

Member's Update on One Health Activities (zoonotic diseases, AMR and wildlife health) and Veterinary Workforce/PVS Pathway

Chinese Taipei

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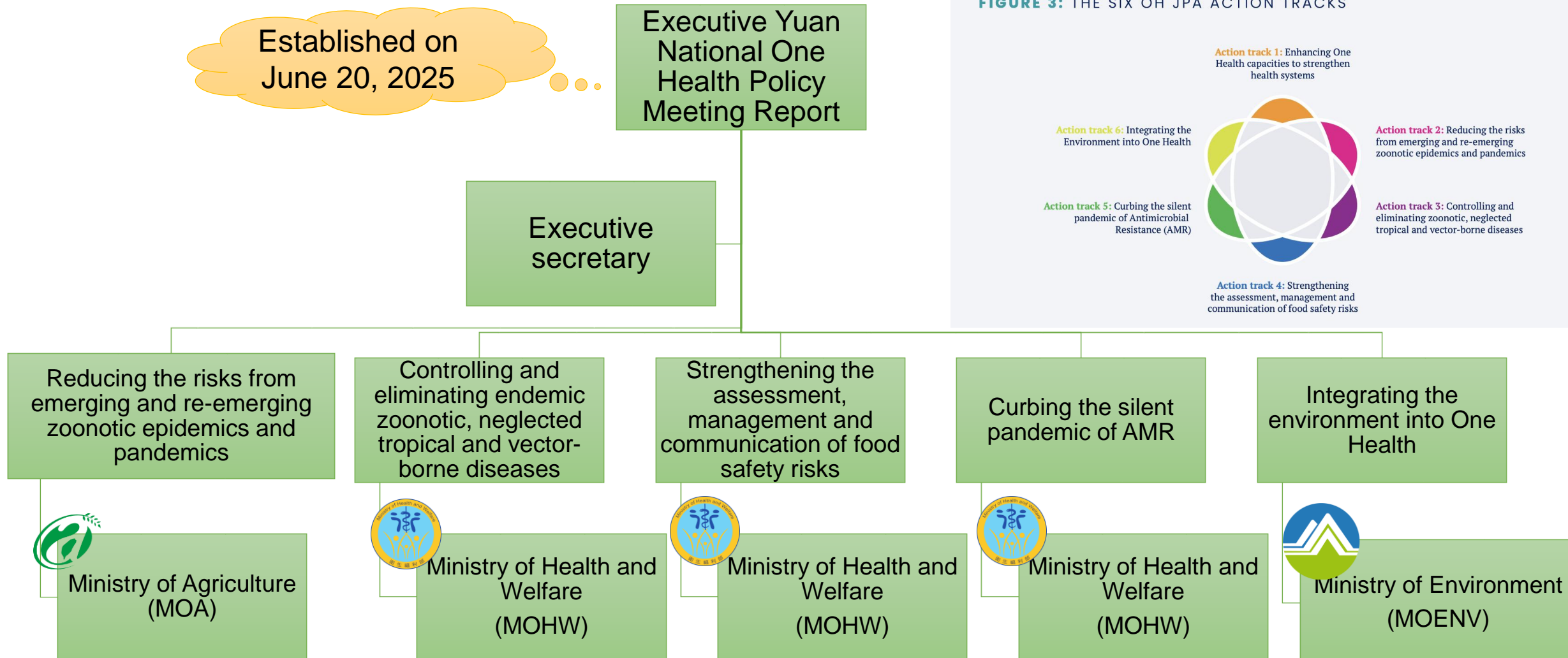
Specialist, Animal Health Inspection Division

Animal and Plant Health Inspection Agency (APHIA),
Ministry of Agriculture (MOA)

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Tokyo, Japan

One Health Governance and Coordination Mechanisms



Key Activities

Outline Projects of the National One Health Joint Action Plan (2026-2030)

- 1 Establishing a sustainable governance and resource investment mechanism
- 2 Optimizing the legal framework and division of responsibilities among ministries and commissions
- 3 Establishing cross-domain capabilities and a professional epidemic prevention system
- 4 Expanding social participation and partner collaboration mechanisms
- 5 Promoting targeted education and behavior change initiatives
- 6 Constructing an integrated monitoring and decision-making information system
- 7 Strengthening scientific and technological innovation and international cooperation

Key Stakeholders

Government Agencies:

- Executive Yuan, Ministry of Health and Welfare (MOHW), Ministry of Agriculture (MOA), Ministry of Environment (MOENV), Ministry of the Interior (MOI), National Development Council (NDC)

International Organizations:

- World Health Organization (WHO), World Organization for Animal Health (WOAH), Food and Agriculture Organization (FAO), United Nations Environment Programme (UNEP)

Academic Institutions and Research Organizations:

- Universities and research centers focusing on epidemiology, veterinary sciences, and environmental health contribute to policy development, research, and innovation in the One Health approach.

Non-Governmental Organizations (NGOs):

- Animal Welfare Groups, Médecins Sans Frontières (MSF), World Vision, International Red Cross, Environmental NGOs...

Zoonotic diseases

- **Highly pathogenic avian influenza (HPAI)**

- ✓ Established interagency risk assessment mechanism with Taiwan CDC (Centers for Disease Control) and the Veterinary Research Institute.
- ✓ Enhanced animal and human surveillance with viral sequencing.
- ✓ HPAI in Chinese Taipei remains confined to poultry, with **NO infections detected in dairy cattle and wild mammals** (e.g. Formosan Ferret-Badger, squirrels, bats).



- **Rabies:**

- ✓ Rabies cases in Chinese Taipei are limited to **wildlife**, primarily Formosan ferret-badgers.
- ✓ **Prevention and control measures** focus on wildlife surveillance, reducing contact between pets and wildlife, and vaccination plan for pets.

- **Lyssavirus:**

- ✓ Taiwan Bat Lyssavirus identified in *Pipistrellus abramus* (a type of bat), officially recognized by the International Committee on Taxonomy of Viruses (ICTV).
- ✓ Taiwan Bat Lyssavirus 2 detected in *Nyctalus plancyi velutinus* (a type of bat).
- ✓ **Control measures:** Enhanced bat sampling and surveillance; public advised to avoid contact with bats.

Zoonotic diseases

- **Bovine Tuberculosis:**

- ✓ Caused by *Mycobacterium bovis*, primarily affecting cattle.
- ✓ Can be transmitted to humans, mainly through unpasteurized dairy products or direct contact.
- ✓ Causes chronic disease in animals and humans.
- ✓ **Control measures** include test-and-slaughter and movement restrictions.

- **Brucellosis:**

- ✓ Caused by *Brucella* spp. mainly affecting cattle, sheep, goats, and pigs.
- ✓ Can be transmitted to humans through raw milk, unpasteurized dairy products, or direct contact with infected animals.
- ✓ Causes reproductive losses in animals and serious illness in humans.
- ✓ **Control measures** include testing, culling, and movement restrictions.

- **Coronavirus:**

- ✓ Long-term monitoring has detected coronaviruses in multiple bat species.
- ✓ None of the detected coronaviruses are known to infect humans.
- ✓ **Control measures:** Enhanced bat sampling and surveillance; public advised to avoid contact with bats.

Antimicrobial Use (AMU) and Antimicrobial Resistance (AMR)

National Action Plan on AMR

- 2021-2025, Ministry of Agriculture (MOA) and the Ministry of Health and Welfare (MOHW)
- Next action plan: MOA, MOHW and Ministry of Environment (MOENV).

Activities



To improve awareness and understanding of AMR

- AMR portal for knowledge sharing
- Event for World Antibiotic Awareness Week.
- Awareness Campaign on AMR for Veterinary Department in University.



Antibiotic Resistance Surveillance and Management in Plant-Based Agricultural Applications

- Engaging plant doctors to promote integrated management and delay antibiotic resistance.
- Monitoring antibiotic resistance in plant pathogenic bacteria.



APHIA AMR webpage

APHIA: Animal and Plant Health Inspection Agency



World AMR Awareness Week



AMR Awareness Campaign for Veterinary Students

Antimicrobial Use (AMU) and Antimicrobial Resistance (AMR)

Activities

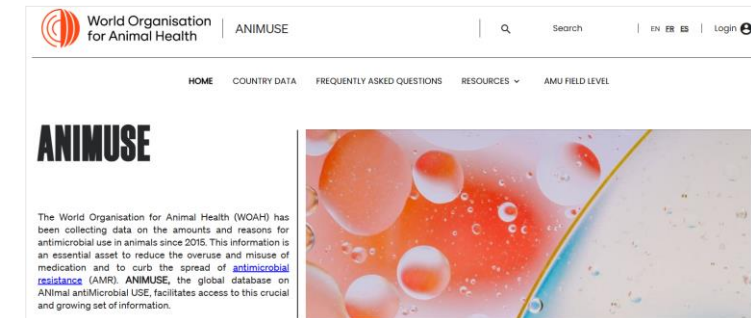


- **AMR Surveillance**
 - Detect resistance genes by analyzing bacterial genomes
 - Enhance data reliability by adopting standardized AMR detection methods
 - Publish livestock and poultry AMR monitoring information on the APHIA Annual Report and guide us to adjust policies, as a communication tool with stakeholders
- **AMU Surveillance**
 - Use WOAHA excel file tool to collect antibiotic sales data from Marketing authorization holders
 - Upload the antibiotic sales data to ANIMUSE



1	Do not change	Optional	Optional	Mandatory	Mandatory	Optional	Optional
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3	WOAH ID Nº Ref.	Data Source Used	ID Product Promotion	Product name	Please indicate the purpose of the product, according to its label declaration. (Medical use includes prevention of clinical signs)	Route of administration, according to its label declaration	Please indicate the Animals covered by the product
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5	1	Source	ASR-2019	Example 1	Use: Medical use	Injection	
6	2	Manufacturer/Pharm	ASR-2017	Example 2	Growth promotion	Oral	
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WOAH Calculation Module excel file tool



Antimicrobial Use (AMU) and Antimicrobial Resistance (AMR)

Activities





- To optimize the use of antimicrobial medicines in animal health
 - gradually phase out a total of 43 medicated feed additives, including antibiotic growth promoters (AGPs), **none of critically important antimicrobials** is used for growth promotion anymore.
 - Distribute “Fighting AMR guidelines by WOAAH (Chinese version)” to stakeholders, and publish on APHIA AMR webpage








APHIA AMR webpage






Legislation and national authorities relating to wildlife

Legislation	National Authority	Role/Responsibility
Wildlife Conservation Law	Forestry and Nature Conservation Agency, Ministry of Agriculture (MOA) 	Responsible for wildlife protection , species conservation, and management of protected areas.
National Park Law	National Park Service, Ministry of the Interior(MOI) 	To protect the country's unique natural scenery, wildlife habitats and historical sites, and to provide recreation and research for the people.
Forest Law	Forestry and Nature Conservation Agency, MOA 	Manages forest conservation areas, ensuring that wildlife habitats are protected.
Soil and Water Conservation Law	Agency of Rural Development & Soil and Water Conservation, MOA 	The protection of hillsides and water sources will also help protect related wildlife habitats .

Outline activities performed by Veterinary Services relating to wildlife and collaborate with human sectors



Competent authority	Role	Activities
Animal and Plant Health Inspection Agency (APHIA), Ministry of Agriculture (MOA) 	Central competent health	Cross-sectoral collaboration to advance wildlife disease surveillance programs; enhancement of animal rabies vaccination; and rabies health education and awareness campaigns.
Biodiversity Research Institutes(BRI), Ministry of Agriculture (MOA) 	Research on wildlife and ecological diversity, and wildlife rescue.	Conducting wildlife rescue and sampling, coordinating with non-governmental organizations, and collecting wildlife specimens.
Veterinary Research Institute), Ministry of Agriculture (MOA) 	National Diagnostic and Research Center	Conducting rabies case diagnostics and viral genetic research.
Centers for Disease Control (CDC), Ministry of Health and Welfare 	Central competent authority for human health	Collaborating with the APHIA to maintain the rabies reporting platform; providing post-exposure prophylaxis (PEP) guidelines and follow-up for human exposures.
Municipal and County/City Governments 	Local Animal Disease Inspection Authorities	Promoting animal rabies vaccination and public health education campaigns; collecting and submitting wildlife specimens for laboratory testing.

Key Diseases Surveillance in Wildlife (2024.1.1 ~ 2024.12.31)

Diseases Surveillance	Animal categories	Number of samples tested	Test results
African swine fever (ASF) Classical swine fever (CSF) Foot and mouth disease (FMD)	 wild boars	183	All negative
Avian Influenza (AI)	 wild birds	7,368	13 samples HPAI (H5N1)
Rabies	 wildlife	827	Positivie results: 45 Ferret-badgers (Melogale moschata). 1 Gem-faced Civet (Paguma larvata).



Key Diseases Surveillance in Wildlife (2024.1.1 ~ 2024.12.31)

Diseases Surveillance	Animal categories	Number of samples tested	Test results
Lyssavirus	 Bats	63	1 Positive Taiwan bat lyssavirus 2 identified in a <i>Nyctalus plancyi velutinus</i> (a type of bat).
Coronavirus	 Bats	166	44 Positive The identified Bat CoV belongs to Alpha-CoV or Beta-CoV, and are not related to SARS-CoV-2 .

Veterinary workforce

Distribution of Veterinary Workforce by Work Area



There are approximately 5,939 licensed veterinarians and about 2,049 veterinary clinics.



There are five veterinary schools, with approximately 250 to 300 graduates each year.

- National Taiwan University
- National Chung Hsing University
- National Chiayi University
- National Pingtung University of Science and Technology
- Asia University

Veterinary workforce (Cont.)

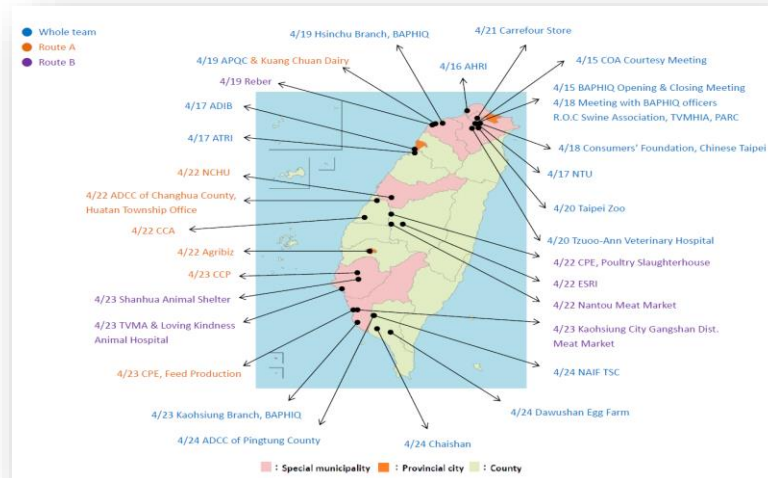
- **Veterinary statutory body for vets and VPPs**
 - Central competent authority: Animal and Plant Health Inspection Agency under the Ministry of Agriculture.
 - Local competent authority: Local Animal Disease Inspection Authorities (LADIAs)
- **Re-licensing or continuing professional development requirements**
 - Since December 16th, 2016, licensed veterinarians have been required to complete 120 continuing education credits every 6 years in order to renew their licenses.
- **Various channels and institutions that provide continuing education for veterinarians.**
 - Universities and colleges
 - Veterinary medical societies
 - Professional associations
 - Guilds
 - Foundations
 - Veterinary teaching hospitals
 - Government agencies
 - other organizations recognized by the central competent authority

Veterinary workforce (Cont.)

- **Major challenges related to veterinary workforce**
 - The number of veterinarians engaged in companion animal care has increased significantly.
 - A shortage of veterinarians in other areas such as livestock and public service.
 - Animal health and animal welfare.
- **Actions to address the challenges**
 - **In order to**
 - attract talented veterinarians to public service and retain current personnel,
 - ensure the long-term stability and sustainable development of the animal disease prevention and control system
 - **Non-Practice Bonus for Public Sector Veterinarians**
 - Started from June 1, 2025.
 - By improving salaries and benefits and stabilizing the workforce structure.
 - Aims to prevent the loss of frontline public sector veterinarians.

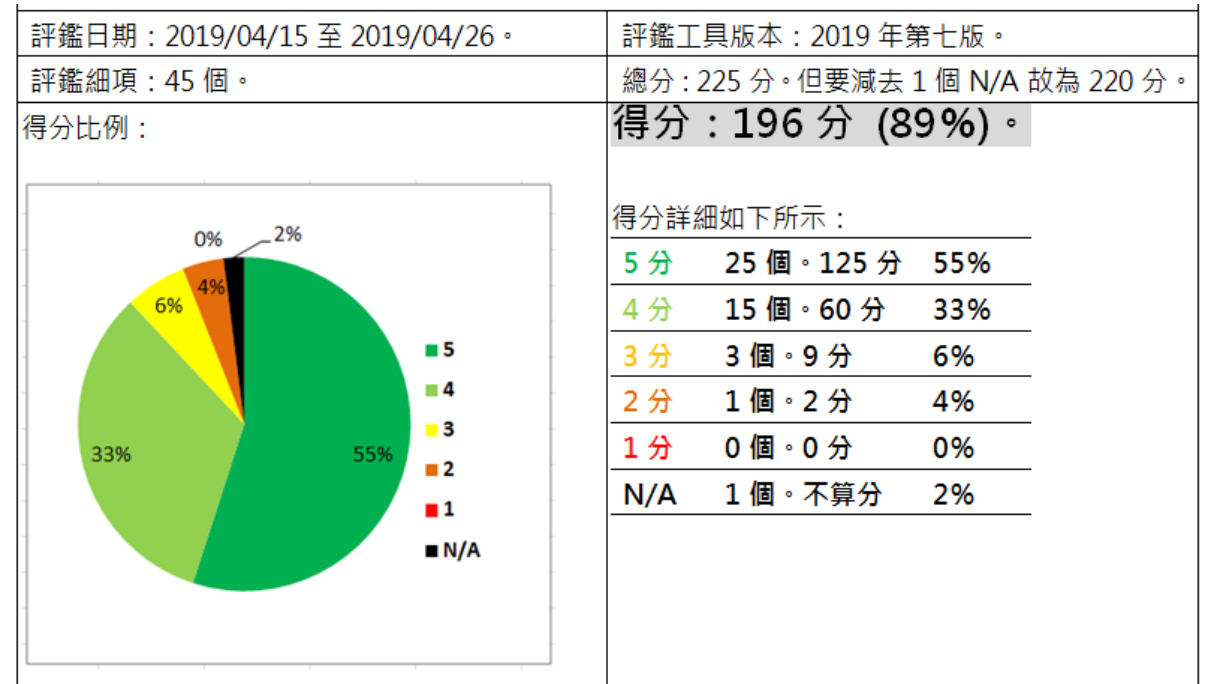
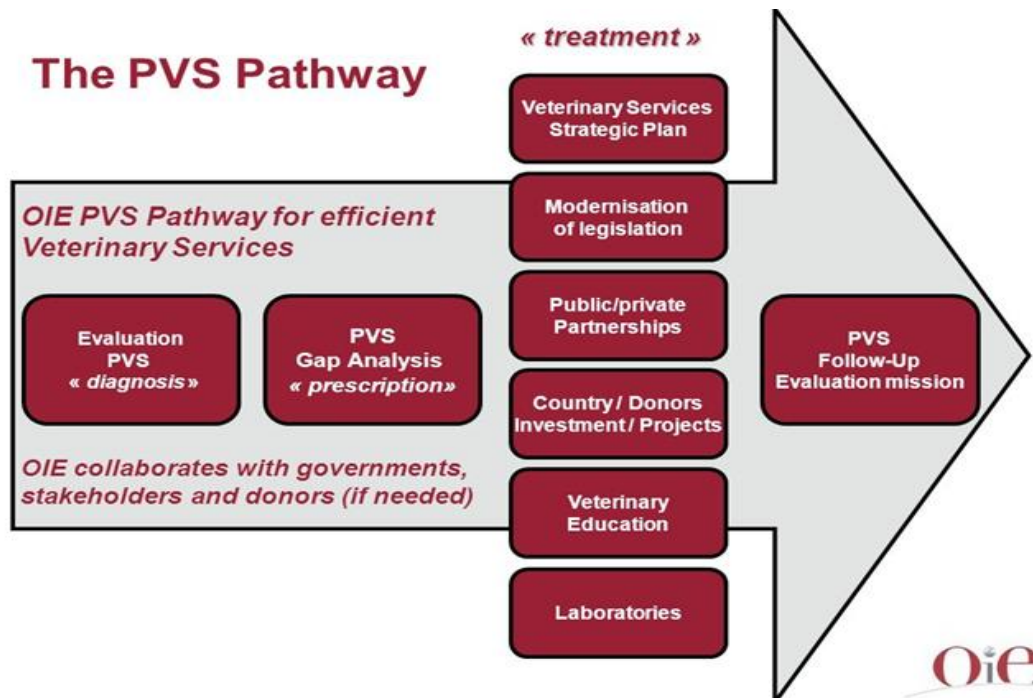
Chinese Taipei participated in PVS Pathway activities in 2019.

- On-site evaluation by WOAHP PVS Committee from April 15th to April 26th, 2019 (a total of 12 days).
- The final result report was published on the WOAHP official website on March 3rd, 2020.



Follow-up plan for PVS Pathway activities

- Continue to collect improvement plans provided by relevant agencies/units.
- Working group meetings are held continuously, inviting domestic and international experts to discuss and provide recommendations.
- In the future, may apply to WOAHP for a PVS Gap Analysis if necessary.



Thank you

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