

FACT SHEET

Enhancing Regional Health Security

Genomic Detection for Infectious Disease Elimination

Asia Pathogen Genomics Initiative • Asia PGI

Asia PGI was established in late 2021, with the support of the Bill & Melinda Gates Foundation, to leverage scientific and technical partnerships in Singapore and across Asia. It aims to accelerate the application of pathogen genomic sequencing across 14 countries.

Initial efforts have focused on conducting a country-led assessment of the status of pathogen genomics. Common challenges and opportunities were identified, which informed the development of a regional road map to inform on how to optimize pathogen genomics for public health impact.

Background

Infectious diseases remain a common cause of preventable sickness and deaths, particularly among children. The ability to detect infections at an early stage and implement proven clinical and public health measures are essential for their control and elimination.

Genomic sequencing has emerged as a powerful new tool to enhance early disease detection and inform decision making. While genomics has been widely used in high-income countries, its application across low-resource settings with high communicable disease risk remains at an early stage. In addition to strengthening infectious disease surveillance, pathogen genomics is a critical building block for the rapid development of novel diagnostics, treatments and vaccines. Pivoting the capacity built during COVID-19 towards the early detection, control and elimination of other more common infectious disease threats is an urgent priority.

DOWNLOAD THE REGIONAL ROAD MAP

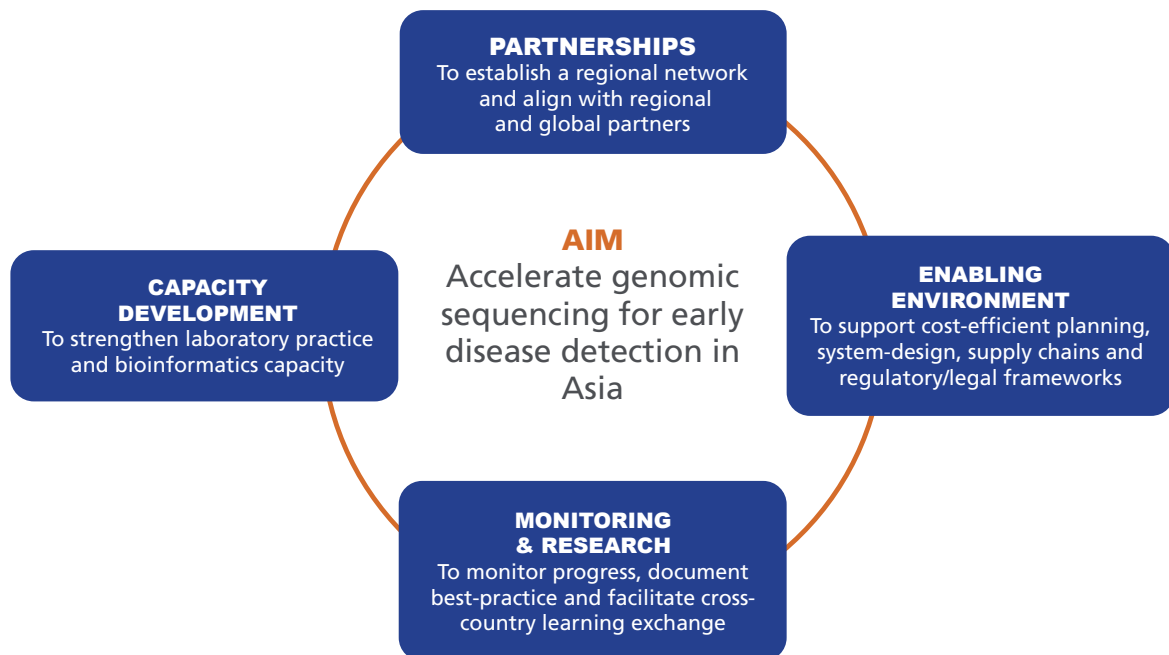
Scan the QR Code



<https://tinyurl.com/35yv3nwa>

Aim & Objectives

The Asia PGI aims to accelerate genomic sequencing for early disease detection in Asia through four objectives:



Asia PGI Academy

Our key capacity development programme is the Asia PGI Academy – a training hub for pathogen genomic surveillance.

The Academy aims to strengthen laboratory practice, bioinformatics capacity and 'One Health' surveillance through training programmes.

The Academy is equipped with wet-lab platforms providing hands on exposure to the main genomic sequencing platforms used across Asia. Quarterly cross-country learning with tailored country outreach and visiting scientist placements will provide opportunities to undertake cutting-edge research in genomics and new tool development.

Asia PGI Strategy Think Tank

We seek to create an enabling environment to support resource constrained countries in Asia to fully adopt genomics surveillance as a public health tool.

The Asia PGI Strategy Think Tank was established to leverage partnerships and convene stakeholders across the region to discuss cross-cutting challenges and share best practices.

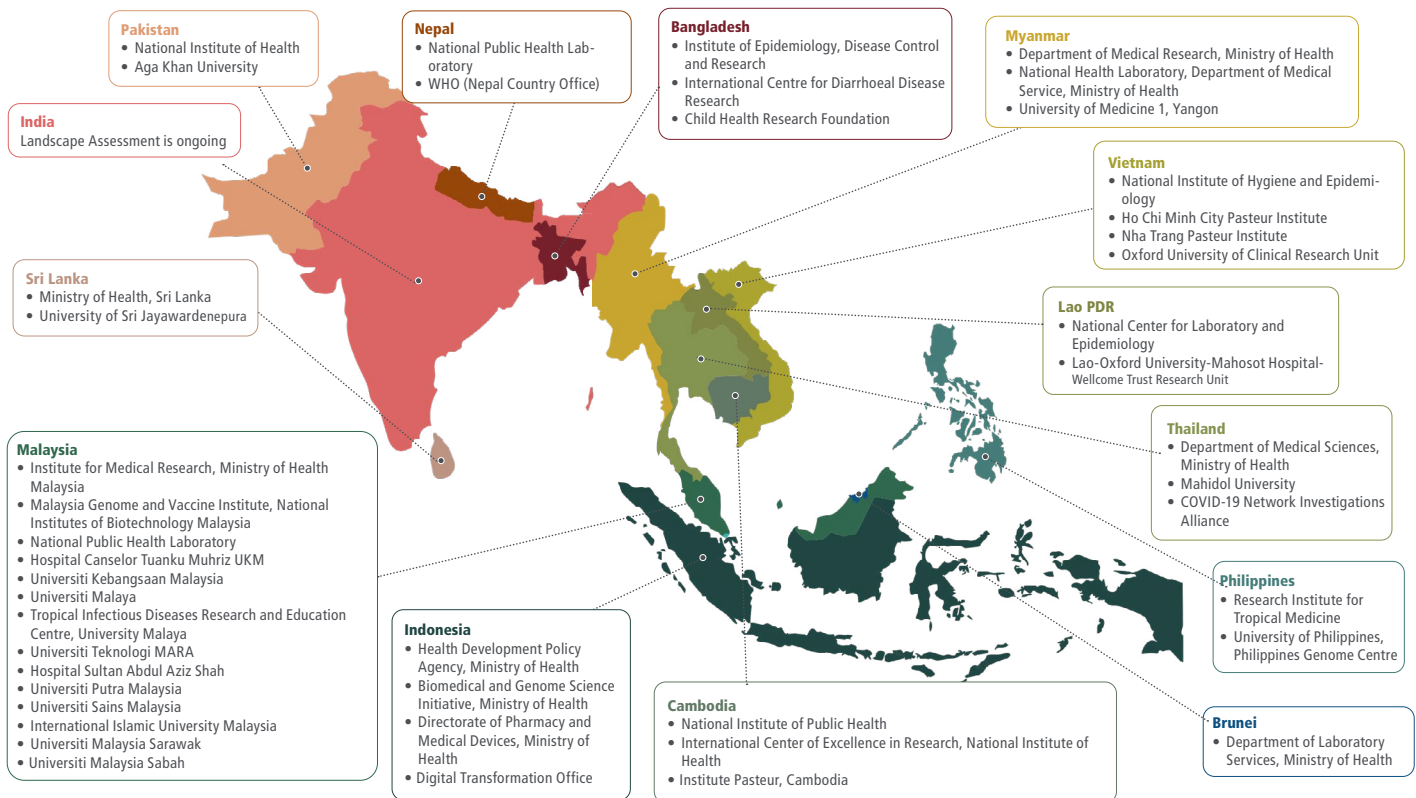
National surveillance planning; economic evaluation and assessment of supply chain, regulatory and legal systems surrounding genomics for infectious disease in the region are a few key areas of focus within the think tank.

“Genomic sequencing of infectious diseases is pivotal for understanding pathogen origin, tracking its spread, and developing effective therapeutics and vaccines.”

- Professor Gavin Smith
Director,
Programme in Emerging
Infectious Diseases

Asia PGI Network

The Asia PGI network includes 41 regional partners from 14 Asian countries representing government, academia, public/private laboratories and NGOs.



The Asia PGI also draws together a consortium of Singapore-based partners with a breadth of scientific and technical expertise, and an extensive track-record of regional capacity development.

Duke-NUS Medical School

- Centre for Outbreak Preparedness
- Programme in Emerging Infectious Diseases
- Programme in Health Services and Systems Research
- SingHealth Duke-NUS Global Health Institute
- Centre of Regulatory Excellence

Agency for Science Technology & Research [A*Star]

- Bioinformatics Institute

National University of Singapore

- Centre for Global Health, Law and Governance
- Saw Swee Hock School of Public Health

National Centres/Initiatives

- National Centre for Infectious Diseases
- National Public Health Laboratory
- Singapore National PREPARE Initiative



The Asia PGI secretariat is hosted by The Centre for Outbreak Preparedness (COP) within Duke NUS Medical School. COP was established in June 2022 to increase the region's capacity to predict, detect and respond to emerging threats across South and Southeast Asia.

FOR OPPORTUNITIES & PARTNERSHIPS

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