RPHL Network Twinning Programme on Biorisk Management Systems

April- October, 2026

Overview:

Led by Thailand through the Department of Medical Sciences, Ministry of Public Health, the Regional Public Health Laboratory (RPHL) Network established in 2019 under the Global Health Security Agenda, serves as a regional platform to strengthen resilient and responsive public health laboratory systems across the Asia-Pacific. The 14 member countries consist of ASEAN and other Asia-Pacific countries, including Nepal, Pakistan and Papua New Guinea. The Network prioritizes strengthening laboratory systems across eleven Core Capabilities, including biosafety and biosecurity. The Network's Strategic Work Plan (2023–2027) sets four strategic objectives that emphasize capacity building across these thematic areas through a three-pronged approach: structured training, technical assistance via peer-to-peer and twinning programmes, and continuous knowledge sharing through regional forums and digital platforms.

Hosted by RPHL Network, in collaboration with the U.S. Defense Threat Reduction Agency (DTRA) and Sandia National Laboratories (SNL), the first Pilot Twinning Programme on BRM was convened in Kota Kinabalu, Malaysia, during 4-8 March 2024. Nominated by RPHL Network, with 4 participants from Thailand, 2 from Malaysia, and 3 from Australia were matched based on shared BRM project interests, complementary strengths, and experience, and were mentored by laboratory experts from the United States. Each pair developed a strategic work plan targeting priority BRM needs within their laboratories and implemented a six-month project to strengthen biorisk management systems across RPHL partner institutions. This initiative aimed to strengthen regional Biorisk Management capabilities through project-based peer-to-peer support.

The project was concluded with four projects had been successfully completed, including:

- Formalization of a Risk Management Program Framework for the Reference Laboratory for Foot and Mouth Disease (RRL FMD) BSL-3, Thailand.
- Evaluation and harmonization of BRM systems between Kota Kinabalu Public Health Laboratory (KKPHL), Sabah, and the National Public Health Laboratory (NPHL), Malaysia.
- Updating the Thai National Institute of Health Quality Management Checklist to align with ISO 35001:2019.
- Development of new biomedical and hazardous waste management tools for the Thai National Institute of Health.

An assessment of the first cohort was conducted to review the program's progress, outcomes, and overall impact. The findings revealed that the BRM Twinning Program delivered strong benefits across participating institutions by strengthening BRM competencies, improving laboratory systems, and expanding professional networks. Participants reported tangible institutional gains, including improved alignment with ISO 35001 standards, enhanced waste management tools, and more harmonized BRM practices. The report also identified key areas for refinement for the next cohort, including clearer role definitions, nomination, selection process, a stronger orientation at kickoff, more consistent communication, and better alignment with institutional priorities. Overall, the program demonstrated high value, meaningful impact, and strong potential for sustainability and

scale-up across the RPHL Network.

Building on these achievements, the second cohort of the 6-month project-based Twinning Programme for selected mid-level laboratory personnel will be conducted by the RPHL Network in 2026 in collaboration with National University of Singapore (NUS). A group of BRM Subject Matter Experts & Lab Experts and leading institutions will be engaged to support the programme.

Objectives:

- Develop a pool of SMEs on BRM within the network
- Enhance individual professional development in BRM
- Apply international standards such as the ISO 35001:2019 BRM system (previously utilized CWA 15793) frameworks to determine critical needs and identify opportunities for collaboration.
- Develop projects to address institutions/national issues/concern

Key Stakeholders:

- Regional Public Health Laboratory (RPHL) Network
- Department of Medical Sciences (DMSc), Ministry of Public Health (MoPH), Thailand
- Communicable Disease Agency (CDA), Ministry of Health (MOH), Singapore
- BSL-3 Core Facility, Yong Loo Lin School of Medicine, National University of Singapore (NUS)
- Biorisk Association of Singapore (BAS)
- Makmal Kesihatan Awam Kebangsaan (MKAK), Ministry of Health (MOH), Malaysia
- Australian Centre for Disease Preparedness (ACDP)
- Coalition of Epidemic Preparedness Innovation (CEPI) – TBC

Host institutions:

- RPHL Network Singapore, Communicable Disease Agency (CDA), Ministry of Health (MOH), Singapore
- BSL-3 Core Facility, Yong Loo Lin School of Medicine, National University of Singapore (NUS)

Facilitators:

- Dr. Tan Boon Huan, President, Biorisk Association of Singapore (BAS)
- Ms. Hannah Phoon Yik Phing, Medical Laboratory Scientist (Microbiology), MKAK, Malaysia
- Mr. Kanate Temtrairat, Medical Scientist - Senior Professional Level, Bureau of Safety and Quality of Food (BQSF), DMSc, Thailand
- Dr. Phubeth Ya-Umphan

Twins

BRM experts from Singapore.

Mentors

- Dr. Raymond Lin, NUS
- Mr. James Thomas Paulley, ACDP
- Dr. Sabai Phyu, NUS
- Dr. Tessy Joseph, NUS
- Mr. Chern Chiang Siew, CDA
- Mr. Damien Chew, WBHT
- BRM experts from BAS and ACDP

Guest Speakers: [tbc]

Participants Criteria:

- Mid-level to senior-level biorisk management trainers representing national animal health laboratories and human health laboratories who are responsible for laboratory quality assurance and training programs;
- Bench scientists and others responsible for laboratory operations who serve as their institution's Biorisk Management Advisor/Biosafety Officers; and
- Have an understanding of Biorisk Management, completion of the International Federation of Biosafety Associations Professional Certification in Biorisk Management (ideal but not exclusionary), have expectations to develop Biorisk Management programs in their institutions as part of the job capacity (institutionally supported daily/weekly hours project development capacity), have experience in leading a team as well as the authority or delegated authority to effect biorisk management change at the institutional level with the support of their leadership to be able to implement the projects developed during the program.
- Mastery of the English language

Selection Process:

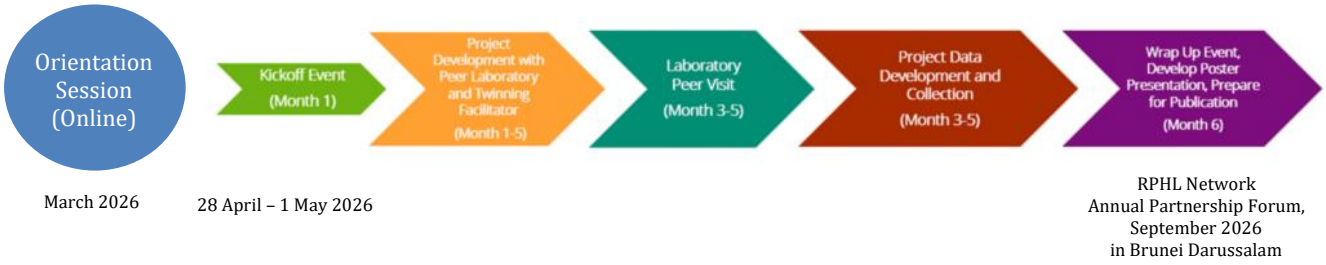
Participants will undergo the following selection process. A total of 10 participants will be selected:

- Each country is requested to at least nominate two qualified candidates.
- Nominations to the RPHL Network Secretariat must include:
  - A brief CV
  - Expression of interest outlining the applicant's area of expertise and proposed project topic.
  - A motivation letter outlining relevant experience and proposed initiative.
- Participants are matched into pairs (twins) based on mutual BRM project interests, strengths, and

experience.

- Facilitators assess participants' backgrounds and ideas to determine suitable pairings.
- The matching is participatory, interest-based, and facilitator-guided, ensuring that each pair aligns in project scope and capacity.

Timeline:



March 2026

28 April – 1 May 2026

RPHL Network Annual Partnership Forum, September 2026 in Brunei Darussalam