

INVESTING IN REGIONAL HEALTH SECURITY FOR SUSTAINABLE DEVELOPMENT IN ASIA AND THE PACIFIC

MANAGING HEALTH THREATS THROUGH REGIONAL AND INTERSECTORAL COOPERATION

Megan Counahan, Sonalini Khetrapal, Jane Parry, Gerard Servais, and Susann Roth

NO. 56

August 2018

**ADB SUSTAINABLE DEVELOPMENT
WORKING PAPER SERIES**

ADB Sustainable Development Working Paper Series

Investing in Health Security for Sustainable Development in Asia and the Pacific: Managing Health Threats Through Regional and Intersectoral Cooperation

Megan Counahan, Sonalini Khetrapal, Jane Parry,
Gerard Servais, and Susann Roth

No. 56 | August 2018

Megan Counahan was a former Health Specialist at the Central and West Department of ADB; Sonalini Khetrapal is a Health Specialist, Health Sector Group, Sector Advisory Service Cluster of ADB; Jane Parry is an independent consultant and communications expert; Gerard Servais is a Senior Health Specialist, Southeast Asia Department of ADB; and Susann Roth is a Senior Social Development Specialist, Health Sector Group, Sector Advisory Service Cluster of ADB.



Creative Commons Attribution 3.0 IGO license (CC BY 3.0 IGO)

© 2018 Asian Development Bank
6 ADB Avenue, Mandaluyong City, 1550 Metro Manila, Philippines
Tel +63 2 632 4444; Fax +63 2 636 2444
www.adb.org

Some rights reserved. Published in 2018.

Publication Stock No. WPS189504-2
DOI: <http://dx.doi.org/10.22617/WPS189504-2>

The views expressed in this publication are those of the authors and do not necessarily reflect the views and policies of the Asian Development Bank (ADB) or its Board of Governors or the governments they represent.

ADB does not guarantee the accuracy of the data included in this publication and accepts no responsibility for any consequence of their use. The mention of specific companies or products of manufacturers does not imply that they are endorsed or recommended by ADB in preference to others of a similar nature that are not mentioned.

By making any designation of or reference to a particular territory or geographic area, or by using the term “country” in this document, ADB does not intend to make any judgments as to the legal or other status of any territory or area.

This work is available under the Creative Commons Attribution 3.0 IGO license (CC BY 3.0 IGO) <https://creativecommons.org/licenses/by/3.0/igo/>. By using the content of this publication, you agree to be bound by the terms of this license. For attribution, translations, adaptations, and permissions, please read the provisions and terms of use at <https://www.adb.org/terms-use#openaccess>.

This CC license does not apply to non-ADB copyright materials in this publication. If the material is attributed to another source, please contact the copyright owner or publisher of that source for permission to reproduce it. ADB cannot be held liable for any claims that arise as a result of your use of the material.

Please contact pubsmarketing@adb.org if you have questions or comments with respect to content, or if you wish to obtain copyright permission for your intended use that does not fall within these terms, or for permission to use the ADB logo.

Notes:

In this publication, “\$” refers to United States dollars.

Corrigenda to ADB publications may be found at <http://www.adb.org/publications/corrigenda>.

CONTENTS

TABLES, FIGURES, AND BOXES	iv
EXECUTIVE SUMMARY	v
I. INTRODUCTION: WHAT IS HEALTH SECURITY?	1
II. THREATS TO HEALTH SECURITY IN ASIA AND THE PACIFIC	2
A. Asia: A Hot Spot for Emerging and Reemerging Communicable Diseases	2
B. Antimicrobial Resistance Is Rampant and Spreading	3
C. Climate Change and Natural Disasters Increase Threats to Health	4
III. DRIVERS OF HEALTH SECURITY THREATS IN ASIA AND THE PACIFIC	4
A. Urban Areas Are Growing	4
B. As Trade Increases, So Does Population Mobility	5
C. Health Systems Need Strengthening	5
IV. INTERNATIONAL AND REGIONAL GLOBAL HEALTH SECURITY INITIATIVES	7
A. International Health Regulations (2005)	7
B. Asia Pacific Strategy for Emerging Diseases and Public Health Emergencies	7
C. Sendai Framework for Disaster Risk Reduction 2015–2030	7
D. One Health	7
E. Global Health Security Agenda	8
V. ADB SUPPORT TO REGIONAL HEALTH SECURITY	8
A. ADB Is Experienced in Supporting Regional Public Goods	8
B. ADB Is Positioned to Promote Regional Cooperation	8
C. ADB Knows How to Invest in Regional Health Security	9
VI. NEW ADB PROJECTS WITH HEALTH SECURITY COMPONENT	12
VII. NEXT STEPS IN ASIA AND THE PACIFIC: INVESTING IN REGIONAL HEALTH SECURITY	13
A. Link with Global Agendas, Including Universal Health Coverage	13
B. Build Regional Governance and Reach for Convergence of Policies	14
C. Increase Cross-Sector Approaches and Activities	14
D. Make Upstream Investments in Health Systems Strengthening	14
E. Invest in Surge Capacity	14
F. Use Digital Tools for Surveillance	14
G. Access Innovative Financing	15

TABLES, FIGURES, AND BOXES

TABLES

1	Rate of Disaster-Affected Populations by Time and Country	4
2	New ADB Projects with Health Security Component	13

FIGURES

1	Promoting Health Security through Strong Health Systems	6
2	How ADB Makes a Difference to Regional Health Security	10
3	Selected ADB Projects with Health Security Component	11
4	The Greater Mekong Subregion Health Security Project (2017–2022)	12

BOXES

1	What Is Health Security?	1
2	What Are Emerging Diseases?	3

EXECUTIVE SUMMARY

Asia is a hot spot for emerging and reemerging infectious diseases, including those with pandemic potential. At the same time, the region is grappling with growing antimicrobial resistance and the health impacts of climate change and frequent natural disasters, all of which pose a threat to regional health security. The reasons for high health security risk in Asia are complex—rapid economic growth, increased trade, urbanization, mobile populations, and weak health systems all play a role. Health security is a regional public good, and as such regional cooperation is essential to protect it. The International Health Regulations (IHR), as well as various regional frameworks, are in place to support countries to improve health security and address threats—196 countries have committed to the IHR. However, competing priorities for national budgets make implementation difficult and can lead to limited health system investment required to protect health security. Strategically, investments in health systems as well as investments beyond the health sector are needed. The Asian Development Bank (ADB) has a long history of investing in public goods and health security and is in a unique position to support countries in these efforts. ADB can convene stakeholders, build on its existing health sector portfolio, and structure long-term financing for health.

I. INTRODUCTION: WHAT IS HEALTH SECURITY?

Rapid economic growth and regional cooperation and integration have brought a myriad of benefits to ADB's developing member countries (DMCs): cross-boundary infrastructure, intraregional investment and labor mobility have all improved over the last 2 decades. But the countries also face numerous pressing threats to human health, including emerging and reemerging communicable diseases, and increasing antimicrobial resistance. Adding to this complexity, the region is grappling with natural disasters and increasing adverse events from climate change.¹

All these factors underscore the need for greater regional cooperation. The solutions for increased health security risk rely on both transboundary cooperation and cross-sectoral support on issues such as transport, urban planning, labor, environment, agriculture, and social policy (Box 1).

Box 1: What Is Health Security?

The World Health Organization (WHO) defines health security as: “the proactive and reactive activities required to minimize the vulnerability to acute public health events that endanger the collective health of populations living across geographical regions and international borders.”^a

Health security commonly incorporates a wide range of health risks, including emerging diseases, the social determinants of health like poverty, and social and environmental factors (Figure).^b

Figure: Understanding Health Security



^a World Health Organization (WHO). 2007. *World Health Report 2007*. Geneva: WHO. <http://www.who.int/whr/2007/overview/en/>

^b Y.W. Chen et al. 2009. The Nature of International Health Security. *Asia Pacific Journal of Clinical Nutrition*. 18(4): 679–683. Source: Authors.

¹ United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP). 2017. Leave No One Behind: Disaster Resilience for Sustainable Development. *Asia-Pacific Disaster Report*. Bangkok: UNESCAP. <http://www.unescap.org/sites/default/files/publications/O...Disaster%20Report%202017%20High%20res.pdf>.

Health security is a public good. Reduced disease benefits everyone, and these benefits ultimately spread across countries. This is especially so in areas with constant movement of goods, services, and labor across borders such as in the Greater Mekong Subregion (GMS). The challenge is ensuring that the necessary collective action for health is taken both at national and regional levels.² Successfully addressing regional health security as a regional public good relies on political commitment translated into government actions supported through sustained financing.

II. THREATS TO HEALTH SECURITY IN ASIA AND THE PACIFIC

A. Asia: A Hot Spot for Emerging and Reemerging Communicable Diseases

Over the past 30 years, approximately 60% of all known human infectious diseases, and about 75% of emerging infectious diseases affecting people are zoonotic diseases, i.e., diseases that originate from animals.³ Zoonotic diseases not only threaten the health of thousands of people particularly the vulnerable each year but they can have disastrous impacts on livestock and economies. In recent years, disease outbreaks, from severe acute respiratory syndrome (SARS), avian influenza, Middle East respiratory syndrome (MERS) coronavirus, Ebola, and Zika have all shown how emerging and reemerging pathogens could cause severe social and economic disruption, and present threats across national borders.

The 2003 SARS outbreak, for example, infected an estimated 8,000 people and killed 800, and at the same time devastated the Asia and Pacific region's tourism and aviation sectors, taking human and economic toll as far away as Canada.^{4, 5} During an avian influenza outbreak in 2009, 12% of the total annual poultry stock (some 50 million birds) died or were culled in Viet Nam, heavily impacting households and the national economy.⁶ More recently, the MERS outbreak cost the Republic of Korea in terms of lost tourism and trade revenue, as well as depressed domestic consumer spending.

Countries at low latitudes (including Cambodia, Indonesia, the Lao People's Democratic Republic, Thailand, and parts of the Pacific) are predicted to be hot spots for emerging disease, as the result of conditions including vectors, climate, poverty, and lack of disease surveillance and outbreak reporting (Box 2). This is particularly so for zoonoses, vector-borne diseases, and drug-resistant pathogens.⁷

Demand for a protein-rich diet has fueled demand for meat.⁸ Production has increased dramatically in developing countries, where per capita meat consumption has increased threefold since the early 1960s, while egg consumption has increased fivefold.⁹ Asia accounts for 70% of this growth. Denser livestock

² R.D. Smith. 2003. Global Public Goods and Health. *Bulletin of the World Health Organization*. 81(7).

³ World Health Organization Regional Office for the Western Pacific. 2010. *Asia Pacific Strategies for Emerging Diseases*. Manila: World Health Organization Regional Office for the Western Pacific. http://www.wpro.who.int/emerging_diseases/APSED2010/en/#.

⁴ J.W. Lee and W. J. McKibbin. 2004. Estimating the Global Economic Costs of SARS. In S. Knobler, A. Mahmoud, S. Lemon, et al., eds. *Institute of Medicine (US) Forum on Microbial Threats. Learning from SARS: Preparing for the Next Disease Outbreak: Workshop Summary*. Washington, DC: National Academies Press (US). <https://www.ncbi.nlm.nih.gov/books/NBK92473/>.

⁵ National Advisory Committee on SARS and Public Health. 2003. *Learning from SARS: Renewal of Public Health in Canada: A Report of the National Advisory Committee on SARS and Public Health*. Ottawa: Health Canada. <http://www.phac-aspc.gc.ca/publicat/sars-sras/naylor/>.

⁶ G.T. Keusch, M. Pappaioanou, M. C. Gonzalez, K. A. Scott, P. Tsai, editors. National Research Council (US) Committee on Achieving Sustainable Global Capacity for Surveillance and Response to Emerging Diseases of Zoonotic Origin. 2009. *Sustaining Global Surveillance and Response to Emerging Zoonotic Diseases*. Washington (DC): National Academies Press (US).

⁷ K.E. Jones et al. 2008. Global Trends in Emerging Infectious Diseases. *Nature*. 451:990–993.

⁸ World Livestock. 2013. *Changing Disease Landscapes*. Rome: Food and Agriculture Organization.

⁹ P. Horby et al. 2013. Prospects for Emerging Infections in East and Southeast Asia 10 Years after Severe Acute Respiratory Syndrome. *Emerging Infectious Diseases*. 19(6), 853–860. <https://dx.doi.org/10.3201/eid1906.121783>.

Box 2: What Are Emerging Diseases?

The World Health Organization defines emerging diseases as “newly recognized, newly evolved or occurred previously but have shown an increase in incidence or expansion of geographical, vector or host range” and include those showing drug (including antimicrobial) resistance.^a Emerging infectious diseases result from complex systems where biological, social, ecological, and technological processes interconnect to enable microbes to exploit new ecological opportunities.^b Increasing antimicrobial resistance adds to the challenge—by making it harder to provide effective prevention and treatment of infections and to stay ahead of the evolving changes.

^a World Health Organization. *Emerging zoonoses*. http://www.who.int/zoonoses/emerging_zoonoses/en/.

^b R.J. Coker, et al. 2011. Emerging Infectious Diseases in Southeast Asia: Regional Challenges to Control. *Lancet*. 377, 599–609. doi:10.1016/S0140-6736(10)62004-1.

Source: Authors.

production methods and less diversity among livestock both increase the risk of disease spread among animals and the risk of newly emerging zoonoses. With much of livestock production done on a small scale in East and Southeast Asia, following the Food and Agriculture Organization of the United Nations’ recommended practice of isolating farm animals from wildlife is often impossible.

For emerging and reemerging infectious diseases, real-time surveillance, including the ability to collect and test (human and animal) samples rapidly and precisely, is needed to identify disease outbreaks. This coupled with national and regional reporting and systems for response will control outbreaks. Since surveillance, diagnosis, and control of zoonotic disease takes place at the interface between animals and humans, systematic communication and substantial coordination between human, wildlife, and veterinary health services is vital.¹⁰

B. Antimicrobial Resistance Is Rampant and Spreading

Antimicrobial resistance (AMR) is another major threat to global health security. AMR is the ability of a microorganism (i.e., bacteria, viruses, and some parasites) to stop an antimicrobial agent (such as antibiotics, antivirals, and antimalarial medicines) from working against it, rendering standard treatments ineffective. While AMR occurs over time, and usually through genetic changes, the misuse and overuse of antimicrobial medicines accelerates this process.¹¹ In many places, antimicrobial medicines, particularly antibiotics, are overused and misused in humans and animals, and often given without consideration of the broader impact on the ecology. Significant quantities of antimicrobial medicines are used in animal husbandry and fishing for therapeutic and nontherapeutic purposes. Traces of these excessively used antibiotics then enter the food chain, exacerbating antibiotic resistance in humans.

South Asia and Southeast Asia are home to the highest number of major bacterial pathogens for which there is AMR, including multidrug-resistant tuberculosis.^{12,13} The prevalence of AMR of major bacterial pathogens has been accelerating and AMR is a serious threat to global public health. Globally in 2016,

¹⁰ World Bank. 2012. People, Pathogens, and Our Planet. *The Economics of One Health*. Volume 2. Washington, DC: World Bank.

¹¹ WHO. *Antimicrobial Resistance*. Geneva: WHO. <http://www.who.int/antimicrobial-resistance/en/>.

¹² R. Bhatia, J.P. Narain. 2010. The Growing Challenge of Antimicrobial Resistance in the South-East Asia Region - Are We Losing the Battle? *Indian Journal of Med Research*. Nov. 132(5):482–486.

¹³ J. Song. 2015. *Antimicrobial Resistance Control in Asia*. Global Health Dynamics. http://www.globalhealthdynamics.co.uk/wp-content/uploads/2015/05/06_Song.pdf.

there were an estimated 600,000 new cases of multidrug- and rifampicin-resistant tuberculosis each year, and drug resistance has complicated HIV and malaria treatment.¹⁴

C. Climate Change and Natural Disasters Increase Threats to Health

Climate change impacts the ecosystem by increasing the incidence, scale, frequency, and complexity of disasters.¹⁵ These disasters can lead to increased risks for outbreaks, as people (and their livestock) are displaced, medical treatment is interrupted and health systems are impacted. Natural disasters have made a significant impact on health security on a global scale. The Asia and Pacific region, with 60% of the world's population, is highly vulnerable to disaster. Countries in the region struggle to reduce disaster risk (Table 1) (footnote 15). Since 1970, disasters in Asia and the Pacific have killed 2 million people—contributing 57% of the global death toll and a cost of \$1.3 trillion.¹⁶

Table 1: Rate of Disaster-Affected Populations by Time and Country

Rank	Country	Affected Population per Million People, per Year	
		2005–2015	2020–2030 Estimate
1	Bangladesh	5,430	5,329
2	Philippines	6,079	5,043
3	Viet Nam	3,615	3,237
4	Lao People's Democratic Republic	3,034	2,702
5	Bhutan	2,929	2,679
6	Myanmar	2,452	2,058
7	Nepal	1,933	1,885
8	India	1,907	1,794
9	Cambodia	1,732	1,581
10	Republic of Korea	1,456	1,250

Source: UNESCAP 2017. *Asia-Pacific Disaster Report*. Bangkok: UNESCAP.

III. DRIVERS OF HEALTH SECURITY THREATS IN ASIA AND THE PACIFIC

A. Urban Areas Are Growing

Between 2000 and 2024, the world's total population is projected to grow by 1.76 billion, with 86% of this growth expected to take place in the urban areas of low- and middle-income countries.¹⁷ It is estimated by 2050, the Asia and Pacific region will be home to 3.2 billion urban dwellers.¹⁸ The largest population in the world in absolute numbers live in slums. In 2009, more than 500 million people, about

¹⁴ WHO. *Tuberculosis*. <http://www.who.int/tb/areas-of-work/drug-resistant-tb/en/>.

¹⁵ WHO. *Climate Change and Human Health*. <http://www.who.int/globalchange/en/>.

¹⁶ UNESCAP. 2017. *Disaster Resilience for Sustainable Development. Asia-Pacific Disaster Report*. Bangkok: UNESCAP. http://www.unescap.org/sites/default/files/1_Disaster%20Report%202017%20Low%20res.pdf.

¹⁷ United Nations. 2006. *World Urbanization Prospects: The 2005 Revised Population Data*. New York: United Nations. http://www.un.org/esa/population/publications/WUP2005/2005WUPHighlights_Final_Report.pdf.

¹⁸ United Nations Human Settlements Programme and UNESCAP. 2015. *The State of Asian and Pacific Cities*. <http://www.unescap.org/sites/default/files/The%20State%20of%20Asian%20and%20Pacific%20Cities%202015.pdf>.

one in three urban residents in Asia and the Pacific, were living in slums. People living in slums are the most vulnerable to health risks.¹⁹

Poor housing conditions, congestion, and lack of access to safe water and sanitation, all typical characteristics of slums, increase communicable disease risk. Overburdened urban health systems are unprepared for disease outbreaks. Enhancing urban health risk management, improving active surveillance, and reinforcing local health systems can reduce the impact of infectious disease outbreaks, disasters and public health emergencies.²⁰ Tuberculosis is one of the diseases especially affecting urban poor population groups and only the investment in improving their determinants of health, for example their living conditions, will help to stop it.

B. As Trade Increases, So Does Population Mobility

Rapidly increasing labor migration threatens health security. In 2015, the number of international migrants—people residing in a country other than their country of birth—at 244 million worldwide was the highest ever recorded.²¹ A 2010 estimate put the number of migrants in Asia and the Pacific at 53 million—47 million in Asia and 6 million in the Pacific.²²

Migrants, particularly those in the informal sector, often have limited access to health services. They are unable to access national health systems and are commonly not included in outreach or health education nor considered for national health planning and policy development. Thailand—a country that has made considerable effort to make health care accessible to migrants regardless of their legal status—faces challenges. The sheer number of migrant workers makes them difficult to reach. According to the International Organization for Migration, the country hosts over 1.6 million officially registered migrants, but unofficial estimates of the actual number of migrants, including those who are undocumented, put the number at approximately to 2.6 million.²³

As many governments in Asia continue working toward greater ease of travel across borders—improving road infrastructure, growing cross-border trade, increasing private investment and construction activities—the possible health and disease impacts on mobile and migrant populations need to be addressed collaboratively at a regional level.

C. Health Systems Need Strengthening

As International Health Regulations signatories, governments acknowledge investing in health systems will yield direct health and economic benefits and help protect populations from emerging health threats. However, the reality of the challenges governments face is more difficult. In Asia and the Pacific, the average total health expenditure as a percentage of gross domestic product (GDP) is low, at 5.3%

¹⁹ World Health Organization Regional Office for the Western Pacific. 2016. *Regional Framework for Urban Health in the Western Pacific 2016–2020: Healthy and Resilient Cities*. Manila: WHO Regional Office for the Western Pacific. <http://iris.wpro.who.int/handle/10665.1/13047>.

²⁰ WHO/UN-HABITAT. 2016. *Global Report on Urban Health: Equities, Wealthier Cities for Sustainable Development*. Geneva: WHO. http://www.who.int/kobe_centre/measuring/urban-global-report/ugr_full_report.pdf.

²¹ International Organization for Migration (IOM). 2015. *Global Migration Trends Fact Sheet*. <http://gmdac.iom.int/global-migration-trends-factsheet>.

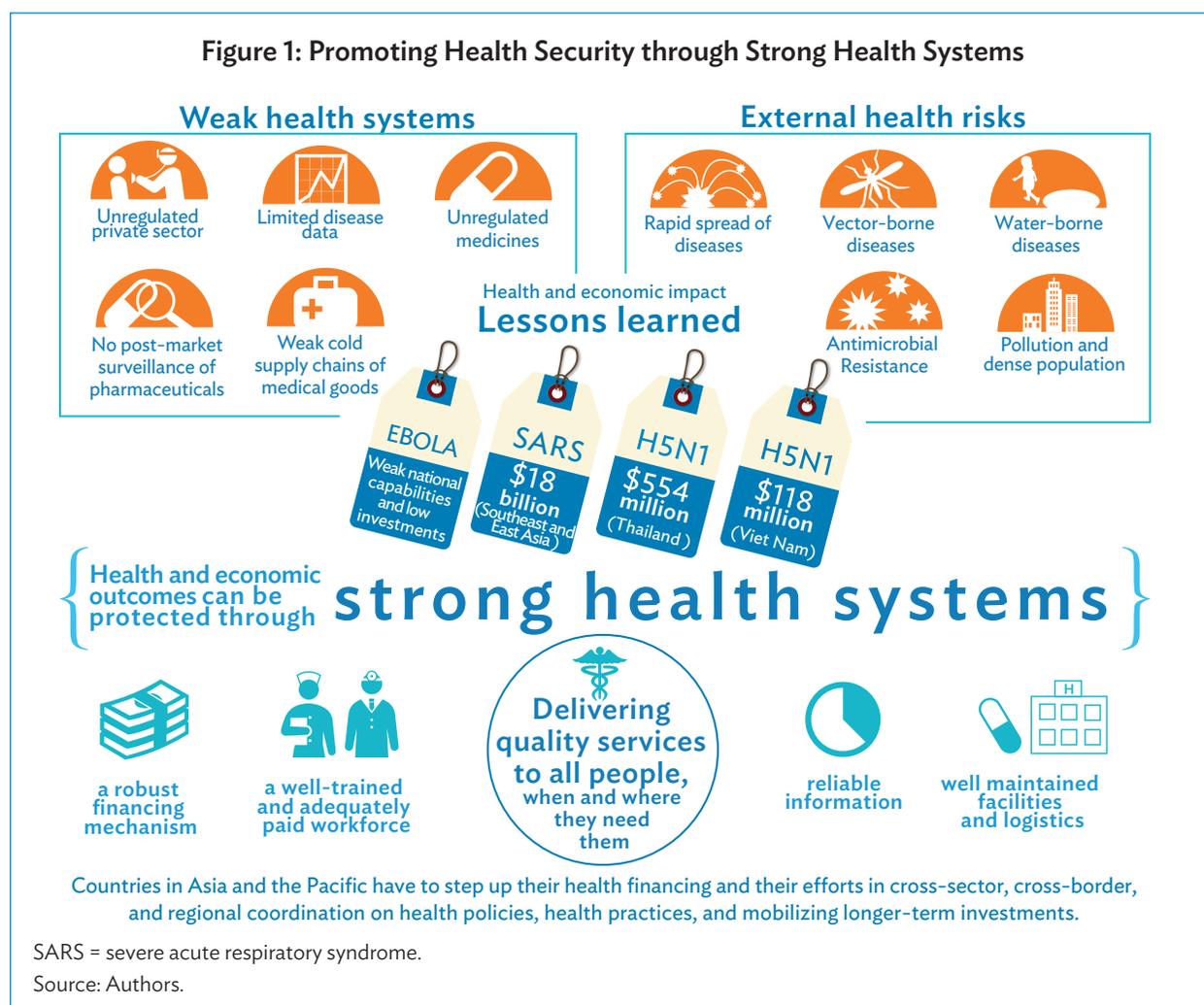
²² UNESCAP. 2013. *International Migration and Development in Asia and the Pacific*. Bangkok: UNESCAP. <http://www.unescapsdd.org/files/documents/SPPS-Factsheet-migration-v4.pdf>.

²³ IOM. 2013. *A Global Report on Population Mobility and Malaria: Moving Towards Elimination with Migration in Mind*. <https://www.iom.int/files/live/sites/iom/files/What-We-Do/docs/REPORT-14Aug2013-v3-FINAL-IOM-Global-Report-Population-Mobility-and-Malaria.pdf>.

for East Asia and the Pacific (excluding high-income countries) and 4.4% for South Asia.²⁴ In absolute terms, domestic health spending remains relatively constant, irrespective of the rate of economic growth. ADB's DMC average health expenditure, as a percentage of GDP is nearly 6%, but there is significant variation for government budget allocation to health care, with a worryingly large number of countries continuing to underinvest in health care.²⁵

At the same time, DMCs' health budgets are being stretched by donor disengagement from infectious diseases such as HIV, malaria, and tuberculosis. DMC health budgets are shifting to addressing growing prevalence of noncommunicable diseases, which are rapidly becoming national priorities and are placing an additional strain on already underfunded health systems.

Strengthening health systems is an important building block for health security. It improves data collection, regulation of the private sector, and the supply and monitoring of the medicines supply chain. These can address not only the health risks to that country's own population, but also its regional and international obligations to protect health security (Figure 1).



²⁴ World Bank. 2014. *Health Expenditure, Total, as Percentage of GDP*. Washington, DC: World Bank.

²⁵ Oliver Wyman Report to ADB on Private Sector Market Opportunities for Health.

IV. INTERNATIONAL AND REGIONAL GLOBAL HEALTH SECURITY INITIATIVES

A. International Health Regulations (2005)

IHR is a legally binding set of regulations designed to “prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with international traffic and trade.”

They came into effect on 15 June 2007, and 196 countries agreed to abide by the regulations that require events of public health significance (including zoonotic diseases) to be reported to WHO. The regulations include specific measures at ports, airports, and ground crossings to limit the spread of health risks to neighboring countries.²⁶

B. Asia Pacific Strategy for Emerging Diseases and Public Health Emergencies²⁷

The newly updated, and Third Asia Pacific Strategy for Emerging Diseases (APSED) provides a common framework for action for the region to implement and strengthen the core capacities required under the IHR. The 2017 version, APSED III, contributes to health systems strengthening and universal health coverage (UHC) by focusing on eight essential public health functional areas necessary for public health emergency preparedness, risk mitigation, and response operation.

C. Sendai Framework for Disaster Risk Reduction 2015–2030

The Sendai Framework for Disaster Risk Reduction, adopted by UN member states in March 2015 at the UN World Conference on Disaster Risk Reduction in Sendai, Japan and endorsed by the UN General Assembly in June 2015. Health is treated as a key element of the framework.²⁸ The framework’s goal is to prevent new disaster risks and reduce existing ones through the implementation of integrated cross-sectoral measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen the resilience. Four of the seven Sendai Framework global targets are health-related: sustainably reduce disaster mortality, the number of affected people, infrastructure damage and service disruption; and sustainably increase the number of countries with disaster risk reduction strategies. The Sendai Framework also emphasizes resilient health systems by integrating disaster risk management into government policies.

D. One Health

One Health is a United Nations’ initiative to forge close collaboration between human and animal health to address the risk from zoonoses. It is an approach to designing and implementing programs, policies, legislation, and research so that different sectors can connect and collaborate. Taking a One Health approach is especially powerful when tackling issues of food safety, AMR, and the control of zoonoses.²⁹

²⁶ WHO. 2005. *International Health Regulations*. Third Edition. Geneva: WHO.

²⁷ WHO. 2017. *Asia Pacific Strategy for Emerging Diseases and Public Health Emergencies: Advancing Implementation of the International Health Regulations (2005)*. Geneva: WHO. <http://iris.wpro.who.int/bitstream/handle/10665.1/13654/9789290618171-eng.pdf>.

²⁸ WHO. 2015. *Sendai Framework for Disaster Risk Reduction*. Geneva: WHO. <https://www.unisdr.org/we/inform/publications/43291>.

²⁹ WHO. 2017. *One Health*. Geneva: WHO. <http://www.who.int/features/qa/one-health/en/>.

E. Global Health Security Agenda

Launched in February 2014, the Global Health Security Agenda (GHSA) is a growing partnership of 64 countries, international organizations, and nongovernment stakeholders to help build countries' capacity to help create a world safe and secure from infectious disease threats and elevate global health security as a national and global priority.

GHSA takes a multilateral and multisectoral approach to strengthening both global and national capacity to prevent, detect, and respond to human and animal infectious disease threats.³⁰ It facilitates collaborative efforts to achieve specific and measurable targets around biological threats. It also supports the achievement of the requirements for global health security, including the IHR and the World Organisation for Animal Health's (OIE) Performance of Veterinary Services Pathway, and other relevant frameworks. In addition to individual countries, advisory partners include WHO, the UN Food and Agriculture Organization, OIE, Interpol, the Economic Community of West African States, the UN Office for Disaster Risk Reduction, and the European Union.

V. ADB SUPPORT TO REGIONAL HEALTH SECURITY

A. ADB Is Experienced in Supporting Regional Public Goods

ADB has supported regional public goods for health security for more than 20 years and recognized the importance of investing in collective action to reduce regional health risks. The combination of persistent and increasing public health threats, and the requirement for countries to meet the obligations of the IHR, presents an opportunity to ADB to work with them to achieve these complementary goals.

ADB's investment history shows it is moving toward systematic and targeted investments, which strengthen health systems for health security. In 2003 ADB supported countries to respond to SARS, and in 2006 it provided approximately \$40 million in grant financing for the avian influenza response, which supported countries to take the lessons learned from SARS and cooperate on disease surveillance and response. ADB has also managed disease-specific trust funds to combat specific disease threats including HIV, malaria, and other communicable diseases through a health system strengthening approach.^{31,32} ADB has recognized the critical need for and importance of surveillance data and health information in responding to an outbreak and has incorporated these data in its recent health investments in Asia and the Pacific—including components of national digital health information systems.

B. ADB Is Positioned to Promote Regional Cooperation

ADB's *Regional Cooperation and Integration Strategy* highlights its ongoing support for regional public goods.³³ ADB recognizes the need for investments in the health sector as a key to sustainable economic growth. Its Operational Plan for Health 2015–2020 lays out ADB's mandate to increase investments in

³⁰ *Global Health Security Agenda*. <https://www.ghsagenda.org/>.

³¹ *ADB Cooperation Fund for Fighting HIV/AIDS*. <https://aric.adb.org/initiative/adb-cooperation-fund-for-fighting-hiv-aids>.

³² *Regional Malaria and Other Communicable Disease Threats Trust Fund*. <https://www.adb.org/site/funds/funds/rmtf>.

³³ ADB. 2006. *Regional Cooperation and Integration Strategy*. Manila: ADB. <https://www.adb.org/documents/regional-cooperation-and-integration-strategy>.

the health sector to 3%–5% of ADB’s total portfolio and to expand its support for regional public goods in health³⁴—placing regional health security as a flagship program.

ADB’s *Operational Plan for Regional Cooperation and Integration 2016–2020* calls for greater investments that promote regional public health, mitigate climate change and disaster risk, and strengthen cooperation mechanisms requiring collective action.³⁵ From a regional health perspective, these two operational plans build on ADB’s track record as a dynamic partner in supporting DMCs to strengthen regional health security and mitigate health risks from regional integration.

ADB is uniquely placed to help strengthen health security as a regional public good across the region. It can structure long-term financing and convene partners across public and private sectors and across borders to design and implement successful health projects for the socioeconomic development of Asia and the Pacific. Under the new corporate strategy, Strategy 2030, ADB will continue to support regional public goods for health.

While bilateral aid agencies and donors such as the Global Fund to Fight AIDS, Tuberculosis and Malaria have financed disease-specific health projects, and WHO is a longstanding technical partner, none occupy ADB’s position to provide solutions for increasing health financing to address the demand and supply side of health services. ADB can structure long-term financing, including innovative financing mechanisms such as health bonds, convene disparate stakeholders, and build on its existing health sector portfolio.

In these ways, ADB can make a considerable difference to the drive for regional health security in Asia and the Pacific (Figure 2). Regional cooperation on health security can encompass a wide range of measures, including systems and protocols to facilitate data sharing, interoperability, and governance. Increasing human resource capacity for emergency response is another key facet of regional cooperation, with scope for cross border training (or centers of excellence) for improved technical skills for laboratories, for example. There is also scope for regional cooperation on medicines regulation, and regulatory convergence whereby countries agree to share regulatory work, particularly for premarket product assessment and post-market surveillance.

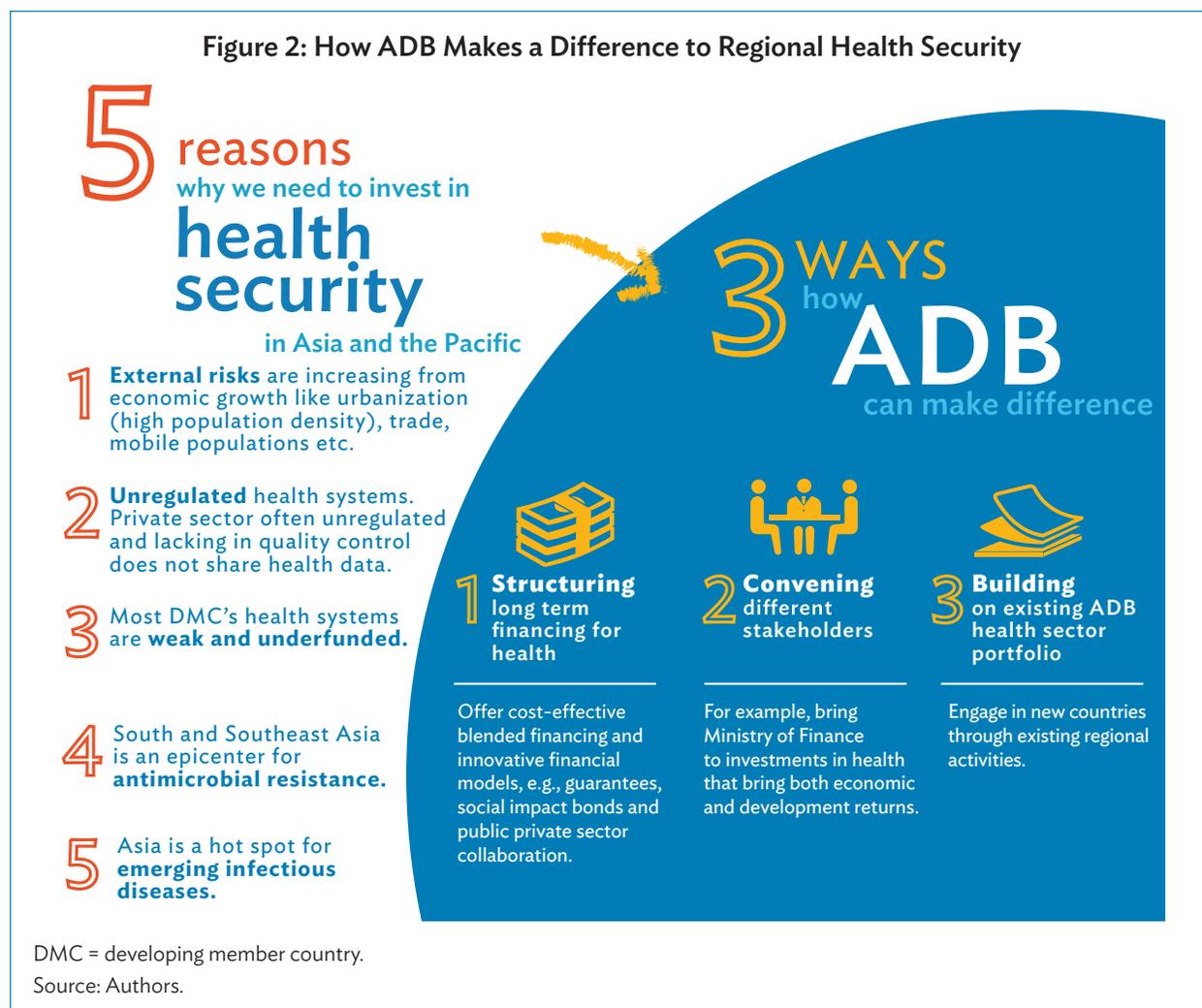
C. ADB Knows How to Invest in Regional Health Security

The very nature of traditional health financing has meant it has been donor- and aid-dominated. DMCs require new models for investments in the health sector that allow governments to better manage the transition period between donor divestments from health and increasing domestic spending on health budgets and enable both economic and development returns. Governments need a long-term partner focused on sustainable financing, and one such as the ADB that convenes development partners, technical agencies, the private sector and mobilizes financing. To assist DMCs to now take ownership of public health, ADB can offer financing structures that are more cost-effective through blended financing.

ADB’s mandate forges the dialogue between ministries of finance and foreign affairs, trade agencies, and ministries of health. This dialogue serves to increase investments in population health and invest in risk

³⁴ ADB. 2015. *Health in Asia and the Pacific: A Focused Approach to Address the Health Needs of ADB Development Member Countries*. Manila: ADB. <https://www.adb.org/documents/adb-operational-plan-for-health-2015-2020>.

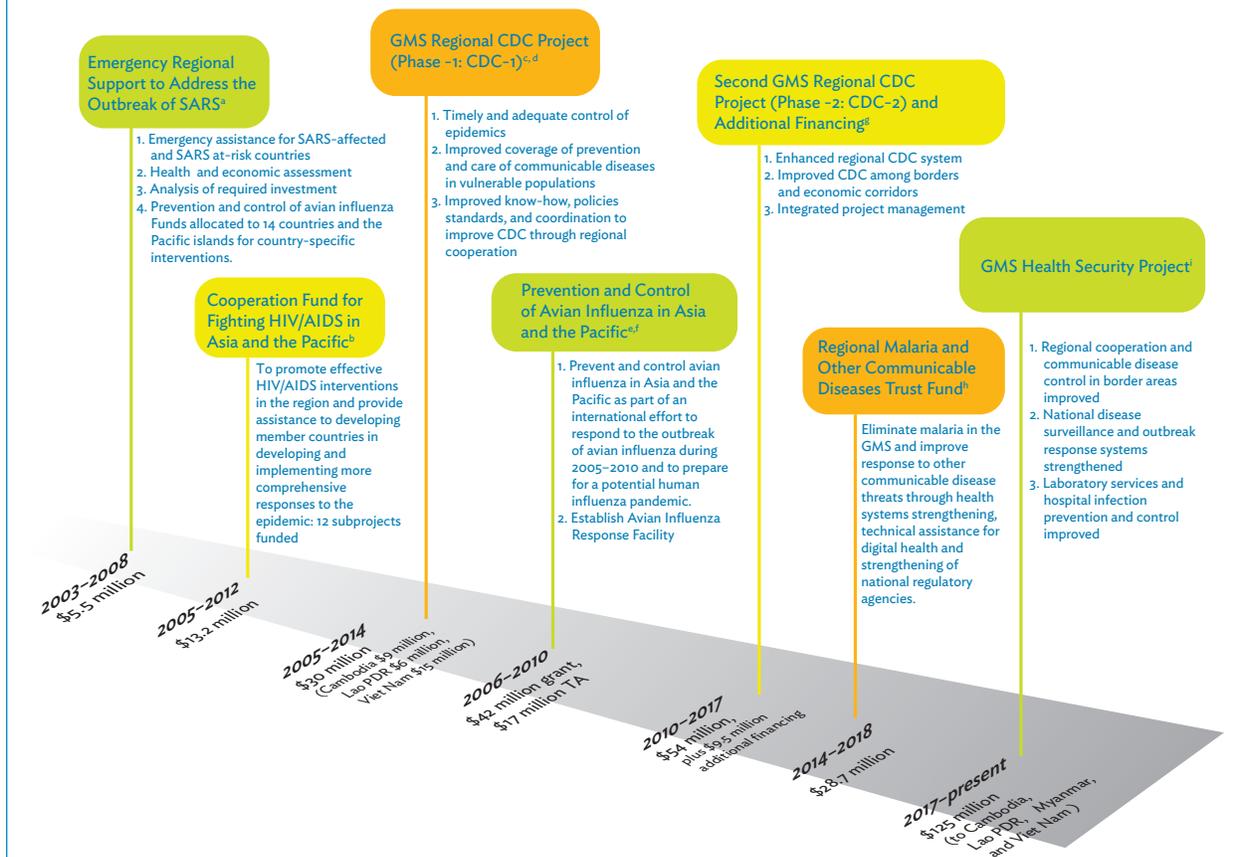
³⁵ ADB. 2016. *Operational Plan for Regional Cooperation and Integration 2016–2020*. Manila: ADB. <https://www.adb.org/documents/operational-plan-regional-cooperation-integration-2016-2020>.



mitigation from regional cooperation, trade and economic growth. It fosters investment in public goods in health and strengthens regional health security.

ADB's track record in supporting regional public goods in health and its commitment to its role in the region's health sector and are demonstrated in its future corporate strategy. ADB has successfully implemented many projects with an impact on regional health security, including loan, grant, and technical assistance projects (Figures 3 and 4).

Figure 3: Selected ADB Projects with Health Security Component



CDC = communicable disease control, GMS = Greater Mekong Subregion, Lao PDR = Lao People's Democratic Republic, SARS = severe acute respiratory syndrome, TA = technical assistance.

^a ADB. 2010. *Technical Assistance Completion Report for Regional Technical Assistance 6108: Emerging Regional Support to Address the Outbreak of Severe Acute Respiratory Syndromes*. Manila. <https://www.adb.org/sites/default/files/project-document/61978/37229-01-reg-tcr.pdf>.

^b ADB. 2006. *Technical Assistance Completion Report for Regional Technical Assistance 6321: Fighting HIV/AIDS in Asia and the Pacific*. Manila. <https://www.adb.org/sites/default/files/project-document/157123/40104-012-tcr.pdf>.

^c ADB. 2016. *Report and Recommendation of the President to the Board of Directors on the Proposed Loans and Grant to the Kingdom of Cambodia, Lao People's Democratic Republic, Republic of the Union of Myanmar, and Socialist Republic of Viet Nam: Greater Mekong Subregion Health Security Project*. Manila. <https://www.adb.org/sites/default/files/project-document/212751/48118-002-rrp.pdf>.

^d ADB. 2013. *Completion Report of Greater Mekong Subregional Communicable Diseases Control Project*. Manila.

^e ADB. 2014. *Completion Report for Grant-2014: Prevention and Control of Avian Influenza in Asia and the Pacific*. Manila. <https://www.adb.org/sites/default/files/project-document/80430/39662-012-pcr.pdf>.

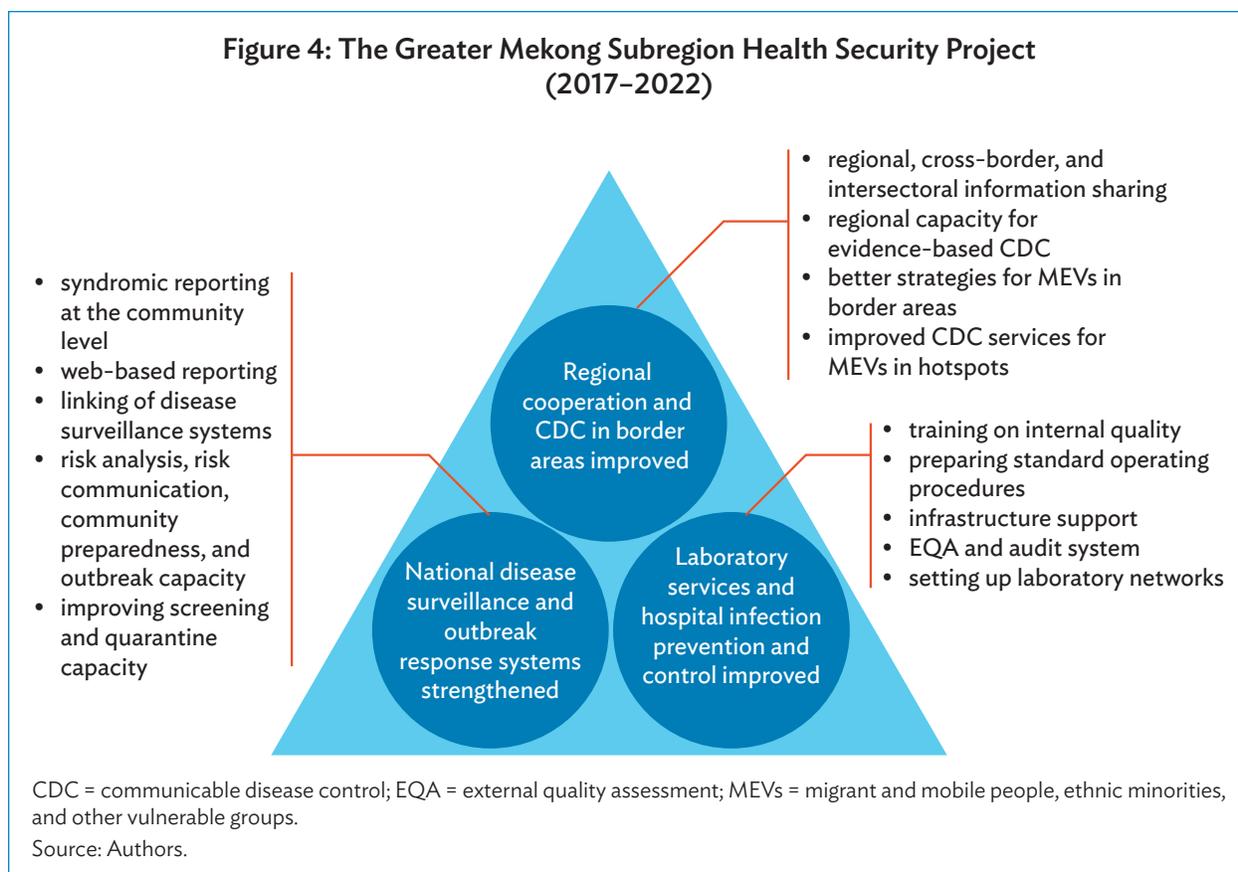
^f ADB. 2012. *Technical Assistance Completion Report for Regional Technical Assistance 6313: Prevention and Control of Avian Influenza in Asia and the Pacific*. Manila. <https://www.adb.org/sites/default/files/project-document/80430/39662-012-pcr.pdf>.

^g ADB. 2016. *Grant Agreement (Regional Malaria and Other Communicable Disease Threats Trust Fund) for Grant 0450-VIE: Second GMS Regional Communicable Diseases Control Project (Additional Grant Financing to Loan 2699-VIE)*. Manila. <https://www.adb.org/sites/default/files/project-document/180841/41508-014-grj.pdf>.

^h ADB. 2013. *Health Financing Partnership Facility: Establishment of the Regional Malaria and Other Communicable Disease Threats Trust Fund and Health Trust Funds*. Manila. <https://www.adb.org/documents/health-financing-partnership-facility-establishment-regional-malaria-and-other>.

ⁱ ADB. 2016. *Report and Recommendation of the President to the Board of Directors on the Proposed Loans and Grant to the Kingdom of Cambodia, Lao People's Democratic Republic, Republic of the Union of Myanmar, and Socialist Republic of Viet Nam: Greater Mekong Subregion Health Security Project*. Manila. <https://www.adb.org/sites/default/files/project-document/212751/48118-002-rrp.pdf>.

Source: Authors.



VI. NEW ADB PROJECTS WITH HEALTH SECURITY COMPONENT

ADB is programming Asian Development Fund (ADF) health security grants across ADF-eligible DMCs to sustainably develop national health security capacity, and to capitalize on growing investor concerns on the lack of financing and programmatic intervention to mitigate epidemics and other threats. ADF health security grants are being invested in four different projects worth approximately \$52.5 million across ADB's regional departments with a focus on communicable diseases surveillance, digital health, and service delivery (Table 2).

In addition to these \$52.5 million and \$28.7 million from the Regional Malaria and Other Communicable Diseases Threats Trust Fund, ADB has processed a \$125 million ADF and ordinary capital resources loan for Strengthening Health Security in the GMS, which will take ongoing investments in health security and communicable diseases control to \$200 million.

The \$24 million Bhutan Health Sector Development Program comprises project and policy-based components of \$10 million each. Tentatively, the Government of Bhutan will contribute \$4 million. The three outputs are enhanced outbreak response capacity and digital health information systems and related policies; improved health services in peripheral areas, and better health sector financing.

The Sri Lanka Health System Enhancement Program is a \$60 million project with \$50 million from ADB (including a \$12.5 million ADF health security contribution) and \$10 million in government counterpart

Table 2: New ADB Projects with Health Security Component

Operational Department	DMC	Project Name	Commitment Year	ADF Health Security (\$ million)	ADB Total (\$ million)
South Asia	Bhutan	Health System Strengthening Project	2018	13.33	20.00
South Asia	Sri Lanka	Health System Enhancement Project ^a	2018	12.50	50.00
Southeast Asia	Viet Nam	Local Health Care Sector Development Program (incl. Health Security Grant) ^b	2018	12.00	92.00
Pacific	Samoa, Tonga, Tuvalu, Vanuatu	Systems Strengthening for Effective Coverage of New Vaccines in the Pacific ^c	2018	15.00	25.00

ADB = Asian Development Bank, ADF = Asian Development Fund, DMC = developing member country.

^a ADB. 2017. *Technical Assistance to the Democratic Socialist Republic of Sri Lanka for Preparing the Health System Enhancement Project*. Manila. <https://www.adb.org/projects/51107-002/main>.

^b ADB. 2017. *Concept Paper for a Proposed Loan and Grant to Viet Nam: Local Health Care Sector Development Program*. Manila. <https://www.adb.org/projects/50285-002/main>.

^c ADB. 2017. *Project Preparatory Technical Assistance Report for Systems Strengthening for Effective Coverage of New Vaccines in the Pacific*. <https://www.adb.org/projects/50282-001/main>.

Note: Estimates subject to ADB Board approval.

Source: Asian Development Bank.

funding. The outputs include strengthened primary health care, improved digital health and disease surveillance capacity, and support for policy development.

The Viet Nam Local Health Care Sector Development Program is a \$94.5 million project with \$92 million from ADB (including a \$12 million ADF health security contribution) and \$2.5 million in government counterpart funding. The outputs include strengthened public investment management for local health care and local health care workforce development and management; and improved service models including digital health for local health care networks.

The Systems Strengthening for Effective Coverage of New Vaccines in the Pacific: Samoa, Tonga, Tuvalu, and Vanuatu is a project costing \$25 million, comprising a \$15 million in ADF grant and \$10 million in ADB allocation. The outputs include strengthened regional vaccine procurement, applying digital solutions, strengthening health systems, and community mobilization.

VII. NEXT STEPS IN ASIA AND THE PACIFIC: INVESTING IN REGIONAL HEALTH SECURITY

A. Link with Global Agendas, Including Universal Health Coverage

Sustainable Development Goal 3, set by the United Nations, includes the target to “achieve universal health coverage (UHC), including financial risk protection, access to quality essential health care services, and access to safe, effective, quality, and affordable essential medicines and vaccines for all.” This necessitates linkages to health systems strengthening including health information and in turn strengthening health security.

B. Build Regional Governance and Reach for Convergence of Policies

Regional public goods can only be realized with regional effort and cooperation. The region will be able to cooperate better for health security if more countries establish regional surveillance, reporting and disease management policies, and governance processes that seamlessly transfer across national borders.

C. Increase Cross-Sector Approaches and Activities

Enhancing cross-border collaboration at the subnational level is key, as is integrated border development that brings several sectors together in a coordinated fashion. This requires a cohesive action plan for the multiple facets involved, including agriculture, food, and climate change. Financing institutions need to generate cross-sectoral partnerships for continued commitment at the country level.

D. Make Upstream Investments in Health Systems Strengthening

Preparing for the inevitability of health emergencies minimizes the impact on health, the health system and the economy. Looking upstream and addressing weaknesses in the health system such as health financing, information, and reach. Efforts to strengthen health security and health systems need to be integrated across the system to promote sustainability, efficiency, and effectiveness of a country's preparedness efforts, while avoiding the creation of a vertical health security silo.³⁶

Areas of focus for this could include improved regulatory and governance structures, medicines quality and supply chain, active surveillance, diagnostics at the point of care, and service delivery to the last mile, infection prevention and control, resilient infrastructure as well as collaborating beyond the health sector to address the environmental and socioeconomic determinants of health.

E. Invest in Surge Capacity

Preparing for disease outbreaks should include building regional buffer stocks of key essential medicines and ensuring there is surge capacity within the health system's work force, from major hospitals down to community health workers. One way of doing this is to explore the establishment of regional workforce hubs, which promote cross-border registration of health workers to allow for surge capacity and training opportunities. The public and private sectors must work together to capitalize on their respective strengths.

F. Use Digital Tools for Surveillance

Information and communication technology, geospatial technologies, digital diagnostic equipment and laboratory information systems networks, mobile applications for disease surveillance and reporting, and electronic health records with unique health identifiers that can identify patients wherever and whenever they interact with the health system, and standardization of data management across borders, all have a role to play in health security. Investments need to go beyond traditional communicable diseases surveillance systems and need to build strong foundations for digitally enabled information systems, which appreciate the patient at the center.

³⁶ WHO. *Health Security and Health Systems Strengthening—An Integrated Approach*. <http://www.who.int/csr/disease/ebola/health-systems-recovery/health-security.pdf?ua=1>.

G. Access Innovative Financing

As many DMCs begin to grapple with what is looming in the post-donor funding environment and are compelled to look more to their own resources, development partners have a role to assist countries to tap into innovative financing mechanisms, such as blended loan products, bonds, risk transfer products, and public–private collaboration, to mobilize funding for health security.

Investing in Regional Health Security for Sustainable Development in Asia and the Pacific *Managing Health Threats Through Regional and Intersectoral Cooperation*

Emerging infectious diseases and the risk of transmission in the constant movement of people, animals, and goods make health security a priority issue in Asia and the Pacific. The region is paying more attention to strengthening health security through technical and political collaboration at multiple levels. With support from the Asian Development Bank (ADB), developing member countries have been building up their health systems to better respond to health security threats. This paper discusses the magnitude and implications of health threats in the region. It provides an overview of global initiatives and discusses the important role that ADB can play in strengthening regional cooperation and national health systems.

About the Asian Development Bank

ADB is committed to achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific, while sustaining its efforts to eradicate extreme poverty. Established in 1966, it is owned by 67 members—48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.

