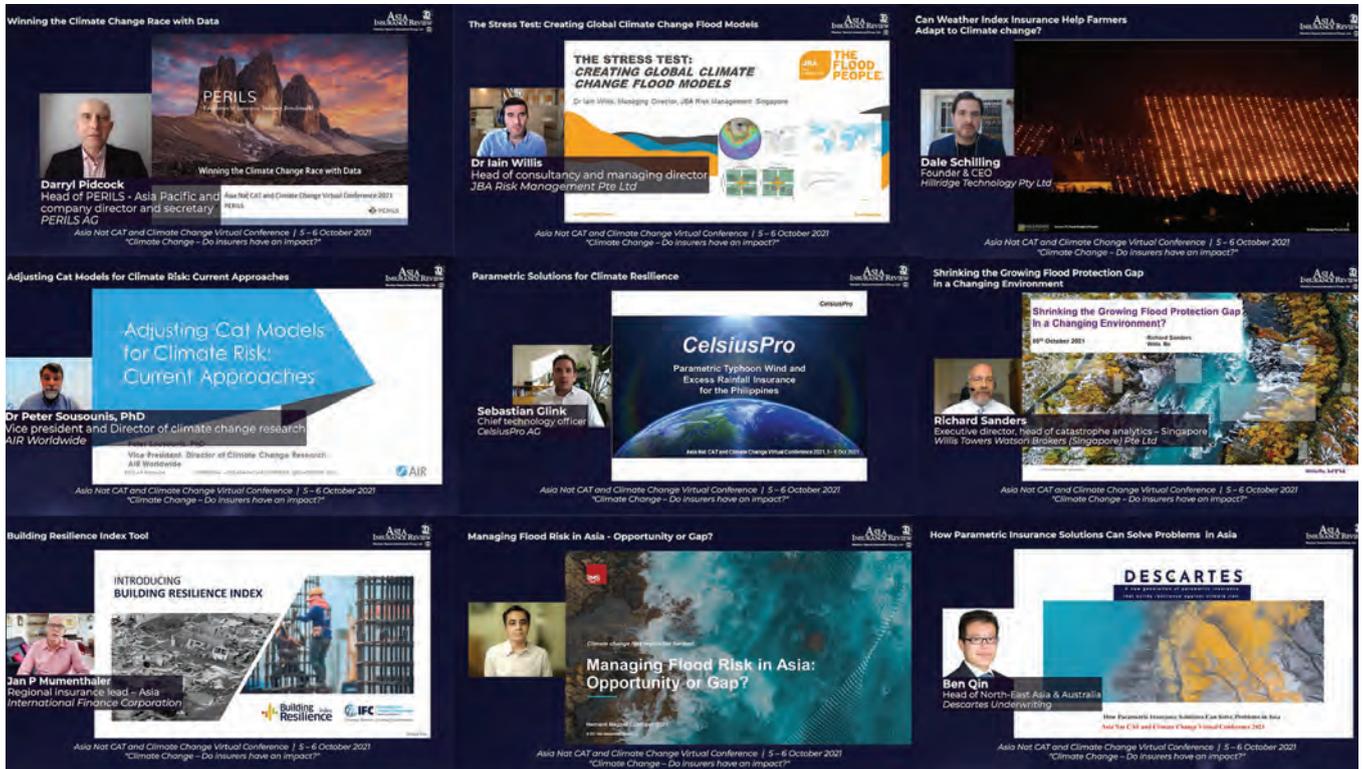


# Rebuilding climate resilience



Even as the world has been focused on COVID-19 and the resulting fallout, climate change and natural catastrophes continue to be underestimated risks. As losses continue to mount, from increasing severity and frequency of Nat CAT events, the insurance industry must bring back the topic of resilience to the forefront. Experts came together to explore the industry's impact on climate and catastrophe resilience at *Asia Insurance Review's* Nat CAT and Climate Change Virtual Conference.

By Ahmad Zaki



The World Economic Forum's Global Risk Report has conducted annual surveys of private the sector and ranked perceived risks since 2013. For the past five years, the report has ranked climate change and natural disasters among the top five risks for businesses.

This risk is compounded in Asia, which is a very fast-growing region, with some of the largest cities in the world in terms of development and density and population. The region also faces an expected rapid increase in exposure to climate change and secondary weather-based perils, such as flood and drought. There is also an increasing concentration of population and value in urban areas, leading to accumulation risk.

For most of Asia, these urban areas are growing faster than they can deal with their flood risk. There is inadequate, overloaded infrastructure, particularly in Southeast Asia, where there is subsidence in several major coastal urban centres, where the land is sinking fast.

## Understanding the impact of climate risk

There are two categories of climate related risks likely to impact the financial sector and financial stability adversely, said Asian Development Bank principal financial sector specialist Arup Chatterjee, speaking during a keynote address at the conference.

"The first comprises physical risks associated with more frequent severe weather events and lasting environmental changes that directly affect people and assets. These can disrupt the supply chain and erode asset values in disaster-prone areas, thus affecting collaterals placed with the lenders. It also adversely impacts borrower's solvency since the collapse of local economic activity can adversely affect livelihoods and incomes," he said.

Moreover, they could leave the insurance companies vulnerable to large scale unforeseen losses, thus forcing them to increase premium rates in the future. Therefore, higher than expected losses are likely to affect the bottom line of insurance companies adversely.



Mr Arup Chatterjee

“The second category comprises the transition risks posed by economic policy, technological changes and social changes for mitigating climate change and achieving a net zero carbon economy,” he said.

These risks take several forms, from fossil fuels to renewables, from internal combustion engines to battery and electrical vehicles, carbon taxation for disincentivising greenhouse emissions policies aimed at encouraging changes in land use and farming practices and legal risk arising from compensation claimed by investors due to lack of non-disclosure of climate risks from businesses.

“Suppose this transition from carbon- and water-intense economics is unmanaged. In that case, it can result in volatility in revenue projections due to stranded assets, adverse movements in asset prices, credit risk and labour market frictions. All these risks can affect insurance companies’ balance sheets because of the high degree of uncertainty about the transition trajectory and the material effect on their portfolios due to the equity and fixed income assets held by them,” he said.

Responding to these risks warrants heightened scrutiny from financial market stakeholders, regulators, governments, financial market participants, firms and even households to enhance the resilience of assets and communities.

### Handling climate change vulnerability

The most significant risk is that infrastructure is not up to the task of handling extreme climate-change-influenced weather events. Vulnerability to climate variability threatens to dent one of the critical aspects of infrastructure. Its long lifespan infrastructure, such as embankments, bridges and ports designed for 20th century climate is not resilient enough to withstand today’s climate disasters.

As a result, it will impact the reliability and efficiency of energy, transport and water networks in rural areas, particularly in low-income countries. Roads and irrigation systems are critical for livelihood. In addition, climate

change impacts these networks in terms of maintenance, repairs and durability as a usable infrastructure.

“The Asian Development Bank in 2017 estimated the financing gap in the economic infrastructure of \$459bn per year for Asia. Moreover, the current and predicted infrastructure shortfall will be exacerbated further by climate change. Investments in sustainable and resilient infrastructure – both building new ones and strengthening the existing ones as a response could offer significant opportunities for financing projects and enhancing the quality of life,” said Mr Chatterjee.

### The lack of resilient infrastructure

Why has resilience not been factored into building design and construction already? According to International Finance Corporation regional insurance lead Asia Jan Mumenthaler, there is a lack of data to show the frequency of disasters and the cost of damages. Secondly, developers are far too focused on perceptions of high incremental cost for resilient construction without focusing enough on the benefits. Thirdly, buyers do not have the data to be informed and are similarly more focused on immediate costs rather than future disasters.

“There are no financial mechanisms to assist them - or indeed pressure from insurance for them to act. Banks are generally not focused on resilience and have not yet conducted internal stress testing to understand how much of their portfolio is exposed to disasters. Governments may also pass building codes that are focused on resilience but are not able to enforce them. All of these factors lead to bureaucracy without an easy-to-understand connection between developers, investors and governments,” he said.

Risk reduction investments extend beyond physical infrastructure to include financial resilience, eco based resilience and social and institutional resilience. Adopting an holistic resilience approach is therefore essential to building resilience in the

face of a wide range of shocks and stresses. It ranges from structural financing projects to nature or eco-based solutions, community-based resilience infrastructure and projects that combine non-structural interventions such early warning interventions. Such an approach ensures economic benefits and builds resilience at all levels - individual, household, community, business and country.

### Managing exposure with data

“Asia continues to have urbanisation and many of these major cities are exposed to weather events, such as floods and tropical cyclones,” said PERILS Asia Pacific head and director Darryl Pidcock. “For more developed regions or developing regions where you have rapid growth and especially around urbanisation, exposure really is an important piece of the puzzle.”

He referenced S&P’s recent report on climate change, wherein it estimates reinsurers may be underestimating exposures relating to climate change by 33 to 50%.

“We can debate the actual number and everyone will have different views, but it is obviously significant that we are potentially seeing the industry underestimate the exposures and impact of climate change.”

These exposures, the accumulation risk and the rising mean surface temperature lead to a lot of concerns for an insurer. Capacity allocation, pricing products and getting the latest and most accurate data and models are vital.

“Data is critical in our industry, both scientific and industry data. While some might say this is obvious, the timeliness and reliability of the data and how it is used becomes really critical. In our view, it will become even more important as climate risk produces more uncertainty about the future,” he said.

The challenge, he said, was to capture that data, while factoring in that uncertainty, into the models and ensure that they can be accurate over the long term, and not just in the next 12 to 24 months.▲



Mr Darryl Pidcock



Mr Jan Mumenthaler