

Health Governance and Dengue in Southeast Asia

Executive Summary

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Executive Summary and Policy Recommendations

This Report focuses on health governance of vector-borne diseases in Southeast Asia, analysed from the context of threats and opportunities brought about by climate change, urbanisation and globalisation. It first discusses regional health governance in ASEAN and the mechanisms and frameworks that have been established to promote health security, with particular focus on vector-borne diseases. It then provides a background on dengue in Southeast Asian countries, the economic burden of the disease and the regional prevention and control measures that have been implemented so far. The Report also presents a SWOT analysis that assesses the health governance systems of two Southeast Asian countries – Indonesia and Malaysia – with a particular focus on the institutions, networks and the effectiveness of domestic vector prevention and control measures. It assesses the level of integration that regional frameworks and domestic measures have achieved and policy shifts from reactive towards preventive and sustainable long term solutions. Finally, the Report lays out a number of policy recommendations relevant to regional dengue prevention and control.

Introduction

Dengue is one of the most common vector-borne diseases in Southeast Asia,⁵ and has been ranked as the most important mosquito-borne viral disease with epidemic potential in the world. Among all the vector-borne viral diseases, the transmission rate of dengue is the fastest in the world. It is alarming that dengue epidemic cycles in the region have been reduced to 3 to 5 years from the average 10 year cycle. Well-integrated prevention and control programmes to combat the dengue across *all* levels and across different sectors and among stakeholders is essential. It is estimated that with the annual average 2.9 million dengue episodes in Southeast Asia, the annual economic burden in aggregate costs from 2010 data is estimated at USD950 million or about USD1.55 per capita (Shepard, Undurraga and Halasa 2013).

Convergence of Regional Frameworks and Multi-sectoral Initiatives

There are existing intergovernmental strategies from global and regional actors and multisectoral collaborations and networks that form part of the ASEAN regional health security framework, particularly strategies that deal with communicable disease control. Specifically, the regional health security framework for dengue puts the region in a good position to leverage on collaborative mechanisms for effective dengue prevention and control. ASEAN member states are very much aware of the epidemic potential of dengue and given its numerous and porous borders, there have been regional efforts to stem dengue under various initiatives under the ASEAN community building processes set forth by the ASEAN Charter and the ASEAN Socio-Cultural Community Blueprint (ASCC).

On one hand, there are intergovernmental initiatives such as the Asia Pacific Strategy for Emerging Diseases (APSED), the WHO Asia Pacific Dengue Strategic Plan and the ASEAN Medium Term Plan on Emerging Infectious Diseases (2012-2015) which mandates the observance of the ASEAN Dengue Day. The ASEAN Strategic Framework for Health Development and the Expert Group on Communicable Diseases further puts focus on endemic vector-borne diseases such as dengue and malaria. On the other hand, there are a number of multi-sectoral collaborations and networks in Southeast Asia. In line with the ASCC Blueprint's action line to "strengthen and maintain surveillance system for infectious diseases including malaria and dengue fever [among others]," there is the United in Tackling Epidemic Dengue (UNITEDengue) network focused on the cross-border sharing of dengue surveillance information and knowledge on dengue control. The network's

⁵ Southeast Asia refers to the ASEAN region which includes: Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam.

website, hosted by the Singapore Environmental Health Institute provides its members up-to-date disease incidence, virus surveillance information and a lucid key for mosquito identification.

With regard to the ASCC Blueprint's action line to "promote collaboration in research and development on health products especially on new medicines for communicable diseases including neglected diseases commonly found in ASEAN Member States," there are initiatives toward dengue vaccine development and biological vector control. There are three main collaborations on dengue vaccines in the region, the Dengue Vaccine Initiative (DVI), the ASEAN Network for Drugs, Diagnostics, Vaccines and Traditional Medicines Innovation (ASEAN-NDI) and the ASEAN Member States Dengue Vaccination Advocacy Steering Committee (ADVASC). Another research program, Eliminate Dengue, aims to biologically control dengue by studying how Wolbachia bacteria can be utilised as an effective strategy to disrupt dengue transmission between people by targeting the dengue virus transmission by *Aedes aegypti* mosquitoes. In line with the ASCC Blueprint action line to "strengthen regional clinical expertise through professional organisations networks, regional research institution, exchange of expertise and information sharing," there are a number of existing networks including the Southeast Asia Infectious Disease Clinical Research Network (SEAICRN), the Inter-Islamic Network in Tropical Medicine (INTRM) and the Southeast Asian Ministers of Education Organization - Tropical Medicine and Public Health Network (SEAMEO-TROPMED).

Indonesia. There is an increasing diversity of actors and stakeholders involved in health governance and dengue across the archipelago. Dengue prevention is not wholly limited to government actors but also is slowly being integrated into the objectives of the private sector, academia, non-government, faith-based and community-led organisations, international funding agencies, pharmaceutical companies and regional organisations. However, the health system including infrastructure and human resources are still inadequate. Improvements on this front, especially recruiting more health professionals into the public sector and retaining them are critical. There is potential for improvement in dengue prevention and control in Indonesia. Political will, community leadership and private sector initiatives can all help in supporting and strengthening public and environmental health across all provinces and special autonomy areas. Long-term commitments for dengue prevention and control are also needed, as many initiatives are usually project-based and most of them are not properly monitored and evaluated. Some local pilot projects were successfully scaled up but not on a national scale as a result of limited financial resources.

Malaysia. A recent increase in dengue incidence is a significant cause of concern, especially given the hyperendemicity of serotypes. The 2009 – 2013 National Strategic Plan for Dengue included a commitment to half the total number of cases by 2013 but was not achieved. Greater urbanisation has led to an increase in encroachment on natural habitats and this could lead to greater co-habitation between mosquito vectors and humans. Thus, there should be further investigation into more sustainable land-use strategies. More recently, the Malaysian government has implemented prevention and control measures at the local level as well as policy measures at the state level. One commendable national level measure was the creation of a Dengue Task Force headed by the Deputy Prime Minister in July 2014. However, while the government's programmes are well-designed especially in terms of engaging different actors, improvements are needed in terms of infrastructure and human resources investment in rural areas. Further development of community and faith-based organisations can help to spread awareness regarding dengue prevention and control measures particularly in rural areas. Alongside this investment, higher levels of engagement with the private sector, especially in the tourism and food & beverage sector to share best practices would encourage a more consistent culture of prevention and control.

Policy Recommendations

This NTS Report provides an initial assessment of regional dengue interventions and an examination of Indonesia and Malaysia in dengue prevention and control. From a regional perspective, multilateral arrangements can provide an avenue to develop cooperative responses to emerging and accelerated spread of communicable diseases as a result of urbanisation, the movement of people and climate change.

Below are some policy recommendations for ASEAN:

- Utilise and reinforce established APSED and APT mechanisms to achieve IHR core capacities. Integrate the UNITEDengue mechanism into the post-2015 ASEAN framework.
- Promote new diagnostic technology in dengue confirmation and infection across ASEAN.
- Promote more public-private partnerships in dengue vaccine development.
- Stimulate the expansion of the collaborative clinical research network of hospitals and research institutions to further strengthen regional clinical expertise on dengue.
- Encourage climate data use to support early warning systems and dengue prevention and control.
- Promote dengue prevention and control as a component of corporate social responsibility especially in the tourism sector.
- Scale up efforts to biologically controlling dengue.
- Advocate for a World Dengue Day, building on the success of ASEAN Dengue Day.