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Customer and Broker Webinars 2021

Catastrophe events increase amid changing global climate conditions

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As catastrophe events increase amid changing global climate conditions, risk managers are urged to take a risk-based approach to protecting their organizations' property and people from the growing threat.

That's the advice from a panel of Zurich Insurance Group experts who discussed in a webinar the business impact of more frequent catastrophe events and how to manage the risk of what often appear to be perils made worse by climate change.

"We've seen more climate- and catastrophe-related records broken in the last few years than since records began," said Hayley Robinson, Zurich's Group Chief Underwriting Officer. Last year was a particularly active period of catastrophe events, she pointed out.

"It was the second-warmest year on record since the 1800s. We had 28 multi-billion-dollar insured loss events, which was the highest on record. And we had 53 multi-billion-dollar economic loss events, which was the second-highest on record," she said, quoting figures from Aon's "Weather, Climate & Catastrophe Insight 2020."

"It's true now that a weather-related event occurs every month somewhere in the world," said Chris Waterman, Commercial Insurance Head of Property, Marine and Technical Lines at Zurich. "And, in fact, over the past 10 years they have increased almost 10-fold."

"There's more pressure on all of us as to how we continue to deal with those events," said John Parvin, Zurich's Global Head of Catastrophe Claims.

A three-step risk management approach

Managing natural hazard risks is difficult because of the evolving and uncertain nature of the threats, said Belinda Bates, Principal Risk Engineer Climate Change at Zurich. "The impact of natural hazards and climate change is large within a company; it's not just damage to facilities and operations," she added, but also poses a risk to employees and customers.

"It could go beyond the financial impact," Bates said of natural hazard losses, which means "proactive risk management is essential" to potentially reduce the frequency or severity of catastrophe event impacts.

Zurich recommends a three-step risk-based approach to managing exposures to catastrophic events, Bates said. "We all tend to focus on the hazards, so it's easy to imagine the wind or flooding or temperatures getting higher. But we should be considering all components of the risk."

Tackling hazards first, Bates warned that simply relying on historical data is a mistake. She used research on precipitation by the Intergovernmental Panel on Climate Change to show how the frequency and severity of hazards are changing over time. "The kind of heavy precipitation event that you would see every 10 years on average" is now 30% more likely "but also wetter," she said.

The research shows that as the climate warms, "the amount of precipitation that can be released in an extreme event is very likely to grow," Bates said.

"With that in mind, we need to think about how we are using our tools and data that we would normally use to assess natural hazards, because in some cases they can be based on historical data." If that's the case, it is likely time to "adjust our view of the hazard when we know we are likely to have more frequent, more severe or longer extreme weather events," Bates added.

Apart from the hazards, Zurich's risk-based approach focuses on exposures, and varies based upon the peril being assessed, according to Bates. Exposure can include people, assets and profits that are vulnerable to losses from the hazards, she said.

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Once the hazards and exposures are known, controls come next, Bates advised. Examine the controls in place to protect property and people, Bates advised, and consider improvements that need to be made according to the degree of hazard.

"By assessing all of these three components, we can understand the impact of a potential event so that we can best prepare for it," she said.

Bad weather brings economic, personal discomfort
Changing weather patterns have been particularly hard on utilities and communications services, Zurich's experts pointed out.

"Heat waves are hotter, rain events are heavier and winter storms have increased in both frequency and intensity," Waterman said, referring to a Climate Central report on extreme weather and power outages. "To date, these kinds of severe weather are among the leading causes of large-scale power outages in the U.S. Climate change will increase the risk of more violent weather and more frequent damage to our electrical systems, affecting hundreds of millions of people and costing the economy tens of billions of dollars each year."

And, service disruptions can have a big impact on the response to a catastrophe event and claims handling, according to Parvin. "If we lose power, we lose the ability to get hold of our cat plans electronically. Do you have access to an old-fashioned paper copy?"

"It is important to not only have a catastrophe claims plan," Parvin said, "but all aspects need to be regularly reviewed and tested against various catastrophe scenarios."

Telephone service is likely to be affected by a catastrophe, Parvin said. "Do you need to pre-order satellite phones? If you wait until it starts, you're probably going to find they're not going to be available."

"What do you do in the event of a cyber disruption?" Parvin asked. "You need to have access to your plan, access to key people you're going to need to contact, key suppliers…Think about utilities, the water supply, the transport network and the mobile phones."

Supply chains at risk
"In recent years, we've all seen the optimization of supply chains, with transport, warehousing capacities, stock levels and lead times all being cut to reduce costs," Waterman said. Then the COVID-19 pandemic arrived, stressing an already lean system, he noted. "What was a well-balanced but somewhat strained system effectively collapsed."

The supply chain served by semiconductor chips is particularly vulnerable to disruption from severe weather, which could cause some of the same problems manufacturers and buyers of the electronic component experienced during the pandemic, Waterman said.

Referring to a McKinsey Global Institute study, Waterman said estimates are that a company sourcing chips from countries such as South Korea, Japan and Taiwan can expect hurricanes strong enough to disrupt supply chains to be up to four times more likely by 2040.

Measuring the threat
Tools are available to help forecast climate-related risks, according to Bates. "There are different data sets that you can use; depending on the granularity that you would like, they can either be open-sourced or higher granularity from providers who take into account things like terrain."

"We take a view of the current risk…and then use the climate data to show the likely relative evolution of different climate change scenarios," Bates said of Zurich's approach. "Looking at the relative change," she noted, risk managers can decide what level of event they want to prepare for and how conservative they want to be when planning around natural hazards.

"We also rely on other business partners that bring specific expertise," said Ron Davis, Zurich's Global Head of Customer Management, Commercial Insurance, and moderator of the discussion. Working with those commercial partners, customers and brokers allows Zurich to analyze a very large number of climate-related scenarios, he noted.

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