

National prevention and control measures for avian diseases

Viet Nam



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World Organisation
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Ministry of Agriculture,
Food and Rural Affairs



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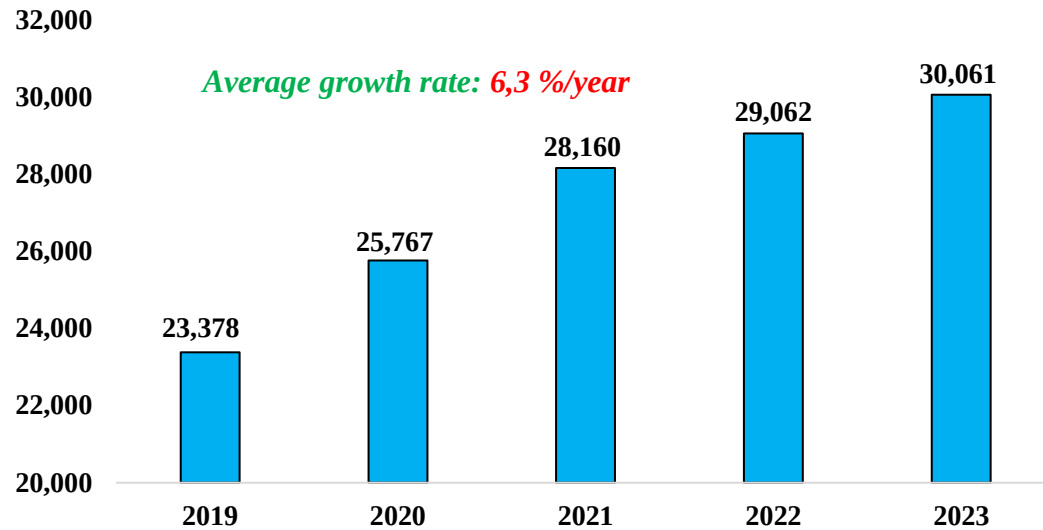
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2. Avian influenza situation
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1. Livestock situation

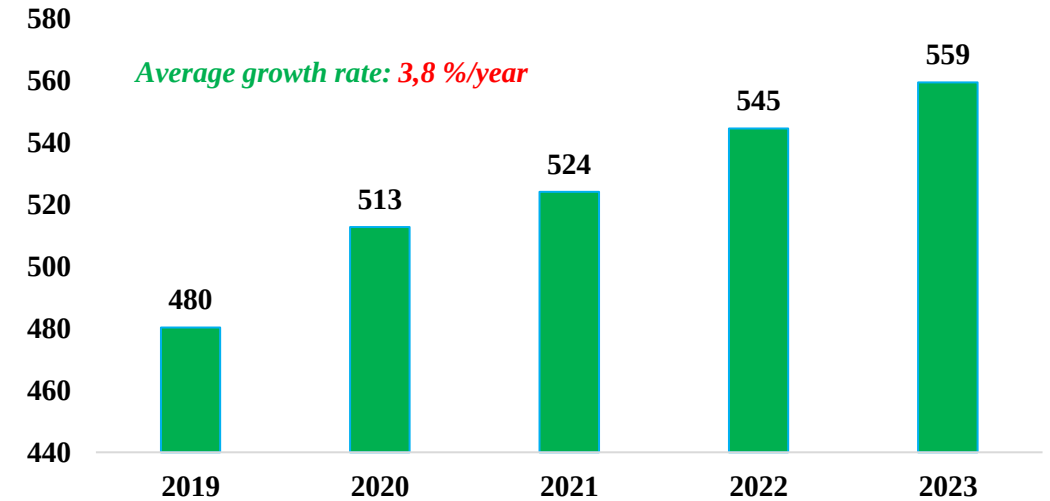
- A brief description of:
 - Susceptible population
 - Risk for introduction of avian diseases into your country/territory

Livestock development situation in the period 2019 – 2023

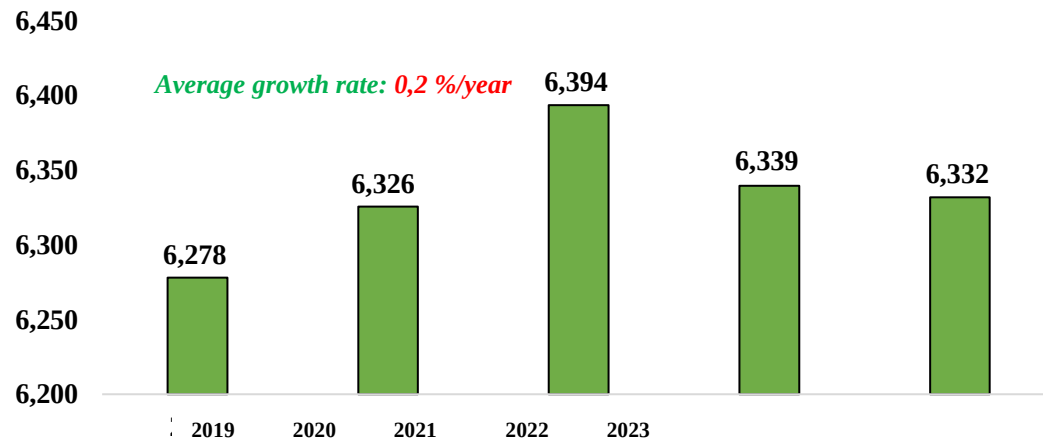
Pig (thousands)



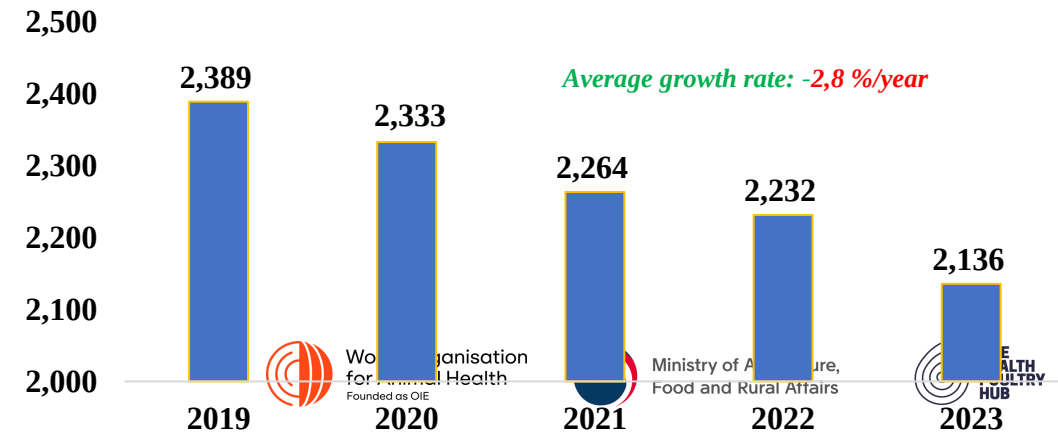
Poultry (millions)

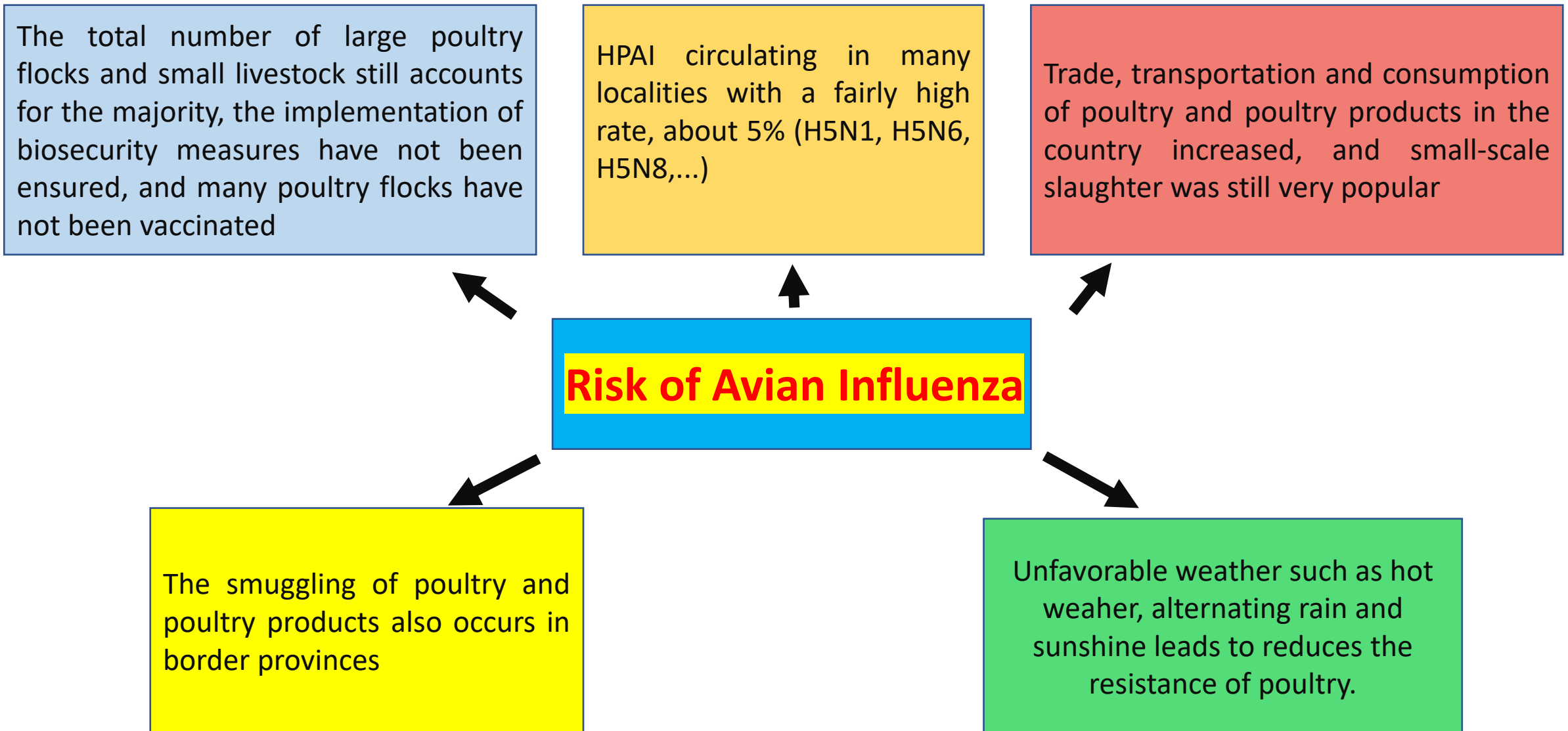


Cattle (thousands)



Buffalo (thousands)





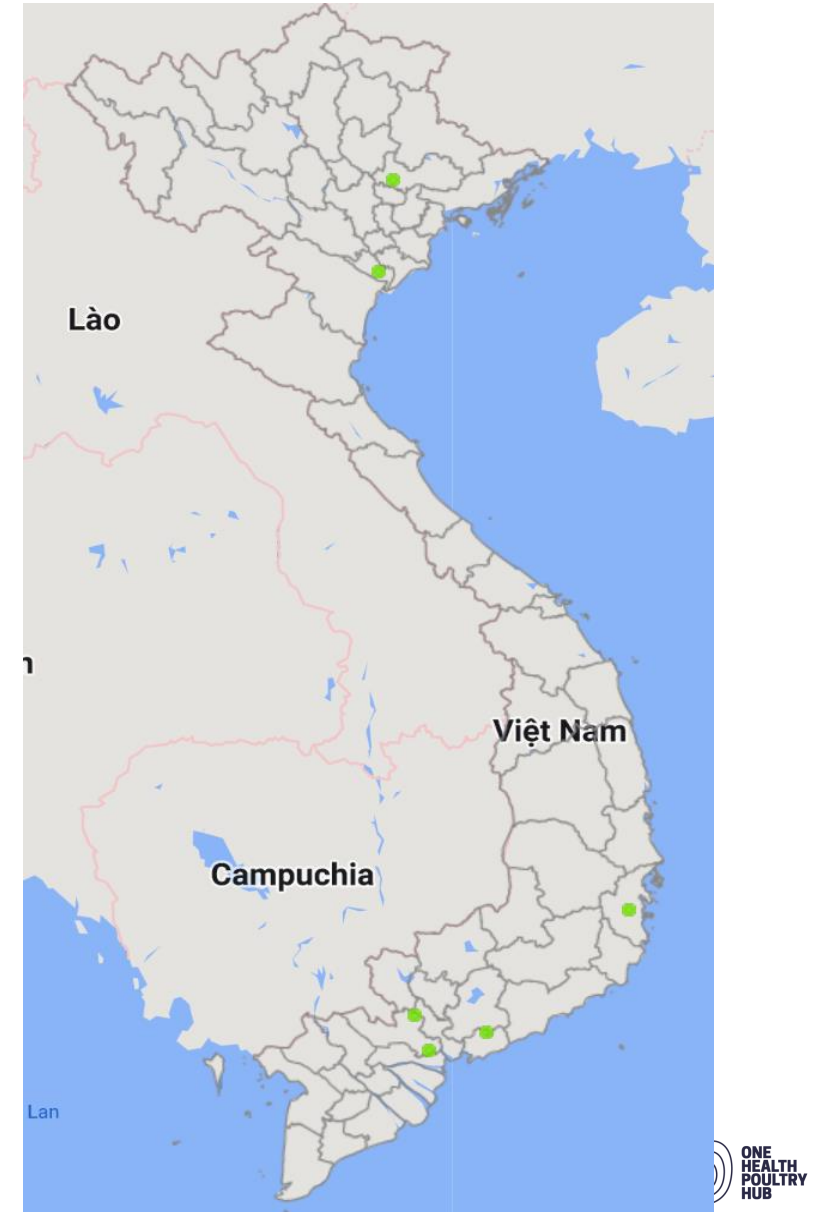
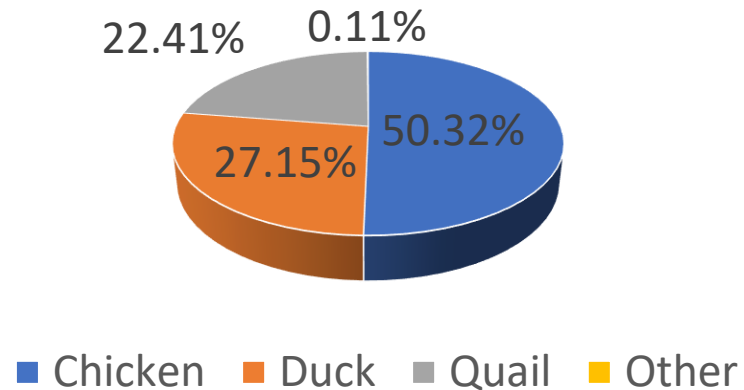
2. Avian disease situations

- A brief description of the avian disease situations in poultry, non-poultry, including wild birds and mammals
- For Avian-influenza positive cases, please provide details such as:
 - Host species
 - Type of samples
 - Subtype
 - Sequence information
 - Antigenicity

Avian influenza situation

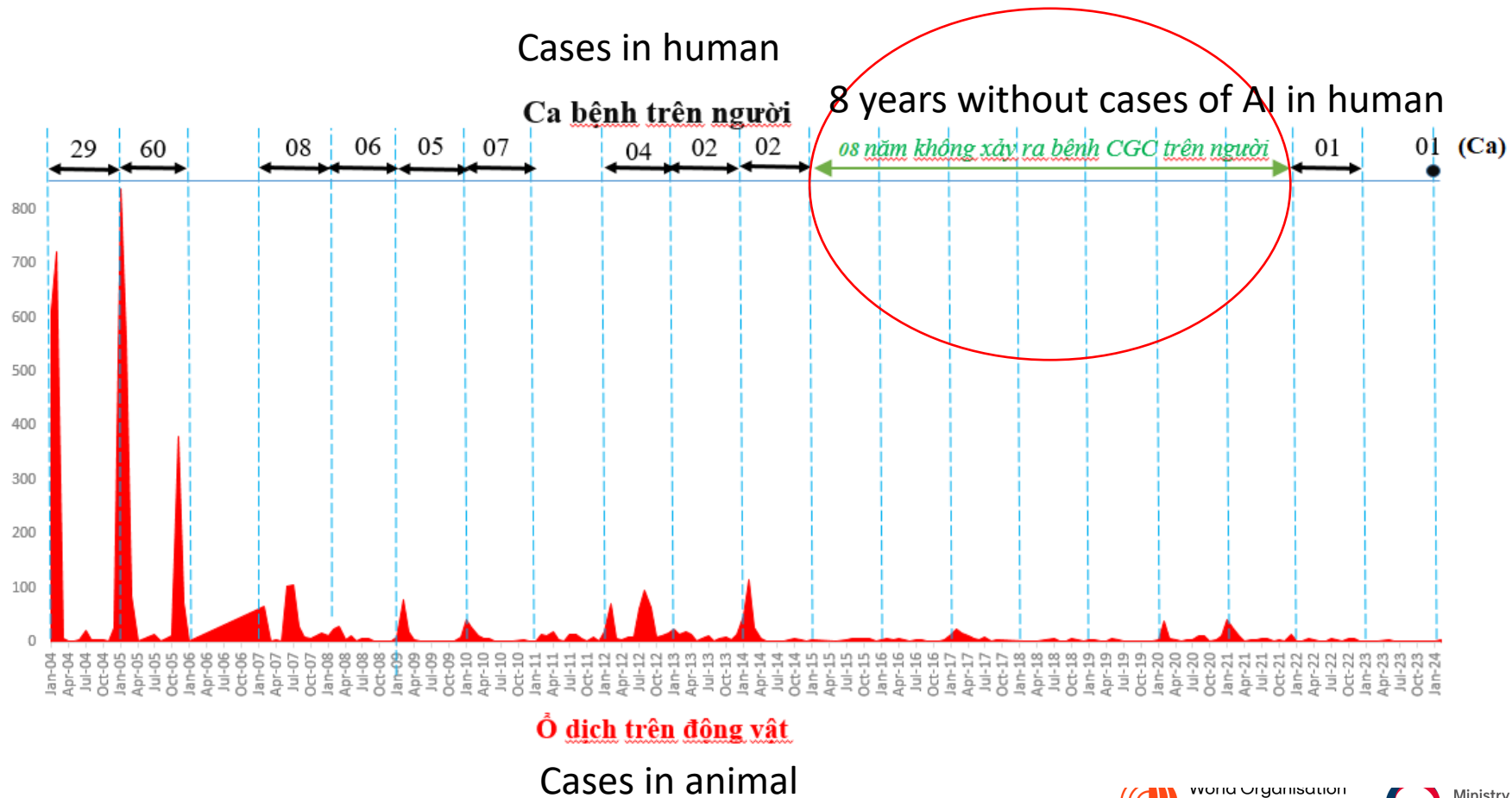
- In 2023: 21 outbreaks of HPAI A/H5N1 occurred in 11 provinces, forcing the destruction of more than 40 thousand poultry.
- In the first 3 months of 2024: 6 outbreaks of HPAI A/H5N1 in 6 provinces, forcing the destruction of nearly 9 thousand poultry, an increase of 25% over the same period in 2023.
- Currently, the country has not had an outbreak of Avian Influenza A/H5N1 for less than 21 days.

Infected poultry by species



Avian influenza situation

Chart of the epidemic situation of AI in humans and poultry from 2003 to 2024



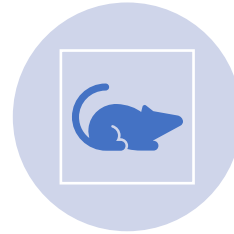
3. Response measures to avian disease outbreak

- Provide details on the following points if relevant.
 - Tracing in-contact animals
 - Eliminating of source of pathogenic agent e.g., killing or slaughter of infected/suspected cases
 - Prevention of spread of disease e.g.:
 - Movement restrictions
 - Biosecurity
 - Vaccination, treatment, etc.
 - Communication and public awareness
 - Costs of response measures
 - Compensation for animal owners for losses incurred by the measures
 - Costs are responsible by whom?

Legal basics for poultry disease control & prevention



Veterinary Law was approved by the National Assembly in 2015



Circular No. 07 dated 31 May 2016 of MARD regulating terrestrial animal disease control & prevention



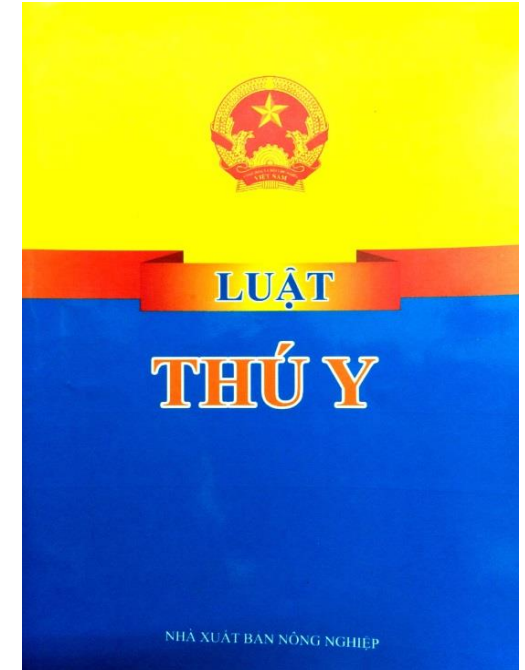
Circular No. 24 dated 30 Dec. 2022 of MARD regulating free disease certification for farms and zones



Decisions 414/QD-TTg and 889/QD-TTg for strengthening animal health capacity of animal health agencies at all levels for the period of 2021 – 2030



Joint circular 16/2013/TTLT-BYT-BNN&PTNT (instruction of zoonotic diseases control and prevention)



Veterinary Law

Activities have been done routinely for AI outbreaks

- Within 24h of receiving any suspected case of HPAI, veterinary officers at Sub-DAH and DVS will conduct outbreak investigation.
- Post-mortem and sampling are taken
- If positive results provided, outbreak declaration will be made by People committee
- Immediate measures will be taken to control the outbreak:
 - Cull infected flocks
 - Cleaning and disinfecting infected households and areas
 - Movement control
 - Ring vaccination
 - Declare and report outbreaks (National on VAHIS, WOAHA, FAO)

RESPONSE TO HUMAN INFLUENZA CASES IN KHANH HOA

- On the morning of March 21, 2024, when it was known that the person was infected with the AI H5, DAH carried out:

1

Express document No. 668/TY-DT dated March 21, 2024 to Khanh Hoa Sub-DAH to direct the investigation and implementation of measures to prevent and control avian influenza.

2

Establishment of the Working Group: Investigating outbreaks and implementing measures to prevent and control diseases in poultry in Khanh Hoa

3

Conducting investigation and sampling:

- Poultry raised at the patient's home;
- Households bordering the patient's house;
- Shop selling ornamental birds in the area.

4

Survey Results:

- **Avian Influenza A/H5 virus was not detected on all 05 samples taken.**
- The patient's poultry raised at home is still healthy, eating normally, with no abnormal signs;
- In the surrounding area, the poultry flock is still healthy and has negative results for Avian Influenza A/H5.

5

Vaccination for poultry: Khanh Hoa Sub-DAH has issued 13,200 doses of avian influenza vaccine.

4. Response measures to avian influenza outbreak - surveillance

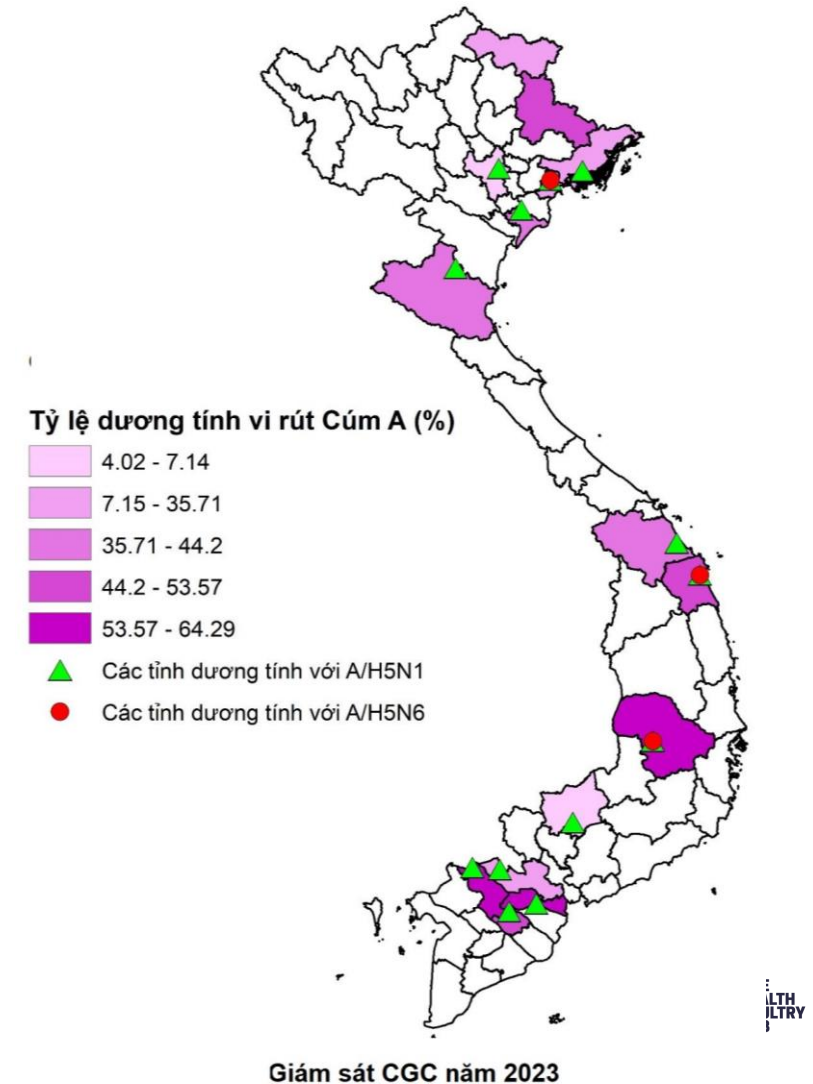
- Focusing on plan for disease surveillance post-outbreak, include details for the following points:
 - Period/duration
 - Type of surveillance (active or passive)
 - Target species
 - Number of collected samples
 - Viruses detected

Active surveillance of avian influenza virus

- In 2023: 3,171 pooled samples (oropharyngeal and environmental samples) were taken at 70 markets/collection points in 15 localities. Test results:
 - 1,300 samples were positive for influenza A virus (accounting for 41%);
 - 127 samples were positive for H5N1 virus (accounting for 4.01%);
 - 6 samples were positive for H5N6 virus (accounting for 0.19%).
- First 3 months of 2024, 63 pooled samples were taken at 70 markets/collection points in 12 localities. Test results: 25 samples are positive for Influenza A virus (39.68%).
- **Avian influenza A/H7N9 virus has not been detected**



Map of the distribution of avian influenza at the live bird markets in 2023



Active surveillance of avian influenza virus

Results of sending samples to the US.CDC and genome sequencing of avian influenza virus

Sample Submission Activity

In 2023, the Department of Animal Health sent to the US.CDC in Atlanta a total of 3,158 samples positive for the Avian Influenza virus (including outbreak and surveillance samples at live bird markets in 2022-2023) for in-depth analysis.

H5N1

H5N1 viruses of clades 2.3.2.1c and 2.3.4.4b;

- H5N1 virus clade 2.3.2.1c detected in some central and southern provinces
- *H5N1 clade 2.3.4.4b consists of 3 subclades:*
 - ✓ Subclade 2.3.4.4b1 appeared from the end of 2021 and then circulated popularly;
 - ✓ Subclade 2.3.4.4b2 detected in Nam Dinh and Thai Binh provinces
 - ✓ Subclade 2.3.4.4b3 detected in the provinces of Cao Bang, Ninh Binh and Nghe An

H5N6

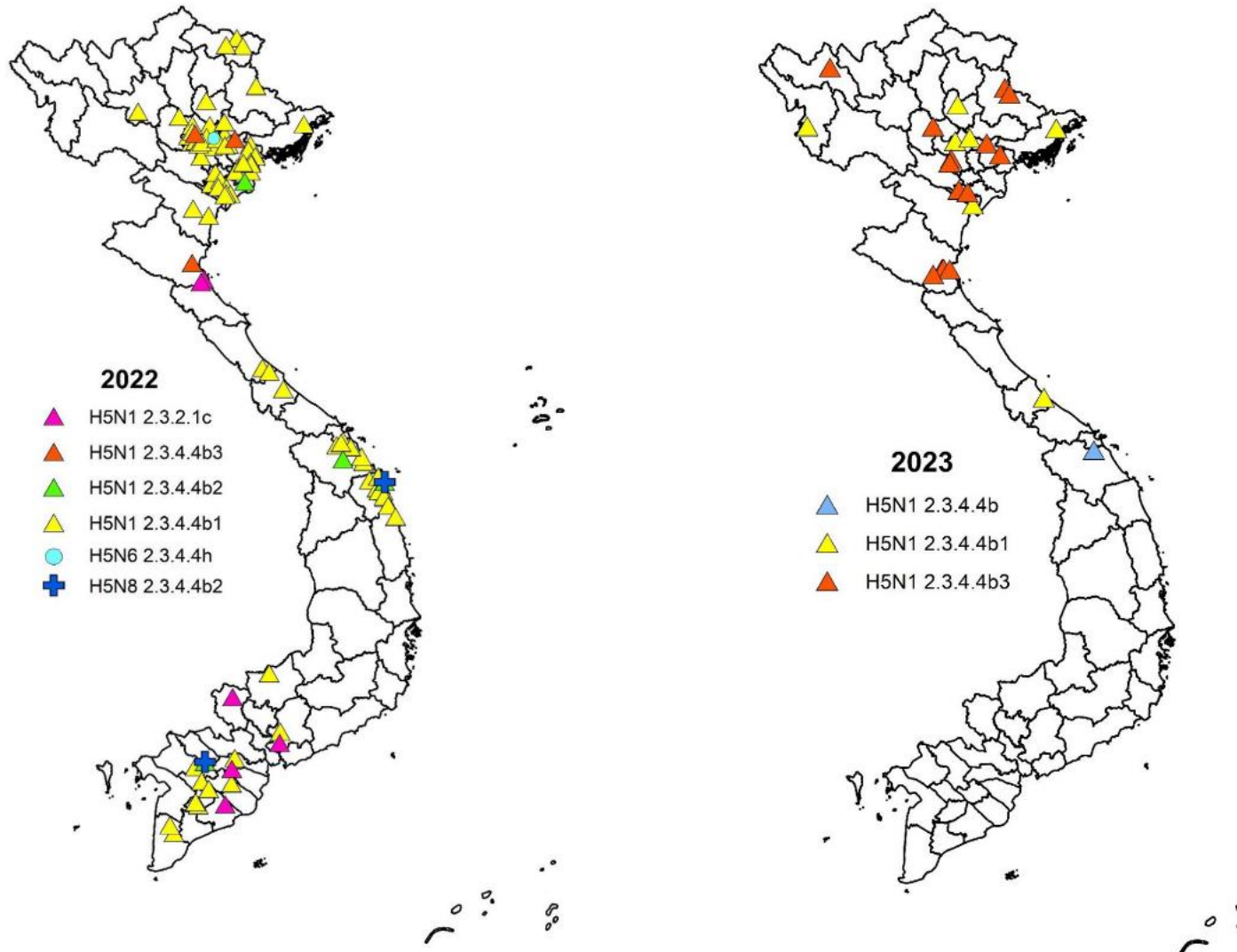
H5N6 virus of clade 2.3.4.4h

H5N8

The H5N8 virus of subclade 2.3.4.4b2 caused outbreaks in Quang Ngai and Dong Thap in April-May 2022, then it was no longer detected

Avian influenza virus surveillance results

Distribution map of avian influenza virus clades during the period 2022 - 2023



Active Surveillance for Influenza A Virus in Pig

Objective

Monitor the circulation of influenza A virus in pigs at slaughterhouses or slaughterhouses of high-risk localities.

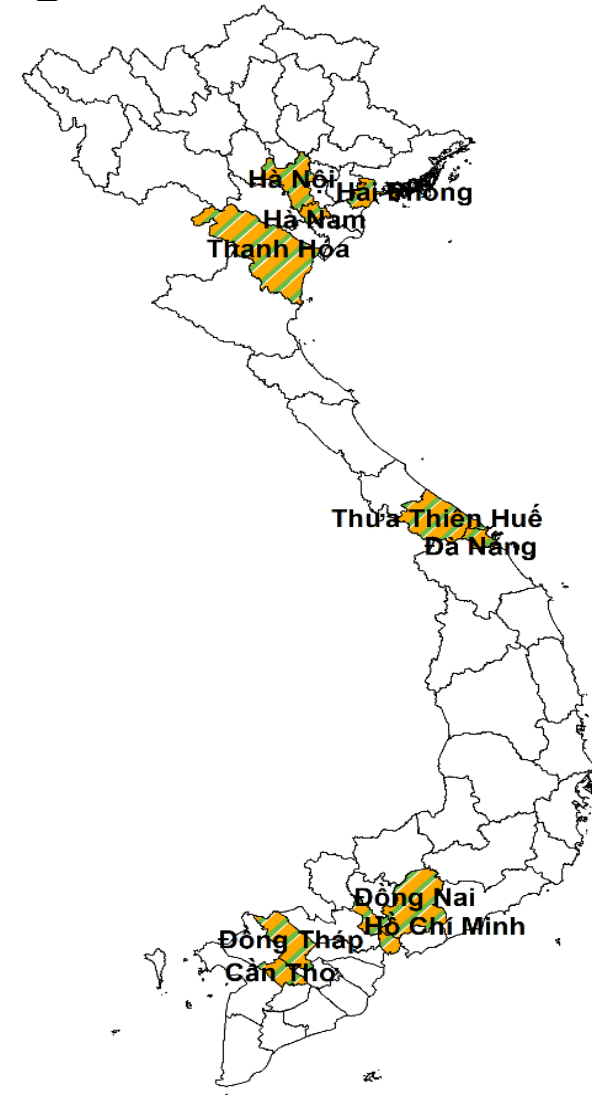
Sampling location

Slaughterhouses of 10 provinces

Criteria for slaughterhouses to be selected for sampling:



- Pigs have signs and symptoms of respiratory diseases and humans (if any).
- High pig density.
- The scale of slaughterhouses is large.



Swine influenza virus surveillance results

- In 2023: Of 930 nasal swab samples, 6 were positive for the Influenza A virus (accounting for 0.65%) in 3 provinces. H1, H3, H5 influenza viruses undetected.
- In the first 3 months of 2024: 30 samples were taken and tested in Hai Phong province and the test result was negative for influenza A virus.



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5. National prevention and control for avian diseases (1)

Measures	Y/N	Description
1. Programme to control or eradicate disease	Y	National Plan for AI control & prevention during 2019 – 2025, Decision No. 172/QD-TTg dated 13 Feb, 2019 of the Prime Minister
2. Veterinary legislation	Y	Veterinary Law was approved by the National Assembly in 2015
3. Emergency preparedness and response plans	Y	Circular No. 07 dated 31 May 2016 of MARD regulating terrestrial animal disease control & prevention
4. Disease surveillance	Y	Circular No. 07 dated 31 May 2016 of MARD regulating terrestrial animal disease control & prevention
5. Disease reporting	Y	Circular No. 07 dated 31 May 2016 of MARD regulating terrestrial animal disease control & prevention
6. Detection and management of cases	Y	Circular No. 07 dated 31 May 2016 of MARD regulating terrestrial animal disease control & prevention

5. National prevention and control for avian diseases (1)

Measures	Y/N	Description
7. Measures to prevent introduction or spread of disease	Y	Circular No. 18/VBHN-BNNPTNT dated 20 May 2024 of MARD providing for the quarantine of terrestrial animals and animal products
8. Vaccination	Y	Circular No. 07 dated 31 May 2016 of MARD regulating terrestrial animal disease control & prevention
9. Measures to protect public health	Y	Joint circular 16/2013/TTLT-BYT-BNN&PTNT (instruction of zoonotic diseases control and prevention)
10. Communication and collaboration among all competent authorities	Y	Joint circular 16/2013/TTLT-BYT-BNN&PTNT (instruction of zoonotic diseases control and prevention)
11. Awareness programme for relevant stakeholders	Y	National Plan for AI control & prevention during 2019 – 2025, Decision No. 172/QD-TTg dated 13 Feb, 2019 of the Prime Minister

National plans and programs

- 1. National Plan** for HPAI control & prevention during 2019 – 2025 Decision No. 172/QĐ-TTg dated 13 Feb. 2019 of the Prime Minister
- 2. The plan** for strengthening animal health capacity of animal health agencies at all levels for the period of 2021 – 2030 (*Decision No. 414/QĐ-TTg, issued on 22/3/2021 by the Government of Viet Nam*)
- 3. National plan** on Conducting focused missions to improve management capacity, control animal diseases and ensure food safety for animal products from 2023-2030 (*Decision No. 889/QĐ-TTg issued on 25/7/2023*).

National plans and programs

Specific objectives:

- i. Implement effective disease control measures, proactively monitor for early detection, promptly manage outbreaks, and prevent the epidemic from spreading to a wide area
- ii. Prevent dangerous new strains of the virus from entering and spreading widely in Vietnam.
- iii. Organize vaccination at least 80% of the total herd eligible for injection.
- iv. To successfully establish AI free poultry production zones in compliance with relevant regulations of Vietnam and standards of WOAHA, in order to meet domestic consumption and export of poultry and poultry products.
- v. Contributing to the reduction or absence of AI cases in humans due to infection with dangerous influenza virus strains (H5 and H7).

6. Laboratory capacity

- A brief description of laboratory capacity for avian diseases
 - Disease covered
 - Type of diagnostic test

Manual and method using at RAHO6

TT	Accredited	Number of Standard Operating Procedures-SOP)
1	ISO/IEC 17025:2017	262



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Standard Setting

- > Overview
- > Terrestrial Code
- > **Terrestrial Manual**
- > Access online

Any chapters adopted between printed editions are added to the web version, thus the on-line English version is always the most recent
Manual of Diagnostic Tests and Vaccines for Terrestrial Animals 2018

AAHL



- > Terrestrial Code
- > Terrestrial Manual
- > Aquatic Code
- > **Aquatic Manual**
- > Access online

Manual of Diagnostic Tests for Aquatic Animals (2018)
Contents



List of Animal infectious disease

No	Purpose testing	Methods
1	Antibodies detect	- Rapid test; M.A.T, ELISA; Inhibition of hemagglutination - Serum neutralisation test, - Immunoperoxidase monolayer assay
2	Antigen detect	- ELISA, PCR , Realtime PCR,
3	Isolation virus	- Chicken embryo egg, Cell lines
4	Bacteria	- Isolation & Identify by traditional method - Automatic identification system (VITEK 2) . - PCR, Realtime PCR
5	Sequencing	Sanger sequencing 3500XL
6	Parasite	- Microscopy - PCR, Realtime PCR
7	Histopathology	- Traditional methods (H&E) - IHC (Immuno-Histo-Chemistry, IF)



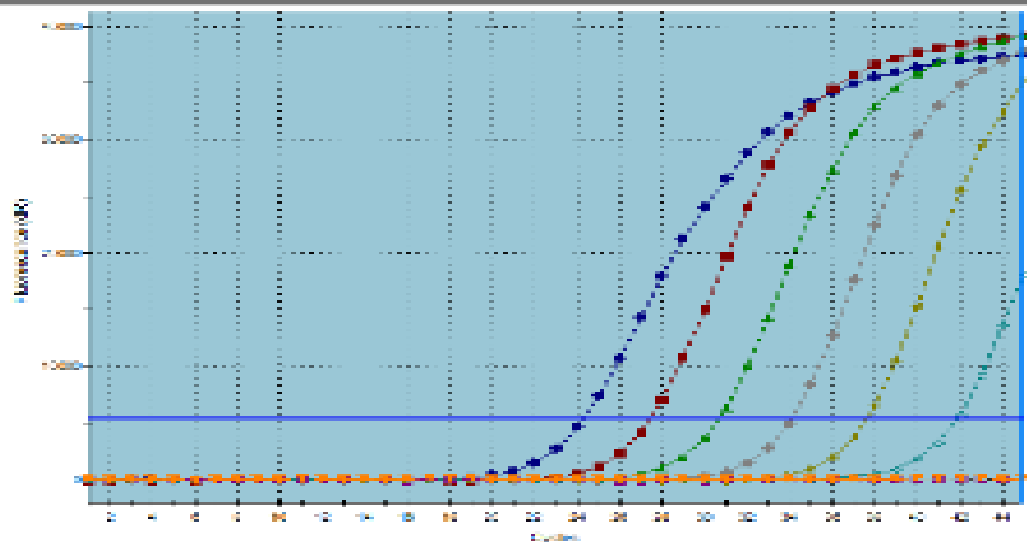
Realtime PCR system



ROBOT Real-Time PCR robot automation



Amplification Plots



7. Challenges and solutions in implementing national plan

Challenges	Solutions
A brief description of challenges in implementation of national action plan	A brief description of how your country overcome the challenges
The total number of backyard farms still accounts for the majority, the implementation of biosecurity measures have not been ensured, and AI can be transmitted through wild birds carrying the AI virus	Biosecurity implementation to limit contact with wild animals and vaccination
To successfully establish AI free zones in compliance with relevant regulations of WOAHA standards	On-going

Thank you

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