Indramayu Districts; Faculty of Veterinary Medicine, Bogor Agricultural University

Objective: (1) to detect AI (H5) viruses in free-range duck farms
(2) to determine AI seroprevalence in free-range duck farms
(3) to measure the knowledge level of free-range duck farmers on AI

Method: sample collection → 30 farms from each district, totaling to 90 farms overall. Samples → cloacal swab, oropharyngeal swab, and blood serum samples.

Data collection → questionnaire (duck farmers)
→ GPS coordinates of farms



Live Bird Market Workshop

Collaboration: District Government of Tangerang, National Committee for Avian Influenza Control and Pandemic Influenza Preparedness, Livestock Services of Tangerang District, and Livestock Services of North Sumatera, East Java, Bali, South Sulawesi, and Lampung Provinces

Objective :

- ❖ To reveal the biosecurity condition of live bird markets and wet/traditional markets in Indonesia, both in urban and rural areas
- ❖ To develop a poultry marketing system that could help prevent Avian Influenza virus transmission from poultry to humans.
- ❖ To plan, develop and determine actions necessary to create a good and healthy market model, which later will be proposed as the Bird Market System Program for national and local level.

Participant : all related parties, from the government, farmers, poultry vendors, market managers, NGOs, and private sector

Result : Guidelines for Bird Market Management and Distribution of Poultry and Poultry Products

Recommend:develop pilot markets in several locations in Indonesia

National Workshop for Development of Avian Influenza Strategy and Surveillance Guideline in Wild Birds

Collaboration: National Committee for Avian Influenza Control and Influenza Pandemic Preparedness, Ministry of Forestry, Ministry of Agriculture, Center for Indonesian Veterinary Analytical Studies (CIVAS), Wildlife Conservation Society (WCS) Indonesia, Indonesia Institute of Science (LIPI), Wetlands International, IdOU, and Yayasan Kutilang Indonesia.

Objective :

- ❖ To establish communication and network between various institutions that have, are, and will conduct surveillance in wild birds, whether it is the government, academicians, NGOs and private sectors.
- ❖ To develop a national strategy that is accepted by all parties and approved by the Indonesian government.

Participant : Ministry of Agriculture, Ministry of Forestry, NGOs, avian influenza and wild bird research institutes, academicians, international agencies

Result : Draft of the National Action Plan and Strategy for Avian Influenza Surveillance in Wild Birds in Indonesia



- ❖ **Review of national strategic plan**
 - Need national surveillance strategy
 - Determine the HPAI status in each region, province, district, etc
 - Then prevent the free area
 - And campaign freedom of the disease per area
- ❖ **NGOs could play a role in controlling HPAI in Indonesia**
 - Research
 - Training
 - Contribution on concept of good practices, guidelines, etc
- ❖ **Indonesia still need to work hard to eradicating HPAI.**
 - It is hard but is it not imposible!!
 - Optimist!!
 - Need High commitment!!

Thank you!

