

PROJECT SUMMARY

Reducing Biosecurity Threats from Infectious Diseases of Pandemic Potential in Southeast Asia

Jointly implemented by APEIR, MBDS, and ASEAN+3 FETN

Southeast Asia, including Southern China, is a hot spot of emerging infectious diseases due to many factors, such as its high population densities, intensive animal farming, abundant but rapidly changing ecosystems, lifestyles that promote close contacts between human and wildlife, and climate. Some of the most dangerous pathogens, such as anthrax, highly pathogenic avian influenza (AI), and melioidosis, are endemic to the region. Though these agents are naturally occurring, their highly infectious nature can lend itself to becoming biological threat if placed in the wrong hands. The ease in which some of these pathogens can be developed in a laboratory, and the difficulties of determining whether pathogens have been removed from laboratory facilities, give these pathogens great potential to cause a deliberate biosecurity threat.

With ASEAN on the verge of becoming a single community in 2015, this will decrease barriers to movement between nations, allowing for greater flow of goods and labor to encourage economic prosperity. However, this can also facilitate the spread of infectious patients or pathogens between countries, both naturally occurring infections and deliberately created infections. Thus, the capacity for ASEAN nations to prevent, detect, and handle these infectious agents is both a public health and national security concern. The project is jointly cooperated by 3 networks (1) Asia Partnership in Emerging Infectious Diseases Research (APEIR) will lead research, (2) Mekong Basin Disease Surveillance Network (MBDS) will lead surveillance activity and (3) ASEAN+3 Field Epidemiology Training Network (FETN) will lead human resource capacity building.

The overall objective of this joint project is *to strengthen regional capacity for understanding, preventing, preparing for, and responding to disease agents that have bioterrorism and/or pandemic potential in Southeast Asia*. This will be done by utilizing existing networks in the region, and building up their capacity, and the capacity of those on the front line of these emerging infectious diseases (EIDs).

APEIR is a research network consisting of six countries (Cambodia, China, Indonesia, Lao PDR, Thailand, and Vietnam). In this study, APEIR will utilize its research networks to carry out the research study on three infectious diseases with possible biosecurity threats: influenza (Influenza type A), melioidosis (*Burkholderia pseudomallei*), and salmonellosis (*Salmonella*). APEIR is hoping to carry out research at cross border sites Thailand – Lao PDR – Vietnam (Mukdahan – Savannakhet – Quang Tri). This research study is expected to take up to 2.5 years (until September 2016).

To achieve the goal, training is necessary as an actual start up event for laboratory manipulation of the project. The “Laboratory Training and Risk Management Workshop” will be conducted on 6-10 July 2015 at Mahidol University, Amnatcharoen campus, Amnatcharoen, Thailand. In addition to provide laboratory practicing experiences, the workshop aims at building laboratory capacity to handle dangerous pathogens and sharing knowledge on some potential pathogens.