

The climate emergency



L-R: Ms Tai Hui Yen, Mr Heddy Agus Pritasa, Mr Richard Austen and Dr Ardhasena Sopaheluwakan.

Climate change has meant a state of emergency for the entire planet. While questions of sustainability will continue to demand an answer over the next few decades, the immediate impact on Nat CAT are already being felt, especially in Asia. Today, the Nat CAT protection gap is a more prominent issue than ever before. Insurers and climate experts across Asia came together at the Asia Nat CAT and Climate Change Conference in Jakarta last month, to discuss solutions and highlight issues others might not have noticed yet.

By Ahmad Zaki



The most basic reason for climate change is the increased amount of greenhouse gases, which traps solar heat within the planet's atmosphere. The biggest contributor has been carbon dioxide. Over the past 800,000 years, carbon dioxide levels in the atmosphere have fluctuated wildly, but had never crossed the 300 parts per million mark until 1950. Today, it is at 410 parts per million, a sharp increase in saturation over the past 70 years.

While the temperature increase is not uniform across the entire planet, it is, on average about 1°C hotter than it used to be in 1950, said Guy Carpenter managing director and head of GC Analytics Asia Pacific Michael Owen. "It is much higher in the North and South Poles, which is leading to the melting of the polar icecaps and the rising sea levels."

The Paris Agreement and other



Mr Michael Owen

measures to limit carbon emissions and therefore attempt to limit global warming to no more than 2°C have been in place for several years now, and some effects of that have already been seen. However, even if the global temperature rises by 2°C, as is the aim, or goes even higher – projections of the temperature if global industries carries on 'business as usual' is at 6°C – the changes to the planet will remain the same.

"What we can expect for the future is for warming to be more pronounced at higher latitudes and more pronounced over land than over the oceans," said Guy Carpenter catastrophe model developer Claudio Saffioti. "Precipitation models show that we can expect, in general, for dry areas to become drier and for wet regions areas to become wetter. If left unchecked, emissions would cause sea levels to rise by at least one metre, bringing us back to



Mr Claudio Saffioti

pre-industrial levels by the end of the century.”

In short, there will be a greater accumulation of water vapour in the atmosphere, and heavier rainfalls. He referenced several studies conducted over the past few years, analysing climate models on extreme precipitation and flooding. “Specifically, they use a number of different methods approaches but most of them come to the same conclusions: That a warmer climate will increase the risk of floods in many regions.”

One of the studies looked at river discharge models and concluded that what is now considered to be a 100-year event could happen once every five to 25 years, by the end of the century, said Mr Saffioti.

Asia, in particular, will experience the largest increase in flood risk; large stretches of Asia would see a 100% to 200% increase, with parts of India seeing a 400% increase.

Sinking cities

According to RMS director, model product management Hemant Nagpal, the world can expect sea levels to rise 3-10 millimetres a year. “If you’re looking at the different components of sea level almost 40% of that is coming from the melting the polar ice caps, which we are aware of. What you may not be aware of is that about 50% of that is due to just thermal expansion – the increase in global temperatures causes the oceans to expand and that would lead to the increase of sea levels by 10%.”



Mr Hemant Nagpal

Combined with land subsidence and unpredictable precipitation, this causes people to use more groundwater. “That’s not a good place to be, from a (re)insurance perspective, but also from a city perspective,” he said.

Some of the Asian cities that are currently facing a sinking risk are Jakarta, Ho Chi Minh City, Bangkok and Manila. Japan, in the mid-1960s, suffered a subsidence of more than four metres, which was solved by the government stopping groundwater extraction for 10 years. The land in



Ms Dharisha Mirando and Mr Dale Schilling

Japan bounced back in 1975.

He also pointed out that skyscrapers also contribute to subsidence, simply due to their massive weight.

The water risk

There are 10 major rivers in Asia, which flow through 16 countries and most of them pass through the borders of China. Currently, Asia faces a ‘triple threat’ in water risk, said China Water Risk valuation lead Dharisha Mirando.

“Firstly, some countries in Asia do not have enough water to continue developing and are facing high water stress. Secondly, climate change is exacerbating the risk that already exists. Finally, there is the clustering of assets in Asia, as urbanisation rates increase and more people, more assets are congregating around the same area, putting more pressure on the already quite vulnerable water resources there,” she said.

She simplified the water risk through the bathtub concept – how many bathtubs full of water does a nation use per person, per day, versus how many bathtubs of water they have access to every day. For instance, the US uses 21 bathtubs for all purposes, including showers, agriculture, power production, and they have access to 131 bathtubs.

On the other hand, China only has access to 28 bathtubs, while India has access to 20. This means that their development must take a different path from countries such as the US. Asia is currently still hungry for water-intensive power such as coal-fired power generation, which also accelerates climate change, she

said. It leads to a vicious cycle that will only increase the water stress on the 10 rivers that supply the region with water.

The unseen impact of Nat CAT

Handling claims after a disaster event is a challenging administrative feat. There are hundreds, if not thousands, of claims to look into, policyholders might not know what to do to get the process started, and in the case of massive property damage, accommodations must also be secured. However, Envista Forensics managing director, Asia Pacific Bruce Swales also pointed out another facet to Nat CAT that typically goes unnoticed – the psychological.



Mr Bruce Swales

“We should never underestimate what policyholders will be feeling at this time, such as shock, denial, anxiety, stress and even post-traumatic stress disorder. And this often results in their ability to think straight and make claims for the damage to be negatively affected,” he said. He noted that a number of times in the past, insurers have pondered why certain policyholders never came forward with their claims.

Insurers then, need to be mindful of the emotional and psychological toll disaster events can have on the affected policyholders and to ease the claims process as much as possible. This adds greater value to parametric disaster insurance and automatic claims pay-outs. ■