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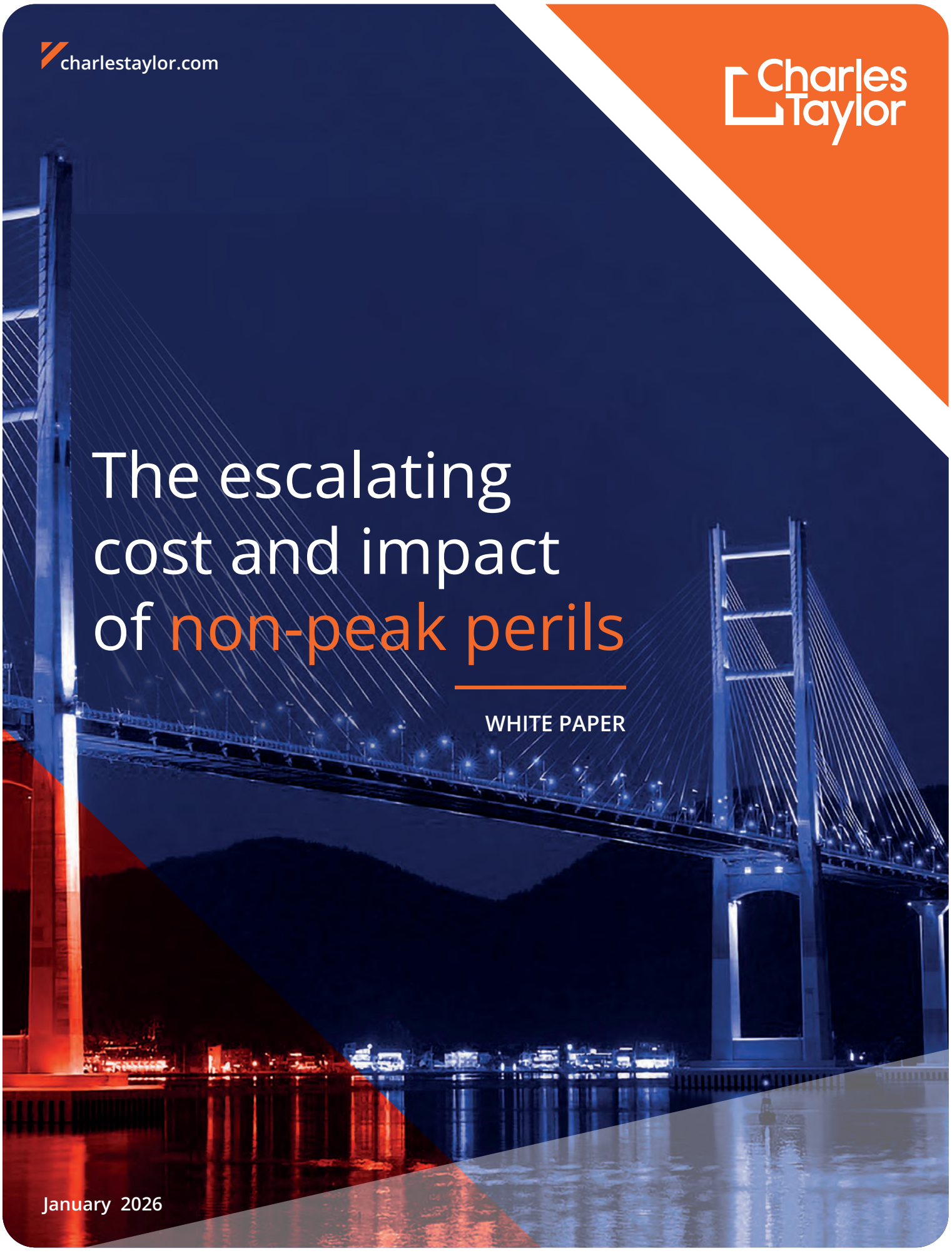
The escalating cost and impact of non-peak perils

WHITE PAPER



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The escalating cost and impact of non-peak perils

The increase in frequency and magnitude of non-peak perils have firmly placed them at the forefront of insurers' and risk managers' list of concerns.

Yet, their increased frequency and larger magnitude have put them in each of the five years between 2020 and 2024, they generated annual insured losses of more than $50bn. And in the first monthsof 2025, insured losses from non-peak perils totalled $77bn.

Non-peak perils are not the most devastating natural catastrophes such as the most powerful earthquakes, windstorm, tsunamis and hurricanes. Rather, they are more localised natural hazards such as flash floods, regional floods, wildfires, hailstorms, and severe thunderstorms and windstorms.

These non-peak or secondary perils are often significant loss events in their own right and their aggregated impact is costing the insurance market dear.

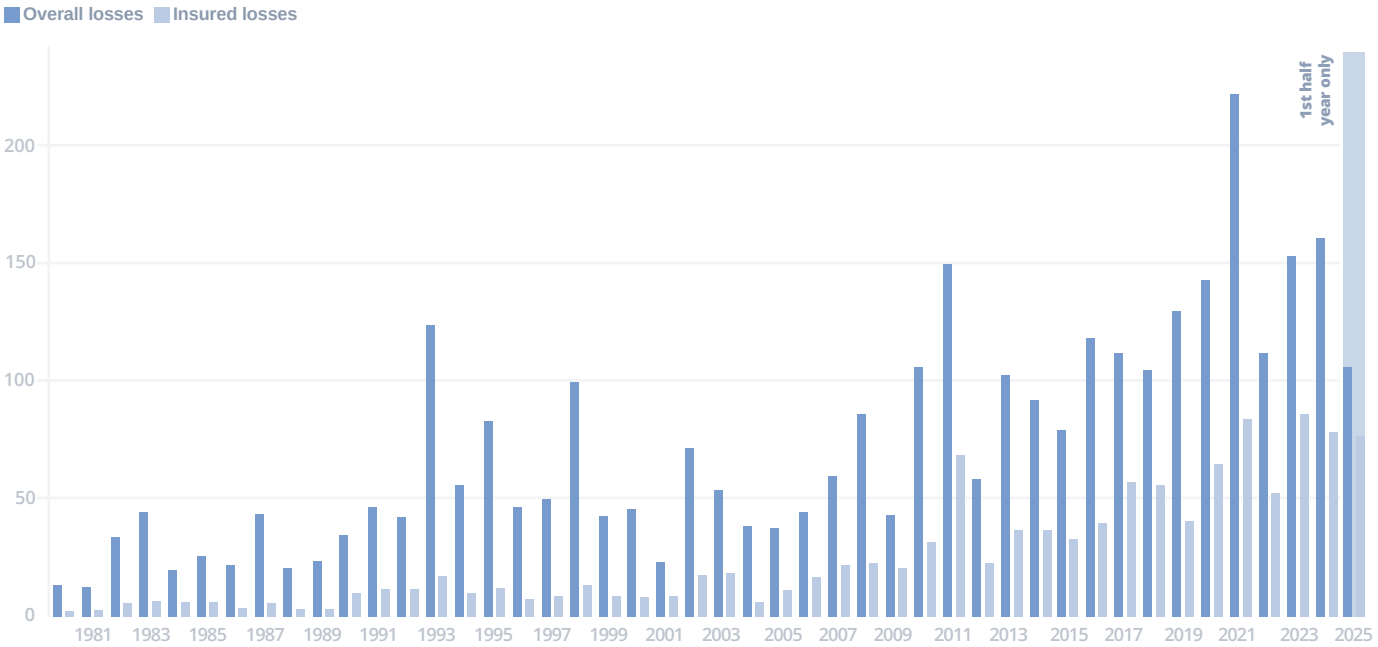
Figures from Munich Re show that, from 1980 to 2016, there was only one year (2011) in which insured losses from non-peak peril events exceeded $50bn. In contrast, there was only one year (2019) from 2017 to 2024 in which insured losses did not exceed $50bn.

Climate change sits at the heart of these increased losses. As the atmosphere gets warmer it can absorb seven per cent more water vapour for every rise of one degree Celsius.
This increases the frequency and severity of flood and hailstorm events. Today's more extreme weather is also characterised by longer heatwaves, which result in prolonged droughts and more wildfires.

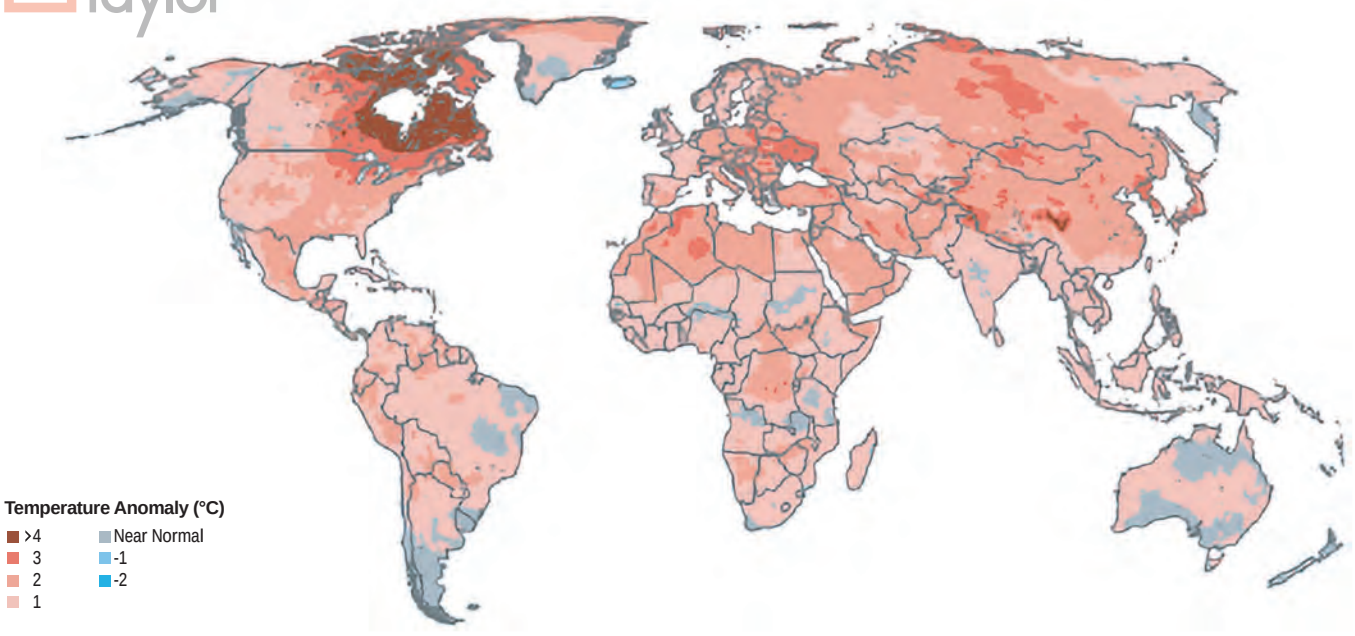
Losses from non-peak perils 1980-2024 and the first half of 2025

(World, in US$ bn, inflation-adjusted)

Munich RE



Source: Munich Re, NatCatSERVICE, October 2025
All natural hazards, except for tropical storms, earthquakes, and European winter storms



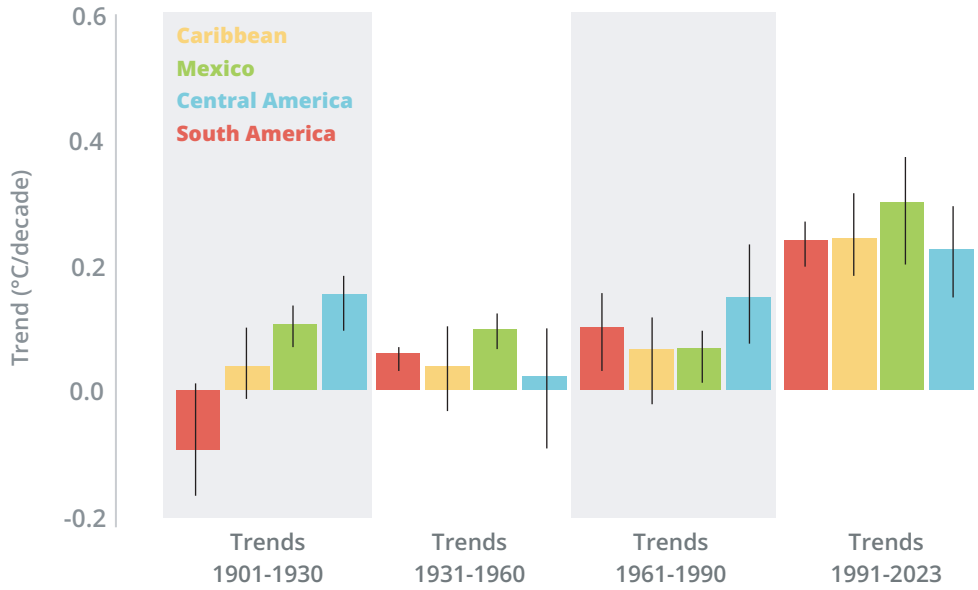
Source: 2024 global temperature anomalies compared to the 1991-2020 climatological normal | Data: Copernicus (ERAS) | Graphic: Gallagher Re

Here we examine a specific loss event that impacted the Panama Canal and explore how the market can help insureds to manage and mitigate their growing exposure to non-peak perils.

Panama Canal in focus

The El Niño phenomenon is well-publicised and relates to the warming of the sea's surface temperature, typically in the central-east equatorial Pacific. The phenomenon is officially declared active when the surface temperature of the tropical eastern Pacific is more than half a degree Celsius above its long-term average.

Regional trends LAC



Temperature: The average temperature in 2023 was the highest on record, 0.82 °C above the 1991–2020 average an 1.39 °C above the 1961–1990 baseline. Mexico experienced the fastest rate of warming in the region, around 0.3 °C per decade, between 1991 and 2023.

Precipitation: The transition from La Niña to El Niño in the middle of the year caused a major shift in rainfall patterns, with many areas moving from La Niña-related droughts/floods to the opposite extreme. Brazil was an example of this.

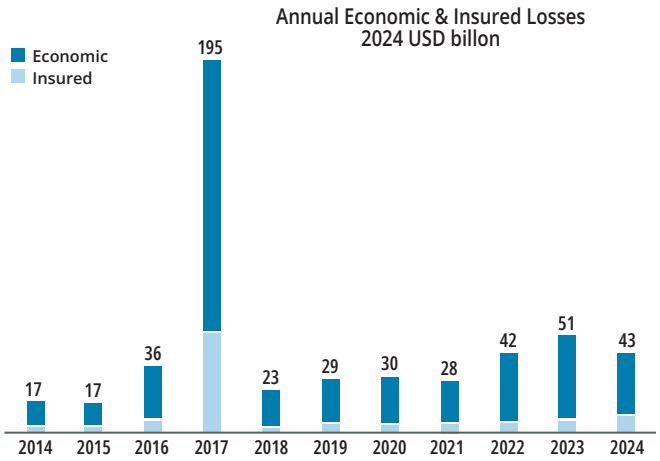
Source: World Meteorological Organization. (2024, 8 mayo). State of the Climate in Latin America and the Caribbean 2023

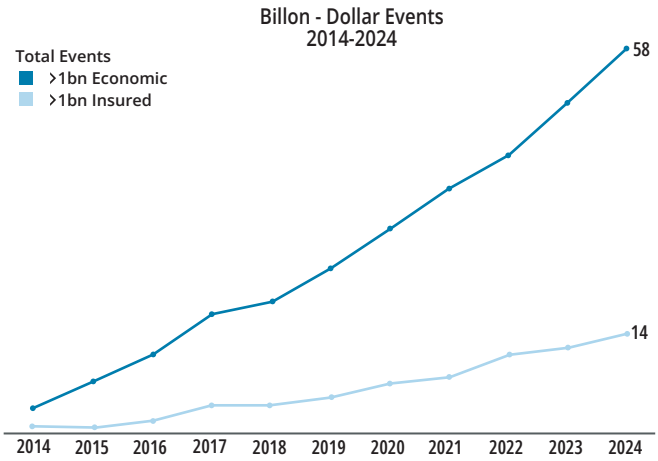
When in play, El Niño tends to reduce rainfall in Central America. In 2023, it was held to be responsible for a drought that lasted from June until December and saw water levels in the Panama Canal drop significantly.

The lower water levels forced the Panama Canal Authority to reduce the number of vessels passing through the waterway from 35 each day to fewer than 25 during some periods. It also imposed draught restrictions on the vessels allowed to use the canal.

The impact was immediate and created a backlog of vessels – sometimes as many as 160 – waiting to pass through the canal. This lengthened voyage times and generated a wide range of losses.

The delays hit perishable cargoes such as fruit, flowers and refrigerated goods. In many cases their value was reduced to zero. Some cargoes were unloaded and transported onwards via road and rail. Others were unloaded and stored until they could be moved. This added time and cost to the shipments and triggered contractual penalties.





Notable Statistics: 2024

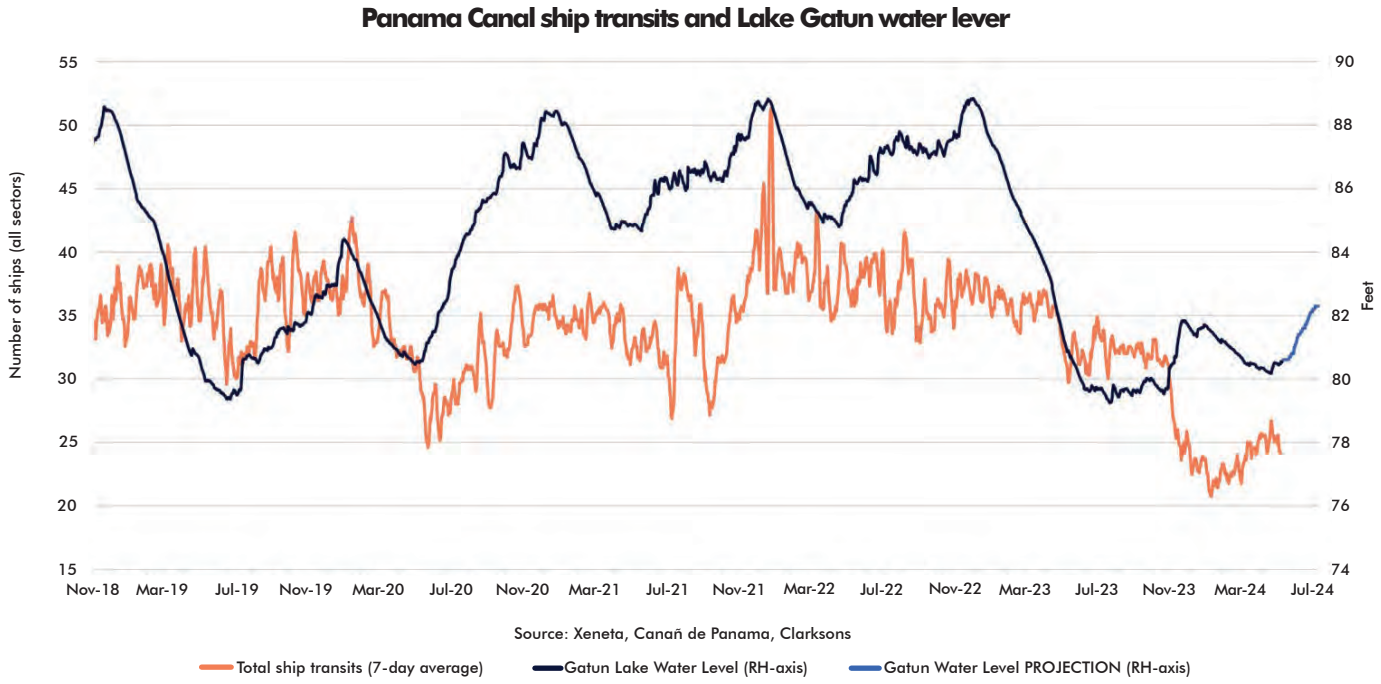
3.2M
Hectares of land submerged inBrazil´s Rio Grande do Sul during April / May floods

120Mt
Record-setting carbon emissions in Bolivia from widespread wildfires fueled by drought

154
Highest 24-hour daily rainfall (mm) ever recorded in Montreal (6.06 in); August 9 from Debby´s remnants

52°C
Hottest temperature ever reliably recorded in Mexico (Sonoran Desert); ¡Une 20 - 125.6°F

Source: Canada and Latin America & Caribbean natural catastrophe statistics in the past decade | Graphic & Data: Gallagher Re.



Source: SAFETY4SEA. (2024, 17 mayo). Xeneta: Panama Canal water is rising but drought

By way of example,

A container ship, was scheduled to pass through the Panama Canal in August 2023.
Due to the draught restrictions in place, the vessel was not permitted to sail through the canal fully loaded. It had to unload 1,400 containers at the Port of Balboa on Panama's Pacific coast.
These were then transported cross-country to Colon, on the Atlantic seaboard, for subsequent collection and onward travel.

The unloading, land transportation and storage in Colon all came with additional time and cost implications. They also changed the nature and scale of the risks borne by the cargo during transit.
The upheaval was faced by many other ships during the long months of drought and resulted in multiple losses.

In some cases, ships were forced to reroute their journey and sail around Cape Horn at the southern tip of the continent. This added thousands of miles as well as time and cost to their voyages. It also increased the risk borne by these vessels and their cargoes during their elongated time at sea.

Nor was it just the ships and their cargoes that suffered. The Panama Canal Authority estimated that the reduction in traffic caused by the drought had reduced its revenue by $200m.

The Panama Canal is only 51 miles long, but it is one of the most important shipping lanes in the world and any disruption impacts vessels, cargoes and businesses globally.

This might have been a regional drought, but it generated international losses running to many hundreds of millions of dollars and it characterises the widespread impact non-peak perils can have.

Facing up to more frequent non-peak perils

This year's UN Climate Change Conference (COP30) in Brazil came 10 years after the Paris Agreement was adopted in 2015. Whether the agreement succeeds in limiting global warming to 1.5 degrees Celsius remains to be seen and governments around the world continue to vacillate in their commitment to the associated targets.

But what is certain is that in the short-term, the world will continue to experience more frequent extreme weather events.

In the face of this increasing exposure, the loss adjusting sector has valuable experience and in-depth data to support improved risk management across all lines of business. Adjusters have longstanding field experience gained from completing multiple complex loss inspections. They have a detailed practical understanding of developing loss patterns and the vulnerabilities within existing insurance and risk management programmes.

Enhanced engagement between loss adjusters, brokers and insurers will make it possible to evolve the covers available and to better promote those that are most effective in providing the required safeguards against developing non-peak perils.

A renewed focus on risk management will also make it possible to make insureds more resilient and to guide them in exactly what is required to ensure crisis response and mitigation plans are robust, flexible and effective.

Such measures are often relatively straightforward and simply require compliance with existing standards.

For example,
in many windstorm losses, property owners have not secured and anchored warehouse roofs in line with regulations.

If the premises had met the stipulated building standards, many roofs would have remained intact avoiding both the property damage loss and that to the contents of the warehouse subsequently exposed to the elements.

Similar examples exist across all lines of business and emphasise the need to improve, at an operational level, the engagement between the claims and underwriting functions in the insurance sector and the way they combine to support enhanced risk management either through the broker or directly with the insured.

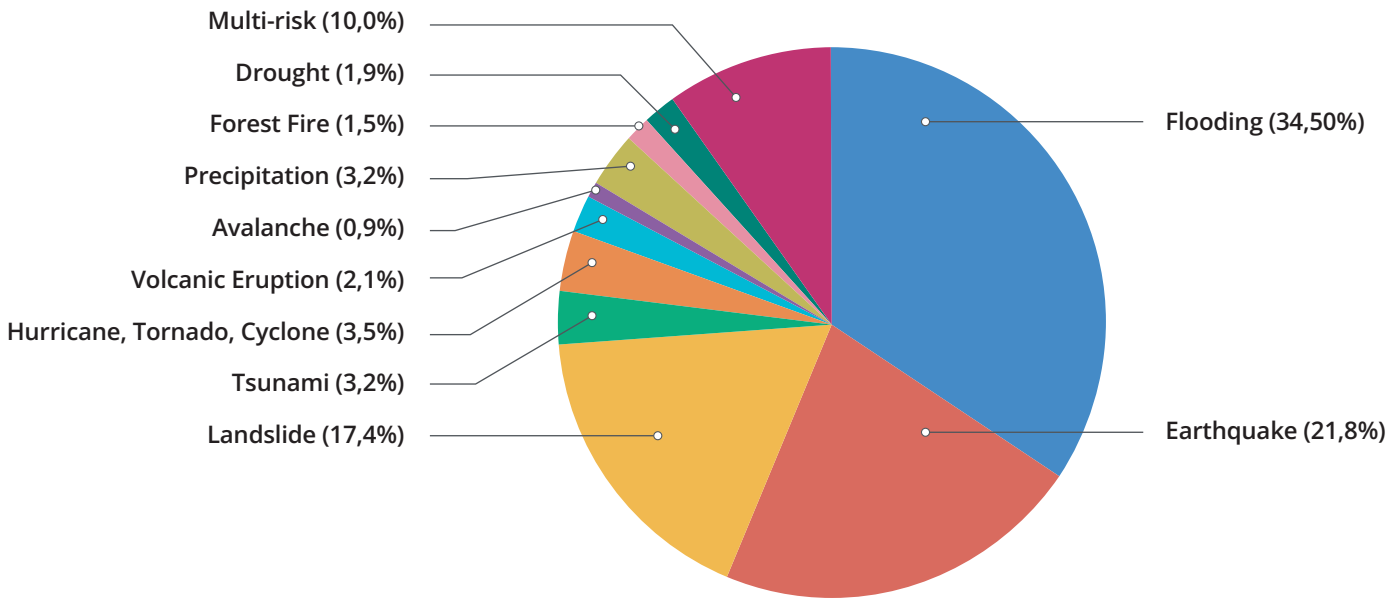
The advent of AI and cloud computing has also created huge opportunities to combat the impact from non-peak perils. It has turbo-charged the industry's ability to develop and refine predictive loss modelling software and to generate much more accurate risk and location specific data.

These models will enable the market to pinpoint the assets most at risk and to generate granular detail on the exact nature of the exposures they face.

This will inform insureds on how to protect existing assets and where future assets should be located, and commercial operations should be focused.

The insurance market cannot turn the tide on climate change. But it can make inroads into the scale of the losses generated by non-peak peril events by working with insureds to make them more resilient.

It is an ongoing and perpetual challenge, but one that comes with increasing rewards as evidenced by the $50bn+ aggregated losses of recent years.



Source: Application of AI to detect and predict natural hazards and disasters obtained from a preliminary literature review covering articles published between 2018 and 2021 with a focus on (future) DRR applications. These results show an overrepresentation of certain types of natural hazards, particularly floods, earthquakes, and landslides.

What does Charles Taylor suggest?

1. **Periodically simulate crisis scenarios** to test coordination and response times among insurers, brokers and loss adjusters, identifying areas for improvement before a real event occurs.

2. **Define and agree in advance on clear decision thresholds,** based on likely scenarios and historical data, enabling timely and consistent response measures to be activated in the event of a risk occurrence.

3. **Review and update policies on an annual basis** to ensure that coverage, sums insured and policy conditions accurately reflect the evolving risk landscape and the insureds' actual needs.

4. **Promote preventive and risk mitigation measures in collaboration with insureds,** encouraging investment in resilient infrastructure, preventive maintenance and sound operational practices to reduce the severity of losses.

5. **Integrate the use of data, predictive models and climate analysis** to anticipate risk trends, enhance exposure assessment and support insureds in making informed decisions before, during and after an event.

Key Contact

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Alejandro is a Chemical Engineer with more than two decades of experience in the energy and maritime sectors, specializing in the analysis and adjustment of complex claims.

He began his career at the Mexican Petroleum Institute, where he developed a strong technical foundation in petrochemical processes.

Since 2002, he has been part of Charles Taylor, working across the Energy and Marine divisions in Mexico, the United Kingdom, and Brazil.

He has international training in Maritime Law & Marine Insurance Claims in London and Liverpool, and is a Member of the Association of Average Adjusters.

Alejandro has led Hull & Machinery, Cargo, P&I, General Average, and Marine Terminal claims for high-profile clients across the region.

From 2014 to 2018, he was responsible for launching and consolidating the Charles Taylor Adjusting operation in Brazil, bringing strategic insight and extensive technical expertise.

He is currently based in Mexico, handling cases at both regional and international levels.

Thanks to his international experience, Alejandro is fluent in Spanish (his native language), English, and Portuguese, enabling him to collaborate effectively with clients and teams in multiple countries.

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