

# First insights: Landscape of Climate and Disaster Risk Insurance (CDRI) in Asia and the Pacific



## Introduction

Disasters affect the poor and vulnerable people in the developing world adversely. These people suffer disproportionately due to their higher vulnerability and exposure and lower ability to cope and recover. The impact of climate change is further amplifying this vulnerability and addressing this requires a multi-layered and multi-stakeholder approach. The InsuResilience Global Partnership brings together stakeholders from the Vulnerable 20 group (V20) and the G20 countries, multilateral development organizations, private sector, civil society organizations and academia. This partnership works to strengthen the resilience of developing countries and protect the lives and livelihoods of poor and vulnerable people against the impacts of disasters.

The central objective of the partnership is to enable more timely and reliable post-disaster response risk through climate and disaster risk finance and insurance solutions. The partnership works to reduce humanitarian impacts, helps poor and vulnerable people recover more quickly, increases local adaptive capacity, and strengthens local resilience. This complements ongoing efforts in countries to avert, minimize and address climate and disaster risks.

Against this background, an analysis of the current status of climate and disaster risk insurance (CDRI) has been developed by the MSC (MicroSave Consulting) in collaboration with the, Gesellschaft fuer Internationale Zusammenarbeit (GIZ), and the Regulatory Framework Promotion of Pro-poor Insurance Markets in Asia (RFPI-Asia), together with the InsuResilience Secretariat which shares first findings of the CDRI landscape in Asia and the Pacific

## Scope of the landscape study

The study focuses on 22 countries located in Asia and the Pacific region - Afghanistan, Bangladesh, Bhutan, Brunei, Cambodia, India, Indonesia, Laos, Malaysia, Maldives, Mongolia, Myanmar, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, Thailand, East Timor, Vietnam, Fiji, and the Republic of Marshall Islands. Out of these, we identified four key markets of Bangladesh, Indonesia, the Philippines, and Vietnam for greater focus because of their high vulnerability to disasters in general, while offering a contrast in approaching disaster risk financing given that the different nature of disasters that afflict these markets<sup>1</sup>.



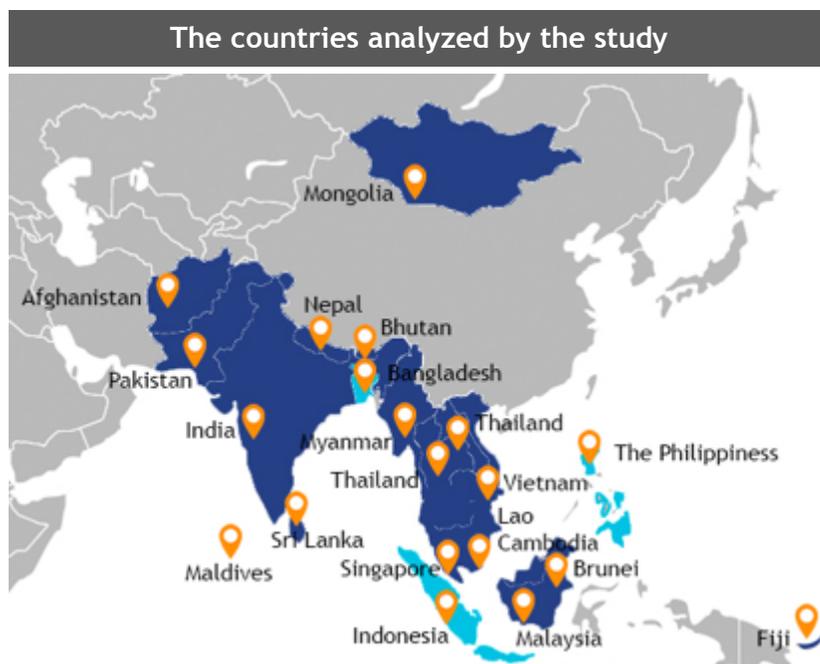
As part of the study, the team undertook a robust secondary research exercise on the climate change adaptation policies and Disaster Risk Management Frameworks in the 22 countries. The

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<sup>1</sup> Earthquakes in Indonesia, typhoons in the Philippines, floods in Bangladesh, and storms and floods in Vietnam

research included an analysis of the current sources of disaster risk financing used by these countries, for instance, contingent funds or budgetary allocations and re-allocations or both.

The team followed this by a scan of existing insurance solutions that would fall under the Climate and Disaster Risk Insurance Category—sovereign risk transfers, agriculture insurance, and other disaster risk insurance products. In the markets of Vietnam, Indonesia, the Philippines, and Bangladesh, we engaged insurers and other stakeholders in person and via telephonic conversations. This policy brief presents the first findings of the study while the final full report is expected by the first quarter of 2020 at a workshop to discuss the findings.



## Background: the need for climate and disaster risk insurance

Asia is highly exposed to catastrophe events that cause damage and erode welfare and economic gains. The nature of hazards faced across the region varies significantly. Asia has seen some of the deadliest disasters in history, such as Cyclone Nargis<sup>2</sup> in Myanmar and the 2004 Indian Ocean Tsunami<sup>3</sup>. Disasters in Asia have also been some of the most costly, such as the Tohoku earthquake and tsunami<sup>4</sup> and the 2011 Thai floods<sup>5</sup>.

Floods are the most persistent hazard across the region. Analysis indicates that the average annual economic losses from flood disasters in Asia could surge to USD 500 billion or more by 2050. Half of all Association of Southeast Asian Nations (ASEAN) member states have experienced at least one flood event that cost over USD 100 million in the past decade. Drought hazard is also widespread and affects agricultural production in parts of most Asian countries. The pattern of exposure to tropical cyclones and geophysical hazards of earthquakes and volcanic eruptions is more geographically specific.

This heterogeneity in hazard generates different disaster financing needs that a government needs to address. A government needs to provide for the costs for response and recovery after rapid-onset disasters, it also funds livelihood assistance and food security responses to flood or drought-

<sup>2</sup> Cyclone Nargis: 84,537 dead and 2.7% of Myanmar's 2008 GDP lost - the Association of Southeast Asian Nations (ASEAN) and the United Nations (UN) released the Post-Nargis Joint Assessment (PONJA) report, 2009

<sup>3</sup> Indian Ocean Tsunami: over 220,000 dead and combine losses of over USD 10 Billion, Asian Disaster Preparedness Centre, 2005

<sup>4</sup> A 9.0 magnitude earthquake and consequent tsunami at the north-eastern coast of Japan in 2011 caused an estimated loss of USD 360 Billion

<sup>5</sup> Thai floods 2011: A total economic loss of USD 8.2 Billion: Thai chamber of Commerce, 2011

damaged crops and reconstruction of critical infrastructure after earthquake, flooding, or storm damage.

## Key examples and lessons in the Asia and Pacific region:

**1. Disaster risk management frameworks are present and implemented in the region, but these frameworks still need to incorporate climate and disaster risk insurance.** All countries analyzed, with one exception, have a defined and legislated disaster risk management framework in place. At the legislative level, almost all such frameworks look at both pre- and post-disaster responses to disasters and catastrophes. Bigger economies in the region, like India, Bangladesh, Philippines, Thailand, Philippines and Vietnam have placed considerable emphasis on developing a better understanding of the disaster risks that the country faces. Based on this understanding, these nations have been developing early warning systems, better response mechanisms, and infrastructure for long-term resilience. None of the frameworks that the study covered featured insurance as an important mechanism of risk financing or risk transfer, except Vietnam, which identifies insurance as an important risk financing mechanism and Indonesia that has recently proposed a public assets disaster risk insurance program.

**2. 14 of the 22 countries studied have defined one or more contingency funds and reserves to mount disaster relief efforts, including national budgetary allocations and re-allocations that can be utilized for these efforts.** However, except for countries like India, Malaysia, Singapore foreign and donor support remains critical for most countries when responding to disasters. The initial findings from the study estimate that over the last 6 years about \$5bn have been allocated for ex-ante disaster risk finance such as contingency funds and reserves to together with ex-post instruments such as national budgetary allocations and re-allocations. Depending on the type of risks that occur the use of ex-ante disaster risk instruments such as contingent funds, contingent credit lines and risk transfer increase post disaster financial capacity as these instruments enable fast liquidity after an event. The study estimates that in the same period about US\$ 9 billion were received in international aid to address post-disaster management. However, shrinking international aid efforts are threatening post-disaster relief. These contingency funds are not generally used to access insurance solutions. However, two examples of use of funds were seen in the Philippines<sup>6</sup> and Indonesia<sup>7</sup>.

**3. No regulations specific to climate and disaster risk insurance exist in the region, while current insurance regulations are not seen as enabling for the development of climate and disaster risk insurance business models.** The study did not identify any regulatory framework that works towards index-based or similar specialized weather index or disaster insurance products. In the Philippines, for instance, non-life insurance products are taxed at 26%. According to insurers like AXA and Pioneer, such a tax regime makes a costly product like agriculture or disaster risk insurance products appear even more expensive.

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<sup>6</sup> Insurance is an allowed allocation up to 5% of DRM mandated funds to secure insurance coverage for disaster volunteers

<sup>7</sup> Indonesian government has recently announced that it will secure insurance coverage for all public assets such as government buildings etc.

Both AXA and Pioneer also highlighted that in the commercial market, disaster coverage or “acts of god” are provided as optional risk coverages with more big-ticket corporate insurance products like property insurance to businesses and corporates. They opined that the tough competition for such accounts makes insurers price their products to be competitive instead of reflecting the real cost of such coverage, resulting in a fight to be the “lowest bidder”. Insurance stakeholders in Bangladesh believe that regulators can play a positive role if they offer more enabling regulations and allow capacity-building of insurers in the technical aspects of Climate and Disaster Risk Insurance.

**4. Most losses caused by disasters are yet uninsured in the region.** Data from Swiss Re Sigma reports on nine of the 22 countries being studied in the last decade indicates that 19 of the biggest disasters and catastrophes caused losses of USD 140 billion. These disasters, including floods, earthquakes, and storms or typhoons, resulted in the deaths of 35,611 persons and rendered 200 million people homeless. Of the USD 140 billion losses suffered, only USD 20 billion or a mere 14.2% were insured across all sectors.

**5. In the region, the study identified 25 interventions that qualify as climate and disaster risk insurance that cover, directly or indirectly, over 212 million people.** At the Macro level, these 5 sovereign risk transfer schemes indirectly provide some degree of coverage to over 171.8 million people in countries like Philippines, Myanmar, Lao, Maldives and those from the Pacific Island Countries like Marshal Islands and Fiji. At the meso and micro levels, through the 14 agricultural and disaster insurance solutions identified, the study can estimate a direct/indirect coverage to over 40.5 million farmers, fishermen etc. and over 43 million hectares of agricultural land. Putting these numbers together we can estimate about 212 million people being covered directly or indirectly.

As per World Bank data, the population of the 22 countries studied is about 2.47 Billion. Hence, this estimated coverage of 212 million represents just 8.5% of the total population, leaving a protection gap of 91.5%.

**6. Five large-scale state-sponsored and subsidized agriculture insurance programs are implemented in the region.** These programs cover India, the Philippines, Thailand, Sri Lanka, and Indonesia and offer coverage to farmers against negative weather events. These programs cumulatively cover over 40 million farmers, and over 43 million hectares of agricultural land, with a total premium of USD 3.021 billion, with India contributing the tiger's share of USD 2.8 billion.



**7. Private insurer-driven agriculture insurance has mostly developed through support from international donors and funding.** The study identified that nine such pilots or products existed between 2016 and 2019—three in Sri Lanka, two in Bangladesh, two in Indonesia, and one each in Cambodia and the Philippines. Out of these, all but two programs in Sri Lanka and one program in the Philippines did not depend on donor support.



**8. The study identified five sovereign risk transfer arrangements that are relevant to seven of the 22 markets studied.** The report covers the following projects: SEADRIF (Lao PDR, Myanmar, and possibly Cambodia), PCRIC (the Republic of Marshall Islands and possibly Fiji), World Bank-supported CAT DDO in the Maldives, World Bank supported CAT DDO and Asian Development Bank supported City Insurance Pools in the Philippines. The chief objective of these arrangements is to ensure the availability of funding in the face of disasters that trigger these arrangements without compromising the economic viability of the countries covered when dealing with disasters.



**9. Like any other insurance product, distribution is a challenge for micro and retail disaster risk insurance solutions.** It is also a function of design. The study finds that state-subsidized (and mandatory) coverage do well, as with the case of PMFBY in India. Moreover, bundled solutions also can find scale, as with the case of Pioneer (890,000 lives covered in 2018). However, retail-focused, non-subsidized solutions have proved to be a hard-sell as per the study. As AXA Philippines observed, solutions like its business interruption coverage for MSMEs need time and effort on part of agents to explain and sell. An agent more focused on selling credit products quickly may find it challenging to invest the effort needed. Inputs from insurers and stakeholders in Philippines, Vietnam, Indonesia and Bangladesh tells the study that they remain optimistic with respect to CDRI becoming a strong commercial opportunity in the medium to long run, however, they also identified capacity building of insurance professional in terms of CDRI, availability of suitable and reliable data, actuarial and modelling capacities, lowering distribution costs through greater use of technology as the missing pieces. All insurers were unanimous in identifying the need for client

education and awareness and state support as the most important factors that will help them be more effective in offering CDRI solutions.

The value that a CDRI product can offer to the end client is also a matter of overall design of solutions against disaster risk. As Card Pioneer, Philippines observes, an insurance solution by itself is not enough and has to be complemented with other financial services like credit or savings or both for it to be of value to the clients.

**10. The use of technology in insurance and Disaster Risk Insurance shows a huge potential for new solutions.** Other than the use of weather-based indexes for factors like rains, floods, earthquakes, we could identify limited examples of the use of technology in these markets. From a client-facing perspective, the study identified two interesting applications: A solution provided by AXA “Red button”, a mobile app based emergency-call system and a block chain based agriculture insurance in Sri Lanka. In this program by Aon, OXFAM and Etherisc, farmers don’t have to submit claims, and insurers don’t need to train adjusters to administer the policies. Instead blockchain smart contracts automate the process. Robotic weather stations record the amount of rain falling on farms. In the event of extreme levels, claims will be triggered automatically.

## Way forward

Climate and Disaster Risk Insurance in the region is in its early stages. With over 90% of the population unprotected against the impacts of climate changes and disaster and under further increase in climate impacts with ever more extreme events there is an urgent need to develop appropriate adaptation strategies that involve ex-ante planning and preparedness. Risk finance and insurance is one element to better cope with the consequences of disaster.



For disaster risk finance to grow and take up an important role in in the region, governments and policymakers must look to encourage and engage with insurers by understanding the risks better and develop a comprehensive climate and disaster risk management strategy to better adapt to climate change. This involves pre-arranged financing at governmental level for immediate response and it involves developing a more systemic approach in disaster risk management. A comprehensive strategy should also enable regulatory environments for development of disaster risk insurance at individual level.

Furthermore, insurers in the region seek government support for reliable data that is efficiently accessible and usable, alongside better weather monitoring infrastructure and reporting

mechanisms. Insurers in the region also seek to develop their capacities to design and model solutions for negative weather events. They are interested in learning from peers and experiences in other geographies. Ultimately, for CDRI to succeed, especially at the micro-level, it will have to find the right fit with other financial services like credit and savings to help clients meet their disaster risk financing needs.

International cooperation and exchange of knowledge and capacities will be important such as the International Conference on Inclusive Insurance, as will be the role of platforms like Mutual Exchange Forum on Inclusive Insurance (MEFIN) that enable these exchanges in the region. Ultimately, the platform for convergence, collaboration and coordination between different actors and initiatives is offered by the G20/V20 initiated InsuResilience Global Partnership.

The landscape study of CDRI in Asia and the Pacific has been supported by:

### **Insuresilience Global Partnership**

The InsuResilience Global Partnership is a coalition of V20 and G20 countries, multilateral development organizations, private sector, civil society organizations and academia working towards a vision to strengthen the resilience of developing countries and to protect the lives and livelihoods of poor and vulnerable people from the impacts of disasters by enabling faster, more reliable and cost-effective responses to disasters.

<https://www.insuresilience.org/>

### **GIZ RFPI ASIA**

The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) Regulatory Framework Promotion of Pro-poor Insurance Markets in Asia (RFPI) is a regional program working to enhance the enabling policy and market conditions for inclusive insurance development. It collaborates with insurance supervisory authorities, government institutions, insurance providers, development actors and other change agents to improve access to insurance by building the capacities for insurance regulation and supervision and by promoting the development of innovative insurance solutions for the low-income sector. The current phase of the program focuses on the promotion of climate risk insurance and is focusing on implementation in Indonesia, the Philippines and Vietnam.

<https://www.inclusiveinsuranceasia.com/>

### **MEFIN**

GIZ RFPI Asia is the Secretariat for the Mutual Exchange Forum on Inclusive Insurance (MEFIN) Network, a peer network of insurance regulatory authorities in Asia working closely with the insurance industry established as a platform for an effective and efficient exchange of relevant knowledge and best practices on inclusive insurance. The MEFIN Network members include the insurance regulatory authorities of Indonesia, Mongolia, Nepal, Pakistan, Philippines, Sri Lanka, and Vietnam. GIZ RFPI Asia is funded by the German Federal Ministry for Economic Cooperation and Development (BMZ).

<http://mefin.org/>

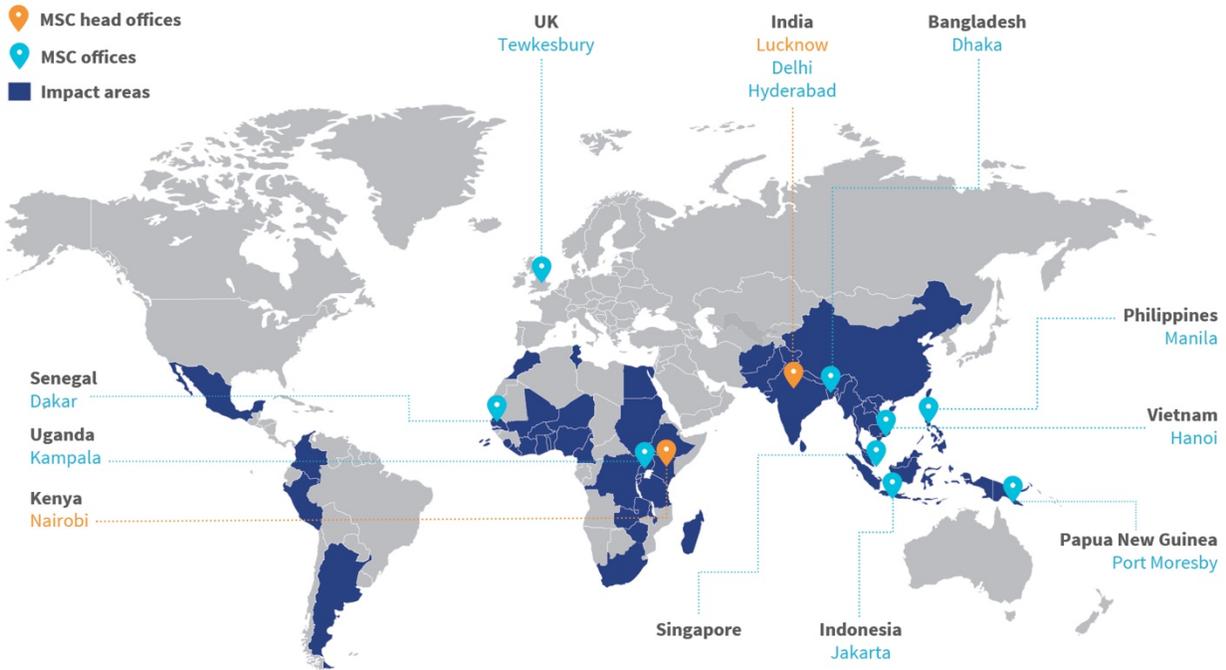
### **MicroSave Consulting**

MicroSave Consulting (MSC) is a boutique consulting firm that has, for 20 years, pushed the world towards meaningful financial, social, and economic inclusion. We are a globally trusted, yet locally based organization that offers high-quality, practical market-led solutions to accelerate financial, economic, and social inclusion in the digital age.

With about 190 staff of different nationalities and varied expertise, MSC is proud to be working in over 50 developing countries. We have offices in Bangladesh, India, Indonesia, Kenya, Philippines, Senegal, Singapore, Vietnam, Uganda, and the United Kingdom.

We work with participants in financial, economic, and social ecosystems to achieve sustainable performance improvements and unlock enduring value. Our clients include governments, donors, private sector corporations, and local businesses. We can help you seize the digital opportunity, address the mass market, and future-proof your operations.

<https://www.microsave.net/>



## Asia head office

28/35, Ground Floor, Princeton Business Park, 16 Ashok Marg,  
Lucknow, Uttar Pradesh, India 226001

Tel : +91-522-228-8783 | Fax : +91-522-406-3773

Email : [manoj@microsave.net](mailto:manoj@microsave.net)

## Africa head office

Shelter Afrique House, Mamlaka Road, P.O. Box 76436,  
Yaya 00508, Nairobi, Kenya

Tel : +25-420-272-4801 | Fax : +25-420-272-0133

Email : [anup@microsave.net](mailto:anup@microsave.net)