



Workshop 2 – Virtual

12, 19, 20 July 2022

INGSA-Asia Regional Chapter, in partnership with the U.S National Academies of Sciences, Engineering, and Medicine (NASEM) are organizing a series of workshops to explore ways to prevent and mitigate the consequences of zoonotic spillover in the live animal supply chain that involve the overlap between wildlife, other animal species, and humans in the Southeast Asia region. This “Countering Zoonotic Spillover of High Consequence Pathogens” project aims to bring together leaders, stakeholders, and policymakers from diverse backgrounds to develop resilient strategies for zoonotic disease surveillance, response, preparedness, and prevention in countries across the region.

The first workshop was held on the 20th, 24th, and 25th of May 2022. The invited participants with expertise in detecting, preventing and mitigating zoonotic spillover in the live animal supply chain shared their perspectives on the challenges and strategies used to combat zoonotic disease spillover in the region. During the meeting, they discussed these critical issues by sharing their experiences and research findings. More details of Workshop 1 can be found [here](#).

The end goal of this INGSA-NASEM project is to create a guidebook that contains expert advice and best practices to help partner organizations in the Southeast Asia region prevent future pandemics. The guidebook will include actionable and evidence-based methods for reducing the risk of zoonotic spillover and pathogen transmission.

At the second workshop, on the 12th, 19th, and 20th of July, the participants discussed the key spillover points in the “value chain” for animal disease management as well as systemic problems and possible solutions for the gaps in the value chain. Discussing the histories and evolution of One Health in the region helped us to understand how efforts to combat relatively well-documented diseases such as SARS, Avian flu, Ebola, Nipah virus, and other pathogens have changed over time in the region.

The following were the key messages derived from Workshop 2:

Lessons learned to help in leaping forward and closing gaps

- Zoonotic pathogens are more likely to spill over into human populations when natural ecosystems are disrupted by phenomena such as changes in land use, habitat fragmentation, and climate change.
- Zoonotic pathogens from wildlife can be introduced to humans via the wildlife trade. Wet markets are a key part of food systems in Southeast Asia, often selling meats from

wild animals, as well as wildlife-based products for traditional medicines. The overlap between humans and animals can increase the risk of spillover.

- In the event of an outbreak, there is a lack of universally agreed-to policies and communication strategies by the local authorities and the governments in the region. Most diseases outbreak strategies start with a risk analysis, but there is insufficient training for risk mitigation across sectors.

Identifying promising areas of innovations in disease detection and surveillance

- New sequencing technologies can be employed for early detection of pathogens or novel virus and can help with early warning.
- “Next generation serology” – the use of serosurveillance in both human and animal populations – is a novel, advanced approach to monitoring the spread of infectious disease.

Building the workforce

- Training a knowledgeable and sustainable workforce is an important aspect of capacity building to improve zoonotic spillover surveillance.
- Helping or learning from each other by sharing case studies is an effective way to inform new populations about what has worked and not worked in the past.
- Training that integrates the local social cultures can be effective for improving disease surveillance and mitigation.

The first two workshops have helped the project organizers identify factors that facilitate spillover events and identified gaps and limitations in the measures designed to combat spillover, including the improvements needed to reduce the frequency of transmission of pathogens from animals to humans. The subsequent two workshops will allow the participants to create actionable and evidence-based guidance and meet with key local, national, and regional stakeholders to consider their specific needs and policy considerations.