



## ASEAN Socio-Cultural Community POLICY BRIEF

ASCC Research and Development Platform | Policy Brief #7 | 2023

### EXECUTIVE SUMMARY

- Robust health security through the building of a resilient health system in the ASEAN region is needed to overcome the vulnerability to public health emergencies due to infectious diseases and the impact of climate change to health.
- Ensuring resilient health systems across ASEAN Member States requires the improvement of several health and non-health factors: WHO's health system building blocks (i.e., service delivery, human resources for health, health information system, essential medical products and technology, financing, and leadership and governance), Universal Health Coverage, social determinants of health for an enabling environment, food security, as well as climate-resilient infrastructure and ecosystem.
- While initiatives aligned with these factors have been established in ASEAN, policies that specifically address the development of resilient health systems are still scarce.

### POLICY RECOMMENDATIONS

- Promoting the awareness and understanding of resilient health systems — such as the technicalities of resilient health systems and their linkages with other public health programmes — and its implementation in the ASEAN region.
- Promoting supply chain connectivity and integrating the humanitarian assistance track with the national health track in ASEAN Member States may prove to be beneficial in implementing a supply chain approach to build resilient health systems.
- Strengthen primary health care services by integrating climate and disaster health management initiatives.

This policy brief was made possible with the support of:  
The Government of Japan through the Japan-ASEAN Integration Fund (JAIF)



## BUILDING HEALTH SYSTEM RESILIENCE IN ASEAN

*Resilience Development Initiative and Aly Diana*

### Introduction

The COVID-19 pandemic and climate-related disasters have highlighted the vulnerability of Southeast Asia. ASEAN is a hotspot for infectious diseases (Miranda et al. 2021, p.1141) and the region is most vulnerable to climate change (ASEAN 2021, p.131). These dual burdens overload public health emergencies (PHE) management and disrupt essential care services. This condition underlines the immediate need for robust health security and adaptive health systems (Rentschler et al., 2021, p.3).

Building robust health security requires a strong health system (WHO n.d.). Thus, it is essential to invest in resilient health system (RHS)—the ability to prepare for, manage, and learn from extreme change impacting health systems (Thomas et al., 2020, p.5). Relevant health and non-health factors (Figure 1) contribute to RHS and its ability to respond effectively to changing situations (Olu, 2017, p.4).

The health factors include WHO health system's building blocks and Universal Health Coverage (UHC). The

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building blocks summarize the health system’s functions into six interconnected blocks: service delivery, human resources for health (HRH), health information system, essential medical products and technology, financing, and leadership and governance. Integrating cognitive capacity and flexibility into the building blocks is a vital starting point (Foroughi et al., 2022, pp.4-10). These efforts also support the achievement of UHC as pillars of RHS (WHO, 2021, pp.3-5).

Non-health factors include the enabling environment, food security, and suitable infrastructure. With regards enabling environments, optimizing the Social Determinants of Health (SDOH)—the conditions in which people are born,

and subsequently live, and grow—is critical as it encapsulates enabling environments for resilience (Olu, 2017, pp.2-4). Moreover, the availability of secure, nutritious food systems and climate-resilient health infrastructure that can withstand disasters and support broader healthcare coverage will further enhance the RHS (Fan et al., 2021; Foroughi et al., 2022, p.9).

ASEAN’s initiatives are in place to enhance factors relating to RHS. Several AMS specifically included sectors relating to RHS in their adaptation to climate change plans (ASEAN, 2021, p.135). However, there is still room for further enhancement to accelerate RHS in the region.

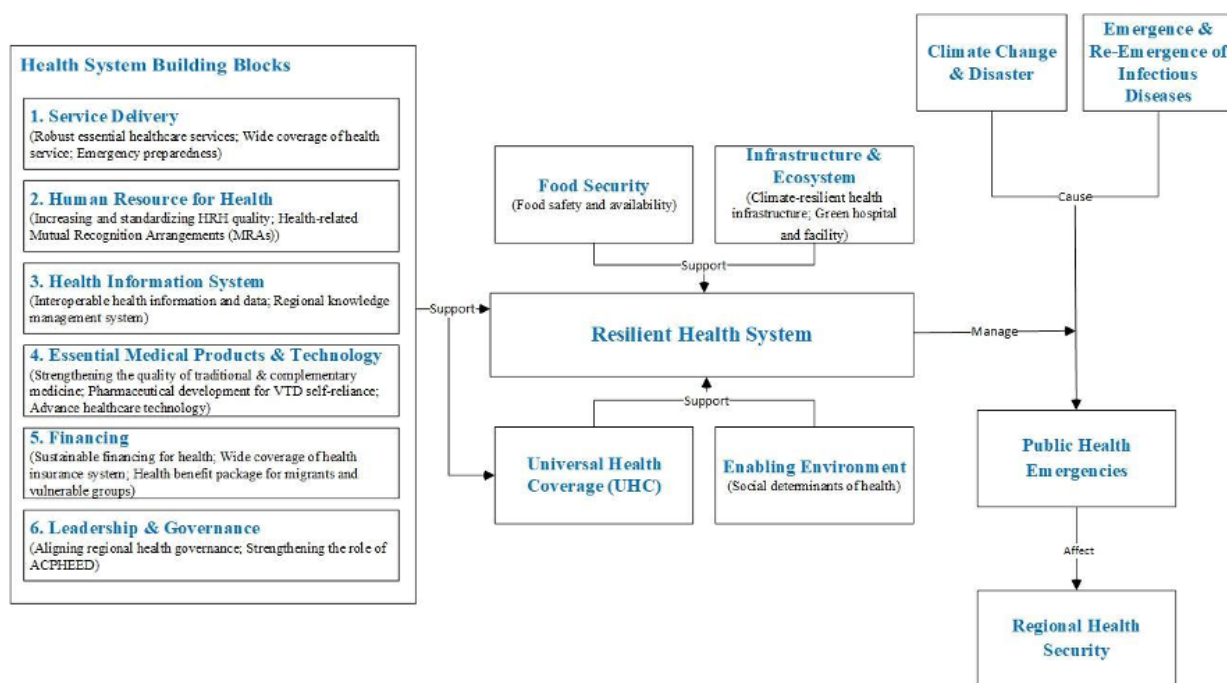


Figure 1: The Framework of RHS in the ASEAN Region

## Strengthening Health System Building Blocks

### 1. Service Delivery

Disastrous health events escalate the demands for health services and disrupt essential care delivery,

necessitating the resilience of healthcare delivery—which is capable of mitigating and responding to emergencies and ensuring the continuity of essential services (WHO, 2022). ASEAN has established diverse initiatives to support PHE and disaster health management, such as the ASEAN

Center for Public Health Emergency and Emerging Diseases (ACPHEED) and the ASEAN Regional Capacity on Disaster Health Management (ARCH).

For essential healthcare, AMS has rolled out initiatives to support resilience, including the ASEAN Comprehensive Recovery Framework (ACRF), which includes enhancing the health system and essential health services as its key priorities. Another element is the role of primary health care (PHC) in resilient services (WHO, 2022, p.13). Several AMS have pushed forward for PHC advancement in supporting RHS. Viet Nam, for instance, has strengthened grassroots healthcare networks, supporting early warning systems (Oanh et al., 2021). Moreover, a resilient supply chain capable of expanding healthcare service provisions may also support RHS (Liu and Anbumozhi, 2021, p.S583). In ASEAN, harmonizing healthcare standards through the ASEAN Medical Device Directive paves the way for resilient supply chains.

ASEAN also needs to address challenges to further RHS, including the disparity among AMS in systems and capacities to implement regionally integrated resilient healthcare service delivery and the lack of a definitive standard on resilient RHS in the region.

## **2. Human Resources for Health (HRH)**

In many ways, a strong workforce is essential for achieving health system resilience (Foroughi et al., 2022, p.1). A robust and flexible HRH is a vital element of preparedness (Barasa et al., 2018, p.499). In Thailand, distribution and flexibility in HRH mobilization allowed for lower COVID-19 mortality rates (Nittayasoot et al., 2021, pp.312-313). However, many AMS still struggle with maldistribution and shortage of HRH, with rural areas often understaffed in delivering Primary Healthcare-related services (Kanchanachitra et al., 2011, pp. 773-775; WHO, 2018, pp.3-11).

The availability of an extensive range of skilled HRH (e.g., nurses, epidemiologists, and community health workers) is vital for RHS. Medicine, dentistry, and nursing particularly, are some examples of occupations where easier mobility and agreements on standards and qualifications are vital towards regional development (Pachanee et al., 2019, p.1). Hence, the ASEAN Mutual Recognition Agreements (MRA) aim to facilitate mobility, information exchange, and capacity building among HRH in nursing, medicine, and dentistry (Law et al., 2019, p.2). An excellent implementation of MRA will be beneficial in attaining RSH in the region, mainly when focusing on an even HRH distribution to improve PHC service delivery (Singh et al., 2018, pp.3-4).

However, MRA's implementation is challenged by domestic-driven changes and limited capacities. Inadequate coordination among governments and fragmented governance are some drivers hampering RHS in ASEAN. The socioeconomic condition also influences MRA's implementation. Therefore, MRA execution will require consideration of the varied needs of the region, and a tendency towards an approach of gradual progress from the bottom up with a focus on agreement building.

In addition, advancing HRH's capacity significantly impacts RHS achievement. The ACRF plans to enhance HRH capacity through the commensuration of compensation and benefits to better support and motivate HRH, which will be highly beneficial in temporarily shouldering extra burdens during PHE (Thomas et al., 2020, p.15).

## **3. Health Information System (HIS)**

Health Information System is the digitalization of data, allowing healthcare providers to collect, manage, and optimize treatments based on patients' histories and other vital data (Leon et al., 2020, pp.1-95). ASEAN and the region's

private sectors are enhancing this system in the region. These efforts include the ASEAN Digital Masterplan (ADM) 2025, Indonesia and Malaysia's experimentation with national digital apparatus (Al-Junid et al., 2014, p.17), digital infrastructure and digital literacy strengthening, and utilization of telemedicine across AMS. Unfortunately, this effort has not achieved the idealized stage of HIS. According to the ADM, AMS lacks digital infrastructure and digital literacy. While Singapore and Brunei have excellent network coverage and quality, the rest of the ASEAN countries have much to improve on.

The implementation of HIS will also support societies and health sectors to bounce back from the pandemic by reducing costs and increasing access to essential care (ASEAN, 2020). HIS development offers insights and an abstraction of population-level data, making it possible for the government and health sectors to react quickly and effectively to public health needs and emergencies. An effective HIS system is beneficial for all sections of society. It can boost the efficiency of local businesses and thus increase their competitiveness in the global market, adds efficiency to public services, and its lower cost can significantly boost government efforts in improving welfare and the social safety net. These in turn, will lower the costs of goods and services from public and private sources while at the same time providing higher quality service.

AMS must strengthen its efforts in building an integrated HIS to fulfill ADM's 2025 goals. It is crucial to invest in digital infrastructure and digital literacy. The European case of a successful HIS, which allows third-party healthcare providers to access cross-border patient data while maintaining their cybersecurity, is an initiative that ASEAN can replicate (Knowledge for Policy Europe). The EU HIS also lowers the disparity in healthcare quality across the region.

#### **4. Essential Medical Products and Technology**

Essential medicines support the healthcare needs of the population to achieve sustainable development (Wirtz VJ et al., 2017, p.403). In the ASEAN region, essential medical products and technologies have become part of health priorities, with strategies focusing on 'Traditional & Complementary Medicine' (T&CM) and 'Pharmaceutical Development' in 2021-2025 to achieve self-reliance.

The ASEAN Trend Report on PHE exposed the limited vaccine self-reliance in the ASEAN region. Therefore, collaborative actions among AMS are essential to support the regional production and distribution of vaccines and drugs. The collaboration must also address the limited resources and capacity disparities between AMS, reliance on imported ingredients, and the low trust in homemade vaccines.

In contrast, traditional medicine is an often-underestimated health service (Liu, 2021, p.441) that could improve self-reliance on medical products if an integration with PHC is successful. Although some AMS have implemented T&CM to various degrees, most of them focused on diseases in circumstances where it was deemed that western medicine does not have any cure as of yet (Peltzer Karl et al., 2017, p.209). However, HRH's reluctance to accept and integrate T&CM hinders its development. Hence, the ASEAN Commemorative Conference on Traditional & Complementary Medicine in 2018 urged the adoption of four recommendations to incorporate T&CM in the existing health systems within the region.

Advancement and increased technology usage in this digital era have been proven useful and allows for better management of health emergencies. The usage of robots and artificial intelligence in

delivering health services in Thailand (Nittayasoot et al., 2021) during the COVID-19 pandemic helped limit HRH's exposure to the virus and lower mortality rates. However, most AMS must first tackle challenges such as inadequate investments in research and development (R&D), fragmented data, and weak cybersecurity before adopting these advanced technologies (Manantan Mark, 2020, p.1).

## 5. Financing

The health-financing systems of AMS are diverse, with different arrangements in different nations. While a single-payer national health insurance system primarily provides health financing with a single pool for revenue collection (e.g., Jaminan Kesehatan Negara in Indonesia), multiple pooling systems and hybrid systems with a single dominant pool exist in Singapore, Thailand, Cambodia, Lao PDR, and Malaysia. However, there is no official mechanism in Myanmar for public health financing inside the health system (Tan et al., 2022, p.10).

Notwithstanding this, AMS has many challenges in enhancing the health and welfare of its citizens, one of which is a reliance on household health spending. Except for Brunei Darussalam and Thailand, the household out-of-pocket expenditure (OOPE) ratio to total health expenditures in AMS exceeds 30%. It is significantly higher than the average OECD country ratio of 20% (OECD Health Statistics 2020). Health-financing systems that include a large proportion of OOPE are more sensitive to catastrophic healthcare expenses. As a result, citizens' health outcomes will only improve slowly, hence this makes narrowing the healthcare coverage gap difficult (EU-ASEAN Business Council, 2022, p.11).

Some possible actions regarding OOPE issues are increasing the tax base and diversifying the sources of non-tax revenue for the government,

increasing fiscal flexibility for health as a result of sustained positive economic performance, and increasing the effectiveness of means testing by active engagement.

The Cambodian example shows the benefit of creating demand-side funding via a health equity fund to strengthen the providers' responsibilities to the poor. In this case, removing user fees without extra funds to subsidize poor people's healthcare might be damaging (OECD, 2020).

In addition, recommendations for AMS issues include: (i) aligning and reorienting funds from global health initiatives; (ii) strengthening political leadership supported by fiscal capacity; (iii) activating community engagement in identifying the poor; (iv) aligning and reorienting funds from global health initiatives; and (v) increasing collaborations and partnerships among AMS stakeholders.

## 6. Leadership and Governance

Strong leadership and governance in the health system are crucial towards detecting, preventing, and addressing health threats, thus strengthening RHS. Effective leadership must demonstrate the benefits of improving the health system for better resilience, supported by strong governance and institutions and coordination at all levels (Thomas et al., 2020, p.12; ASEAN, 2020, p.44).

At the regional level, governance in the health system is shown through the ASEAN Health Ministers' Meetings (AHMM) for high-level decision-making on the priorities for health improvement (Lamy and Phua, 2012). Furthermore, the ASEAN Coordinating Council Working Group on Public Health Emergencies (ACCWG-PHE) was set up to ensure a coordinated and cross-sectoral ASEAN response.

Subsequently, the ASEAN Center for Public Health Emergencies and Emerging Diseases (ACPHEED) aims to prevent, detect, and respond to PHE, with the potential to push and improve the regional governance of RHS in ASEAN. Thus, in developing ACPHEED, several factors must be considered, such as having clear goals and milestones for achieving RHS, being able to prevent silos in the regional health system and emergency efforts, and being able to widen collaborations on RHS development through strategic stakeholder engagements (Nathan et al., 2021, p.8).

## Achieving Universal Health Coverage

UHC and health security are interconnected, and a robust and resilient health system is the cornerstone for both (WHO, 2021, p.2). The purpose of UHC is to ensure that all individuals have access to high-quality healthcare without having any financial burden, and healthcare financing plays a vital role in achieving UHC (WHO, 2010; Jabeen et al., 2021, p.2611).

AMS has made considerable progress towards UHC (ASEAN, 2016, p.23). According to The Commonwealth Fund (2020), Singapore has achieved UHC through a hybrid financing system. Meanwhile, Thailand has achieved UHC for the entire population through three main public health insurance schemes (WHO, 2021).

In addition, Brunei Darussalam, Malaysia, and Viet Nam have high coverage of essential services. These countries' relatively low out-of-pocket spending suggests a low risk of financial hardship (WHO, 2018; The Vietnamese Ministry of Health, 2022).

However, Cambodia's current out-of-pocket spending is around 60% of health expenditure, which poses a substantial risk of impoverishment

to many households (Hyder, 2021). Coverage of most health service indicators in Myanmar was also below the UHC target of 80% (Han, 2018, p.2). Meanwhile, Indonesia and the Philippines are working hard to attain UHC by 2030. Indonesia has the National Health Insurance programme, which has protected more than 82% of the total population of Indonesia (Ministry of Health of Indonesia, 2021). In contrast, in the Philippines, UHC only covers 51% of the population (Hutapea, 2019, p.644).

Furthermore, although Lao PDR has the lowest UHC service coverage, Lao PDR has made impressive progress toward UHC. Effective social health protection coverage reached 94% of the population in 2018, jumping from 10.8% in 2008 (ILO, 2018, p.1).

Overall, significant portions of the population in AMS gained access to financial protection services, but not for universal coverage. Some possible actions for this issue are strengthening national and local leadership to achieve UHC, investing in a robust PHC, and developing economic aid for UHC's adoption and extension.

## Ensuring an Enabling Environment

The environmental and social conditions in which health systems exist, greatly influence an individual's access and use of health services, including health outcomes (WHO, 2019, p.27). Aspects of the enabling environment for RHS are connected to SDOH. Therefore, optimization of SDOH is required to mitigate public health risks from disasters (Olu, 2017, p.5). As seen during the COVID-19 pandemic, factors relating to SDOH, such as poverty, impacted the spread and morbidity of COVID-19 outcomes (Abrams and Szeffler, 2020, p.659).

ASEAN has several initiatives to optimize SDOH generally, including the ASEAN Economic Community Blueprint 2025, the COVID-19 ASEAN Response Fund, and the ASEAN Common Framework for Comprehensive School Safety (ACFCSS). These initiatives aim to support health equity and achieve UHC, along with other programmes to improve the socioeconomic condition of the ASEAN Community. AMS also implemented several policies to support SDOH in the countries, such as Singapore's policies for safe housing. However, improvement is still needed to optimize SDOH, as proven by the limited health literacy in the SEA region (Rajah et al., 2018, p.1). Ensuring an enabling environment for RHS will require addressing its challenges, such as defining specific SDOH relating to RHS and integrating health system resilience considerations into current socioeconomic-related initiatives.

### **Developing Suitable Infrastructure**

A resilient and environmentally-friendly health infrastructure (REHI) refers to health facilities and supply-chain that consider local threats in the form of natural disasters and pandemics while practicing sustainable practices. Examples include resilient building codes which specify minimum standards for the construction of buildings, nature-friendly construction blocks, or other nature-based solutions.

Unfortunately, not all AMS have adopted REHI despite its benefits, and there has been a concerted effort to increase resilience amongst health infrastructure across the region. For example, during Typhoon Haiyan in the Philippines, public hospitals were more resilient than their private counterparts, as represented by the constant service conducted by the hospitals after the typhoon (Labarda et al., 2017, pp.426-436).

To support REHI adoption, ASEAN established the '2019 Plan of Action to Implement the ASEAN Leaders' Declaration on Disaster Health Management', a concerted effort to establish the Regional Coordination Committee on Disaster Health Management (RCC-DHM) and propel the development of REHI at the national level.

An example of a successful REHI is in Japan, as seen in the ability to handle COVID-19 coupled with tsunamis and earthquakes while ensuring the continued delivery of healthcare for its citizens (Hirota, 2021, pp.1-23). To achieve this, AMS must reduce unsustainable practices (e.g., healthcare waste and carbon-heavy supply chain) and ensure environmentally-friendly design, adequate supplies, digitalization, and a green tax system (WHO, 2022; HCWH, 2016).

### **Enhancing Food Security**

Most countries in the ASEAN region are agriculture-based, and due to the impact of climate change and urbanization, the state of food security is at stake. Agricultural production is constrained by water shortages, increasing temperatures, rapid spatial transformation, and rising built areas. Furthermore, the COVID-19 pandemic worsened food security due to economic slowdowns and downturns caused by policies and restrictions to contain the outbreak (ASEAN, 2022, p.8). Strengthening food security becomes more crucial considering the aggravating factors. Moreover, food security is closely related to human development as it affects human health and life expectancy (Jakaria, Tanuwijaya, and Lutfi, 2022, p.2).

Based on the Economist Intelligence Unit's Global Food Security Index (EIU GFSI)'s ranking in 2019, within the ASEAN region, from the data available from nine out of ten countries, most AMS have a below-average rank out of 113 countries, including

Cambodia (90), Indonesia (62), Lao PDR (92), Myanmar (77), and the Philippines (64) (Jakaria, Tanuwijaya, and Lutfi, 2022, p.2).

Regionally, efforts to strengthen food security in ASEAN is shown through statements issued concerning food security. ASEAN has adopted the ASEAN Integrated Food Security (AIFS) Framework and Strategic Plan of Action on Food Security (SPA-FS) in the ASEAN Regional. Subsequently, ASEAN has developed and endorsed frameworks and guidelines to promote food and nutrition security.

At the national level, Singapore, for example, has the '3 Food Baskets' strategy to strengthen food security (Singapore Food Agency, n.d.a). This strategy is also supported by their '30 by 30' plan to build up the agri-food industry's capability and capacity to produce 30% of their nutritional needs locally and sustainably by 2030 (Singapore Food Agency, n.d.b).

## Conclusion

ASEAN must optimize health system initiatives and policies to support RHS. These factors encompass the WHO's robust six health system building blocks, UHC achievement, optimizing enabling environment, investing in infrastructure, and ensuring food security. Although initiatives aligned with these factors have been established in ASEAN, policies that specifically address the development of RHS are still scarce. Hence, a few recommendations to initiate RHS in ASEAN include the following:

### 1. Promoting Understanding of Health System Resilience

As stated, literature on the technicality of RHS and its linkages with other public health programmes is still scarce (WHO, 2022, p.59). Hence, pushing forward for R&D in AMS' RHS is required. One

crucial action is assessing RHS condition in AMS is by utilizing WHO's Health Systems Resilience Toolkit. Other measures include identifying potential sources of vulnerability (Thomas et al. 2020, p.5) and carrying out health systems 'stress-test' for different PHE scenarios (EIT Think Tank, 2022, p.17).

### 2. Supply Chain Approach for Health System Resilience

A study indicates that a supply chain approach provides a better and more realistic approach to promoting RHS (Liu and Anbumozhi, 2022, p.5600). Case studies in Europe confirmed extending upstream procurement or resource sharing among hospitals and countries leads to superior risk mitigation (Spieske et al., 2022, p.1). A supply chain approach promotes an adequate and highly coordinated shared pool of health capabilities and capacity for deployment to face major health events (ibid.). Hence, promoting supply chain connectivity for RHS and integrating the humanitarian assistance track with the national health track in AMS may prove to be beneficial.

### 3. Strengthening Primary Health Care Services

The reform of PHC and associated hospitals can promote health security and improve health system responsiveness through integrated public health and primary care capacity in the frontline (WHO, 2021, p.14). Countries have demonstrated the importance of PHC, such as Greek's plan to reform primary care and prevention (EIT Think Tank, 2022, p.54). Recommendations include developing an operational framework to support PHC's role in PHE and climate impact assessment, enabling climate-related disaster management, ensuring that HRH trained in managing RHS is stationed in PHC, and utilizing telemedicine for primary care services (Thomas et al., 2020, p.15).



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