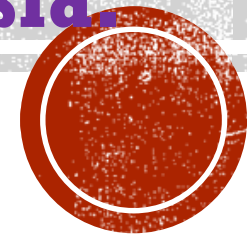


# COUNTRY REPORT ON AVIAN INFLUENZA IN MALAYSIA

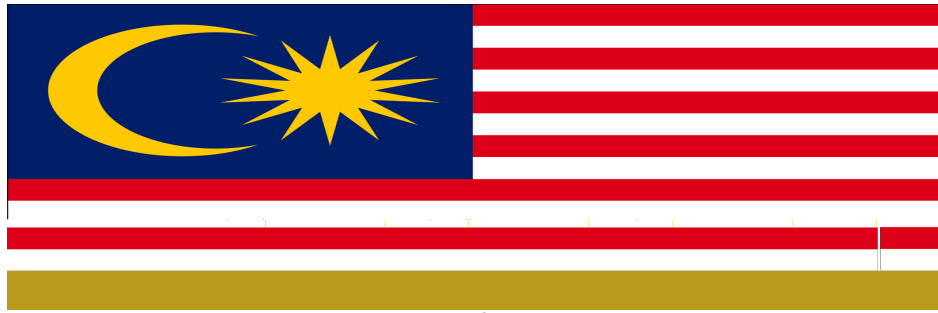
**Dr Saipul Bahari Abdul Ree**  
**Department of Veterinary Services Malaysia**

OIE Regional Expert Group Meeting for the Control of Avian  
Influenza in Asia

Sapporo, Japan, 3-5 October 2017



# MALAYSIA



|                   |  |                       |   |
|-------------------|--|-----------------------|---|
| <b>COUNTRY</b>    | Peninsular Malaysia<br>East Malaysia (Borneo)<br>11 states,<br>3 Federal Territories.                                  | <b>LANGUAGE</b>       | Bahasa Malaysia (Malay), <b>English</b>     |
| <b>TOTAL AREA</b> | 329,758 km <sup>2</sup>  | <b>ECONOMY</b>        | Manufacturing, Petroleum, Palm Oil, Rubber, |
| <b>BORDERS</b>    | Land : Thailand, Brunei, <b>Indonesia (Kalimantan)</b><br>Maritime : Singapore, Vietnam, Philippines, <b>Indonesia</b> | <b>AGRICULTURE</b>    | 12 %  |
|                   |  | <b>CURRENCY</b>       | Malaysian Ringgit (RM)                      |
|                   |  | <b>GDP PER CAPITA</b> | 10,380.54 USD (2012)                        |
|                   |  | <b>CAPITAL</b>        | KUALA LUMPUR                                |
|                   |  | <b>POPULATION</b>     | 33 MILLION                                  |



# **VETERINARY LAWS AND LEGISLATIONS**

- ❖ **Ministerial Functions Act, 1969**
- ❖ **Animals Act, 1953 (*Revised-2006, 2012*)**
- ❖ **Veterinary Surgeons Act, 1974**
- ❖ **Abattoir (Privatisations) Act , 1993**
- ❖ **Feed Act, 2009**
- ❖ **Animal Welfare Act 2015**
- ❖ **Others: State enactment, Ordinance, Rules, Regulations etc.**



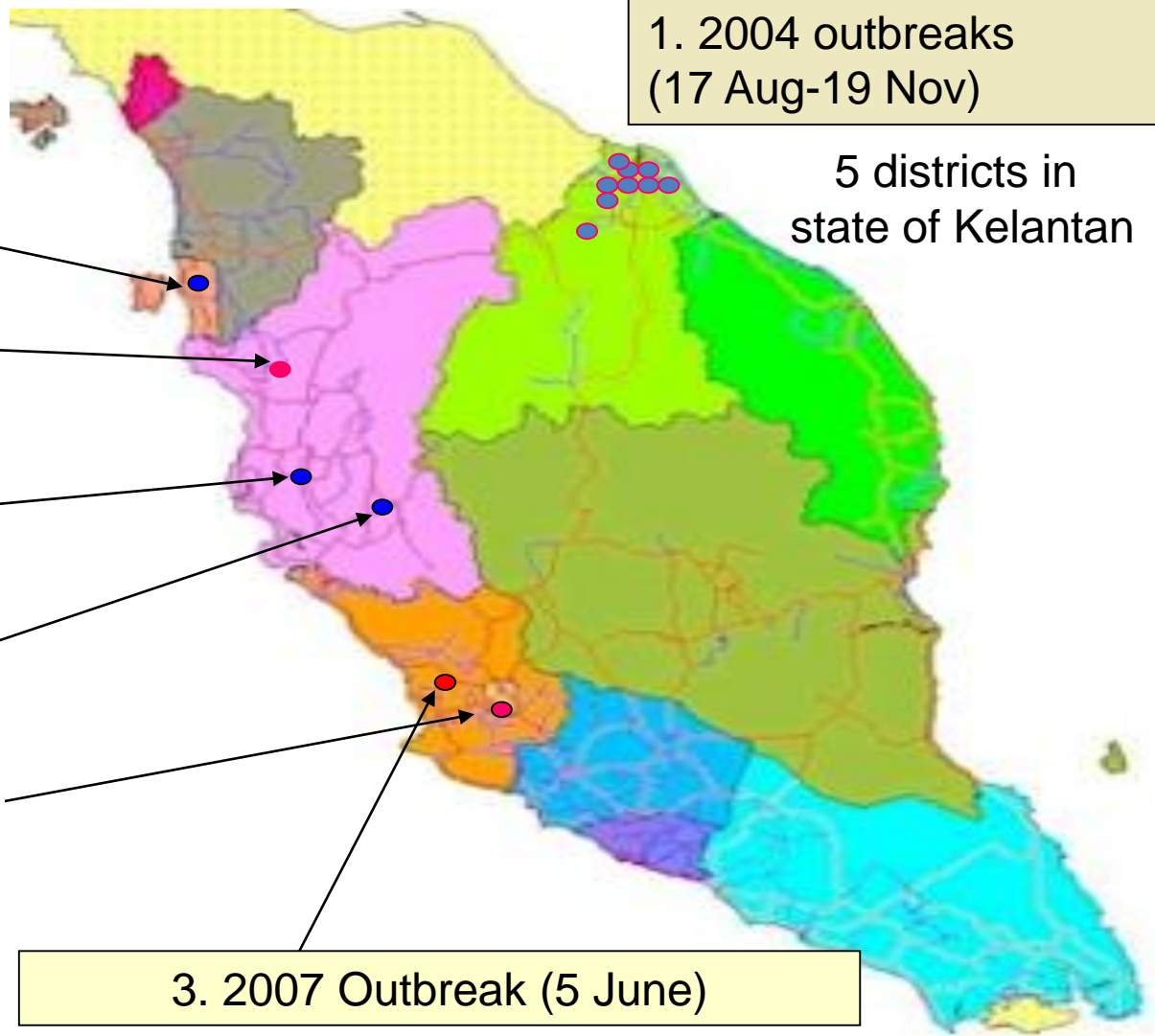
# AVIAN INFLUENZA HISTORY (2004-2007)

- 19 August 2004 - HPAI H5N1 was first detected in Malaysia.
  - The outbreak occurred in a flock of free-range chickens in the village of Pasir Pekan, Wakaf Bharu Kelantan State.
  
- 19 Feb 2006 - second outbreak of HPAI H5N1 in FT, Penang and Perak states.
  
- 5 June 2007, another outbreaks of HPAI in Paya Jaras, Sg Buluh Selangor.



1. 2004 outbreaks  
(17 Aug-19 Nov)

5 districts in  
state of Kelantan



2. 2006 outbreaks

- iv. 20 Mac 2006  
Permatang Bogak, Penang  
Mort: 6/20 vil.chic.
- iii. 16 Mac 2006  
Bukit Merah, Perak  
Virus Isolation
- v. 21 Mac 2006  
Titi Gantong, Perak  
Virus Isolation
- ii. 16 Mac 2006  
Changkat Tualang, Perak  
Mort: 9/20 vil.chic.
- i. 19 Feb 2006  
Pasir Wardieburn, WP  
Mort: 40/150 vil.chic.

3. 2007 Outbreak (5 June)

Paya Jaras Hilir village, Selangor

# AVIAN INFLUENZA HISTORY(2017)

- The new outbreak of HPAI started on 28 February 2017
  - involved backyard chicken at Kampung Pulau Tebu, Sub-district of Tunjung, Kota Bharu, Kelantan.
  - reported clinical signs with swollen head, loss of appetite, bluish discoloration and death.
  - 15 out of 26 chickens died.
  - confirmed HPAI H5N1 on 6 Mac 2017 using RT PCR by VRI, Ipoh.
  - Sequencing showed HPAI virus isolates belong to HA Clade 2.3.3.1, which is closely related to the Vietnam strain.
  - Immediate Notification
  - Report was submitted to OIE on the 8 Mac 2017, stating the occurrence of the outbreak.

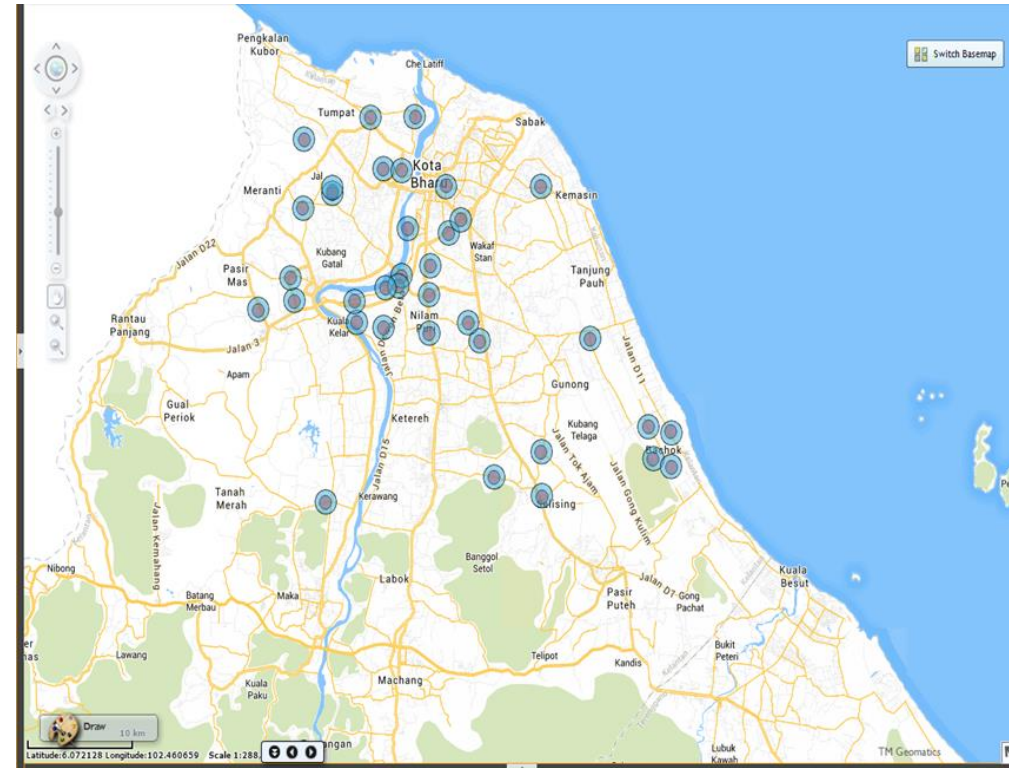


# CONT...

- 36 cases were detected with a death toll of 130 birds
- Involving 6 districts (6 villages)
  - Kota Bharu (15 cases), Pasir Mas (6 cases), Bachok (6 cases), Tumpat (5 cases), Pasir Puteh (3 cases), Tanah Merah (1 case).
- 56,961 birds and 17,531 eggs were destroyed, involving 1,243 premises.
- 30,334 vehicles were inspected and 62 shipments involving 288 different species of birds were confiscated.
- Total compensation paid amounted to RM413,004, 60 for the losses caused by HPAI outbreaks.
- Manage to contain the disease within 24 days.
- Limited only to backyard chicken



# MAP OF HPAI OUTBREAK IN KELANTAN, MALAYSIA





# HPAI CONTROL AND ERADICATION POLICY.



| <b>Parameter</b>                 | <b>Policy</b>  |
|----------------------------------|--|
| <b>Eradiation/Control method</b> | <b>Stamping-out</b>  |
| <b>Case definition</b>           | <b>Detection of HPAI virus subtype H5 or H7 (w/wo CS) in bird population</b>   |
| <b>Confirmation test</b>         | <b>RT-PCR, RRT-PCR conducted by Veterinary Research. Institute, Ipoh, Malaysia.</b>  |
| <b>Compensation</b>              | <b>Commensurate and timely compensation (poultry, ducks, birds, eggs)</b>  |
| <b>Infected Premise (IP)</b>     | <b>Premise that confirmed HPAI.</b>  |
| <b>Protected zone</b>            | <b>1 km radius around the IP (stamping out)</b>  |
| <b>Surveillance zone</b>         | <b>9 km radius around the protected zone.</b><br><b>Quarantine enforced for 42 days</b>  |
| <b>Surveillance strategy</b>     | <b>Surveillance zone: intensive clinical and virological (2X) within 42 days</b><br><b>Free zone: passive and active surveillance (clinical and virological)</b> |
| <b>Freedom declaration</b>       | <b>3 months after final disinfection.</b>  |
| <b>Vaccination</b>               | <b>Prohibited</b>  |



# HPAI CONTROL MEASURES AT SOURCE

- The Ministry of Agriculture and Agro-Based Industry Malaysia through the Department of Veterinary Services is responsible for the control measures when an outbreak of the notifiable disease avian influenza (AI) has been detected.
- These measures are in accordance with the Animal Acts 1953 (Revision 2013), Malaysian Veterinary Protocol (PVM) and in line with OIE recommendations.
- After the suspicious case reported by private veterinarian or farmer, the DVS has immediately performed disease investigation and clinical inspections in the field.
- Samples were taken at the farm and sent to Veterinary Research Institute (VRI), the Malaysian veterinary reference laboratory for diagnosis.
- In all cases where HPAI is confirmed , a stamping out policy has been applied.



# CONT...

- After confirmation by VRI on the 4th Mac 2017, a meeting was convened on 5 March 2017 in the state of Kelantan.
- Activation of Crisis Management Room and Operation Room.
- All teams (including culling, compensation, enforcement, disinfection, logistic and transportation, recording and information, operations room and logistic requirements) were assembled immediately.
- The outbreak was gazetted in the state of Kelantan.
- **Stamping out policy** was applied in infected premise on the night of the 6th Mac 2017, and within **1km radius** (protected area) around the infected premises. Immediate culling of all birds were implemented, followed by disinfection of all infected premises in this area.
- No movement of birds from infected premise and protected area.
- Restrict movement of vehicles in and out of infected premises and protected or control area.
- Active surveillance within **9 km radius of surveillance area**. Clinical inspection and sampling (cloacal swab) was performed based on systematic random sampling to detect the spread of the virus.



# CONT...

- Intensified public awareness campaign for the owner and public.
- Twenty-four hours roadblocks were set up at four strategic locations with the cooperation of Police personnel to control the any movement of vehicles carrying any bird/poultry .
- Establishment of disinfection points for vehicles moving in and out of the infected premises.
- Disinfection of vehicles within the protected and surveillance area.
- Nation wide National Surveillance Program for avian influenza (AI) that covering commercial poultry, ducks, village chicken, pet shop as well as migratory birds in all states.
- Early warning system was implemented to detect AI in earliest stages.
- Provision of commensurate and timely compensation to poultry owners for culled birds and destroyed eggs.
- Vaccination for HPAI is prohibited in Malaysia.



# BENEFITS OF CURRENT NATIONAL PREVENTION AND CONTROL PLAN



- Stamping out was found to be an effective method in controlling and eradicating avian influenza in Malaysia,
- Cost effective if the outbreaks can be identified at very early stages. (time factor is crucial in this control plan to prevent the spread)
- One health approach (Integrated inter-agency collaboration between DVS, MOH, RELA, APM and local governments).
- Improve the awareness, emergency preparedness and early detection of Notifiable Avian influenza.
- Improvement in the facilities and capability of avian influenza diagnosis at Kota Bharu Regional Veterinary Laboratory.



# LIMITATIONS OF NATIONAL PREVENTION AND CONTROL PLAN



- Limited frontline staff at DVS state office in Kelantan, need to deploy from other states.
- Long distance to transport samples to the national laboratory in VRI, Ipoh.
- Insufficient budget in an emergency situation
- Insufficient capabilities at the regional laboratory in Kelantan to do the diagnosis for AI.
- Difficulty in getting cooperation from the farmers during the outbreak
- Border controls not effective and will lead to illegal movement of birds from neighboring country



# POSSIBLE IMPROVEMENTS

- Rearing of village chicken should be registered.
- Public awareness campaigns need to be improved and should be continuous.
- Movement of poultry should be controlled at the border with neighboring countries through cooperation with other enforcement agencies such as MAQIS, Police, Customs and Anti Smuggling Unit (UPP).
- Control poultry movement between district through e-Permit 3 system.
- Increase active surveillance in areas along the border with Thailand especially for village chicken.
- Cooperation with Village Chicken Farmer Association and Bird Competition Organizer for disease monitoring purposes.
- Improve biosecurity measures in chicken farms emphasizing on disease control.
- Improve the regional veterinary laboratory facilities and capability in detection of avian influenza virus.



**TERIMA KASIH  
THANK YOU**

