



Regional Strategic Framework for Laboratory Capacity Building and Networking in ASEAN

I. Background

The economic and public health implications of Highly Pathogenic Avian Influenza (HPAI) and other Highly Pathogenic Emerging Diseases (HPED) are the threats to the national prosperity of the Member States and the regional development of the Association of Southeast Asian Nations (ASEAN). Since 2003, HPAI outbreaks caused considerable losses of production, and loss of livelihoods of vulnerable people. In addition, recent emergence and re-emergence of the potential transboundary animal diseases (TADs), including Highly Pathogenic Porcine Reproductive and Respiratory Syndrome (HP-PRRS), New Castle disease (NDV) and Foot and Mouth Disease (FMD) in ASEAN countries have posed serious economic loss, a significant threat on human food security and trade barrier to the affected countries.

The continuing outbreaks that began in late 2003 and early 2004 have been disastrous for the poultry industry in the region; by mid-2005, more than 140 million birds had died or been destroyed and losses to the poultry industry are estimated to be in excess of US\$10 billion (World Bank, 2009). Although concerted international action has successfully eliminated the deadly H5N1 virus from poultry in almost all the 63 countries infected at the peak of the global outbreaks, the virus still persists in the SEA regions, with evidence of transboundary transmission among the affected neighboring countries. At least five countries, namely Bangladesh, China, Egypt, Indonesia, and Vietnam, have been identified as HPAI endemic countries with high disease incidence in both humans and animals. Two out of these five HPAI endemic countries, Vietnam and Indonesia, are in Southeast Asian regions. In addition, there are clear evidences that the virus has continuously evolved, resulting in substantial phenotypic diversification and expansion of host ranges. This has raised serious public health concerns at the region and global levels. The obtained research information highlights the need of continuous monitoring of the biological and epidemiological natures of the HPAI viruses in the affected region. Establishment and continued support on the regional laboratory network is essential for the effective surveillance, and control program against HPAI in the region.

Apart from HPAI, pathogens circulating in domestic animals and wildlife population also pose a threat to both animal and public health sectors. Intensified livestock production system, urbanization and the continuous changes of the eco system allows the closer interface of livestock, wild life and human which could enhance the possibility of disease emergence and spread to the domestic animal and human populations. The majority (>70%) of the newly emerged infectious diseases originate in animals including severe acute respiratory syndrome (SARS), Ebola, Nipah, etcetera. More importantly, most of the recently emerged diseases occurred within Asia. Laboratory capacity of the Member States is crucial for surveillance and monitoring efforts which could initiate the rapid response to contain the disease before it spreads. Sharing of quality laboratory results generated by laboratories of Member States is another concern when interpretation of the results is required for disease control at the regional basis. Sharing of expertise among the laboratories of the Member

States would enhance the resource mobilization within the region through the collaborative efforts. Therefore, the regional laboratory network can serve as a key mechanism to orchestrate the above mentioned efforts to combating against the upcoming EIDs in the region.

- II. **Vision** – ASEAN is capable of detecting and responding in a timely manner to animal and zoonotic diseases with high impact on food security and public health safety through multi- sectoral cooperation and partnerships.
- III. **Purpose** – The Regional Strategic Framework for Laboratory Capacity Building and Networking (hereinafter referred to as “the Framework”) is proposed to promote sustainable development of diagnostic capacities, quality of laboratory services, and sharing of information and expertise among the veterinary diagnostic laboratories of the ASEAN Member States.
- IV. **Scope and Linkages** – The Framework is action-oriented, included medium term activities but long-term strategy. The Framework aims to harmonize efforts across the Member States to promote the efficient and sustainable animal health laboratory services. The Framework will focus on the national veterinary diagnostic laboratories with the aims to build and/or enhance the laboratory capacity for detecting and responding to HPAI and other potential HPED in the region, promote laboratory quality system, and networking among the laboratories within the region. It is also to streamline regional and global initiatives, such as the OIE/FAO Network of Expertise on Animal Influenza (OFFLU), the Global Framework for the Progressive Control of Transboundary Animal Diseases (GF-TAD), and the One Health approach

The Framework is linked with the strategic goals envisaged under the Roadmap for an HPAI-Free ASEAN Community by 2020. It also provides a strategic approach to converge efforts to strengthen laboratories into the prevailing, ongoing ASEAN’s initiative in a broader context to establish a functional mechanism to coordinate undertakings on animal health and zoonosis.

The Framework is complementary with the Master Plan for ASEAN Connectivity to enhance integration and cooperation of ASEAN, global competitiveness of ASEAN through stronger production networks, and the well-being and livelihood of ASEAN peoples. The Strategic Goals set forth therein are also aligned with the ASEAN Economic Community (AEC) Blueprint that ratifies deepened and broadened economic integration by 2015. Through multi-sectoral dimension of the Framework, and its contribution to safeguard animal and human health, the Framework is also cohesive with the ASEAN Socio-Cultural Community (ASCC) Blueprint that is aspired to lift the quality of life of its peoples by building a strong foundation for greater understanding, good neighbourliness, and a shared sense of responsibility.

- V. **Strategic Goals** – There are 6 key strategic goals in this strategic framework as followed;
 - Goal 1:Development of regionally-coherent, national laboratory strategies and policies
 - Goal 2:Allocation and mobilisation of resources to support implementation of national strategies for efficient and cost-effective delivery of laboratory services
 - Goal 3:Strengthening of ASEAN Member States capacity to provide acceptable quality and proficient laboratory services
 - Goal 4:Enhancement and promotion of acceptable biosafety and biosecurity practices and environment in laboratory settings
 - Goal 5:Enhancement and promotion of linkages and sharing of information among laboratories and stakeholders to ensure rational use of laboratory services

Goal 6: Strengthening of ASEAN Member States capacity on planning, coordinating, and implementing research activities under standard ethical research conducts

Goal 1: Development of regionally-coherent, national strategies and policies to support effective and sustainable laboratory services

- Objective 1: To develop national strategies and policies for animal health laboratory services
- Objective 2: To promote regional and national regulatory mechanisms and/or certification process on good laboratory services and practices
- Objective 3: To align animal health laboratory policies and governances at national level with that of regional level through the regional laboratory network
- Objective 4: To strengthen regional mechanisms to coordinate laboratory policies and activities

Goal 2: Allocation and mobilisation of resources to support implementation of national strategies for efficient and cost-effective delivery of laboratory services

- Objective 1: To advocate for and support development of national human and financial resource management plans
- Objective 2: To assess needs and gaps for the implementation of national strategies and maintenance of laboratory services considering the use of existing tools such as OIE Performance of Veterinary Services (PVS) Pathway

Goal 3: Strengthening of ASEAN Member States capacity to provide acceptable quality and proficient laboratory services

- Objective 1: To strengthen laboratory capacities of ASEAN Member States to diagnose and confirm infections of animal and zoonotic diseases
- Objective 2: To develop and promote the implementation of regional guidelines and protocols for diagnosis of animal and zoonotic diseases
- Objective 3: To strengthen proficiency of laboratory services of ASEAN Member States through engagement in the regional and national proficiency testing programs

Goal 4: Enhancement and promotion of acceptable biosafety and biosecurity practices and environment in laboratory settings

- Objective 1: To develop and implement operating procedures on laboratory biosafety and biosecurity management, including occupational health and safety programs, and biological waste management
- Objective 2: To strengthen functional and physical capacities of laboratories to implement the biosecurity and biosecurity guidelines

Goal 5: Enhancement and promotion of linkages and sharing of information among laboratories and stakeholders to ensure rational use of laboratory services

- Objective 1: To strengthen capacities of laboratories to efficiently manage relevant information

- Objective 2: To enable laboratories within ASEAN Member States to appropriately share information among laboratory networks and other stakeholders at national, regional and global level
- Objective 3: To promote sharing of expertise, resources, and trainings among laboratories within ASEAN Member States

Goal 6: Strengthening of ASEAN Member States capacity on planning, coordinating, and implementing research activities under standard ethical research conducts

- Objective 1: To strengthen capacity of laboratory personnel in research methodology and ethical research conduct
- Objective 2: To enable engagement and promote proper recognition of laboratory personnel of ASEAN Member States in research studies and scientific meetings/conferences and publications

VI. Cross cutting strategies –

The regional competency in providing a quality laboratory services require multi-agency and multi-sectoral cooperation among the ASEAN Member States, international organizations and donor agencies. The multi-sectoral collaboration is expected to be further strengthened by the regional coordination mechanism on animal and human health laboratory networks. Joint development and implementation of regional laboratory diagnostic protocol, sharing of research/laboratory expertise, collaborative research and development are among the potential implementation activities. Through this coordination, benefit from activities related to the laboratory issues and networking can be shared among the network members in a technically and financially efficient manner.

VII. Implementation arrangements –

The proposed activities within the framework can be facilitated through several mechanisms at national, regional, or international levels. In a short-term, the implementation of the Framework will be coordinated by the ASEAN Secretariat, with assistance from the ASEAN Regional Support Unit, in close consultation with Regional Laboratory Advisory Group. There are existing dialogue partners including WHO, FAO, OIE, and regional reference/leading laboratories which can provide technical guidance, and inputs, and financial contributions along the implementation process, with financial inputs currently available from several regional and national projects and programs, such as EU-HPED, USAID-EPT program.

In a mid- and long-term, the Member States which implement national laboratory capacity building programs will assume responsibilities in ensuring successful execution of the Framework.