

Avian Influenza **SURVEILLANCE**

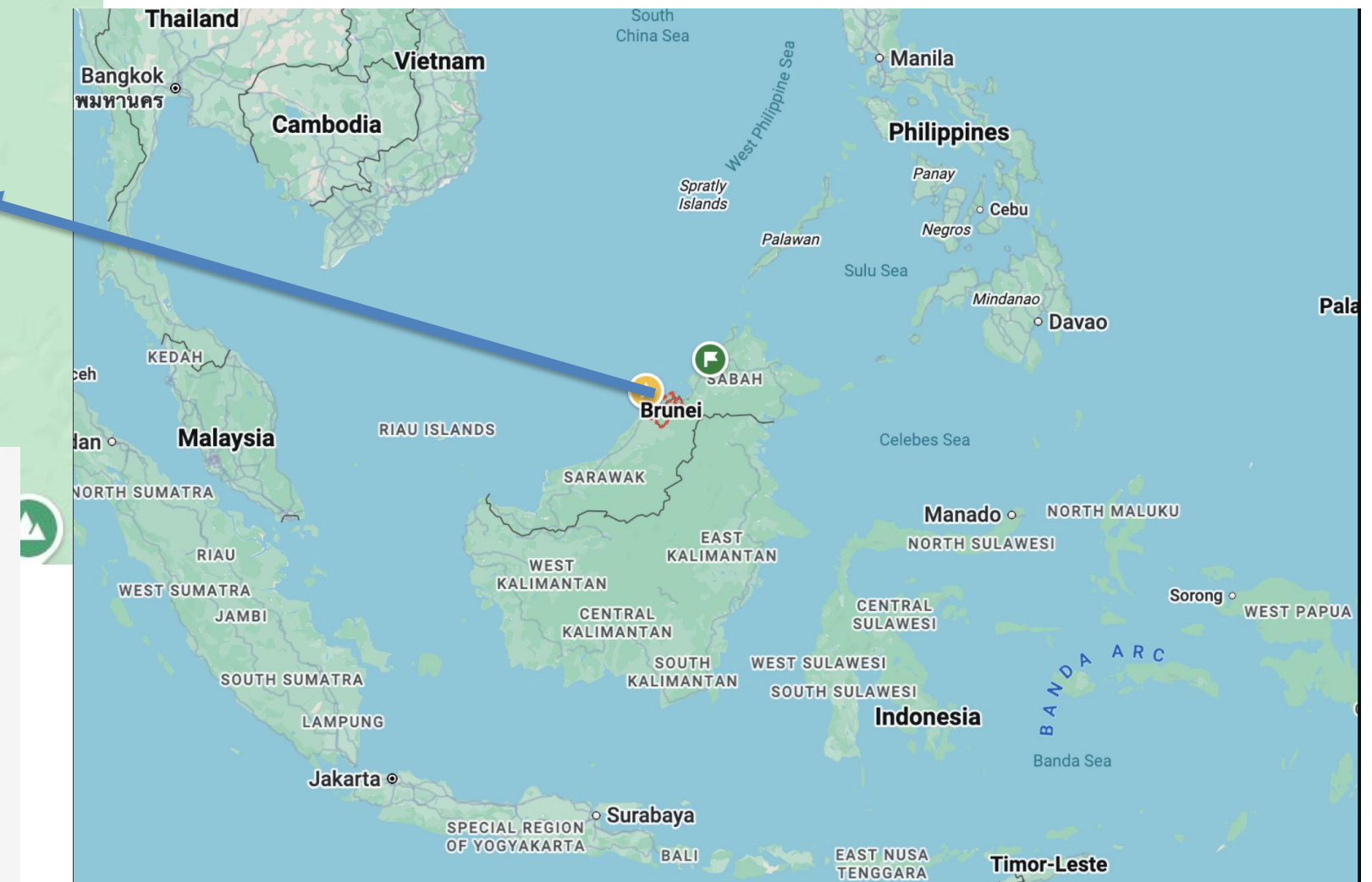
BRUNEI
DARUSSALAM



*WOAH Regional Capacity Training on Priority Animal Disease
Control and Prevention in Asia and the Pacific
14-18 September
Qingdao, China*

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Ministry of Economy, Trade and Industry

SULTANATE OF BRUNEI DARUSSALAM



POULTRY PRODUCTION SYSTEM OVERVIEW

- Poultry Production makes up the largest livestock industry in Brunei Darussalam.
- Commercial poultry farms consist of intensive, closed-house systems and automated management to supply country's need.
- Brunei has achieved full self-sufficiency in its poultry sectors.



Annual Poultry Production Volume 2025
(Cumulative Annual Head Count)

Broiler	Breeder	Layer
19,736,343	924,630	1,404,167

WILDBIRDS / LIVEBIRD MARKET POPULATION

Jerudong Market:

- Live bird market.
- 16 species observed.
- 330 total bird count.
- Key species: Java Sparrow, pigeons, quails and doves.
- Low proximity to Agriculture Development Area.
- Additional AI surveillance priority.

Tasek Merimbun:

- Wetland.
- 41 species observed.
- 116 total bird count.
- Key species: Little Egret, Black-crowned Night Heron and Purple Heron.
- Low proximity to Agriculture Development Area.
- Breeding ground for selected bird species; Low direct interface risk.

Kandol Ricefield:

- Ricefield.
- 52 species observed.
- 400 total bird count.
- Key species: Wood Sandpiper, Barn Swallow and Wandering Whistling Duck.
- Low proximity to Agriculture Development Area.
- Feeding ground; low-moderate interface risk.

Brunei Bay:

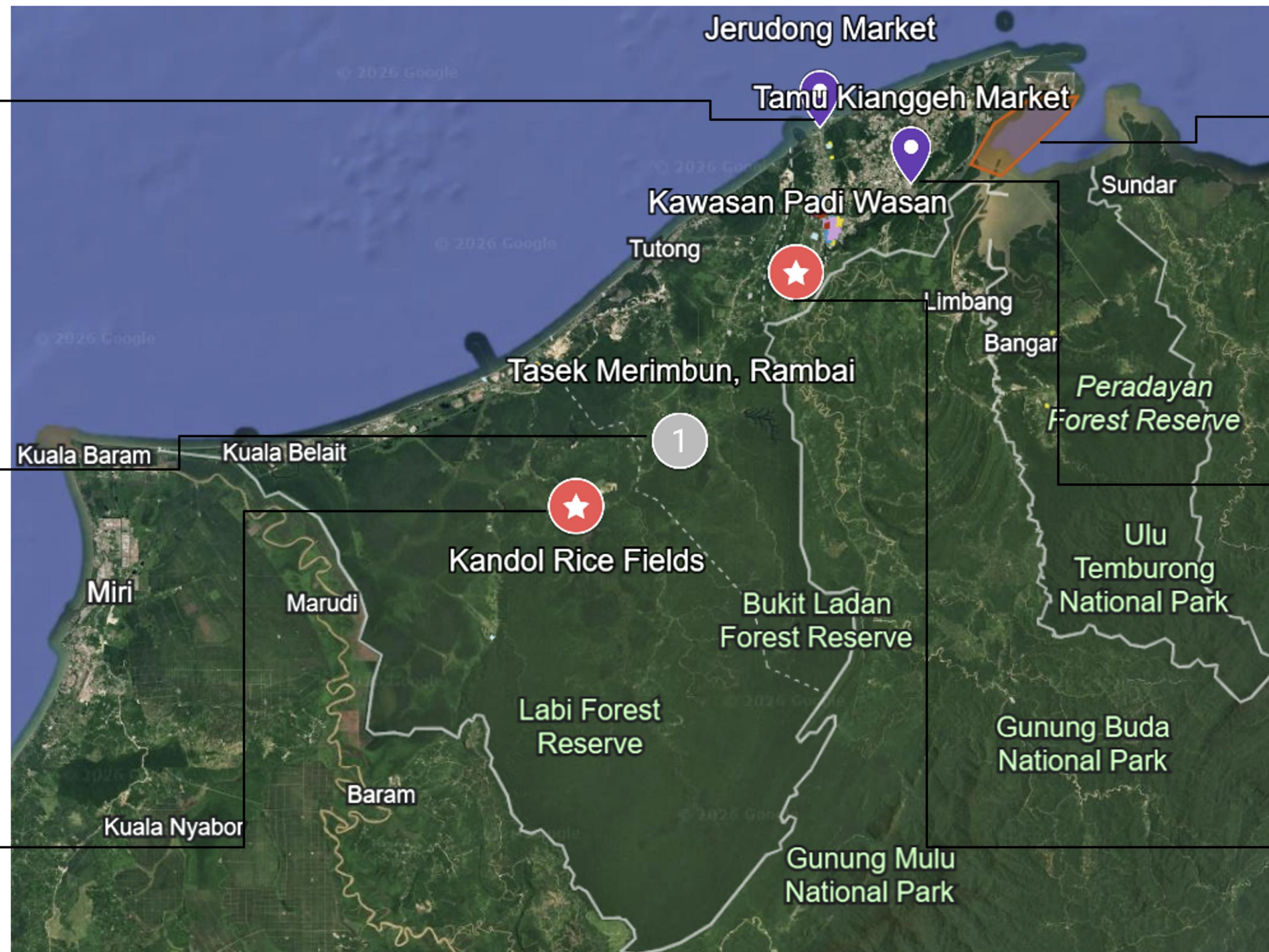
- Coastal wetland.
- 33 species observed.
- 249 total bird counts.
- Key species: White Egret, Chinese Egret and Great Egret.
- Low proximity to Agriculture Development Area.
- Important migratory site; potential spillover interface.

Tamu Kianggeh Market:

- Live bird market.
- 5 species observed.
- 68 total bird counts.
- Key species: Domestic chicken and pigeons.
- Low proximity to Agriculture Development Area (indirect link via supply chain).
- Additional AI surveillance priority.

Wasan Ricefield:

- Ricefield.
- 44 species observed.
- 1,051 total bird counts.
- Key species: Wood Sandpiper, Java Sparrow and Hirundo javanica.
- High proximity to Agriculture Development Area (1 poultry abattoir).
- High-risk poultry-wildlife interface.



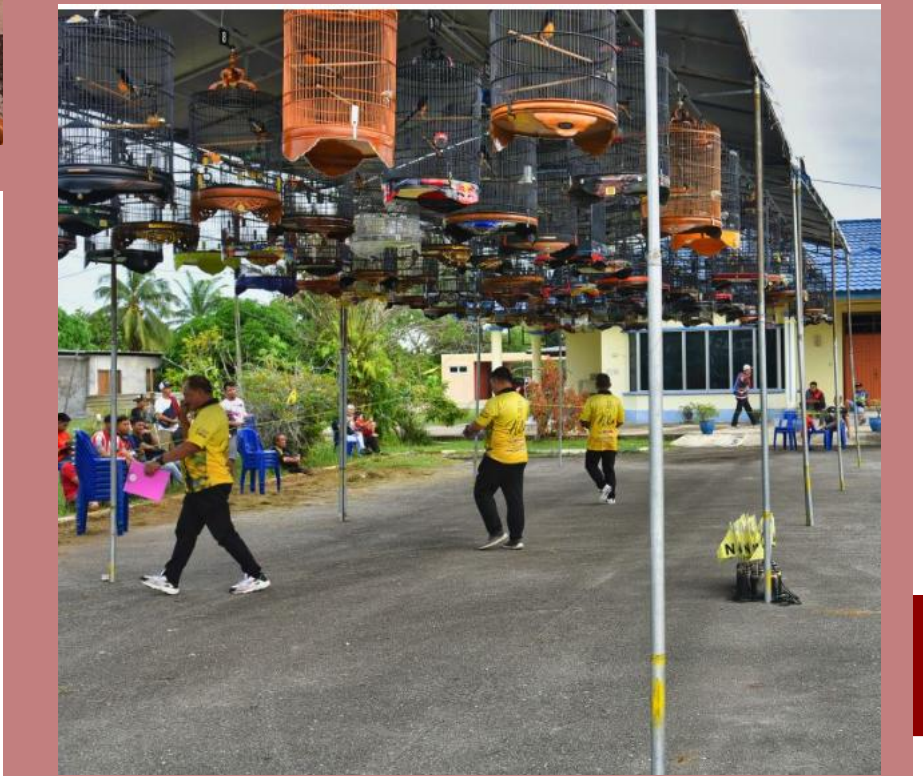
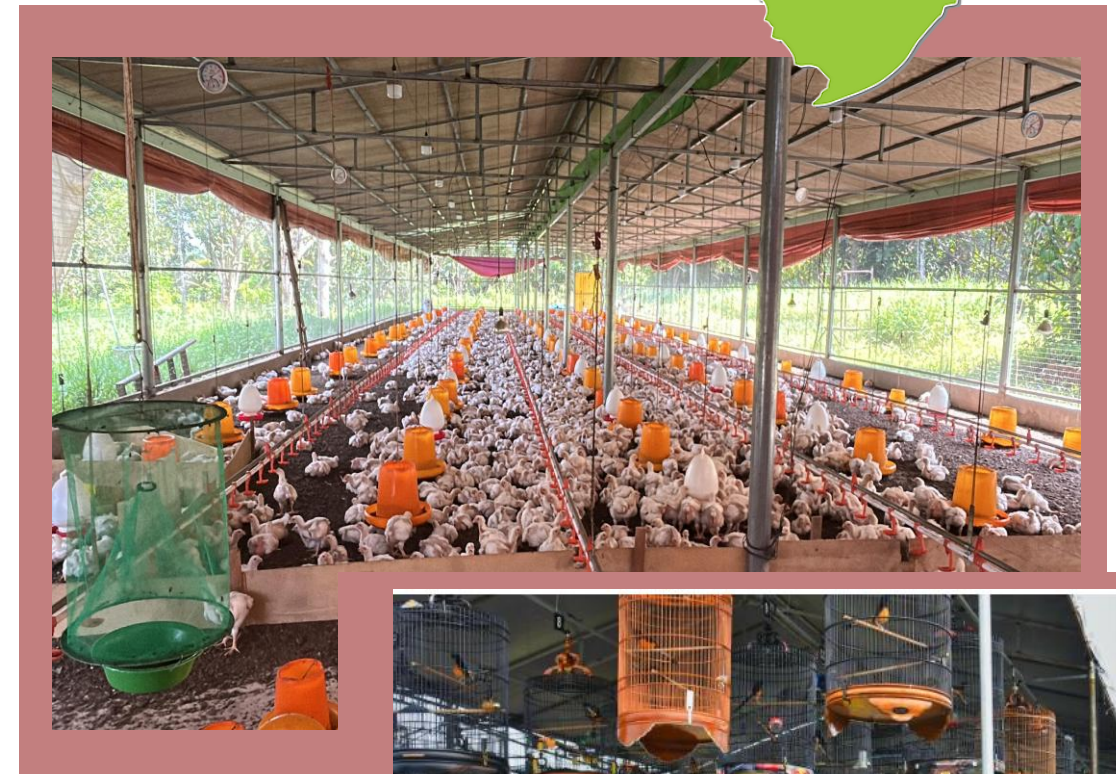
AVIAN INFLUENZA STATUS AND RISK

DISEASE STATUS

- Brunei is **historically-free** from Highly Pathogenic Avian Influenza (HPAI), without the use of preventive vaccination programs.
- **Regional Threat**: Close proximity to neighbouring countries where endemic or recurrent outbreaks of strains occur.

MAIN RISK INCURSION PATHWAYS

- Importation of live animals or animal products, including illegal smuggling.
- **East Asian–Australasian Flyway**: Brunei lies along major migratory bird flyways. Wild birds act as natural reservoirs for AI and can shed high viral loads.
- Live bird markets that are not strictly monitored.



AVIAN INFLUENZA (AI) SURVEILLANCE



The Department of Agriculture and Agrifood (DoAA) conducts disease surveillance in livestock farms and slaughterhouses, to safeguard animal and public health.

Disease surveillance includes :

1. Passive surveillance – includes disease notification to the DoAA by farmers, personnel also the public.

2. Active Surveillance

- Clinical surveillance and sample collection from poultry farms and backyard keeper/hobby farmers by DoAA.
- Samples includes blood test, tracheal swabs and cloacal swabs.
- Quality Assurance and Quality Control (QAQC) through meat inspection in slaughterhouses allows for prompt notification of diseases.



AI Samples Collected in 2026 (until Sep 2026)

Farm Type ¥ Sample Types	Tracheal	Cloacal
Backyard	0	45
SMEs	180	551
Commercial	0	150



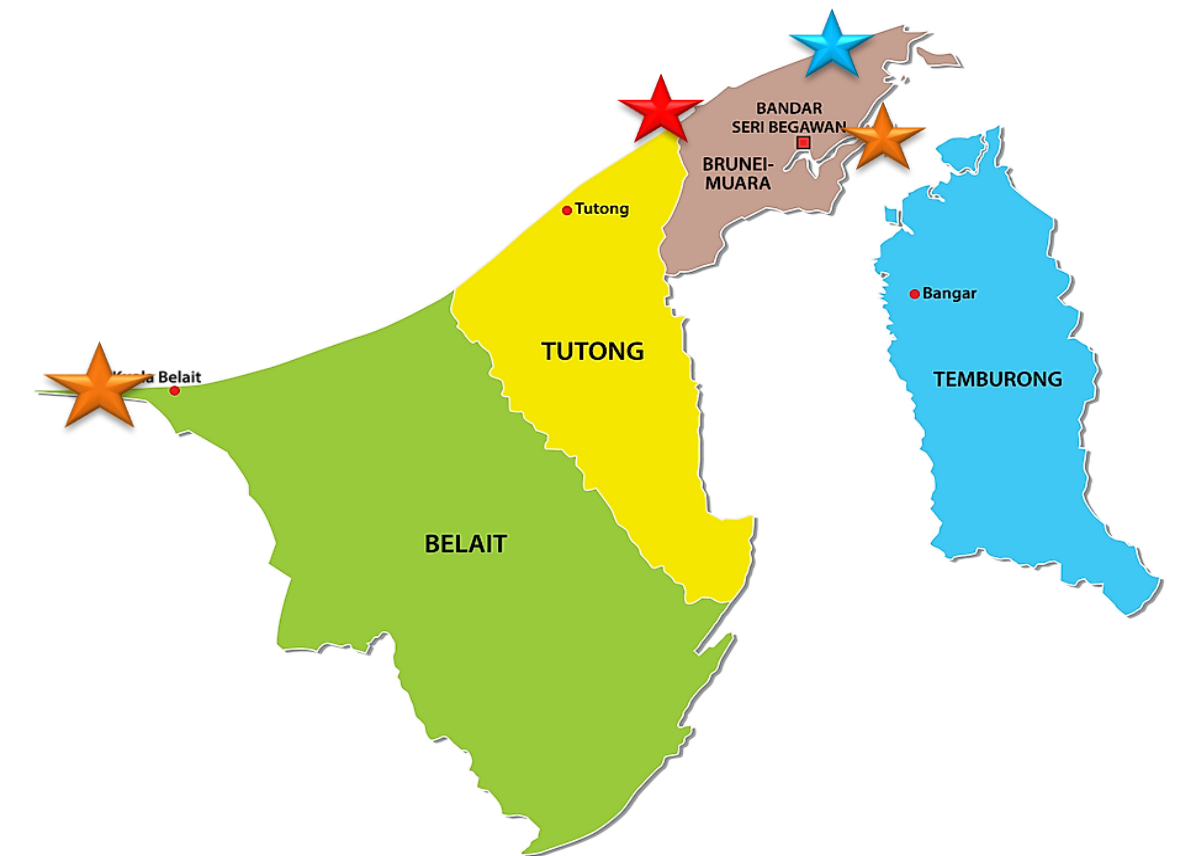
LAB TESTING



- 1 Veterinary Laboratory Services (VLS) is a section under our Division and provide both internal and external testing.
- 2 BSL3 facility and PCR platform is readily available in VLS when they are required.
- 3 Enrolled in proficiency testing yearly with Australian Centre for Disease Preparedness (ACDP), with result satisfactory z score of -1.51
- 4 References: WOAHA & Testing kits (Qiagen QIAamp Viral RNA, Kyt H5/H7/H9 RT-PCR, Kyt H5/N1 RT-PCR, AgPath ID One Step for H5)
- 5 Reporting result in qualitative, but interpretation result using quantitative Ct value; Threshold Ct value at 40

PREVENTION AND CONTROL MEASURES

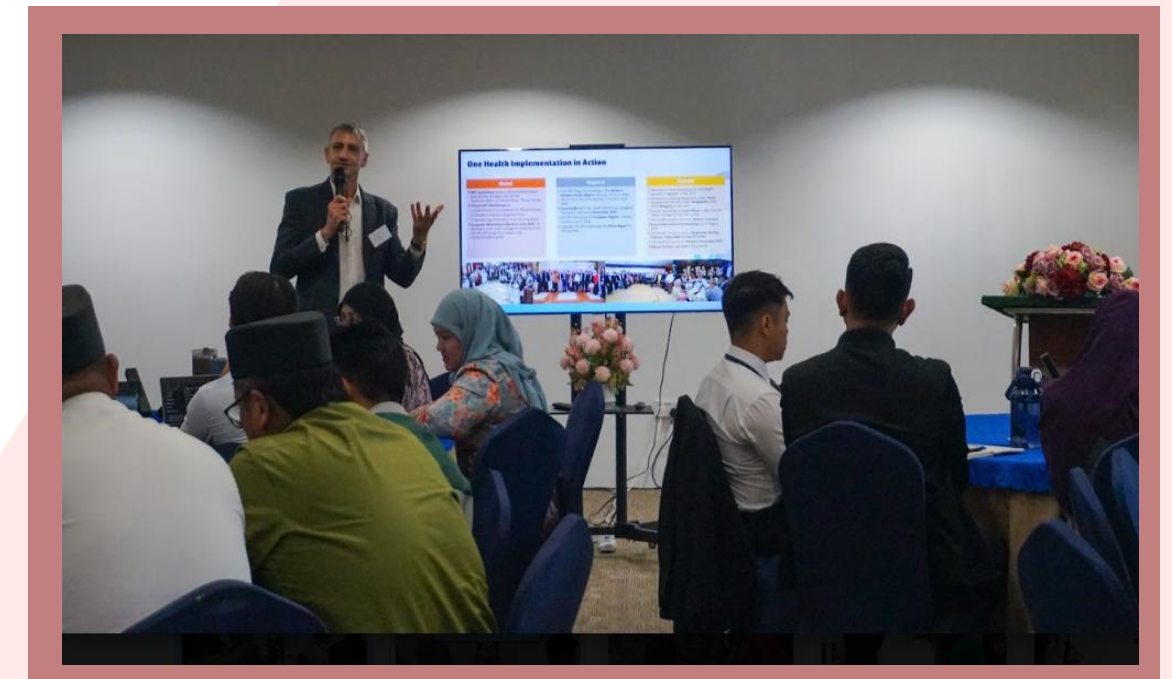
- **Rapid Action (RA) Teams** are formed to aid with surveillance as well as as first responders in cases of outbreak of notifiable diseases.
- Training is carried out annually to ensure up-to-date knowledge and technical proficiency in disease surveillance as well as disease outbreak preparedness.
- **Emergency Response of Animal Diseases (ERAD) Manual** is available and recently updated with table-top and simulation exercise conducted regularly.
- **Control of importation** of animals and animal products via the border control points through desk audit and clinical surveillance at the border.
- **Frequent surveillance** of all premises with poultry or birds for Avian Influenza including commercial farms and household backyards.



ONE HEALTH ACTIVITIES

One Health Disease Prioritization (OHZDP) Workshop, 3–5th February 2026

- Held on the 3rd to 5th February 2026, in close collaboration with the Tripartite organization (FAO, WOA and WHO).
- 6 priority zoonotic diseases have been identified, including **Avian Influenza**.
- The list will be used as an entry point to strengthen One Health collaboration and next steps include refining objectives and activities under 3 core areas:
 1. Laboratory and Surveillance
 2. Preparedness and Response
 3. Prevention and Communication



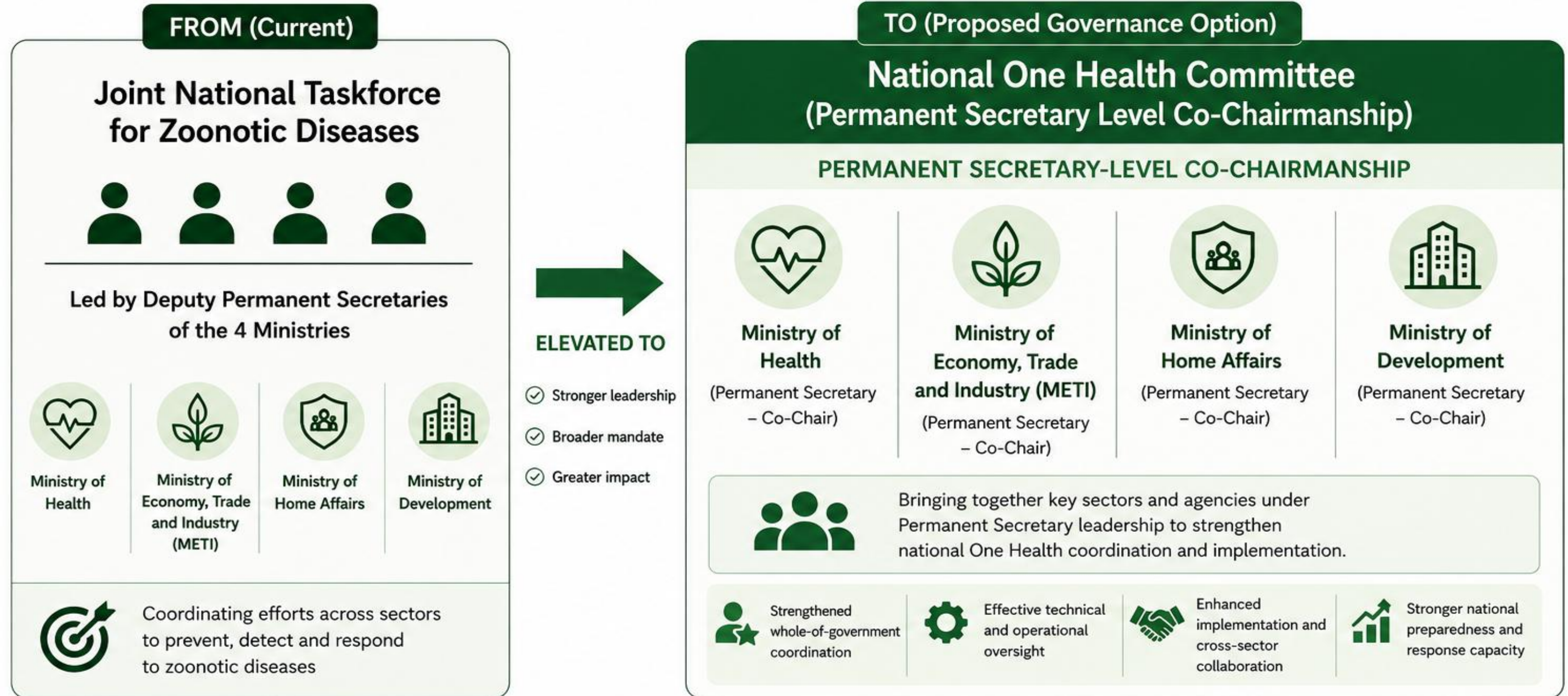
One Health Joint Plan of Action (OHJPA) Workshop, 26–28th August 2026

- **Objective** : To institutionalize and operationalize a **nationally owned** One Health Joint Plan of Action, aligned with the Quadripartite One Health Joint Plan of Action, through stocktaking, multisectoral planning, prioritization and costing.
- **Scope & Stakeholders**: Engages key government agencies, statutory bodies, and One Health partners to clarify agency mandates, align priorities, and define specific contributions toward national implementation.



Strengthening One Health Governance in Brunei Darussalam

Enhancing national coordination for a healthier people, animals and environment



The renaming of National Joint-Task Force to **National One Health Committee**, with changes including:

- **Escalating the co-chairmanship** to Permanent Secretary Level from the former Deputy Permanent Secretary;
- Official welcoming the Ministry of Development, with objective to involve the **environment sector**.

INTERNATIONAL COLLABORATION

There are various regional and international initiatives that support our ongoing surveillance and management of Avian Influenza:

- [Avian Influenza Group of ASEAN \(AIGA\)](#) and related activities annually.
- One Health Workshop on Multi-Sectoral Prevention and Control of Avian Influenza for SEA Region, [Singapore 20-22 January 2026](#).
- Confronting avian influenza in Asia and the Pacific: Global Situation, vaccination and Risk [dynamics \(23 June 2025, ENTRVST Webinar\)](#).
- [BORNEO](#) Disease Control Animal Group (A Whatsapp group formed between animal health sectors of the region).

Laboratory-related activities:

- ASEAN Bio-informatics Workshop, [Yogyakarta 15-17 November 2023](#)
- Regional Workshop on Bioinformatics with Focus on Avian Influenza and Coronavirus (planned for [24-28 January 2027, The Government of Oman](#))
- Enrolment in the 2026 Australian Centre for Disease Preparedness (ACDP) [Proficiency Testing and training on molecular AI testing](#) – Regional Avian Program.



GAPS	WAY FORWARD
Lack of Active Wild Bird Surveillance Absence of routine sampling in wild and migratory birds leaves a critical surveillance blind spot for early spillover detection into poultry.	Cross-Sectoral Wildlife Collaboration Partner with the Wildlife Division, forestry agencies, and academic institutions to establish active wild bird sampling networks along known flyways.
Limited Technical Workforce Capacity Shortage of specialized field personnel and veterinary officers to conduct nationwide epidemiological monitoring and rapid field sampling.	Systemic Capacity Building (WOAH PVS Pathway) Utilize the WOAHPVS Performance of Veterinary Services (PVS) Pathway to resource and systematically upgrade national capabilities.
Inconsistent Biosecurity Awareness & Reporting Variable levels of biosecurity understanding and disease reporting among smallholder farmers, backyard poultry keepers, and farmers	Targeted Community Engagement & Education Expand tailored outreach campaigns to smallholders and rural farmers in non-capital districts, focusing on awareness on notifiable diseases, its immediate reporting procedure and biosecurity standards.
Continuous Technical Training Needs Gaps in technical officers' exposure to modern diagnostic techniques, field outbreak response, and epidemiological data interpretation.	Regular Competency Assessment & Upskilling Implement structured annual technical evaluations, diagnostic proficiency testing, and simulated outbreak response workshops for field and laboratory staff.
Slow Operational Progress in One Health Surveillance While strong frameworks and multi-agency involvement are established, cross-sectoral operationalization and routine real-time data sharing between human, animal, and environmental health are still in early development.	Operationalize Joint One Health Protocols To transition from planning to operational execution, agencies must establish clear priorities within defined timeframes while taking full ownership and accountability for their One Health commitments.
Over-Reliance on Tabletop Exercises (TTX) for Preparedness Current response readiness relies heavily on theoretical tabletop exercises (TTX), which fail to stress-test real-world field logistics, diagnostic throughput, or emergency resources during an actual outbreak.	Conduct Full-Scale Field & Simulation Exercises Supplement theoretical TTX with live, functional simulation exercises, field sampling drills, and rapid-response deployments to validate true operational readiness.

THANK YOU

🌐 <https://www.agriculture.gov.bn>

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