



CLIMATE AND HEALTH IN ASIA

How the health and life insurance sector can strengthen climate-resilience among policyholders and communities while supporting climate-ready health systems in Asia

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FORUM FOR THE FUTURE

(CONVENOR OF THE CLIMATE AND HEALTH COALITION)

Forum for the Future is a leading international sustainability organisation with offices in London, New York, Singapore and Mumbai. Founded 30 years ago, Forum for the Future's mission is to catalyse systems transformation towards a just and regenerative future via both partnerships and pre-competitive collaborations.

Forum for the Future founded the Climate and Health Coalition in early 2021 on the premise that the climate crisis is also a health crisis, necessitating systemic, interlinked action from the private sector, governments, and civil society. The purpose of the Climate and Health Coalition is to equip and mobilise the private sector to accelerate the integrated transformation of our health and climate systems, delivering benefits for people and planet. Through targeted reports, practical guidance, and advocacy at leading international climate forums, the Coalition advances climate and health as interconnected challenges and enables implementation of innovative products, services and value-chain strategies by the private sector. Members of the Climate and Health Coalition include some of the world's leading healthcare businesses, as well as trailblazers from other sectors. The Coalition also hosts a wider network of non-market actors all focused on climate and health, including non-profit, network, and civil society organisations.

About the sponsor

AIA GROUP

AIA Group is a pan-Asian life and health insurance group with more than 100 years of history, operating across eighteen markets in the Asia-Pacific region. It provides life and health insurance solutions to millions of customers, guided by its Purpose to help people live Healthier, Longer, Better Lives.

Across Asia, environmental factors such as extreme weather, air quality, and climate-related disruptions are increasingly shaping health outcomes and placing pressure on health systems. Climate change is contributing to rising risks, including heat stress, air pollution, and infectious disease exposure, with implications for population wellbeing and long-term resilience. AIA recognises the link between the health of the planet and the health of the communities and has integrated climate considerations into its broader sustainability approach.

AIA has committed to achieving net-zero greenhouse gas emissions by 2050 and was the first pan-Asian life and health insurer to have its near-term emissions reduction targets validated by the Science Based Targets initiative. The Group has supported the Task Force on Climate-related Financial Disclosures since 2018 and published its Climate Transition Plan in 2023, outlining how it intends to align its operations and investments with its climate objectives.

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Foreword

Climate change is no longer a distant environmental concern. Rising temperatures, extreme weather events, air pollution and changing patterns of disease are placing growing pressure on individuals, communities and health systems alike. As these impacts intensify, they are reshaping health outcomes across the world, affecting how people live, work and stay well.

At the same time, climate change is testing the resilience of health systems themselves, increasing demand for care and placing additional operational and financial pressure on already constrained systems. Addressing these challenges will require stronger prevention, greater preparedness, and the ability to respond to evolving health risks over time.

Asia is home to more than half of the global population and is highly exposed to climate-related risks, including extreme heat, flooding, air pollution and climate-sensitive infectious diseases, placing it at the frontline of this challenge. Rapid urbanisation, population ageing and existing health inequities further increase vulnerability. In many parts of Asia, the health impacts of climate change are already visible, even when they are not always recognised or recorded as climate-related.

The World Health Organization has been clear: the climate crisis is a health crisis. Protecting health must therefore be central to climate action. Placing health at the heart of climate policies and investments prevents illness, saves lives and builds more resilient societies. But addressing these challenges requires action beyond the health sector alone. Governments, cities, financial institutions, businesses and civil society all play a role in strengthening preparedness and protecting those most at risk. Better data, early warning systems, prevention and equitable access to care are critical foundations for effective response.

Within this evolving landscape, the role of health and life insurers is changing. Sitting at the intersection of population health, risk management and healthcare financing, they have the potential to contribute not only to financial protection, but also to prevention, early intervention and system-level resilience.

This report, *Climate and Health in Asia*, contributes to this effort by examining how climate change is already affecting health across the region. It presents a structured framework for considering how the health and life insurance sector can engage across four interconnected areas, underscoring the importance of collaboration across traditional boundaries and sectors.

Through the WHO Foundation, we mobilise resources and partnerships to support the World Health Organization's mission of protecting health for everyone, everywhere in a rapidly changing world. Evidence-based analysis such as this can help inform decisions that drive practical, equitable action.

The choices made today will shape the health and wellbeing of millions across Asia for years to come.



Anil Soni
Chief Executive Officer
WHO Foundation



Executive summary: the role of life and health insurers in building climate-resilient healthcare systems in Asia

This paper examines the intersection of climate change and health in Asia, focusing on the implications for the health and life insurance sectors and the need for proactive, forward-looking strategies.

Asia faces a growing and interconnected set of climate-related health risks, including extreme weather events, rising temperatures, air pollution, rising sea levels, and shifting patterns of climate-related disease. These risks are compounded by structural and demographic factors in the region that intensify exposure, exacerbate existing health vulnerabilities, and place additional strain on already constrained healthcare systems.

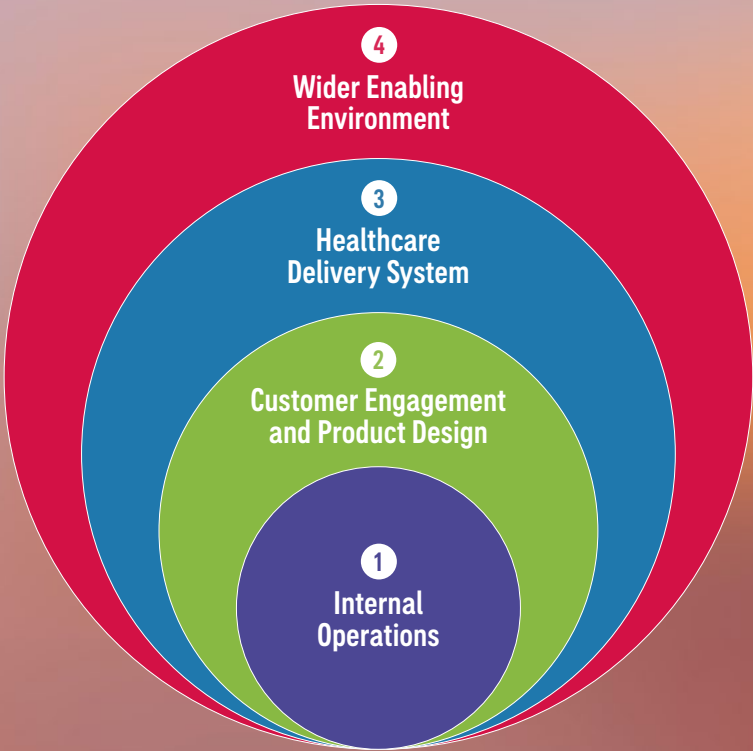
Several Asia-specific dynamics intensify this vulnerability. The region is home to many densely populated urban centres, where the impacts of climate change from heat stress and air pollution are particularly magnified. Large delta and coastal populations face heightened exposure to rising sea levels and flooding. Severe storms in late November 2025 caused more than 1,600 fatalities across six Asian countries, while by 2030, seven major Asian cities are projected to face a high risk of severe flooding. However, Asia's estimated disaster protection gap of 88–

90% is the largest of any region, and significant segments of its population remain uninsured or underinsured, limiting their ability to recover from climate-related health shocks.

At the same time, Asia is ageing rapidly: by 2050, one in four people in the region will be over the age of 60, increasing demand for healthcare at a time when climate risks are accelerating. As the climate continues to warm, the frequency and severity of these risks will intensify, placing growing pressure on populations and healthcare systems.

Against this backdrop, health and life insurers can play a bigger role in strengthening climate resilience within Asia's communities and healthcare systems. As these risks evolve, insurers can complement traditional risk protection with activities that support prevention, preparedness, and system-level resilience, alongside their core underwriting and risk management functions.

This analysis draws on Forum for the Future’s *Spheres of Influence* framework to outline potential areas of action for health and life insurers across four nested spheres:



1 Internal Operations Reduce operational emissions in line with climate science, allocate capital to support the transition to a lower-carbon economy and foster a culture of climate awareness.	2 Customer Engagement and Product Design Drive customer engagement to strengthen policyholder health resilience through education, incentives for protective behaviours, preventive health programmes and mental health support, while helping policyholders better understand and respond to climate-related health risks.	3 Healthcare Delivery System Enhance efficiency and resilience within healthcare systems by reducing waste and inefficiencies—helping to lower emissions while freeing clinical, financial, and infrastructure capacity to respond to increasing climate-related health pressures. Address infrastructure resilience gaps through investment in telemedicine.	4 Wider Enabling Environment Advance research, data-sharing and collaboration to improve understanding of the relationship between climate hazards and health outcomes, strengthen risk assessment, and support longer-term planning for climate-resilient health systems.
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Taken together, these actions highlight how health and life insurers can engage across the value chain and partner with governments to help address health risks related to climate change. Many of the opportunities identified relate to longer-term system transformation

rather than immediate change. However, decisions taken today will shape how effectively insurers—and the health systems they support—are positioned to manage the growing health impacts of climate change across Asia.



1 Context: the evolving health impacts of climate change

“Life and health insurers have a detailed understanding of what makes people sick, what puts them at risk and what makes them healthier. The industry can use this knowledge to make a difference and help build resilience.”

► FORESIGHT INTERVIEW

1.1 Climate change as a health crisis

Once primarily an environmental concern, climate change is now recognised as a global health threat that may increasingly shape risk profiles, product design, and investment strategies across the health and life insurance sector.

This growing recognition is also reflected at the international policy level. A key inflection point occurred in 2023, when, for the first time in its 28-year history, the United Nations Climate Change Conference of the Parties (COP28) placed explicit and sustained focus on the intersection of climate change and human health.¹ More than 140 countries endorsed the

COP28 United Arab Emirates Declaration on Climate and Health, alongside commitments of approximately US\$1 billion in funding to address climate-related health impacts, building on the momentum and strategic efforts from a range of earlier initiatives.² This focus on health continued at COP29 with the launch of the Baku COP Presidencies Continuity Coalition for Climate and Health, designed to sustain progress across COP presidencies and integrate health into climate policies. At COP30, the adoption of the Belém Health Action Plan (BHAP) provided further momentum by establishing a framework for building climate-resilient health systems.

¹ The integration of health discussions into Climate Change COP conferences was first introduced at COP21 in 2015. Early COPs (pre-2015) addressed health issues only peripherally. However, post-COP21, there has been a marked increase in health-related sessions, supported by the advocacy from the WHO, and a focus on vulnerable populations negatively affected by climate change. Key milestones include the “Global Climate and Health Summit” at COP23 (2017), the “Health at COP26” initiative (2021), and leading up to the introduction of the first “Health Day” at COP28 (2023).

1.2 The causal chain: from global energy-related emissions to negative health outcomes

Climate indicators show a consistent and accelerating pattern: emissions remain high, the world is warming faster than expected, and the impacts on human health are already evident.

In 2025, analysis showed that the world's 100 largest oil and gas companies were collectively on track for 2040 emissions 189% above a 1.5°C-aligned pathway. At the same time, global temperatures continue to rise faster than anticipated.³ 2025 was recorded as the third hottest year on record, and for the first time, global temperatures over a three-year period (2023-2025) averaged more than 1.5°C above pre-industrial levels.⁴

Together, these data points indicate that further action is required to strengthen global mitigation efforts.

Institutions such as the United Nations and Berkeley Earth have noted that the likelihood

of limiting long-term warming to 1.5°C above pre-industrial levels is rapidly diminishing, with global temperatures expected to exceed this threshold on a temporary basis within the next five to ten years.^{5,6} The 1.5°C limit was established because exceeding it significantly increases the risk of severe and irreversible impacts, including extreme weather events, rising sea levels, ecosystem collapse, and food insecurity.⁷ This temperature trajectory is consistent with findings from multiple long-term climate assessments.

According to the Lancet Countdown, an international research collaboration founded in 2016, which tracks the relationship between climate change and health, climate change is already having measurable impacts on human health. Its 2025 report, released in advance of COP30, found that 12 of 20 key indicators used to monitor climate change-related health hazards, exposures, and impacts have reached record levels.⁸



189%

Projected emissions above
1.5°C-aligned limits by 2040.



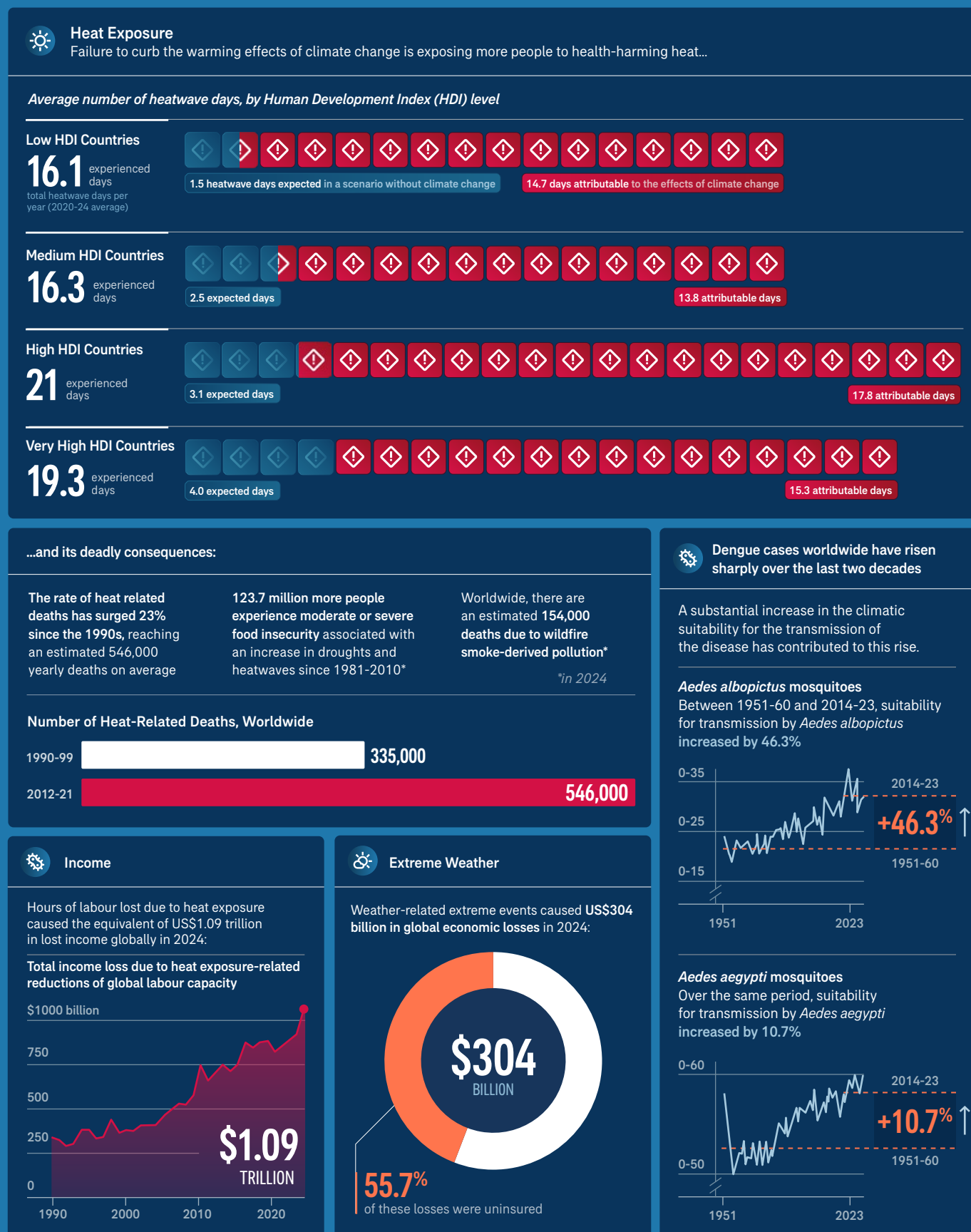
2025

Third hottest year
on record

FIGURE 1: The Lancet Countdown on Health and Climate Change (2024 and 2025)

Key Findings of the Lancet Countdown on Health and Climate Change (2024 and 2025)

Our fossil fuel dependence, growing greenhouse gas emissions, and adaption delays are killing millions each year



Source: The Lancet

Extreme heat provides one of the clearest examples of the impact of climate change on health.

Indicators related to extreme heat show that rising temperatures are already affecting health outcomes.

Heat-related deaths among people over 65 have increased by 167% compared to the 1990s, substantially above the 65% increase that would have been expected had temperatures not

changed.⁹ Rising temperatures are also disrupting daily life, affecting physical activity and sleep quality, and impacting both physical and mental health.¹⁰ In 2023, people exercising outdoors were exposed, on average, to conditions posing a risk of heat stress for nearly one-quarter more hours than in the 1990s baseline.¹¹

Based on available evidence, heat consistently ranks among the most immediate and measurable climate-related health risks.

FIGURE 2: An overview of climate-sensitive health risks, their exposure pathways and vulnerability factors





2 Impact: Asia's climate and health nexus

2.1 From global trends to a regional reality: Asia's converging climate-health risks

“The effects of climate change will continue to appear over time, and many will emerge in parts of our lives not currently seen as directly connected.”

► FORESIGHT INTERVIEW

Asia is warming faster than the global average while ranking among the world's most climate-disaster-prone regions.¹² As a result, global climate trends translate into more frequent, more severe, and more immediate health risks for populations across the region.

Asia remained the most disaster-impacted region in 2024, with climate-related hazards causing widespread human and economic impacts.¹³ Over the past decade, the Philippines, Viet Nam, and Myanmar have repeatedly appeared among

the countries most affected by extreme weather events globally.¹⁴

Flooding has impacted more people in Asia-Pacific than any other climate-related hazard, with more than half of people impacted between 1970 and 2024. It has also remained as the leading cause of economic losses from disasters in the region.¹⁵ Severe storms in late November 2025 caused more than 1,600 fatalities across Indonesia, Malaysia, the Philippines, Sri Lanka, Thailand, and Viet Nam, with widespread flooding and landslides displacing 1.2 million people.¹⁶

Together, these patterns illustrate how climate-driven hazards converge with high population density and coastal exposure, producing disproportionately large health and social impacts across the region.

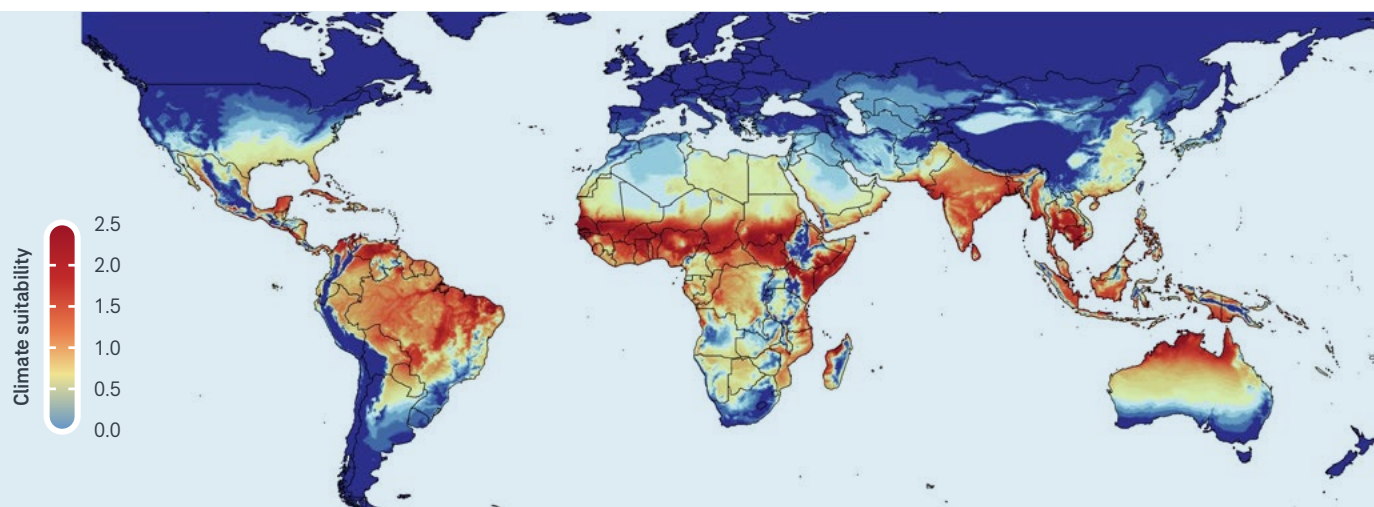
FIGURE 3: The impacts of tropical storm Paeng which hit Manila in 2022, damaging at least 15 healthcare facilities in the city



Source: Jonathan Cellona, ABS-CBN News

2.2 Climate-sensitive diseases: dengue and water-related risks

FIGURE 4: Average climate suitability for dengue virus transmission (1979-2022)



Source: Communications Earth & Environment (Taishi Nakase, Marta Giovanetti, Uri Obolski & José Lourenço, Population at risk of dengue virus transmission has increased due to coupled climate factors and population growth, 2024)

Changing rainfall patterns further illustrate the health implications of Asia's shifting climate. Longer rainy periods and extended monsoon seasons are altering disease transmission dynamics, with dengue—once largely confined to seasonal outbreaks—increasingly posing year-round risks. Under projected global warming scenarios, an estimated 2.9 million additional people are expected to be exposed to dengue in Asian metropolitan areas.¹⁷

Several public health experts have warned that dengue is becoming an increasing public health concern, reflecting its expanding geographic range and increasing incidence.¹⁸ Beyond vector-borne diseases, flooding is also expected to increase the incidence of waterborne diseases, exacerbate food insecurity, and contribute to mental health conditions, including post-traumatic stress associated with displacement and community disruption.¹⁹



2.3 Extreme heat and air quality as compounding risks

Extreme heat represents another escalating threat, described by one interviewee as a “silent killer” due to its lower visibility compared with floods, despite its potentially severe health impacts.

Although Asia is heating up faster than the global average, heat-related mortality in the region is frequently under-reported, masking the true scale of the risk.¹¹ Extreme heat exacerbates a wide range of health conditions, including cardiovascular disease, respiratory illnesses

such as asthma, diabetes, kidney diseases, neurological conditions, including multiple sclerosis, and mental health disorders such as depression and anxiety.²⁰

These risks are amplified when extreme heat coincides with poor air quality, a critical concern in Southeast Asia, where 99% of cities are breathing air far in excess of WHO guideline levels.²¹ This combination creates a compounding health burden that increases respiratory and cardiovascular complications.²²

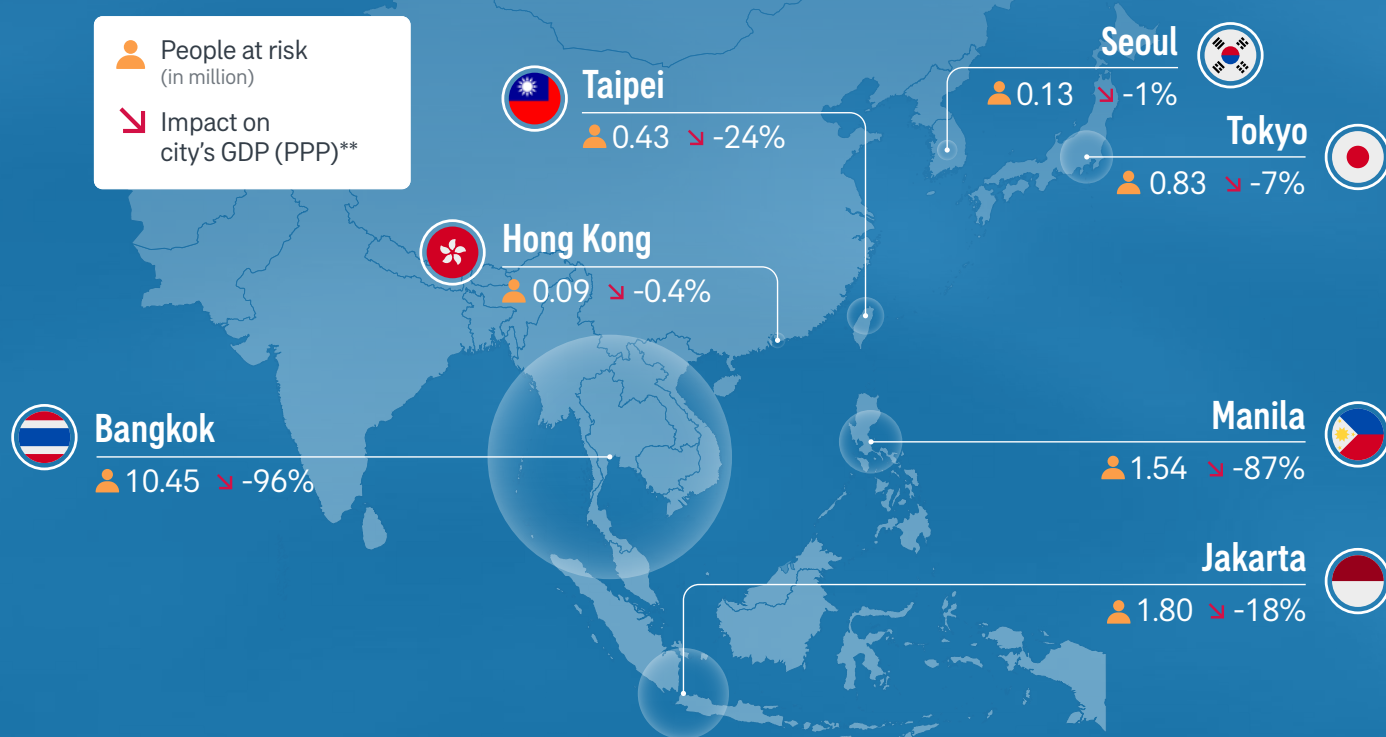
¹¹ This underreporting can be due to various factors, including difficulties in attributing deaths specifically to heat, limited data collection in some regions, and the fact that heat-related mortality is often overshadowed by more visible disasters like floods and storms.

2.4 Sea-level rise and coastal exposure

FIGURE 5: Asia's sinking cities

Asia's Sinking Cities

Risk to Asian cities due to rising sea levels and flooding* by 2030



* In the event of a 10-year flood (1:10 chance of occurring in any given year)

**Gross domestic product based on purchasing power parity.

Source: Statista (2021)

Rising sea levels also present a long-term threat to Asia. Even if global greenhouse gas emissions were stabilised today, sea levels would continue to rise beyond 2100 due to climatic processes already set in motion.²³

By 2030, seven major Asian cities are projected to face a high risk of severe flooding, even under relatively frequent 10-year flood events.²⁴ Bangkok is among the most exposed, with 96% of its land area at risk, while Jakarta faces a dual

challenge of sea-level rise and land subsidence, with approximately 17% of the city already below potential flood levels, placing an estimated US\$68.2 billion in GDP at risk.²⁵

These pressures are already contributing to population displacement and heightened health vulnerabilities in coastal communities, while also expanding habitats for disease vectors, including mosquitoes and ticks.²⁶

ASIA'S CONVERGING CLIMATE-HEALTH RISKS

The Escalating Health Burden



Extreme Heat: The 'Silent Killer'

+167%

Heat-related mortality for those over 65 has increased by 167% compared to the 1990s

99%

of Southeast Asian cities breathing air far in excess of WHO guideline levels

2.9 million

more expected to be exposed to dengue in Asian metropolitan areas — shifting rainfall patterns are expanding the geographic range and transmission window for dengue

Cities at the Frontline



Climate-Exposed cities

Urban Heat-Island Effect

Concrete and limited green space cause urban temperatures to remain significantly higher than surrounding areas



Bangkok

PRIMARY RISK FACTOR

Rising sea levels.
Land/economic exposure:
96% of land area at risk



Jakarta

PRIMARY RISK FACTOR

Challenge of sea-level rise and land subsidence: with approximately 17% of city already below potential flood levels

2.5 Existing vulnerabilities in Asia

Asia's climate-related health risks are amplified by pre-existing geographic, demographic, and socioeconomic vulnerabilities.

Urban dwellers

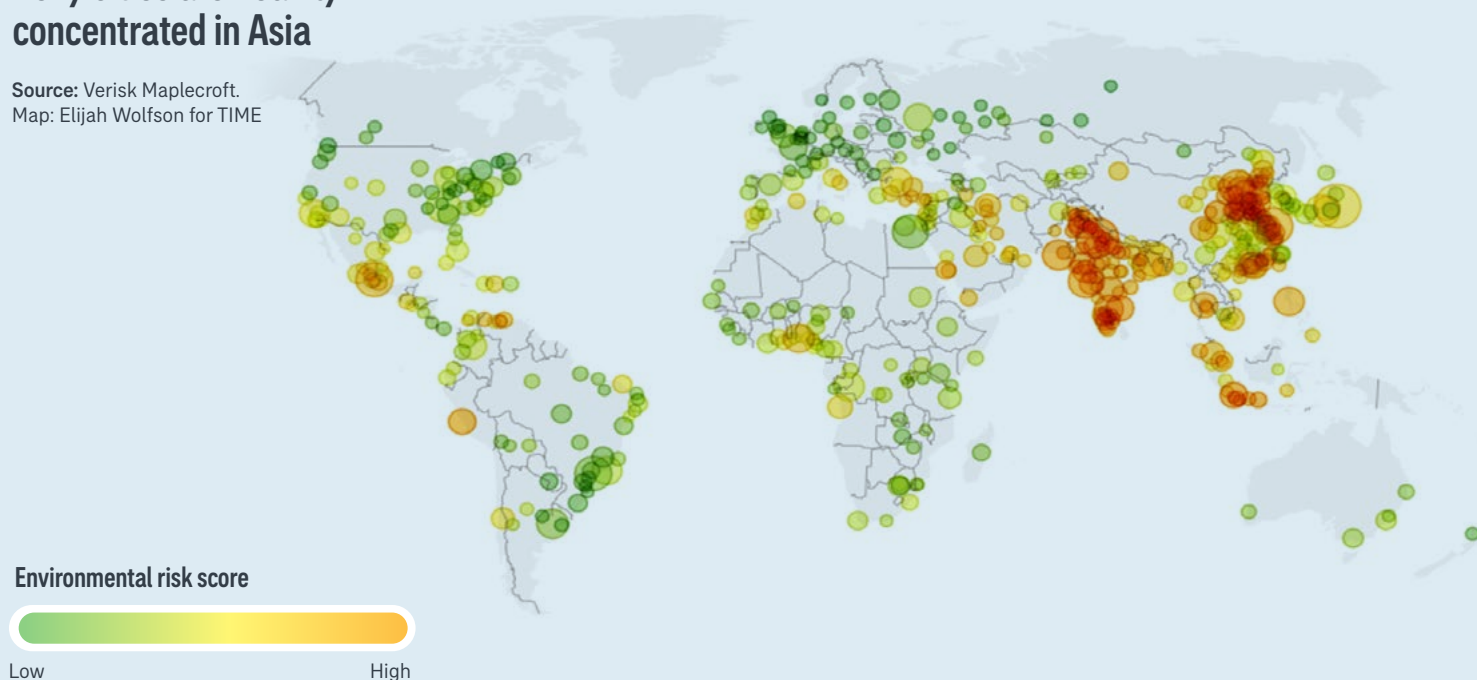
Asia has 99 of the world's 100 most environmentally at-risk cities.²⁷ Approximately 2.2 billion people currently live in urban areas, with an additional 1.2 billion expected over the next 25 years. These populations face elevated health risks from air pollution, urban heat islands, and accelerated disease transmission in densely populated areas.²⁸

The urban heat-island effect occurs when built-up areas—characterised by concrete, asphalt, and limited green space—absorb and retain heat, causing urban temperatures to remain significantly higher than surrounding rural areas, particularly at night. This intensifies both the frequency and severity of heat exposure, disproportionately affecting residents in informal settlements and reinforcing cycles of heat-related illness, respiratory disease, and infectious outbreaks.

FIGURE 6: Map of cities most at risk from climate change

The most environmentally risky cities are heavily concentrated in Asia

Source: Verisk Maplecroft.
Map: Elijah Wolfson for TIME



Delta and coastal communities

The world's 48 major river deltas—of which Asia's are the most densely populated—are on average 2.6 times more densely populated and 1.7 times more heavily built up than other coastal zones. Globally, approximately 240 million people live in delta regions, where flooding risks are already acute.²⁹ Coastal vulnerability is expected to increase in the coming decades. If greenhouse gas emissions remain high, global sea levels are projected to rise by 0.6–1.1 metres by 2100, further increasing exposure in low-lying coastal areas.³⁰

In the Asia-Pacific region, an estimated 44.1 million people live below one metre of elevation, and 112.3 million below three metres.³¹ Rising seas are associated with multiple health threats, including saltwater contamination of drinking water, expanded mosquito breeding habitats, outbreaks of waterborne disease following floods, and psychological trauma linked to repeated displacements.

Uninsured populations

Asia's disaster protection gap—estimated at 88–90%—is the largest of any region, leaving many households without the financial resources

needed for recovery. The impacts are particularly acute for female-headed households, people with disabilities, and workers in informal economies.^{32,33}

As a result, climate disasters often force households to make acute trade-offs between healthcare and basic recovery needs. Documented cases show families forgoing chronic disease treatment, reducing food consumption, or delaying medical care in order to finance rebuilding and repair.³⁴

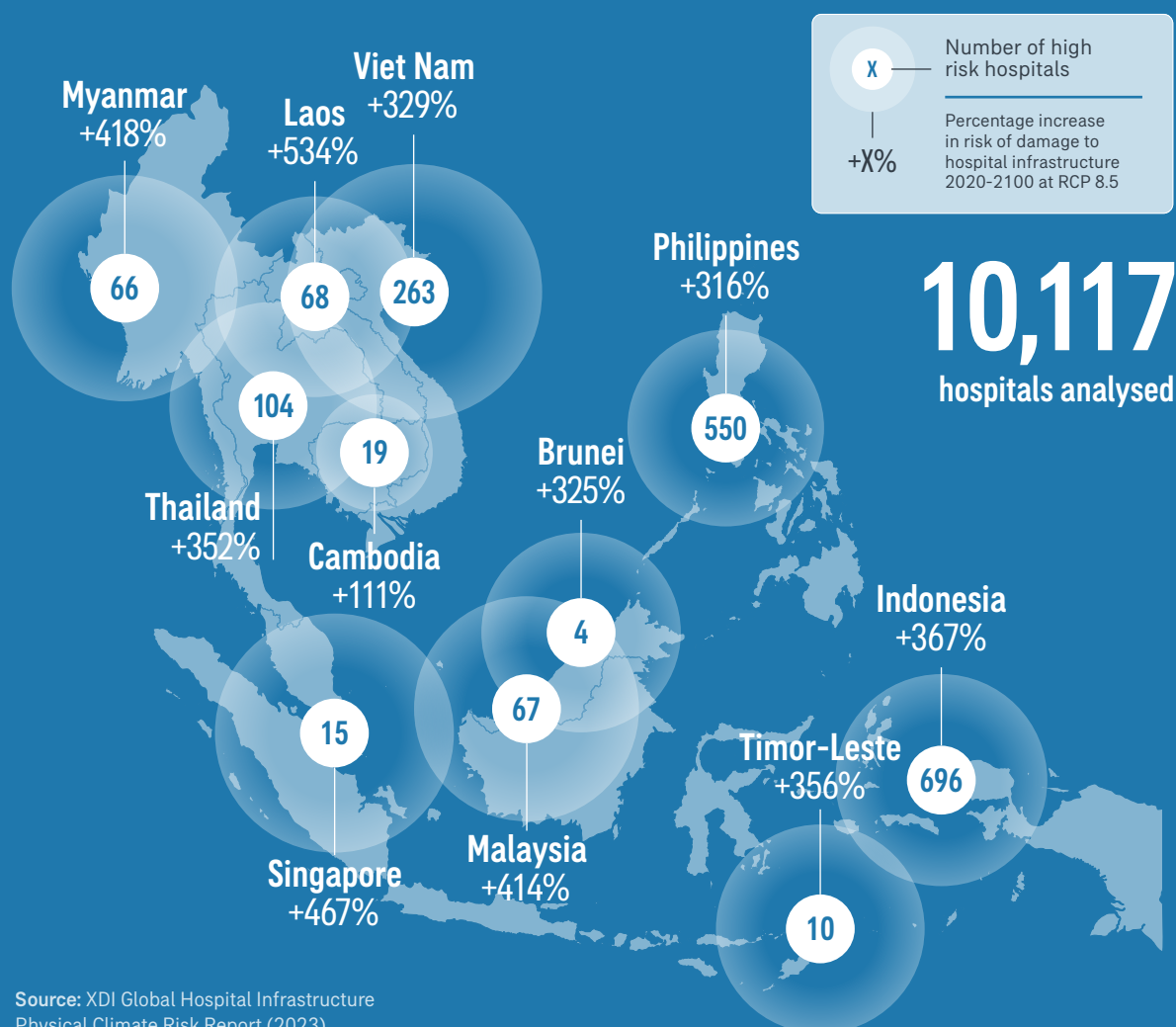
Elderly populations

Asia's elderly population is particularly vulnerable to climate-related health risks due to reduced capacity to regulate body temperature, a higher prevalence of chronic conditions, and limited mobility during extreme events and evacuations.³⁵

Asia is also home to the world's fastest ageing population.³⁶ By 2050, one in four people in the region will be over 60, with the elderly population projected to triple to nearly 1.3 billion compared to 2010 levels.³⁷ This demographic shift is expected to place unprecedented pressure on health systems as climate risks intensify, particularly in contexts where social support systems and healthcare infrastructure remain constrained.³⁸

2.6 Health system resilience gaps that compound vulnerability

FIGURE 7: Number of high-risk hospitals in Southeast Asia



Exposed healthcare infrastructure

Flooding poses a direct and material risk to healthcare delivery across parts of Southeast Asia. Following Typhoon Haiyan in 2013, 41% of hospitals in the Philippines were rendered non-functional, leaving affected populations without access to care at the point of greatest need.³⁹

Workforce limitations

Many countries in Asia face persistent under-penetration of healthcare resources. Countries such as Indonesia, the Philippines and India have relatively low penetration of doctors, with just 0.7 doctors per 1,000 people in Indonesia and 0.8 per 1,000 in both the Philippines and India, well below the WHO recommended threshold of 2.5 doctors per 1,000 population.⁴⁰ Gaps in training further constrain system capacity, leaving healthcare providers ill-equipped to manage emerging climate-linked conditions.⁴¹

Fragmented information systems

Health data systems across much of Asia remain fragmented between public and private providers. This fragmentation disproportionately affects vulnerable populations whose medical records can become inaccessible during climate-related displacement.⁴²

Insufficient government funding

Asia's average public health expenditure in 2021 was 4.5% of GDP in Asia's low- and lower-middle-income countries, compared with 9.7% across Organisation for Economic Co-operation and Development (OECD) countries.⁴³ While some governments have developed climate-health adaptation strategies and made progress in implementation, funding constraints continue to limit scale and effectiveness, leaving many vulnerable populations inadequately protected.⁴⁴



3 Agency: the expanding role of health and life insurers

3.1 Contributing to more resilient and adaptive healthcare systems in Asia

“Escalating climate risks will not resolve on their own and require coordinated interventions and systems that are prepared to respond. It will take time to build, but it is achievable.”

► **FORESIGHT INTERVIEW**

3.2 A shift in mindset: partnering for resilience

“From a health perspective, the goal is to positively shape the healthcare sector by influencing systems rather than controlling them.”

► **FORESIGHT INTERVIEW**

Government agencies, health regulators, and healthcare providers have traditionally been the primary architects of healthcare systems. Climate-related health challenges, however, introduce a new layer of complexity that extends beyond the remit of any single actor.

Building truly resilient health systems requires coordination across multiple sectors and disciplines. This includes collaboration between infrastructure managers and community organisers, alongside researchers, policymakers, and urban planners who understand how factors such as city design, housing, and transport influence health outcomes.

Within this evolving ecosystem of resilience builders, health and life insurers hold a distinctive and influential position. They sit at the intersection of healthcare financing, delivery systems, and population wellbeing. Through levers such as provider reimbursement models, investment capital, policyholder engagement, and data and analytics capabilities, insurers are well-positioned to convene stakeholders, shape incentives, and support system-level adaptation in fragmented health systems.

Despite this potential, the business case for insurers to proactively strengthen healthcare system resilience is not yet widely understood.

A 2024 Geneva Association global study found that most insurance stakeholders do not perceive climate change as exerting any immediate impact on the liabilities associated with health and life insurance products, nor do they anticipate short-term consequences for their insurability and affordability. There is, however, a consensus that this situation may change over the long term, particularly if global temperatures surpass the 1.5°C threshold in the coming years.⁴⁵

In Asia, declining infant mortality and rising life expectancy may appear to reinforce this view. However, these indicators do not capture how climate change is likely to increase morbidity without immediately affecting mortality rates.

In this context, insurers can support policyholders by partnering with healthcare systems and communities to build resilience, shifting from a reactive focus on risk transfer to a more proactive contribution to long-term health system stability.

3.3 Understanding system-level levers for climate-resilient health systems

“In Asia, healthcare systems are grappling with two parallel imperatives: decarbonising operations but also being adaptive as we continue to develop.”

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The WHO operational framework for building climate-resilient and low-carbon health systems helps identify gaps in Asia’s climate-health preparedness.⁴⁶ The model supports the analysis in the main body of this paper and provides readers with a consolidated view of the system-level levers identified by the WHO.

For health and life insurers, the value of this framework lies in its ability to clarify how health system actors—including providers and

policymakers—are being advised to respond to accelerating climate and health challenges.⁴⁷

The framework identifies ten essential components that contribute to climate-resilient health systems, spanning governance, financing, service delivery, and data and information systems. The full description of the WHO’s ten-component framework for climate-resilient and low-carbon health systems is provided in Appendix B.

⁴⁷ A key element of the framework is for countries to develop Health National Adaptation Plans, embedded within their multi-sectoral National Adaptation Plans (NAPs), to improve “whole-of-economy” resilience to climate change.

4 Delivery: path to implementation

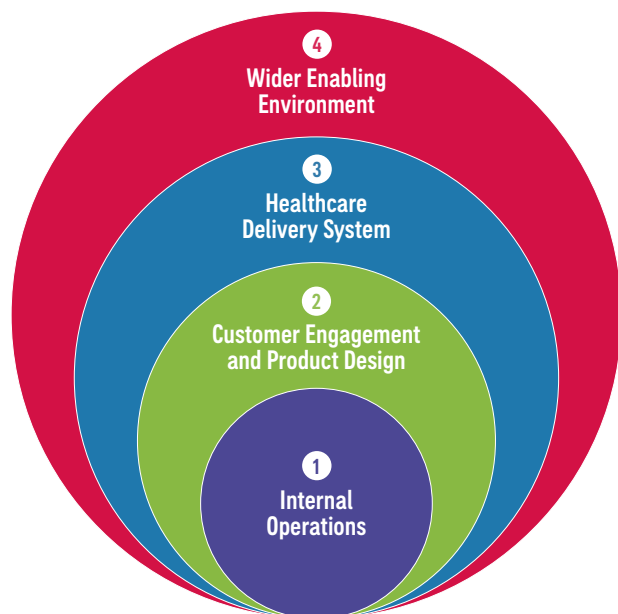
4.1 Aligning opportunities to act with the *Spheres of Influence* framework

The *Spheres of Influence* framework developed by Forum for the Future provides a practical structure for translating broad opportunities into concrete actions.⁴⁷

The framework helps organisations identify where business value and improved health outcomes align across the wider system. These alignment points sit across multiple spheres of influence, including optimising internal operations and investment portfolios; designing coverage products and engaging policyholders; strengthening healthcare provider networks; and shaping the broader market through policy advocacy, underwriting standards, and strategic partnerships.

The sections that follow outline the actions health and life insurers can take across each of the four spheres of influence.

FIGURE 8: Business *Spheres of Influence*



Source: Climate and Health Coalition - Driving Co-Benefits for Climate and Health (2021)

4.2 First sphere of influence: Internal operations

The first sphere of influence encompasses activities under the direct operational control of health and life insurers. This includes reducing internal operational emissions in line with climate science, integrating the transition to a lower-carbon economy into investment decision making and investing in a culture of climate action. Insurers should also strengthen the assessment and measurement of climate-related health risks. Within this sphere, insurers have the greatest degree of control, enabling more direct and immediate action.^{IV}

Actions taken in this sphere form the foundation for credibility and capability in the other spheres. By demonstrating commitment through their own operations and investments, insurers build the internal expertise and external trust needed to effectively engage with policyholders, healthcare providers, and the broader ecosystem on climate-health challenges.

4.2.1 ADDRESSING CLIMATE IMPACTS THROUGH MITIGATION

The Asia-Pacific region accounts for over 50% of global greenhouse gas emissions, a share expected to grow further as 80% of projected

increases in coal demand are anticipated to originate from the region.⁴⁸ Without a just transition away from continued investment in unabated high-emission activities, and towards credible decarbonisation and resilience measures, rising emissions are likely to increase future exposure to life-threatening heat stress, heightened infectious disease transmission, and disruptions to access to essential healthcare during climate-related disasters.

Specific actions for the health and life insurance sector

Insurers can accelerate decarbonisation by reducing emissions across their own operations through the adoption of low-carbon technologies and more energy-efficient systems.⁴⁹ Setting science-aligned net-zero targets can further reinforce commitments, enhance accountability, and provide a clear reference point for decision-making.

Beyond core operations, insurers—acting as asset owners—can align their investment portfolios with net-zero pathways, supported by Science Based Targets.

Q Formalising the pathway to net-zero through science-aligned targets and climate transition planning: In 2023, AIA formalised its net-zero pathway by committing to the Science Based Targets initiative (SBTi), becoming the first pan-Asian life and health insurer to adopt science-aligned emissions targets. The SBTi framework now provides a consistent reference point for the company's decarbonisation programme and sets clear expectations for accountability across the organisation. In the same year, AIA introduced its inaugural Climate Transition Plan (CTP), outlining near-term emissions targets and an implementation roadmap designed to support delivery for operations and investments.⁵⁰

Q Sustainability philosophy as a driver of success at Bangkok Dusit Medical Services (BDMS): BDMS operates an extensive private healthcare network comprising more than 50 hospitals in Thailand

and Cambodia. The organisation has set a target of achieving net-zero emissions by 2050 and is currently undertaking 32 emissions-reduction initiatives across 16 hospitals. Its progress has been recognised through high rankings in the Dow Jones Sustainability Indices (DJSI) World and Emerging Markets Index within the Health Care Services and Providers industry category.⁵¹



^{IV} While not explored in depth in this paper, this sphere also includes managing the insurer's own supply chain and operational footprint to enhance climate resilience and reduce environmental impact.

4.2.2 ADDRESSING THE NEED FOR A CULTURE OF CLIMATE AWARENESS

Embedding sustainability as part of organisational culture ensures that climate considerations are integrated into decision-making at all levels, rather than treated as isolated initiatives. A strong and regularly reviewed climate awareness and sustainability culture is critical to empowering employees, shifting mindsets and positioning sustainability as a core part of organisational identity. It also underpins long-term, measurable progress towards sustainability ambitions.⁵²

Specific actions for the health and life insurance sector

Providing regular training, aligned with climate and sustainability objectives, builds awareness of pertinent climate-related issues that may impact health and life insurers and drives understanding of sustainable behaviours. This equips employees with the knowledge and tools needed to integrate sustainability into day-to-day activities.

Beyond formal training, the design and adoption of creative sustainability initiatives can stimulate innovation and foster a sense of shared ownership, supporting collective action and sustained behavioural change.



Q Making employees pioneers to fight climate change

The “AXA Climate School” is an e-learning platform which aims to train employees on climate issues, sustainability and environmental responsibility. It provides courses tailored for businesses and individuals to enhance their understanding of climate-related issues and how to address them in a professional context. The programme provides a library of engaging, science-based training content that educates holistically. A dedicated content team is supported by

contributions from more than 120 experts from across academia and industry to accelerate learning and inspire change. Content is updated every six to eight weeks to ensure alignment with the latest scientific discoveries, research and regulations.⁵³

Additional examples of addressing climate impacts through mitigation and developing an organisational culture of climate awareness and sustainable behaviour are provided in Appendix C.

4.3 Second sphere of influence: Customer engagement and product design

The second sphere of influence centres on the direct relationship between health and life insurers and their policyholders. It encompasses strengthening policyholder health resilience through increased customer engagement, personalised guidance, incentive mechanisms, preventive health programmes and mental health support, while helping policyholders better understand emerging climate-related health risks.

Within this sphere, insurers can most directly apply their expertise to help address climate-related health risks by shaping how coverage, services, and incentives support prevention, resilience, and healthier outcomes over time.

“Private companies hold significant influence when it comes to shaping people’s behaviour.”

► FORESIGHT INTERVIEW

“We should proactively prepare people for the climate-related risks ahead, instead of waiting for regulatory direction.”

► FORESIGHT INTERVIEW

4.3.1 ADDRESSING THE ENVIRONMENTAL HEALTH AND WELLNESS AWARENESS GAP

As environmental factors such as air quality and extreme heat threaten human health, individuals do not always adapt their behaviour to reduce risk. Awareness of the growing frequency and severity of environmental health threats remains uneven, and many people lack clear guidance on how to adapt daily activities and habits in response. This gap is particularly consequential for population groups that may be more exposed to environmental health risks, including the elderly, children, and those requiring maternal healthcare.

Specific actions for the health and life insurance sector

Insurers can play a meaningful role in closing this awareness gap by combining trusted engagement with timely, practical guidance. Community-based events and educational workshops offer opportunities to engage the public and healthcare professionals in accessible ways. Partnerships

with NGOs, schools and environmental organisations can amplify reach, align messaging with public health authorities and distil complex environmental health issues into relatable, locally relevant and actionable information.

Digital channels offer additional opportunities to support prevention. By establishing direct communication with policyholders through mobile platforms, insurers can deliver timely guidance on environmental health risks, potentially reducing avoidable emergency care. This approach is particularly relevant in the Asia-Pacific region, where high smartphone penetration is accelerating the adoption of digital health tools. Wearables, mobile health apps, and SMS-based interventions can drive continuous engagement and support healthier behaviours.

By integrating insights from claims data, wellness programme participation, and environmental indicators, insurers could apply predictive analytics to identify when and where targeted interventions are most likely to be effective. Looking ahead, advances in data analytics and digital engagement may further enable insurers to combine climate and health data to deliver personalised notifications and practical guidance

during extreme heat events or periods of poor air quality, supporting individuals in managing climate-related health risks.⁵⁴ Over time, these capabilities could support the development of incentive structures—such as tiered benefits or dynamic premium adjustments—that reward protective behaviours and encourage preventive action. Any such use of health data must be based on opt-in participation, governed by strict data controls, and underpinned by responsible data use to protect consumer rights and maintain trust. To address data privacy concerns, policyholders should explicitly consent to data sharing in exchange for clear benefits, such as participation or premium incentives.

At the same time, evidence suggests that technology alone is insufficient to drive sustained

behaviour change and may, in some contexts, exacerbate existing health inequalities.⁵⁵ Digital tools are therefore most effective when deployed alongside trusted community-based organisations, including civil society groups or local family networks that have established relationships with at-risk communities. These partnerships can extend reach, strengthen cultural relevance, and improve adoption rates.

Taken together, data-enabled engagement strategies can help insurers drive a shift towards more prevention-oriented models of care, complementing traditional coverage with practical measures that strengthen individual and community resilience to environmental health risks.

🔍 Empowering people through digital health literacy programmes

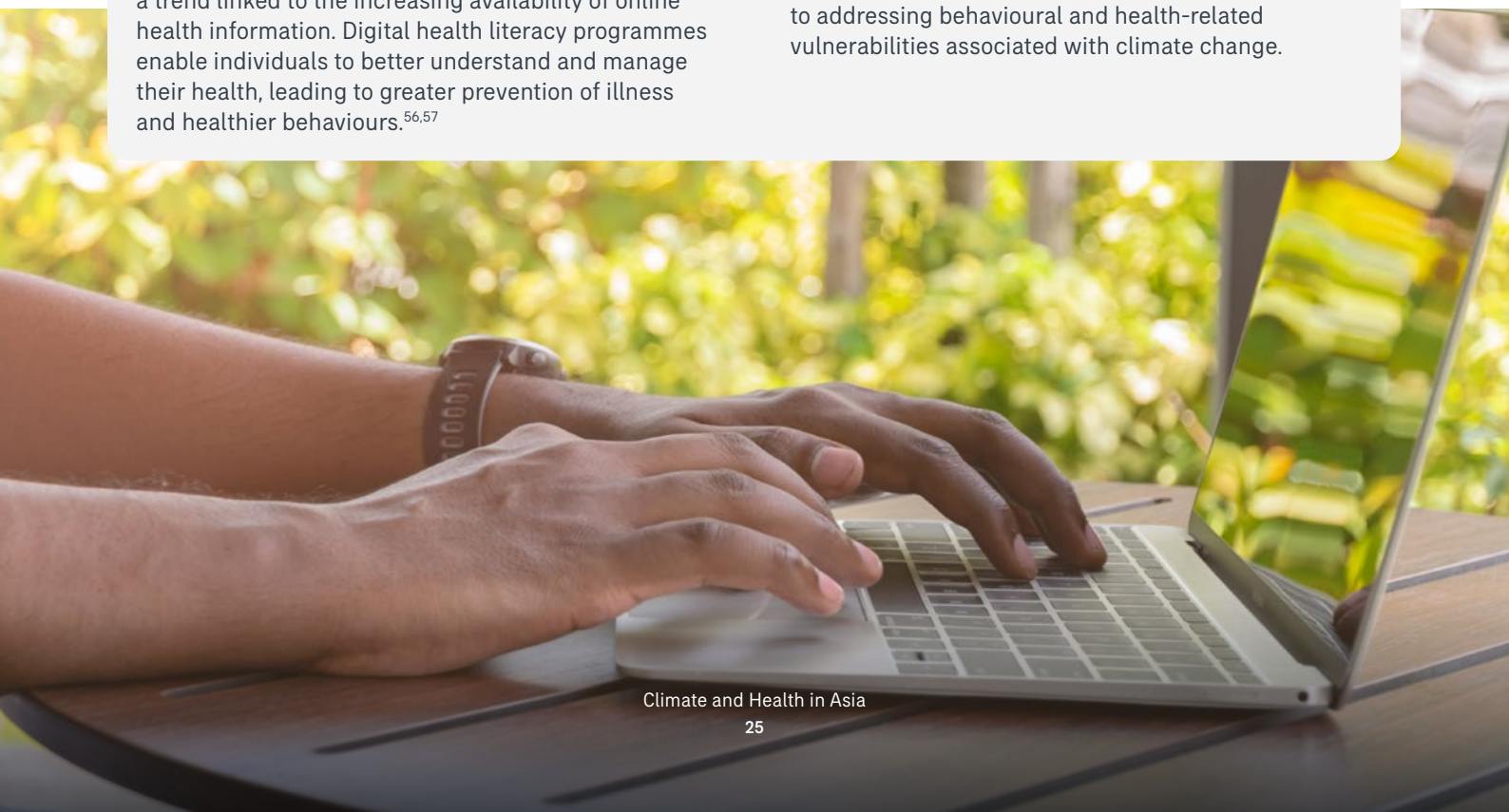
While not an insurance-led initiative, the example below illustrates how digital platforms can be used at scale to improve health literacy and encourage healthier behaviours.

In the People's Republic of China, the growing popularity of short video platforms, social media and WeChat has transformed the way people access health information. As smart healthcare continues to expand, healthcare professionals are leveraging their clinical expertise to create simple, engaging short-form videos that make complex medical information easier to understand. Data from the National Health Commission shows that national health literacy levels increased from under 10 percent in 2014 to 30 percent in 2023, a trend linked to the increasing availability of online health information. Digital health literacy programmes enable individuals to better understand and manage their health, leading to greater prevention of illness and healthier behaviours.^{56,57}

🔍 AIA Vitality's Preventive Health Model

AIA Vitality is a science-backed health and well-being programme that uses behavioural incentives to support preventive care. Members receive discounts and benefits as they progress through programme status levels (Bronze to Platinum) by earning points for activities such as sleep tracking, physical exercise and health assessments. Measured outcomes indicate health improvements among participating members who are at or above clinical risk thresholds: 23% achieving healthier BMI ranges, 66% reaching healthy blood glucose levels, and 35% returning to healthy cholesterol levels.⁵⁸

In the context of climate-related health pressures, programmes that strengthen baseline health can support greater individual resilience. AIA Vitality's focus on preventive health, therefore, is relevant to addressing behavioural and health-related vulnerabilities associated with climate change.



4.3.2

ADDRESSING THE MENTAL HEALTH VULNERABILITY GAP

A growing body of evidence suggests that acute climate events may be associated with psychological impacts similar to those associated with other recognised stressful or disruptive experiences. Studies link exposure to extreme weather to a range of mental health outcomes, including post-traumatic stress disorder, acute stress disorder, depression, anxiety, suicidal ideation, and substance misuse.⁵⁹ Research focused on flood-affected populations found that approximately 67% of individuals experienced anxiety symptoms and 60% suffered from depression in the aftermath of floods, with effects that can persist for months or even years.⁶⁰

Young people in Asia may be disproportionately affected by climate-related mental health challenges, with nearly double the proportion experiencing multiple climate shocks compared with the global average of 37%.⁶¹

Recent events illustrate these impacts in tangible terms. Typhoon Yagi, an extremely destructive tropical cyclone, caused extensive damage across Southeast Asia and South China in September 2024. The typhoon disrupted learning for nearly 1.3 million children across the region, through school closures, home flooding, and family displacement throughout Viet Nam and Myanmar.⁶²

Country-specific research further highlights these patterns. In Indonesia, *Breaking the Silence: Unveiling the Intersection of Climate Change and Youth Mental Health in Indonesia* documents the psychological impacts of environmental hazards and social disruption on young people, including anxiety and post-traumatic stress disorder. The report also describes the growing prevalence of fear and distress among young people in response to climate change.⁶³

Specific actions for the health and life insurance sector

Climate change is increasingly recognised as one of a number of factors that may contribute to mental health challenges. Across the insurance sector, mental health support is becoming more integrated into health propositions and care ecosystems. Continued expansion of mental health support can help insurers address a broad range of customer needs, including those arising from or exacerbated by climate-related events and environmental disruptions.

Integrating digital mental health services into policy benefits can improve accessibility and scalability of mental health support, helping insurers address a broad range of mental wellbeing needs, including those that may arise following climate-related events. By embedding access to digital platforms in advance of crises, insurers can enable timely intervention, particularly for younger policyholders who may experience heightened climate-related anxiety and who are more likely to engage with digital services.

Reducing stigma around mental health presents a further opportunity, especially in Asian markets where stigma may be a barrier to help-seeking and treatment. Insurers can enable education and awareness initiatives that improve understanding of available mental health resources and normalise early access to care.⁶⁴

Direct examples of health and life insurers explicitly addressing climate-related mental health impacts remain limited. However, many insurers are expanding mental health support within their policies more broadly, signalling a growing recognition of psychological wellbeing as a core component of health resilience. This direction is reinforced by the Intergovernmental Panel on Climate Change (IPCC), which has emphasised that mental health resources should be integrated into national responses to climate change, pointing to a likely area of future focus for the insurance sector.⁶⁵

Q AIA Singapore & WhiteCoat: Digital mental health support through the Think Well programme

AIA Singapore has partnered with WhiteCoat, a regional digital health provider, to deliver an end-to-end digital mental health service aimed at improving access to mental wellbeing and mental health support.

The Think Well programme is embedded within AIA's corporate outpatient plans and leverages WhiteCoat's omnichannel platform and network of mental health professionals to provide text-based mental health

coaching to employees covered under these plans. Users can complete a mental health self-assessment and schedule same-day text-based sessions with qualified mental health professionals. The service also offers video and in-person consultations, alongside a curated content library of articles and videos to guide users in managing their mental wellbeing.⁶⁶

As the impacts of extreme weather events contribute to growing mental health challenges across Asia, insurers have an important role to play in supporting more holistic healthcare solutions.

4.3.3

EXPLORING INNOVATION AND RISK TRANSFER APPROACHES FOR CLIMATE-RELATED HEALTH RESILIENCE

“When discussing the topic of climate and health, equity must be a primary consideration.”

► FORESIGHT INTERVIEW

“Climate impacts risk undermining the growth of the middle class in Asia, as economies bear the cost of communities having to recover and rebuild after repeated disruptions.”

► FORESIGHT INTERVIEW

Over 40 million households in Asia currently forgo necessary medical treatment due to financial barriers, with climate-sensitive health risks disproportionately felt by the most vulnerable and disadvantaged groups, including the elderly, children, and those requiring maternal healthcare.⁶⁷ This human impact represents one dimension of Asia’s growing health protection gap, estimated at \$1.8 trillion in 2017 and expected to widen as climate-related health impacts intensify.⁶⁸

Specific actions for the health and life insurance sector

The examples included in this section are intended to illustrate emerging market signals and areas of experimentation. While they highlight potential approaches for strengthening climate-related health resilience, many remain at an early stage of development and should not be interpreted as established market practice or universally proven solutions.

Parametric insurance models have emerged as an area of innovation in parts of the insurance industry seeking to address climate-related health risks. Unlike traditional indemnity-based coverage, parametric products trigger pre-agreed payouts when objective thresholds—such as extreme heat indices or disease outbreak metrics—are met, enabling rapid financial support without the delays associated with claims assessment.⁶⁹

These solutions may be relevant across a range of exposed groups, including small and medium-sized enterprises (SMEs), which can face significant disruption from climate-related events. In the ASEAN region, where SMEs account for approximately 97% of economic activity, parametric mechanisms could address protection gaps that conventional products struggle to cover.⁷⁰

More broadly, health and life insurers can address protection gaps through integrated strategies that combine product innovation, distribution model refinement, and strategic partnerships:

Explore how insurance products, services and ecosystem partnerships can evolve to support resilience to climate-related health impacts.

In some markets, industry participants are experimenting with inclusive insurance models, simplified product structures and alternative risk-transfer approaches to help address wider protection gaps.

Leverage mobile technology and community partnerships to overcome distribution barriers.

Digital enrolment platforms can reduce administrative and compliance costs while expanding reach, particularly when combined with trusted community organisations that can facilitate education and enrolments among vulnerable populations.⁷¹ Such partnerships offer a pathway to more scalable alternatives to traditional, agent-led distribution models.

🔍 Heatwave Innovation: Heatstroke insurance in Japan

In response to rising extreme heat events, two major Japanese insurers—Sompo Holding Inc. and Sumitomo Life Insurance—have introduced heatstroke insurance products offering short-term and monthly coverage options.

Customers can opt into daily coverage based on the weather forecast, with policies covering hospitalisation and other medical costs arising from heat exposure. Distributed digitally via the PayPay smartphone payment system, the plans aim to reduce transaction friction. Unlike conventional products that focus primarily on hospitalisation, these offerings also provide payouts for outpatient treatments such as intravenous drips.^{72,73}

Q Southeast Asia Disaster Risk Insurance Facility (SEADRIF)

The Southeast Asia Disaster Risk Insurance Facility (SEADRIF) addresses gaps in disaster risk financing across ASEAN by offering parametric insurance solutions and advisory services. Established with ASEAN+3 partners, SEADRIF enables governments to access pre-arranged funding that can trigger payouts rapidly following natural disasters such as floods. By pooling risks regionally, reducing reliance on post-disaster aid, SEADRIF supports improved financial preparedness, more timely response capabilities and enhanced economic resilience among countries with high climate vulnerability and low insurance penetration.⁷⁴

Q Heatwave Parametric Insurance for Outdoor Practitioners

In response to rising temperatures in Hong Kong, AXA Hong Kong and Macau launched the market's first Heatwave Parametric Insurance designed to protect outdoor workers exposed to heat stress.

The product targets sectors with significant outdoor exposure, including construction, property management, public utilities, and transportation. Using a parametric model, coverage is triggered automatically when temperatures exceed 36°C for three consecutive days during the summer coverage period. Eligible insured individuals receive either a HKD100 payout or an anti-heatwave kit of equivalent value.

Unlike traditional insurance products, no proof of loss, claims submission, or assessment process is required. This simplified mechanism enables faster support and reduces administrative burden.

The initiative remains a practical solution for corporations seeking to strengthen workforce protection.⁷⁵

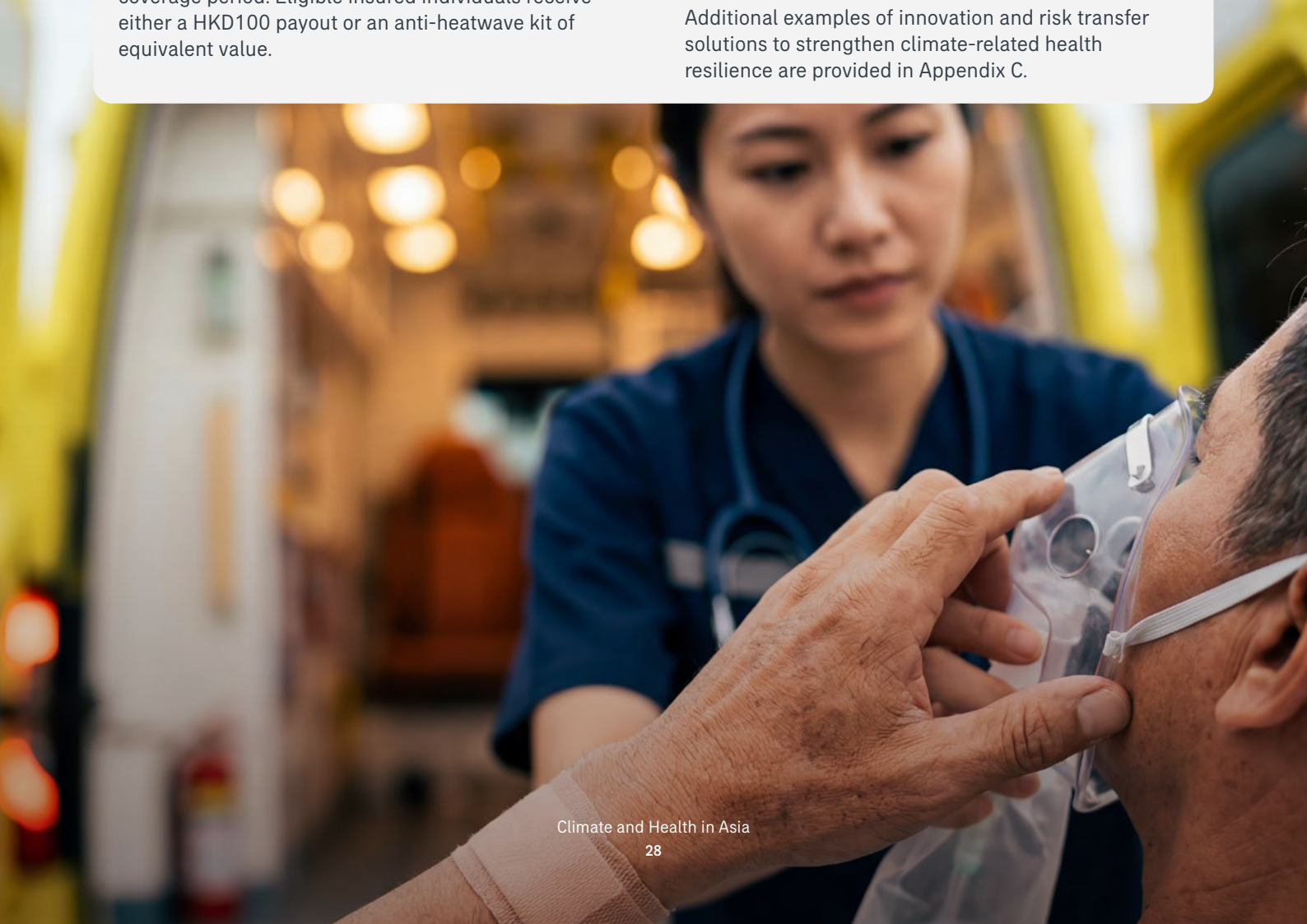
Q The Women's Climate Shock Insurance and Livelihood Initiative (WCSI)

The Women's Climate Shock Insurance and Livelihood Initiative (WCSI) supports women facing increasing heat-related risks through a combination of financial protection and complementary interventions.

Initially launched in India and expanding to Thailand, Pakistan, and Sierra Leone, the initiative was designed by Climate Resilience for All in partnership with the Self-Employed Women's Association (SEWA) and, in collaboration with Swiss Re Public Sector Solutions, implemented in 2024.

WCSI provides microinsurance that automatically pays out when temperatures exceed a defined threshold, supplemented by cash assistance to help offset lost income. The initiative aims to strengthen women's resilience to extreme heat by linking financial protection with early-warning systems and other support mechanisms.^{76,77}

Additional examples of innovation and risk transfer solutions to strengthen climate-related health resilience are provided in Appendix C.



4.4 Third sphere of influence: Healthcare delivery system

The third sphere of influence reflects the role health and life insurers can play in shaping change across the healthcare delivery system. Distinct from internal operations or direct policyholder engagement, this sphere focuses on insurers' ability to influence provider networks, hospital systems, clinical pathways, and other ecosystem partners.

4.4.1 ADDRESSING WASTE AND INEFFICIENCIES TO CREATE CAPACITY IN THE HEALTHCARE SYSTEM

“There is clear scope to improve efficiencies across Asia’s healthcare systems and this should be the first priority.”

► FORESIGHT INTERVIEW

The ability to collect, analyse, and act on responsibly collected health data will be crucial for addressing climate-related health challenges. Across much of Asia, gaps in data infrastructure contribute to persistent inefficiencies—such as fraud, waste, and abuse (FWA)—that absorb financial and clinical capacity needed to respond to growing climate-related health pressures. According to a joint survey by the Asian Development Bank and Asia Care Group of almost 240 insurance leaders, FWA accounts for an estimated 30–40% of health insurance claims costs across the Asia-Pacific region.⁷⁸ These practices raise operational costs for insurers with consequences felt throughout the healthcare system. Research by the Asian Development Bank

has found that overprescription of medication is a primary source of waste for insurers in the region. Insurers also face challenges related to provider-induced demand and inefficiencies arising from the absence of standardised care pathways.⁷⁹

Reducing FWA can deliver multiple co-benefits. It helps minimise unnecessary treatments and the resources they consume, lowering the carbon intensity of healthcare delivery. It also frees up clinical, financial, and infrastructure capacity that can be redirected to climate-related health pressures, including the management of chronic conditions—such as diabetes and cardiovascular disease—that may worsen under climate stressors. By creating this space, health systems are better positioned to respond to demand surges during extreme events, invest in more sustainable infrastructure, and strengthen workforce preparedness.

Specific actions for the health and life insurance sector

Health and life insurers can continue to strengthen integrated fraud, waste and abuse detection systems that also lay the groundwork for broader climate-health analytics.

Shifting towards value-based care (VBC) models presents a further opportunity to improve efficiency and resilience across healthcare systems. VBC models offer healthcare organisations in the region an opportunity to prioritise the delivery of cost-effective, high-quality, and efficient patient-centred care by more strategically utilising healthcare resources and reducing unnecessary utilisation. Over time, this approach can support more streamlined, adaptive healthcare delivery systems that are better equipped to absorb climate-related pressures.⁸⁰

🔍 Integrated Healthcare Strategy to Improve System Capacity

AIA's Integrated Healthcare Strategy aims to shift health insurance from a transactional model to a more proactive, patient-centred approach, structured around three pillars:

- 1 Delivering differentiated health insurance solutions that provide improved coverage and access to affordable care
- 2 Partnering with healthcare providers to support better health outcomes at lower cost

- 3 Enhancing customer experience through integrated care management across the healthcare journey

A central element of this approach is adopting VBC models. Through partnerships with hospitals such as Singapore General Hospital (SGH), care pathways for selected procedures have been redesigned to improve efficiency and patient experience. As a result, approximately 25% of total knee replacement procedures at SGH are now performed as day surgeries, reducing length of stay and freeing hospital capacity.⁸¹

4.4.2

ADDRESSING INFRASTRUCTURE RESILIENCE GAPS THROUGH INVESTMENT IN TELEMEDICINE

“If environmental shocks occur once every decade, hospitals are typically able to restore operations within weeks. However, if these events become recurrent and we remain underprepared, then large segments of Asia’s population may be unable to access essential care.”

► FORESIGHT INTERVIEW

Under high-emissions scenarios and without a phase-out of fossil fuels, modelling indicates that up to one in twelve hospitals globally could face a high risk of total or partial shutdown due to extreme weather events by the end of the century, equivalent to approximately 16,245 hospitals.⁸² This represents nearly twice the number of hospitals currently assessed as being at high risk. A residential or commercial building with a comparable level of risk would typically be considered uninsurable.

Hospitals located on coastlines and major river systems are particularly vulnerable. Across Asia, many of the region’s largest cities and healthcare facilities are concentrated in coastal areas, including in Japan, the People’s Republic of China, Viet Nam, Bangladesh, Indonesia, and the Philippines, creating disproportionate exposure to coastal inundation.

While flood risk today is primarily driven by riverine and surface water flooding, coastal inundation is projected to increase sharply towards

the end of the century as sea levels rise. By 2100, it is expected to become the dominant hazard after riverine flooding. Infrastructure planning and investment decisions made today will therefore have long-term implications for health system resilience. Limiting global warming to 1.8°C with a rapid phase-out of fossil fuels would halve the risk of damage to hospital infrastructure compared to a high-emissions scenario.⁸³

Specific actions for the health and life insurance sector

If climate-related disruptions to physical infrastructure become more frequent, insurers and healthcare providers need to prioritise continuity of care through alternative delivery models. Telemedicine has emerged as a key adaptive strategy to maintain healthcare delivery during extreme weather events that compromise physical facilities.

However, the effective deployment of telemedicine faces several barriers, including limited internet connectivity, uneven digital literacy among patients and providers, and significant upfront investment requirements.⁸⁴ Healthcare systems also require protocols for remote triage and diagnosis, training for clinical staff, and integrated digital health records that safeguard patient privacy and data security.

Looking ahead, telemedicine may play a more prominent role within broader resilience strategies. Continued investment will be needed in enabling technologies such as AI-supported diagnostics, remote monitoring tools, and digital platforms designed to function during disruption. These solutions can be complemented by community health worker networks and mobile medical units, creating more flexible, hybrid models of care. Health and life insurers can enable this shift through benefit design, reimbursement structures, and strategic partnerships that incentivise resilient service delivery.

🔍 India’s telemedicine platform

India’s government-led eSanjeevani telemedicine platform provides free online consultations through a hub-and-spoke model linking primary health centres with specialists in urban hospitals. The platform reduces travel time and waiting periods for patients, particularly in rural and remote areas, and has

facilitated more than 100 million consultations. During the COVID-19 pandemic, eSanjeevani played a critical role in maintaining continuity of care, supporting India’s broader Universal Health Coverage objectives.⁸⁵

Additional examples of addressing data and infrastructure reliance gaps are provided in Appendix C.

4.5 Fourth sphere of influence: Wider enabling environment

The fourth sphere of influence extends beyond insurers' direct operations and customer relationships to encompass their role in shaping the wider enabling environment. This includes contributions to policy development, industry standards, research agendas, and market infrastructure that influence how effectively health systems respond to climate-related health risks.

Within this sphere, health and life insurers can help create conditions that support climate-health resilience at scale. Through participation in public-private partnerships, investment in applied research, collaboration with policymakers, and engagement in standard-setting processes, insurers can enable the development of regulatory and market frameworks that accelerate adaptation and strengthen the resilience of healthcare systems across Asia.

4.5.1 ADDRESSING CLIMATE-HEALTH INTELLIGENCE AND RESEARCH GAPS

Health and life insurers have an opportunity to deepen their understanding of climate-related health impacts by investing in research and strengthening climate risk intelligence capabilities. Closing this gap is particularly critical in Asia, where climate hazards and health outcomes vary significantly across geographies, requiring regionally specific data, expertise, and risk models.

While the relationship between climate change and human health is well established, accurately estimating the scale, timing, and attribution of many climate-sensitive health risks remains challenging. Some impacts are immediate, including mortality, injury, respiratory and cardiovascular harm, and exposure to infectious diseases. Others emerge over longer time horizons, appearing months or years after climate events.⁸⁶ Attribution is further complicated by fragmented health datasets, limited longitudinal data, and inconsistent reporting across public and private systems.

Current climate-health research highlights a gap particularly relevant for insurers. Much of the existing evidence base focuses on average temperature increases assessed over long-term horizons, typically up to 30 years. While this perspective is important for understanding

structural risk, it does not fully capture the growing volatility and near-term extremes that drive health outcomes, claims patterns, and system stress. For insurers, insight into near-term heat impacts—over the next one to five years—is becoming increasingly important.

Geographically granular data can also identify priority areas for intervention and support more effective allocation of resources. As one interviewee observed, "We are dealing with very different types of countries... It's a very complex system." Greater spatial resolution can reveal distinct climate-related challenges and vulnerabilities across and within markets. An Asian Development Bank survey has highlighted concerns about the lack of geographic granularity in data relating to multiple dimensions of climate vulnerability in the region.⁸⁷

Specific actions for the health and life insurance sector

Insurers can strengthen their expertise through external collaboration, including participation in existing capacity-building programmes or co-developing customised programmes and certifications that synthesise climate science, financial modelling, and risk assessment. Given the multidisciplinary nature of climate impacts, collaboration across scientific, medical, and analytical domains is likely to be important.

Partnerships with academic institutions, as well as funding or supporting research centres focused on climate change and health impact assessment, can help advance understanding of emerging and under-researched health risks relevant to insurance portfolios.

Broader investment in data science and digital infrastructure can further enable analysis of the complex interactions between climate variables and health outcomes, strengthening insurers' ability to model correlation, uncertainty, and long-term risk.

Health actuaries and actuarial science may increasingly play a role in translating geographically specific climate science into financial risk assessment. Understanding connections between where people live, environmental exposures, behaviour, and health outcomes can support more precise underwriting and inform new approaches to coverage.

Insurers can also strengthen risk assessment by partnering with climate scientists and healthcare providers to target research on the impacts of climate on health, including the near-term impacts of extreme heat such as heatstroke and the worsening health risks associated with chronic conditions, including cardiovascular, mental health, respiratory and diabetes-related conditions.⁸⁸ Key questions include how repeated heat exposure affects chronic conditions, which geographies are likely to experience the most significant heat intensification over the next

five years, and which demographic factors most strongly predict heat-related hospital admissions. Insights from this research could inform pricing strategies, geographic exposure management, and targeted prevention programmes.

Based on the research conducted for this paper, near-term heat impacts remain an underdeveloped area of focus for health and life insurers in Asia, despite their growing relevance to both population health and insurance risk.

Q Developing Climate-Risk Education for Insurance Professionals

The Institute and Faculty of Actuaries (IFoA) in London and Nanyang Technological University (NTU) in Singapore have introduced specialised courses in sustainable finance and climate risk management. However, interviews conducted by the Global Asia Insurance Partnership (GAIP) indicate that health insurance professionals remain underrepresented in these programmes. In response, NTU is developing an enhanced programme with a more specific focus on the insurance sector.⁸⁹

Q Democratising climate intelligence through AI-powered climate intelligence

CRAVIS (Climate Resilience Analytics and Visualisation Intelligence System) is an AI-powered climate intelligence platform developed by the Council on Energy, Environment and Water (CEEW).

Designed to make complex climate data in India more accessible, CRAVIS integrates over 40 years of historical climate data from 1981 to 2024 with future projections through to 2070 to assess district-level climate risks across India.

The platform analyses 279 climate indicators, including extreme heat, heavy rainfall and drought patterns, enabling users to better understand current and emerging climate challenges. Its built-in Agentic AI capabilities allow users to ask natural-language questions about district-level risks, receiving insights in real time, while an Atlas Tool provides dynamic visualisations of severe weather and climate risk metrics like hot days, heavy rainfall days, and dry spells across all districts in India.⁹⁰

4.5.2 ADDRESSING INVESTMENT AND FINANCING GAPS IN CLIMATE- HEALTH ADAPTATION

Across the Asia-Pacific region, the annual financing gap for health-focused climate adaptation is approximately US\$3.52 billion through to 2030, more than six times the level of currently available funding.⁹¹ Closing this gap requires targeted and strategic deployment of capital to address persistent underinvestment at the intersection of climate adaptation and health.

One promising mechanism for unlocking this necessary capital is blended finance, which combines public funding, concessional finance, grants, and private investment to reduce risk and crowd in additional capital for scalable solutions. Alongside blended finance, impact investors can play an important role in de-risking early-stage, climate-smart health innovations and resilience

measures that may not yet meet commercial investment thresholds.

Specific actions for the health and life insurance sector

Insurers can deploy impact-oriented capital to support emerging climate–health solutions that strengthen resilience and reduce long-term risk exposure. These could include technologies or services that reduce exposure to air pollution or support infectious disease management.

Insurers can also provide investments that strengthen health system capacity in areas facing heightened climate-related health risks, such as expanding access to telemedicine, supporting community-based care models, or enabling digital health infrastructure in underserved areas. By aligning investment activity with long-term health system resilience, insurers can contribute to adaptation outcomes while reinforcing the sustainability of healthcare delivery.

Q AVPN and Bayer Foundation: Climate–Health Solutions Fund for Asia

The Asian Venture Philanthropy Network (AVPN), in partnership with the Bayer Foundation, has established a US\$5 million fund supporting climate-related solutions that deliver health benefits in vulnerable communities across Asia.⁹² The *Lighthouse for Asia* fund prioritises climate-health innovations, including interventions related to water and sanitation in frontline climate-affected areas.

Alongside the fund, AVPN released the *Climate & Health Opportunity Primer: An Investment Opportunity for Social Investors*, supported by Bayer Foundation and developed in partnership with Dalberg Advisors. The primer outlines approaches to accelerate climate–health solutions, help vulnerable populations, and promote equitable investment strategies across the region.⁹³

4.5.3

STRENGTHENING PARTNERSHIPS AND ECOSYSTEM COLLABORATION

Climate-health resilience cannot be achieved by any single actor. Governments, healthcare providers, researchers, insurers, investors, and civil society organisations all play important roles in strengthening climate-health preparedness and resilience.

As climate-related health risks become more complex, effective collaboration across sectors will become increasingly important.

Partnerships can help address challenges that extend beyond the remit of individual organisations, including research and data gaps, financing constraints, and the design and delivery of effective climate-health interventions. They can also provide platforms for knowledge sharing, coordination, and the testing of new approaches to resilience building.

For health and life insurers, participation in multi-stakeholder partnerships provides

opportunities to contribute data, expertise, funding, and convening power while learning from other actors working at the intersection of climate and health.

Specific actions for the health and life insurance sector

Health and life insurers can participate in multi-stakeholder partnerships that bring together governments, healthcare providers, researchers, investors, and civil society organisations to address climate-health challenges that no single actor can solve independently.

Insurers can contribute data, technical expertise, and funding to collaborative initiatives that improve understanding of climate-related health risks, strengthen climate-health resilience, and support the development and scaling of effective interventions.

Insurers can also help convene stakeholders, support knowledge-sharing platforms, and contribute to the development of common frameworks, standards, and approaches that strengthen coordination across the broader health ecosystem.



Q Enhancing Population Health Resilience to Climate Change in ASEAN

Populations are at an increased risk of health issues due to climate change, with factors such as air pollution, extreme heat, and infectious diseases contributing to the threat. Current approaches to climate change, from data and evidence to financing and risk transfer, do not adequately address these

health risks, resulting in a significant protection gap at both global and national levels. Without the development and implementation of effective policies, frameworks, and appropriate health financing mechanisms to reduce risks, populations will remain vulnerable to them. This vulnerability will ultimately impact health outcomes, economic stability, and domestic financing.

Prudence Foundation and the WHO Foundation have entered a multi-year partnership to support WHO work on climate and health resilience in ASEAN, starting with a pilot project in Viet Nam. The partnership supports in-country research, policy and interventions alongside broader coalition-building mechanisms. The initiative aims to bridge the climate and health data gap and establish a robust evidence base for understanding and quantifying climate-related health risks. In parallel, the partnership will convene a variety of stakeholders to identify appropriate approaches to risk reduction and resilience building, including financing instruments and risk transfer mechanisms, to strengthen frameworks around climate and health.⁹⁴

Additional examples of measures that contribute to a more enabling environment are provided in Appendix C.



5 Conclusion: a forward-looking model for climate-resilient health action

This paper has examined the intersection of climate change and health in Asia through a four-part framework for action: the climate–health context and impacts shaping the region, the unique agency of health and life insurers, and the delivery of resilience through four *Spheres of Influence*—internal operations, customer engagement and product design, the healthcare delivery system, and the wider enabling environment.

The actions outlined span both near-term adaptations of existing insurance practices and emerging signals of longer-term sector evolution. Taken together, they reflect the nature of climate change itself—not only as a crisis demanding immediate response, but as a strategic inflection point that will shape how health and life insurers understand risk, value, and protection.

For Asia, this inflection point is particularly acute. The region faces overlapping climate

hazards alongside rapid urbanisation, demographic shifts, and persistent health system constraints. As demonstrated in the Impact: Asia’s climate and health nexus section, these pressures are already straining healthcare infrastructure, exposing vulnerable populations, and amplifying health inequities. Without adaptive, coordinated responses, these dynamics are likely to intensify over time.

Against this backdrop, the analysis underscores that health and life insurers occupy a distinctive position at the intersection of healthcare delivery systems and population wellbeing. As explored in the Agency and Delivery sections, insurers can influence outcomes not only through risk transfer but also through investment decisions, customer engagement, data and analytics capabilities, healthcare system partnerships, and ecosystem collaboration that shape how societies prepare for, respond to, and recover from climate-related disruption.

Realising this potential will depend on coordinated, forward-looking action across the sector. In particular, health and life insurers should consider the following strategic priorities across the four *Spheres of Influence*:

- ❶ **Strengthen internal capabilities and readiness for climate-related health risks.** Through decarbonisation efforts, climate-health risk assessment, investment portfolio alignment, and the development of an organisational culture of climate awareness, insurers can strengthen the foundations needed to respond effectively to emerging climate-health challenges.
- ❷ **Help policyholders build resilience to climate-related health risks.** Through customer engagement, preventive health programmes, mental health support, risk awareness initiatives, and innovative protection solutions, insurers can help individuals better understand, prepare for, and respond to emerging climate-related health risks while supporting overall health and wellbeing.
- ❸ **Contribute to more resilient and adaptive healthcare delivery systems.** By improving efficiency, reducing fraud, waste and abuse (FWA), expanding access to telemedicine, supporting value-based care models, and

partnering with healthcare providers, insurers can help strengthen health system capacity and continuity of care in the face of growing climate pressures.

- ❹ **Help shape a stronger enabling environment for climate-health resilience.** By supporting climate-health research, strengthening climate-risk intelligence, mobilising capital for climate-health adaptation, and participating in multi-stakeholder partnerships, insurers can contribute to the development of the evidence, financing mechanisms, and collaborative frameworks needed to accelerate resilience across Asia.

Together, these priorities illustrate how health and life insurers can strengthen resilience across the value chain while continuing to manage core insurance risks. Decisions taken today will influence not only how effectively the sector responds to future climate-related pressures, but also how it contributes to the long-term durability of health systems and communities across Asia.

By embracing an expanded role through coordinated action—one that balances risk management with resilience-building—health and life insurers have the opportunity to support a more adaptive, equitable, and sustainable health future for the region.

Appendix A

Methodology and Scope

Purpose

The aim of this landscape study was to identify opportunities for the private health and life insurance sector to take proactive action to

improve health outcomes for people living in Asia, with a view to the region's unique needs and context.

Methodology and research method

This paper outlines actions that health and life insurers can take to contribute to improved health outcomes across Asia, a region that will face unprecedented climate-related health challenges in the decades ahead.

Unlike traditional retrospective analyses, this study employs a foresight methodology to identify emerging opportunities before they become market imperatives. Through a combination of foresight interviews and literature review, the research identifies gaps where the health and life insurance sector might take a proactive response to anticipated climate-related health challenges.

To accomplish this, the research was guided by three questions:

- › What unique vulnerabilities do Asian communities face at the intersection of climate and health?

- › What are some of the gaps in climate-related health risks that have been identified by ecosystem actors?
- › What actions can health and life insurers, in partnership with their broader ecosystems, take to meaningfully contribute to protecting public health and community resilience in the face of climate change?

The geographical scope of Asia is wide, and the issues faced vary across different parts of the region, with a lack of awareness of the links between climate and health in Southeast Asia particularly acute. However, given that this paper addresses the role of insurers across the region, the boundary of Asia allows full exploration of the issues within the context of health and life insurance.

Foresight-oriented interviews

Participants were selected through purposeful sampling, targeting experts from health insurance providers, specialists working at the intersection of climate and health, and regional health system administrators.

The interview methodology utilised an open-ended, exploratory questioning approach to uncover challenges unique to the Asian

healthcare ecosystem, identify potential gaps, and develop strategic responses. The interview protocol was designed to encourage participants to articulate grounded yet speculative insights into future healthcare and insurance landscapes. These foresight interviews are intended to surface a range of perspectives, and the participants' responses do not necessarily reflect the views of AIA Group.

Our gratitude goes to the following participants who shared their expertise and experience through in-depth interviews:

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- › Reid Bailey, Director of Operational Risk Management, AIA Group
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- › Stuart Woollford, Director of Group Brand, AIA Group
- › Steve H.L. Yim, Founding Director, Centre for Climate Change and Environmental Health (CCEH); Professor, Asian School of the Environment; Professor, Lee Kong Chian School of Medicine, Nanyang Technological University, Singapore; Director, Climate and Air Pollution Research for Environmental Health in Asia (CARE-ASIA)
- › Maria Xin Qing Zou, formerly Technical Sales Lead, Vice President, Public Sector Solutions, Swiss Re

Analysis

To help provide insurers with actionable opportunities, the analysis aligns identified gaps with the *Spheres of Influence* framework developed by Forum for the Future for the Climate and Health Coalition. To ensure that the analysis

contributes to and complements globally aligned climate-resilient health efforts, we also drew on the WHO's Operational Framework for Building Climate Resilient and Low Carbon Health Systems during the analysis process.

Scope and limitations

This paper explores opportunities for health and life insurance companies to improve health outcomes for Asian populations, complementing existing claims reimbursement models.

The intersection of climate and health is complex, dynamic, and evolving. While evidence linking climate-related events to adverse health outcomes is widely accepted, the current

landscape is constrained by a lack of robust data and predictive models capable of adequately tracking and forecasting emerging climate–health risks.

The foresight interviews conducted as part of this study are intended to surface a range of perspectives and do not necessarily reflect the views of the author or the sponsor of this paper.

Appendix B

The WHO framework for climate-resilient and low-carbon health systems

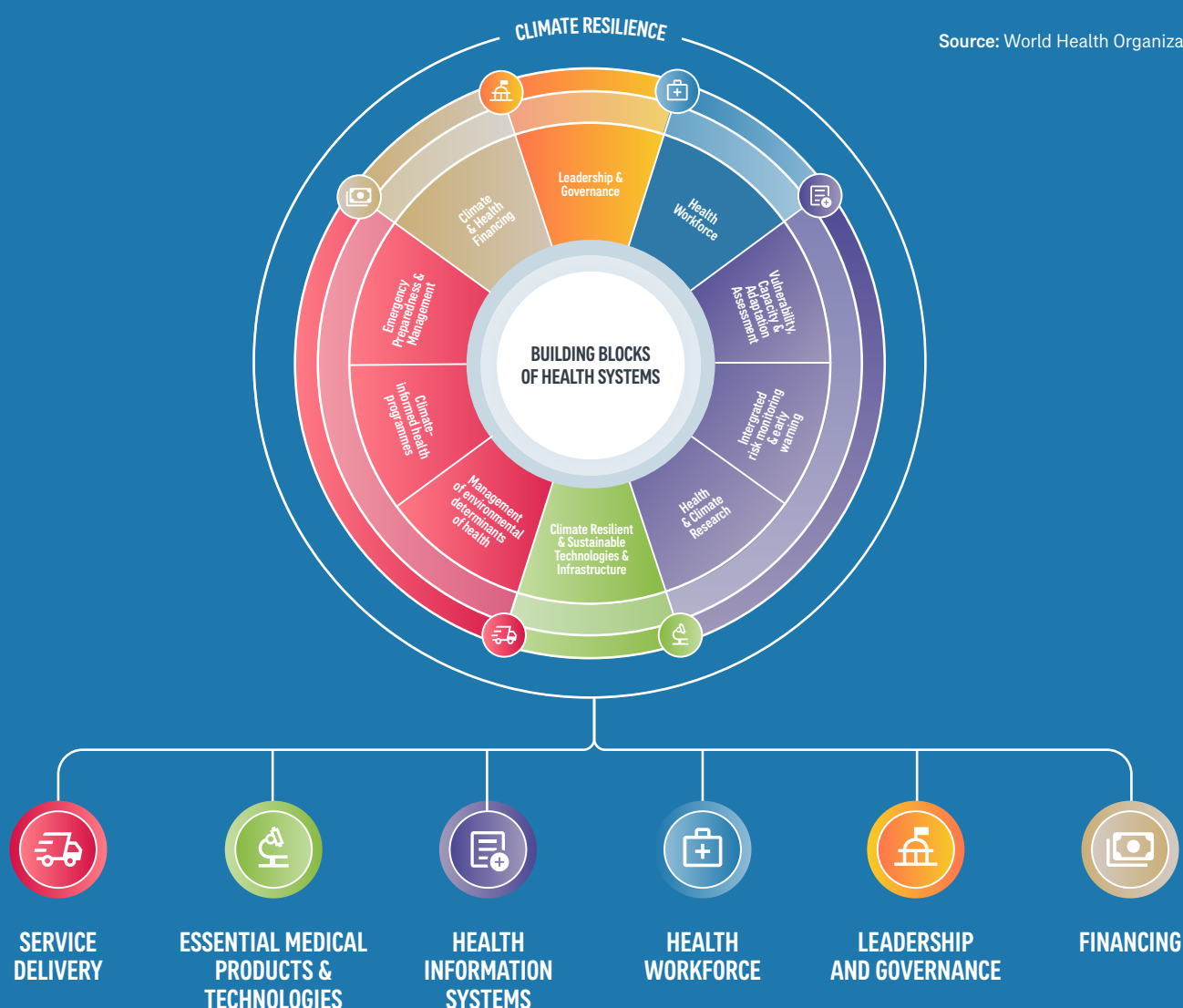
This appendix presents the WHO's Operational Framework for Building Climate-Resilient and Low-Carbon Health Systems in full.

The framework outlines ten core components that collectively describe how health systems are expected to strengthen resilience to climate-related health risks while reducing greenhouse gas emissions. It is included here as a reference to support the analysis in the main body of the paper

and to provide readers with a consolidated view of the system-level levers identified by the WHO.

Placing the full framework in this appendix allows the main paper to focus on the implications and opportunities for health and life insurers, while ensuring that the underlying global guidance informing this analysis remains transparent and accessible.

FIGURE 9: Operational framework for building climate resilient and low carbon health systems



- › **Climate transformative policy and governance** aims to establish strong leadership and governance for building climate resilience in health systems by integrating climate considerations into health policies and fostering cross-sectoral collaboration.
- › **Climate-smart health workforce** aims to equip the health and care workforce with the ability to respond to climate-related health risks while also reducing its own greenhouse gas emissions; in addition to providing actionable information and communication to work with communities and health-determining sectors in the context of climate change and health.
- › **Assessment of climate and health risks and greenhouse gas (GHG) emissions** aims to first gain a comprehensive knowledge of the main hazards, exposures, health risks (both current and future), and vulnerabilities across different population groups, geographical areas, and health systems in the country or region; second, have information on GHG emission hotspots at both national health system and facility levels; and third, have an established process and system to track progress in overall climate resilience and GHG emissions in health systems while iteratively assessing health risks over time.
- › **Integrated risks monitoring, early warning, and GHG emissions tracking** establish an integrated approach to climate-health surveillance through three interconnected objectives: collecting, analysing, and interpreting data on climate-sensitive environmental risks and epidemiological trends to enable timely responses; monitoring and reporting information on climate change, health impacts, vulnerabilities, health system capacity, and GHG emissions over time; and communicating timely warnings to health decision-makers, media, and communities that translate into effective preventive actions against negative health outcomes.
- › **Health and climate research prioritises three core elements:** developing and implementing a multidisciplinary research agenda on climate change and health with key stakeholders; building research capacity through networks, funding, and training opportunities covering both climate resilience and low carbon sustainability; and translating research findings into evidence-based policies that inform adaptation and mitigation decisions within and beyond the health sector to transform practices.
- › **Climate resilient and low carbon infrastructures, technologies, and supply chain** addresses the importance of strengthening the adaptation of current infrastructures, technologies, and supply chains; introducing new low carbon technologies; and promoting environmental sustainability of health operations.
- › **Management of environmental determinants of health** aims to step up efforts to address environmental risks to health by strengthening monitoring and management of these determinants; developing and implementing regulatory instruments and mechanisms; and promoting coordinated intersectoral management.
- › **Climate-informed health programmes** aim to leverage health information systems (e.g. assessments, research, and monitoring) to inform the delivery of specific climate-sensitive health programmes. The health sector, in coordination with other sectors, is often directly responsible for programmes that address climate-sensitive health risks (such as vector- and water-borne diseases, mental health, cardiovascular and respiratory diseases, maternal and newborn health, nutrition), preparedness and response to extreme weather and environmental events, as well as other crises.
- › **Climate-related emergency preparedness and management** aims to build preparedness, response capacity, and health security in health systems and communities by implementing climate-related risk management for emergencies and disasters through climate-smart policies and protocols; establishing climate-informed health emergency and disaster risk management; and supporting community empowerment.
- › **Sustainable climate and health financing** supports countries in identifying and accessing sustainable financing to support climate change and health interventions and proposes ensuring access to health-specific funding and financing mechanisms, including climate change funding streams, and funding allocated for health-determining sectors. Effectively protecting health from climate change will incur financial costs for health systems.

Appendix C

Case studies and market signals

The case studies included in this appendix provide practical illustrations of how insurers and ecosystem actors across Asia are responding to the intersection of climate change and health.

They are intended to complement the main analysis, offering concrete examples of initiatives, partnerships, and financing mechanisms that relate to the themes explored in the paper, including system resilience, innovation, investment, and cross-sector collaboration. The case studies span different geographies, actors, and stages of maturity,

reflecting the diversity of approaches currently emerging across the region.

These examples are illustrative rather than exhaustive. Inclusion does not imply endorsement, nor are the case studies intended to represent best practice or replicable models in all contexts. Instead, they serve as signals of market activity and experimentation, highlighting where insurers, investors, governments, and partners are beginning to engage with climate-related health risks in new ways.

First sphere of influence

Internal operations

Augmenting ESG training and capacity in investments

AIA requires in-scope research analysts and portfolio managers to complete CFA Institute's Sustainable Investing Certificate. The internationally recognised qualification provides a standardised foundation in investment-relevant ESG concepts, including:

- › ESG factors
- › Engagement and stewardship
- › ESG analysis, valuation and integration

- › ESG integrated portfolio construction and management
- › investment mandates, analytics and reporting.

Beyond strengthening the technical capabilities of AIA's investment professionals, AIA was the first organisation globally to mandate the CFA Institute's Sustainable Investing Certificate for relevant roles. Adoption of the qualification has since grown across the investment industry, reflecting increasing recognition of the importance of ESG expertise in supporting sustainable investment outcomes.

Second sphere of influence

Customer engagement and product design

Programme to engage one billion people to live Healthier, Longer, Better Lives by 2030

Through partnerships, events, community programmes and campaigns, the AIA One Billion programme aims to engage people across Asia in adopting healthier lifestyle behaviours. Initiatives such as the AIA Healthiest Schools Programme and AIA Voices provide health and wellness

education and support financial literacy within underrepresented communities. The programme also aims to raise awareness of the growing prevalence of lifestyle-related diseases in Asia, some of which may be exacerbated by a warming climate. The initiative aims to reach one billion people across Asia by 2030. Since its launch in 2022 to end-2025, AIA One Billion has engaged 622 million people.⁹⁵

Heat-triggered micro-insurance for informal workers in India

In India, insurance technology firm Blue Marble, the Arsht-Rock Foundation, and the Self-Employed Women's Association (SEWA) are working with local insurer ICICI Lombard to pilot a micro-insurance product designed to address income loss caused by extreme heat. The programme targets women working in the informal economy, who are particularly vulnerable to climate-related disruptions due to limited financial protection and dependence

on daily wages. The pilot currently supports 21,000 women across five districts in the state of Gujarat. Under the scheme, workers receive payouts when temperatures rise beyond threshold deemed unsafe for outdoor labour. Payments are triggered automatically through an algorithm that uses satellite-assessed temperature data customised to each of the five districts, enabling rapid and objective disbursement of support. To improve affordability and accessibility premium payments are subsidised by the Arsht-Rock Foundation.^{96,97}

Third sphere of influence Healthcare delivery system

Digital innovation in Southeast Asian health insurance fraud prevention

Health insurers across Southeast Asia are adopting digital technologies to address fraud, waste, and abuse that affect the financial sustainability of health systems. In Indonesia, BPJS Kesehatan has implemented an e-Claim system using big data analytics, reducing average claim processing times from two months to around 30 days and improving transparency across a network serving over 278 million citizens as of end 2025.⁹⁸

Similarly, the Philippines' PhilHealth has developed a centralised claims processing system with embedded fraud-detection algorithms and is exploring AI to identify suspicious patterns in real time.⁹⁹ While these digital transformations face common regional challenges, including rural-urban technology gaps and data privacy concerns,

these examples demonstrate how digital infrastructure can support more efficient claims management and reduce administrative burden.

Asia-Pacific Economic Cooperation (APEC) Rural Health Equity projects

The APEC Rural Health Equity initiative leverages telemedicine to address healthcare disparities in remote Asia-Pacific regions. Through digital platforms, patients in isolated communities can access consultations with urban-based healthcare providers, reducing the burden of travel and cost. These programmes also incorporate health education and chronic disease management to support improved health outcomes for marginalised groups. Telehealth continues to play an important role in enabling equitable healthcare delivery across geographically dispersed settings.¹⁰⁰

Fourth sphere of influence Wider enabling environment

FAST-P Industrial Transformation infrastructure debt programme

BlackRock, the Monetary Authority of Singapore (MAS), the International Finance Corporation (IFC), MUFG, NEXI and AIA signed a Statement of Intent in November 2024 to collaborate on a blended-finance debt initiative under Singapore's Financing Asia's Transition Partnership (FAST-P). FAST-P aims to mobilise US\$5 billion for transition financing across Southeast Asia.

FAST-P seeks to address Southeast Asia's substantial decarbonisation financing gap, with annual investment needs projected to rise from approximately US\$30 billion in 2022 to between US\$208 billion and US\$244 billion a year by the early 2030s. The Industrial Transformation component will support debt financing for hard-to-abate sectors, low-carbon technologies and industrial decarbonisation opportunities. The programme leverages BlackRock's infrastructure investment expertise and aims to attract additional capital to support regional transition efforts.^{101,102,103}

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