Member's update on

One Health activities (Zoonotic diseases, AMR and wildlife health)

and

Veterinary Workforce/PVS Pathway

[China]

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China Animal Health and Epidemiology Center

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World Organisation for Animal Health

中华人民共和国农业农村部
Ministry of Agriculture and Rural Affairs of the People's Republic of China

Ministry of Agriculture, Food and Rural Affairs

One Health Governance and Coordination Mechanisms

- **National-level**
  - **The joint prevention and control mechanism of the State Council**
    - Coordination of cross-sectoral responses among health, agriculture and rural affairs, forestry and grassland authorities during sudden zoonotic disease outbreaks
  - **Ministry of Agriculture and Rural Affairs**
    - Prevent and control of livestock and poultry diseases and promotes the reduction of veterinary antibiotics
  - **National Health Commission**
    - Population-based disease prevention and control initiatives through interdepartmental surveillance data sharing with MARA
  - **National Forestry and Grassland Administration**
    - Wildlife Epidemic source and disease surveillance

One Health Governance and Coordination Mechanisms

- Legal and policy support
  - Laws of Biosecurity, Prevention and Control of Infectious Diseases, Animal Epidemic Prevention, Protection of Wildlife
  - National Plan for Prevention and Control of Zoonotic Diseases in Livestock (2022–2030)
  - Mitigate zoonotic disease risks to reduce pathogen transmission
  - Ensure livestock production safety, public health security, and national biosecurity

One Health Governance and Coordination Mechanisms

- Cooperation among key stakeholders in areas such as infectious disease surveillance and early warning, antimicrobial resistance control, food safety, wildlife protection, and disease prevention and control

  - National level: Ministry of Agriculture and Rural Affairs, National Health Commission, State Administration for Market Regulation
    - Three-Year Action Plan: Systematic Mitigation of Veterinary Drug Residue Non-Compliance
    - Governance on pesticide residues in agricultural products
    - Awareness campaign on prevention and control of avian influenza, brucellosis, schistosomiasis, etc.
  - Local level: Depertments of Agriculture and Rural Affairs, Health, Meteorology, Emergency management, Water resources
    - During flood seasons, animal disease prevention and control, biosafety protection

Zoonotic diseases

- Ministry of Agriculture and Rural Affairs, *National Plan for Prevention and Control of Zoonotic Diseases in Livestock (2022–2030)*

Classification of diseases	Diseases
Key diseases (8)	Highly Pathogenic Avian Influenza (HPAI), Brucellosis, Bovine Tuberculosis, Rabies, Anthrax, Echinococcosis, Schistosomiasis japonica, Glanders
Regular diseases (14)	Toxoplasmosis, Leptospirosis, Salmonellosis, Japanese Encephalitis (JE), Streptococcus suis Type 2 Infection, Trichinellosis, Cysticercosis, Listeriosis, Melioidosis, Fascioliasis, Psittacosis, Q Fever, Leishmaniasis, Clonorchiasis
Exotic diseases (2)	Bovine Spongiform Encephalopathy (BSE), Nipah Virus Encephalitis

Zoonotic diseases

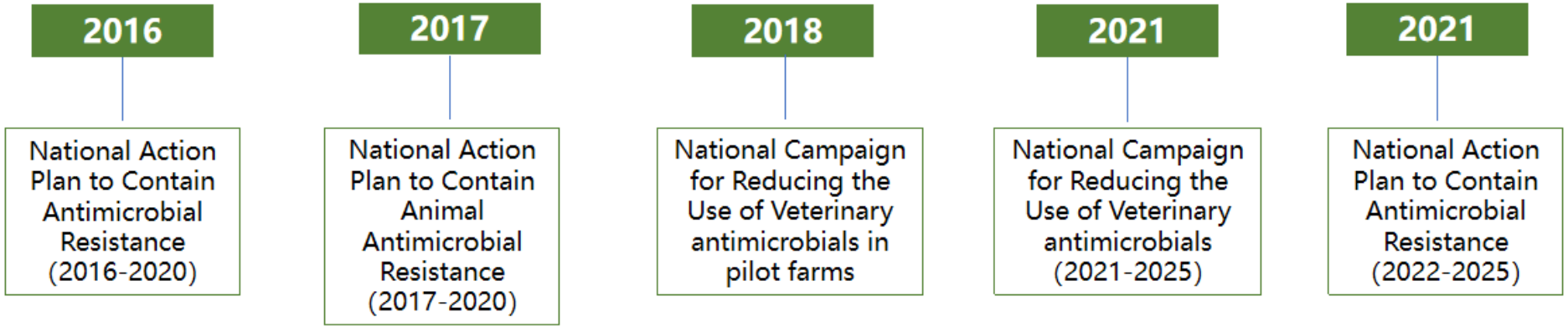
- National Plan for Prevention and Control of Zoonotic Diseases in Livestock (2022–2030)
  - Zoonotic diseases challenges in livestock: diverse, complex
    - Risk of Highly Pathogenic Avian Influenza (HPAI) outbreaks spreading through migratory bird migration
    - Risk of brucellosis, bovine tuberculosis, echinococcosis, anthrax in certain areas
  - Livestock and poultry farming sector: large production, limited industrial-scale integration, suboptimal biosecurity infrastructure
    - Small- and medium-sized farming households account for a high proportion, with uneven awareness and capacity for biosecurity protection
    - Frequent long-distance transportation of live livestock and poultry and market transactions pose sustained risks of disease occurrence and cross-regional spread
  - Multiple external risk factors intertwined
    - Cross-border movement of animals and animal products: risk of introducing zoonotic diseases
    - Cross-species transmission of wildlife-origin diseases infecting humans and livestock/poultry
    - Changes in climate, environment, and ecosystems, along with increased extreme weather events, further elevate the risks of zoonotic disease occurrence, transmission, and spread

Zoonotic diseases

- Prevention and response to major food safety issues
  - Special rectification campaigns
    - Strictly crack down on illegal practices such as the use of "clenbuterol" and other prohibited additives
  - Post-slaughter inspection and quarantine
    - Detection of trichinellosis and cysticercosis in slaughterhouses
- In response to climatic factors on zoonotic disease transmission
  - Vectors control
    - Rising temperatures and prolonged rainy seasons alter the distribution of ticks and mosquito vectors, increasing the transmission risks of arboviruses such as Japanese encephalitis and dengue fever
  - Disinfection
    - Post-flood conditions elevate the risks of leptospirosis and salmonellosis

Antimicrobial Use (AMU)and Antimicrobial Resistance (AMR)

- Both the National Action Plan to Contain Antimicrobial Resistance (2016–2020) and the National Action Plan to Contain Antimicrobial Resistance (2022–2025) address animal health concerns
- MARA annually formulates the National monitoring plan for antimicrobial resistance in animals
- Annual statistical analysis on the usage volume of veterinary antimicrobial agents from the previous year, and submits relevant data to the ANIMUSE database of WOAH
- MARA announcements: withdrawal policies for the use of relevant antimicrobial agents
- Currently, the study regarding the burden of AMR in animal health sector as well as an interdepartmental integrated monitoring system for antimicrobial resistance/antimicrobial use (AMR/AMU) are yet to be further conducted



Antimicrobial Use (AMU)and Antimicrobial Resistance (AMR)

- AMR awareness campaign for stakeholders
  - Livestock and Veterinary Lecture
  - Science and Technology to the Countryside
  - New Professional Farmers Training Courses

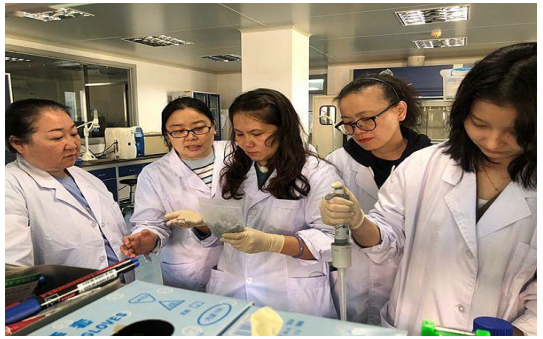
Virtual training, online audience of **4.5 million people**

Technical Expert Service Team

Annually to livestock farmers
60,000 copies of science publications
85,000 posters and informational leaflets

Antimicrobial Use (AMU)and Antimicrobial Resistance (AMR)

- Sample source: swine, chicken, diary cattle, duck, sheep
- Sample type: Feces, fresh milk, cecum, cloaca/anal swab
- Target sampling and random sampling
- Escherichia coli, Enterococcus, Salmonella, Campylobacter, Staphylococcus aureus, Hemophilus parasuis, Clostridium perfringens, and Corynebacterium pseudotuberculosis
- More than 10 categories and 50 types of antimicrobials



- **Key actions**
  - MARA: 46 county-level exemplary cases for the 2024 Veterinary Antimicrobial Use Reduction Campaign
    - Example (Qinghai): A government-led, enterprise-driven, technology-supported, and society-engaged governance model has yielded measurable outcomes in advancing antibiotic reduction initiatives
  - In 2024, FAO and Chongqing China co-hosted the International Symposium on Antimicrobial Reduction Pathways and Sustainable Development of Animal Husbandry
  - Shanghai applied for the "Animal-Origin Bacterial Resistance Monitoring Laboratory Construction Project"
    - Real-time monitoring of animal-origin bacterial resistance
    - Statistically analyze long-term bacterial resistance trends
    - Formulate first local standard on resistance
    - To date, over 6,000 bacterial strains have been isolated and identified, with more than 70,000 pieces of drug sensitivity data monitored and analyzed

Wildlife Health

- Laws and Regulations
  - Wildlife Protection Law of the People's Republic of China
  - Animal Epidemic Prevention Law of the People's Republic of China
  - Regulations on the Implementation of Terrestrial Wildlife Protection
  - Regulations on the Implementation of Aquatic Wildlife Protection
  - List of National Key Protected Wildlife
  - List of Zoonotic Infectious Diseases
  - Contingency Plan for Emerging Terrestrial Wildlife Epidemics
- Responsibilities
  - National Forestry and Grassland Administration (NFGA): Responsible for terrestrial wildlife resource surveys, habitat protection, hunting/breeding permits, and monitoring of epidemic sources and diseases, with a focus on nature reserve supervision and enforcement of non-market trade regulations
  - Ministry of Agriculture and Rural Affairs (MARA): Oversees aquatic wildlife protection, aquatic germplasm resource management, and fisheries law enforcement, with emphasis on approving special hunting permits for aquatic species and conducting quarantine inspections at breeding farms
  - State Administration for Market Regulation (SAMR): Supervises wildlife trade in marketplaces, collaborates with other departments on out-of-market enforcement, and focuses on inspecting market stalls and verifying business licenses
  - National Health Commission (NHC): Conducts surveillance of vector-borne infectious diseases and implements direct online reporting systems for patients with natural focal zoonotic diseases
  - Ministry of Ecology and Environment (MEE): Leads biodiversity conservation efforts

Wildlife Health

- Wildlife-related veterinary activities and collaboration mechanisms
  - Surveillance, Prevention and Control of Terrestrial Wildlife Epidemic Sources and Diseases
    - The "Terrestrial Wildlife Epidemic Source and Disease Surveillance, Prevention, and Control Information Management System" enables direct online reporting
    - Active surveillance is conducted on key wildlife diseases such as avian influenza in migratory birds, peste des petits ruminants (PPR) in blue sheep, and African swine fever (ASF) in wild boars
  - Scientific Research on Wildlife Zoonoses
    - Research on prevention and control of major diseases in rare and endangered wildlife
    - Studies on infection mechanisms and pathogenesis of important zoonotic viruses
  - Multi-departmental Collaboration (Ministry of Science and Technology, MARA, NHC, NFGA, etc.)
    - Information sharing and coordinated measures
    - Basic Research on Wildlife Diseases
    - Systematic monitoring of potential epidemic sources and transmission factors (e.g., wildlife, vector organisms) carrying unknown pathogens
    - Assessment of infection risks to humans and public health impacts

Wildlife Health

- Wildlife Disease Surveillance and Epidemic Reporting
  - List of Key Epidemic Diseases
    - The Bureau of Animal Husbandry and Veterinary Medicine of MARA and the Department of Wildlife Protection of the National Forestry and Grassland Administration jointly released the "Wildlife Quarantine Measures (Draft for Solicitation of Comments)" for public consultation
    - For species frequently in contact with humans and domestic animals (bats, rodents, migratory birds): Prevention and control of zoonotic disease risks

Attachment 4

List of Key Quarantine Diseases of Wild Animals

Quarantine Scope		Key Quarantine Diseases
Primates	Lorisidae, Cercopithecidae, Pongidae, Hylobatidae	**Tuberculosis**
Tupaiiformes	Tupaiidae	Canine Distemper
Carnivora	Canidae	**Rabies**, Canine Distemper, Canine Parvovirus Disease
	Ursidae	Canine Parvovirus Disease
	Ailuridae	Canine Distemper, Canine Parvovirus Disease
	Mustelidae	Canine Distemper, **Rabies**
	Viverridae	**Rabies**
	Felidae	**Rabies**, Feline Panleukopenia (Feline Parvovirus Disease), **Highly Pathogenic Avian Influenza**, Canine Distemper
Perissodactyla	Equidae	Equine Infectious Anemia, Glanders, Equine Influenza
Artiodactyla	Suidae	Foot-and-Mouth Disease, Classical Swine Fever, **African Swine Fever**, Highly Pathogenic Porcine Reproductive and Respiratory Syndrome, Swine Erysipelas, Swine Influenza
	Camelidae, Moschidae,Cervidae	Foot-and-Mouth Disease, **Brucellosis, Tuberculosis**
	Bovidae	Foot-and-Mouth Disease, **Brucellosis, Tuberculosis**, Anthrax, Peste des Petits Ruminants, Contagious Bovine Pleuropneumonia, Sheep Pox
Lagomorpha	Leporidae, Ochotonidae	Rabbit Hemorrhagic Disease (Rabbit Plague), Myxomatosis, Rabbit Coccidiosis
Aves		**Highly Pathogenic Avian Influenza**, Newcastle Disease

Wildlife Health

- Wildlife Disease Surveillance and Epidemic Reporting
  - Recent Epidemic Situations
    - In June 2024, HPAI outbreak occurred among wild birds in Xiangshan County, Ningbo City, Zhejiang Province. Monitoring and investigations found no abnormalities in surrounding domestic poultry
    - In May 2024, HPAI outbreak occurred among wild birds in Seni District, Naqu City, Tibet Autonomous Region. No domestic poultry farms were found within a 3-kilometer radius of the epidemic foci
    - In May 2024, HPAI outbreak occurred among wild birds in Gangcha County, Haibei Prefecture, and Gonghe County, Hainan Prefecture, Qinghai Province. Monitoring and investigations found no abnormalities in surrounding domestic poultry
    - In February 2024, PPR outbreak occurred among wild sheep in Rutog County, Ngari Prefecture, Tibet Autonomous Region. Monitoring and investigations found no abnormalities in surrounding domestic livestock

Wildlife Health

- Practices of Integrating Wildlife Health into the "One Health" Framework
  - Domestic Integrated Actions
    - The newly revised Wildlife Protection Law mandates the establishment of a "**coordinated mechanism for joint wildlife law enforcement**," involving multiple departments such as forestry and grassland, agriculture and rural affairs, and public health to ensure effective implementation of the legislation
    - The **scope of subsidies** for wildlife damage prevention and control has been expanded from nationally protected wildlife to other terrestrial wildlife species causing severe harm, reflecting the **linkage between ecological and public health risks**
    - Chengdu Research Base of Giant Panda Breeding: Developed a **technical system for health management and major disease prevention and control**, fecal DNA targeted technology, intelligent monitoring via infrared cameras, and an AI-powered image analysis framework
    - Ningxia Forest Pest Prevention and Quarantine Station: **Enhanced early warning capabilities** for avian influenza in wild birds by integrating satellite tracking technology with laboratory virus detection
  - International Collaboration and Challenges
    - Focus on precise and efficient prevention and control, and establish a **global pandemic risk assessment framework**
    - Standardization and sharing mechanism of **wildlife disease research data**
    - Ai-driven conservation of wildlife and other biodiversity

Veterinary workforce

- Veterinary team
  - Official veterinarians
    - Quarantine supervision, disease monitoring, law enforcement supervision, laboratory testing
  - Practicing veterinarians
    - Practicing veterinarians and assistant practicing veterinarians
  - Rural veterinarian
    - A person who has not yet obtained the qualification of a practicing veterinarian but has been registered to engage in animal diagnosis and treatment activities in rural areas
    - Specially-appointed Animal Epidemic Prevention Specialist
      - Grassroots epidemic prevention, collaborative inspection, and technology promotion (Filling the staffing gap)
    - Village-level animal epidemic prevention officer
      - Epidemic reporting, compulsory immunization, harmless treatment, basic data collection

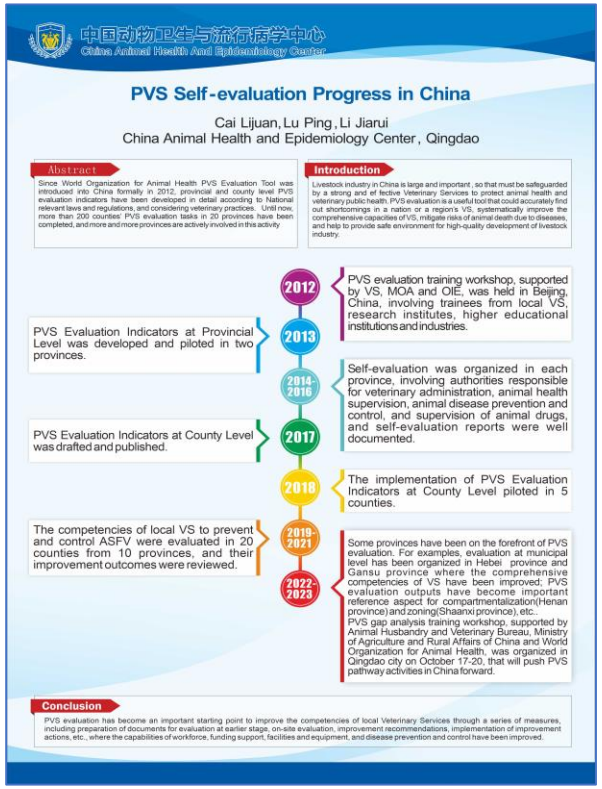
Veterinary workforce

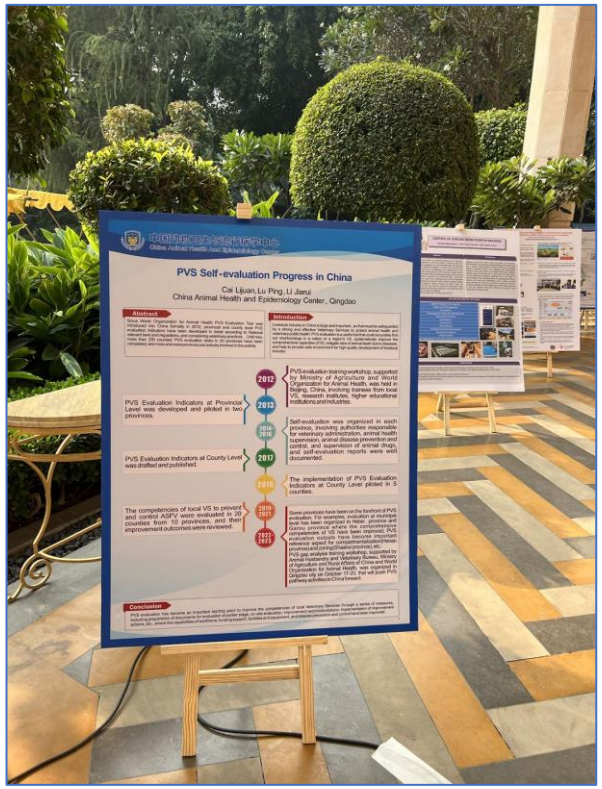
- Veterinary education
  - National Official Veterinary Training Program 2022-2025
    - The training completion rate of official veterinarians at provincial, municipal and county-level animal health supervision institutions has reached 100%, and the examination pass rate has exceeded 90%
  - Continuing Education for Practicing Veterinarians and Rural Veterinarians
    - The proportion of rural veterinarians receiving continuing education has reached over 90%, enhancing their ability to effectively deal with common and frequently-occurring diseases in the local area
    - Build a continuing education service platform for practicing veterinarians, select continuing education training institutions, choose high-quality public welfare courses, establish a class hour management mechanism, and gradually expand the forms and channels of continuing education
  - PVS training: Composed of a provincial expert team and relevant personnel from universities and research institutes
    - In 2022, the training course included 40 provincial-level personnel and 10 from universities and research institutes
    - In 2023, the training course included 32 provincial-level personnel and 7 from universities and research institutes
    - In 2024, the training course included 33 provincial-level personnel and 8 from universities and research institutes

Veterinary workforce

- Basis of law
  - Article 8 of the Animal Epidemic Prevention Law (Local Government Responsibility for Epidemic Prevention)
  - National Plan for the Prevention and Control of Zoonoses in Livestock (2022–2030) (Requires performance evaluation)
- Implementation Mechanism
  - Three-Tier Evaluation System: Provincial level (19 indicators) → Municipal level (22 indicators) → County level (including "risk assessment for breeding farms")
  - Policy support: Funding allocation completed within 3 months post-evaluation (case studies: Shandong, Hebei provinces)
- Statutory Regulatory Bodies
  - National Level
    - Bureau of Animal Husbandry and Veterinary Medicine, MARA (formulates standards, coordinates evaluations)
    - China Animal Health and Epidemiology Center (conducts evaluations, training, and international coordination)
  - Local Levels
    - Provincial, municipal, and county animal husbandry and veterinary authorities (implement rectifications and resource allocation)
- Professional Qualification Recertification
  - International Training: Three consecutive years (2022–2024) of WOAH (World Organisation for Animal Health) gap analysis workshops
  - Domestic Training: Provincial expert teams established (Shaanxi, Gansu provinces); laboratory technical rotations (Xiji County, Ningxia sent personnel to Yinchuan for training)

Veterinary workforce





- Opportunities for vocational re-education development
  - Diversified paths
    - International Capacity Building: WOAH experts delivered lectures (covering PVS tools and gap analysis methods)
    - Inter-provincial Observational Learning: Counties with strong foundations (Chenggu County, Huating City) served as models to drive other counties
    - Specialized Technical Training: Animal Health Risk Assessment Workshop in Dali Prefecture, Yunnan Province (30 participants from 12 provinces)
    - Advanced Laboratory Training: Personnel from Xiji County (Ningxia) and Diebu County (Gansu) were dispatched to learn detection techniques

Veterinary workforce

- Main Challenges and Countermeasures
  - Shortage of Grassroots Teams
    - New staff positions have been added (≥98 personnel), specialists recruited (15 individuals in Beipiao City, Liaoning Province), and civil servants hired (2 individuals in Dongwuqi Banner, Inner Mongolia Autonomous Region)
  - Insufficient Funding and Equipment
    - Central and local governments have invested a total of ≥100 billion yuan; the budget in Beipiao City, Liaoning Province, has increased by 2.4384 million yuan; a CNAS-accredited laboratory has been established in Yicheng District, Shandong Province
  - Weak Quarantine Supervision
    - Specialized assessments have been conducted in pastoral counties (e.g., Dongwuqi, Inner Mongolia Autonomous Region)
    - A big data traceability platform has been implemented in Uradhouqi
  - Lack of Work Motivation
    - Veterinary allowances have been implemented (30 counties in Hebei Province)
    - Administrative levels have been optimized (e.g., the level of Yicheng CADC of Zaozhuang city, Shandong Province, has been upgraded)

PVS Pathway

- Current Status of PVS Pathway Engagement
  - Deep Application of International Tools
    - Translation and adoption of the WOAH PVS Evaluation Tool (Version 7, 2019)
    - Development of differentiated indicators aligned with China’s context, based on PVS core competencies (e.g., human/financial/material resource allocation, disease prevention and control)
  - Innovative Practices
    - "City-wide Promotion" model (Pingliang, Rizhao, and other cities recognized by WOAH)
    - Pioneering "Municipal-Level Evaluation Indicator System" (established in 2024)
    - Specialized assessments for semi-agricultural and semi-pastoral regions (6 counties including Zhangbei County, Hebei)
  - International Impact
    - China’s tiered evaluation model offers replicable solutions for developing countries

PVS Pathway

✓ China’s PVS has formed a closed-loop system of "international benchmarking → tiered innovation → problem refinement," with plans to deepen PVS pathway application through regional collaboration and technology localization

- Future PVS Engagement Intentions
  - Deepening Regional Collaboration
    - Practical cooperation in veterinary standard mutual recognition, technical exchanges, and joint evaluations to systematically enhance regional veterinary service capacities
  - Technology Integration
    - Adapt WOAH gap analysis methodologies to develop localized tools (e.g., standards for calculating grassroots personnel numbers and funding)
    - Explore using performance evaluation to control major diseases, referencing international experiences with peste des petits ruminants (PPR)

Thank you

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