

World Organisation for Animal Health

Australian Aid

SEACFMD

SEACFMD Laboratory Network Meeting

2026 Country Report
Singapore

Ng Oi Wing (PhD)
Senior Scientist, Centre for Animal & Veterinary Sciences, National Parks Board

10-11 November 2026
Manila, The Philippines

BRIEF FMD SITUATION :

- Singapore is recognised by WOAH as a FMD free country where vaccination is not practiced
  - No outbreak and evidence of FMD in Singapore since 1935
  - No vaccination against FMD has been carried out and no vaccinated animal has been imported into Singapore in the last 12 months

- National Parks Board (NParks), as the Singapore's national authority for animal health, in conjunction with Singapore Food Agency (SFA), does risk assessments for FMD incursion in local animal populations when necessary, including taking into account emerging threats such as FMD SAT 1



Surveillance

Please describe briefly surveillance type, number of samples tested

- Monitoring and surveillance of local farmed ruminant (cattle and goat) populations, synergized with other TADs:
  - Compulsory reporting of FMD cases under the Animals and Birds Act
  - Monthly syndromic surveillance for clinical signs of ill-health
    - Farms advised to seek further veterinary attention if necessary
  - Annual serosurveillance for FMDV non-structural protein (NSP) using ELISA
  - Total number of samples tested in last 3 years (2024, 2025, 2026): 82
    - All samples collected in last 3 years were tested with negative results

- Surveillance of local wild boar population
  - Samples from wild boars – Sera tested for antibodies using FMDV NSP ELISA or organs tested for FMDV
  - Investigation into unusual mortality or disease, if required
  - Total number of samples tested in last 3 years (2024, 2025, 2026): 9
    - All samples collected in last 3 years were tested with negative results

- Clinical surveillance of zoological animals
  - *Ad-hoc* testing of samples from zoological animals sent in by the zoological centre (Mandai Wildlife Group) for testing for presence of FMDV or FMDV antibodies when necessary

Current Projects and Programmes Supporting Laboratory Capacity Building

Please describe the main projects and programmes currently supporting laboratory capacity building in your country, including the project/programme name, key focus areas, donor/supporting organisation, implementation period, and major laboratory-related outputs.

Project / Programme	Implementation Period	Main Focus Areas	Supporting Organisation	Laboratory Capacity-Building Activities / Outputs
Interlaboratory Proficiency Testing Scheme for FMD	Ongoing since 2014	FMD laboratory diagnosis (Molecular, antigen detection and serology methods)	The Pirbright Institute; Thailand Pak Chong Regional Reference Laboratory	Evaluation of laboratory performance on FMD diagnostics; ensure laboratory's competency in FMD diagnostics
ASEAN Regional Reference Centre (RRC) for Biorisk Management and Quality Assurance	Ongoing since 2021	Biorisk management and quality assurance for ASEAN national veterinary or animal health laboratories	Australian Centre for Disease Preparedness (ACDP)	Organized yearly workshops; set up a platform for networking and sharing of best laboratory practices and knowledge

Important changes since 2023 SEACFMD LabNet meeting

Please highlight the key changes since the 2023 SEACFMD LabNet Meeting, including major developments, improvements, new challenges, and emerging issues. Avoid repeating details from the questionnaire.

Improvements

- Periodic assay monitoring through *in-silico* qPCR pipelines to assess primer and probe compatibility with currently circulating target strains , enabling early identification of performance gaps

- Continual development of in-house Whole Genome Sequencing (WGS) capabilities and bioinformatic pipelines for genomic analysis of animal viruses, including FMDV

Important changes since 2023 SEACFMD LabNet meeting

Please highlight the key changes since the 2023 SEACFMD LabNet Meeting, including major developments, improvements, new challenges, and emerging issues. Avoid repeating details from the questionnaire.

Challenges and emerging issues

- Monitoring of FMD epidemiological situation in our region
  - Up-to-date genomic information of the evolving FMDV is critical for the laboratory to ensure current tests can detect new virus types and/or strains
  - The presence of other animal diseases, some accorded higher priority, may divert attention and resources from FMD preparedness

- Maintaining diagnostic capability and competency for FMD remains challenging for a FMD-free country, where opportunities to test the full diagnostic response under realistic conditions are limited

- Availability of reference materials, particularly for emerging strains, may be limited, presenting challenges to assay verification and reliable pathogen detection

Collaboration and network needs

Please highlight priority areas where stronger collaboration, networking, technical support, or knowledge sharing with SEACFMD Members, reference laboratories, and regional partners is needed.

- Regional access and sharing of reference materials and positive controls
  - Regional network could coordinate and facilitate access to appropriate reference materials, offering a more efficient and sustainable approach than each individual national laboratory independently sourcing these materials
  - Tailored regional FMD proficiency testing programme, incorporating challenge panels that represent emerging regional strains and threats

- Regional programme to support timely assessment of FMD assay
  - Rapid sharing of FMDV sequences, commonly used assays and epidemiological metadata to ensure methods remain effective against circulating strains and up-to-date information

- Closer integration between LabNet and EpiNet would strengthen early warning and enable risk-informed laboratory preparedness aligned with evolving epidemiological intelligence

2026–2028 way forward

PROPOSED ACTION

Priority Action	Expected Result	Regional Support / Collaboration Needed
1. Further strengthen the regional FMD diagnostic early-warning mechanism	New FMDV strain detected in region → Sequence/serotype information shared → LabNet diagnostic alert → National laboratories assess their assays → Problems reported back to the network → Reference laboratories coordinate any technical support	WOAH, regional reference laboratories
2. Proficiency testing programme tailored to region	- Challenge panel to include the newly emerging strains in the region - Possibility to include PT component on WGS of FMDV for laboratories with WGS capabilities	Reference laboratories

THANK YOU