AON

2026 Climate and Catastrophe Insight

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Foreword by Greg Case
CEO, Aon

As Organizations Seek Growth, Weather Volatility Tests Resilience

Over the past year, our clients continued to navigate four interconnected megatrends shaping the global economy: **Trade, Technology, Weather** and **Workforce**.

Weather risks sit at the heart of this interconnectivity, complicating and amplifying decisions linked to the other three megatrends. At the same time, climate science indicates the impact of weather risks on the economy and society will only intensify, meaning businesses must adapt to a world increasingly shaped by weather volatility in order to become more resilient and grow.

Our 2026 Climate and Catastrophe Insight report — now in its 21st year — indicates that extreme weather events are becoming more frequent and unpredictable, affecting new geographies and sectors, and challenging long-held assumptions about resilience.

Global economic losses from natural catastrophes in 2025 reached $260 billion, underscoring the scale of disruption. From falling water levels on the River Rhine to wildfires in California, the economic, human and operational consequences are proliferating. While insured losses declined slightly from 2024, the long-term trend is clear: Weather exposures are rising.

This volatility exacerbates the current and future risks identified in Aon's 2025 Global Risk Management Survey, where business interruption ranked as the second-most significant risk globally and commodity price risk and material scarcity ranked sixth. For the first time, climate change and weather/natural disasters also entered the top 10 current global risks, demonstrating how climate risk is no longer a peripheral concern, but a core strategic issue for business decision makers worldwide.

The ability of weather events to disrupt global supply chains, agriculture and commodity production is forcing leaders to consider climate-resilient infrastructure and proactive planning throughout the supply chain. The events are also driving workforce migration patterns, requiring organizations to reconsider their talent and health strategies — from delivering health and benefits programs to supporting employees in climate-exposed locations to sourcing talent in areas challenged by weather events.

To respond effectively to this challenge, business leaders must:

- Embed adaptation into their people and location strategies;
- Invest in early warning systems and predictive analytics;
- Foster cross-functional approaches to weather risk.

As leaders consider a range of scenarios and hazards, they will benefit greatly from the use of predictive analytics to better understand their exposures, price future risks and measure the impact of their mitigation efforts.

A data-driven approach not only advances resilience, but helps to ensure businesses remain competitive and relevant in an environment where risks and customer expectations are constantly evolving.

The insurance industry is well-positioned to act as a strategic partner as organizations navigate these challenges. The industry is bringing record levels of capital to bear to help organizations respond to weather risks and build increasingly diverse alternative risk transfer solutions to deliver coverage and certainty in the face of a changing climate. To protect and grow organizations, Aon's integrated Risk Capital and Human Capital capabilities uniquely enable our firm to leverage differentiated data, tools and expertise — from our Climate Risk Monitor to Property Risk Analyzer — to better inform clients of evolving risks and build innovative capital solutions to support them.

The ability to anticipate and respond to climate-driven disruptions will define the competitive advantage in the years ahead. Those organizations which act decisively and embed resilience into their core operations will mitigate risk and seize opportunities to achieve sustainable growth.

Greg Case
CEO, Aon

Executive Summary

Economic Loss

$260B

global economic losses,
23% below the 21st-century average,
lowest since 2015

49

billion-dollar economic loss events,
above the average of 46

51%

global protection gap:
lowest on record

total losses

$260B

covered by Insurance

$127B

Insured Loss

$127B

global insured losses,
27% above the 21st-century average

30

billion-dollar insured loss events,
above the average of 17

81%

of global insured losses were
recorded in the United States

Severe Convective Storm

peril with the highest economic
and insured losses

Palisades and Eaton Fires, Costliest Events

$58B

in economic and **$41 billion**
in insured losses

Réunion and Jamaica

recorded their costliest insurance
events on record

$61B

global insured losses from SCS,
the third highest on record

Third-Warmest Year on Record

1.44˚C/2.59˚F

temperature anomaly compared to
pre-industrial period, the third warmest
year on record (WMO)

5,456

fatalities from the Myanmar Earthquake,
the deadliest event of the year
(excluding heatwaves)

252 mph/406 kph

maximum wind gust of Hurricane
Melissa, the highest wind gust ever
measured by dropsonde

42,000

global fatalities, driven by earthquakes
and heatwaves. **45% below** the
21st-century average

Insured losses in 2025 remained elevated at $127 billion despite below-average economic losses. Strengthening both physical and financial resilience is crucial for reducing long-term impact and loss of life.

Year of Contrasts: Subdued Hazards, Concentrated Losses

Global disaster activity slowed in 2025, storms failed to form and economic losses dipped to their lowest level in a decade. Total losses reached $260 billion — 23% below the 21st-century average and the lowest since 2015. Yet beneath this quieter surface, the year told a very different story. Insured losses reached $127 billion, 27% above the long-term average, a reminder that even in a below-average hazard year, the concentration and severity of certain events can reshape the global loss picture.

A Narrowing Protection Gap, but There's a Catch

The California wildfires struck early and hard, anchoring the year's totals from January onward, while severe convective storms once again proved their growing influence on industry losses. In fact, 30 billion-dollar insured loss events occurred, far above the historical average of 17, and severe convective storms alone accounted for $61 billion in insured losses, the third-highest on record.

The global protection gap narrowed to 51%, its lowest on record, but this improvement was largely due to the concentration of losses in the United States, which accounted for 81% of global insured losses thanks to high insurance penetration. Even so, more than half of economic losses worldwide remained uncovered, underscoring the persistent challenge of closing the gap in emerging markets.

Loss patterns revealed striking contrasts:

- 49 billion-dollar economic loss events occurred — slightly above the average of 46 — yet 30 billion-dollar insured loss events far exceeded the historical average of 17.
- Severe convective storms were the costliest peril, generating $61 billion in insured losses, the third-highest on record.
- The Palisades and Eaton Fires were the most expensive events, causing $58 billion in economic losses and $41 billion insured.
- Global fatalities totaled 42,000, driven by earthquakes and heatwaves — 45% below the 21st-century average — with the Myanmar earthquake alone claiming 5,456 lives. It is estimated that at least 24,400 people died due to the heat in Europe during the summer.

Boosting Physical and Financial Resilience

The contrast of subdued activity but elevated insured losses underscores a central theme of the year: Resilience must be both physical and financial. Even when nature eases its grip, the impacts can be profound without strong infrastructure, robust risk transfer and the ability to absorb and recover from shocks.

To achieve resilience, organizations – from the energy sector to construction – must understand where people, assets and operations are exposed today and under future scenarios. Targeted investments in resilience will reduce damage, downtime and revenue loss. By quantifying the return on investment of mitigation measures and demonstrating credible risk reduction, organizations can fundamentally change how risk is financed to help unlock affordable insurance. Equally this is an opportunity for insurers to deploy capital and address unmet needs.

Our 2026 Climate and Catastrophe Insight report — now in its 21st year — provides the intelligence leaders need to anticipate and adapt. Competitive advantage will belong to those who can absorb and recover from climate-driven shocks — because resilience is no longer a future ambition; it is the price of survival.

How to Use This Report

Each year's climate and catastrophe losses tell a story — not just of what happened, but of what it means for businesses, communities and decision makers navigating an increasingly complex risk landscape. This year's report is designed to help you move beyond the headlines and understand how these events may have shaped your organization directly or indirectly. Whether through supply chain disruption, workforce impacts, property exposure or shifts in insurance market conditions, the data offers a practical lens to assess where you may be vulnerable and where you may be more resilient than expected.

The report also gives you a chance to benchmark your experience against what happened across your region and sector. Understanding how other industries were affected, where losses were concentrated and how risk patterns are evolving can help you anticipate what's coming next. These insights can inform everything from capital planning and insurance purchasing to operational resilience, people strategies and long term investment decisions.

Most importantly, this year's findings highlight the growing need for collaboration — between organizations, insurers, governments and communities. As climate driven events continue to affect both people and property, the opportunity lies in using data to strengthen preparedness, rethink risk management strategies and build partnerships that support faster recovery and long term resilience.

This year's report helps you:

- Understand your own exposure by comparing your 2025 experience with global and regional loss trends.
- See what's happening in your region, including how local hazards, climate patterns and protection levels are shifting.
- Identify sector specific implications, from supply chain disruption to workforce safety and operational continuity.
- Assess impacts on people and property, and what that means for risk management, insurance strategy and resilience planning.
- Explore opportunities for collaboration with insurers, brokers and partners to strengthen financial and physical resilience.
- Use data to inform decisions on capital allocation, insurance purchasing, mitigation investments and long term planning.

Five Questions Readers Should Ask Themselves

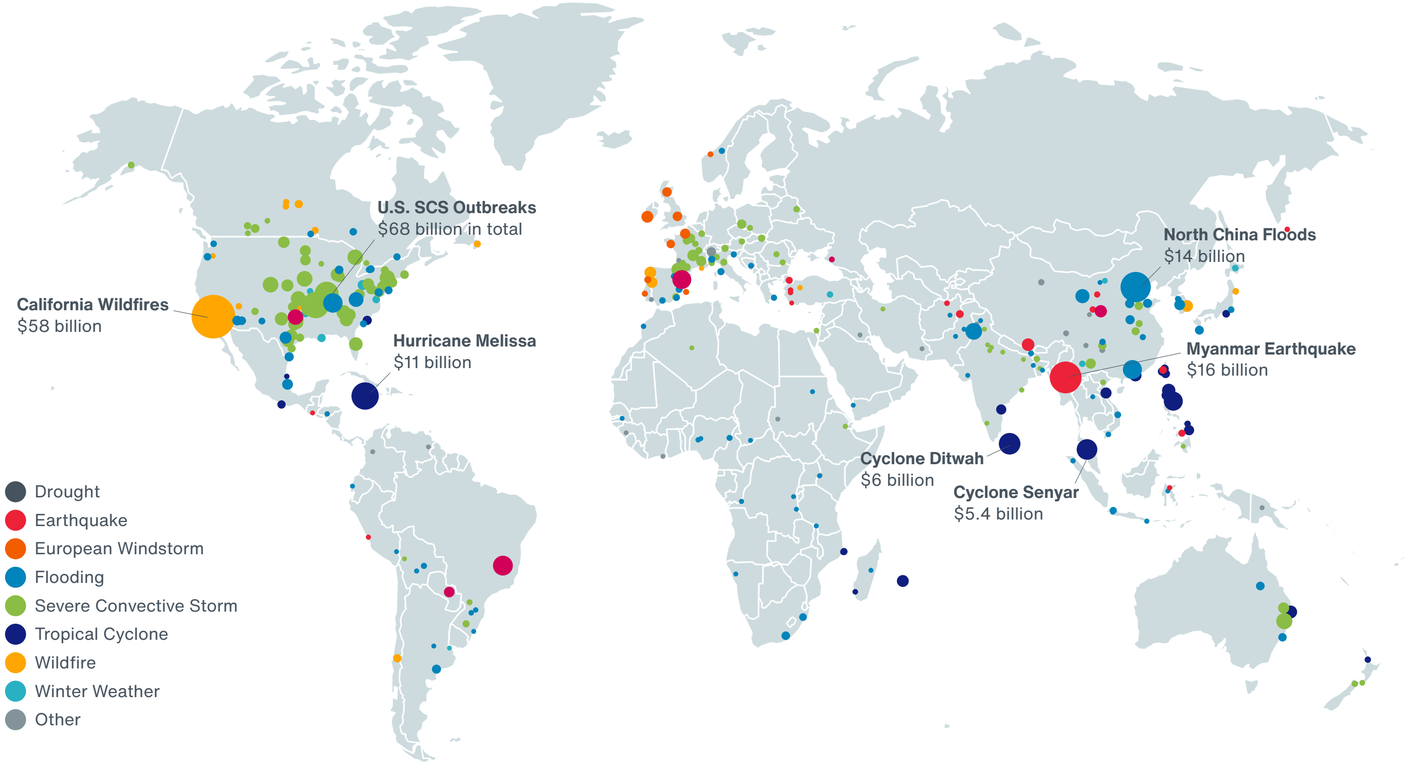
1. How did this year's events impact my organization — directly or indirectly — and how does that compare to the broader trends?
2. What does the report reveal about emerging risks in my region that I may not be preparing for today?
3. How exposed is my sector to the types of events that drove losses this year, and what does that mean for my strategy?
4. What steps can I take to strengthen resilience for both people and property, using the insights in this report?
5. Where could deeper collaboration with insurers or partners help me close protection gaps or improve recovery outcomes?

2025 Natural Disaster Events and Loss Trends

Explore long-term trends and the impacts of the year’s major natural disasters from a global and regional perspective

Global Economic Losses in 2025 Were Below Average Due to Lower Activity in 2H

Exhibit 1: Notable 2025 Economic Loss Events



Data: Aon Catastrophe Insight

Global economic losses due to natural disasters in 2025 were preliminarily estimated at more than $260 billion, which was approximately 23% below the long-term mean since 2000 ($336 billion), 27% below the median of the same period ($356 billion) and at their lowest since 2015.

In contrast to the active first half, marked by extreme losses from California wildfires and severe convective storms (SCS) across the United States, losses from catastrophe activity were particularly subdued during the third quarter of the year. They also remained about 25% below average in the fourth quarter. The lack of hurricane landfalls in the U.S. and a general pause in Atlantic storm activity during the climatological peak of the season were among the crucial factors.

Palisades and Eaton Fires were the costliest events of 2025, while SCS resulted in the highest aggregated losses. From the regional perspective, economic losses in the U.S. through December reached at least $141 billion and were 21% above average. Economic losses in all other regions were below their respective averages.

It is worth noting that these figures are subject to change as individual event loss estimates may evolve even months after the date of occurrence.

Exhibit 2: Top 10 Global Economic Loss Events in 2025

Date(s)	Event	Location	Economic Loss (2025 $B)
01/07-01/28	**Palisades Fire**	United States	33
01/07-01/28	**Eaton Fire**	United States	25
03/28	**Myanmar Earthquake**	Myanmar, Thailand, China, Vietnam	16
07/24-07/29	**North China Floods**	China	14
10/24-10/31	**Hurricane Melissa**	Caribbean	11
03/14-03/16	**SCS Outbreak**	United States	10
05/14-05/16	**SCS Outbreak**	United States	7.9
11/26-12/04	**Cyclone Ditwah**	Sri Lanka, India	6.0
11/25-12/01	**Cyclone Senyar**	Malaysia, Indonesia, Thailand	5.4
01/01-06/30	**Seasonal Drought**	Brazil	4.8

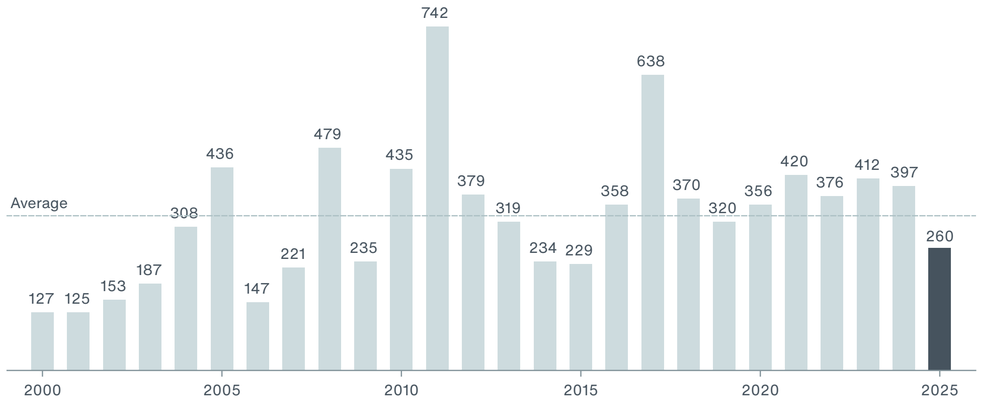
Palisades and Eaton Fires were the costliest individual catastrophe events of the year. They also rank as the costliest wildfires of the modern era. For comparison, the Camp Fire, which destroyed the town of Paradise in November 2018, resulted in economic losses of $13.5 billion at the time, or $17.4 billion in 2025 USD.

The earthquake that struck Myanmar in March became the most significant seismological event, with far-reaching consequences across multiple countries. Seasonal floods in China resulted in notable economic loss, yet the annual total was close to average.

Asia and Pacific suffered further major losses in November and December, as widespread flooding engulfed parts of Sri Lanka, India and Southeast Asia.

However, the largest aggregated losses were caused by severe convective storms, represented in the table of top 10 events by two major outbreaks in the U.S. — in mid-March and mid-May.

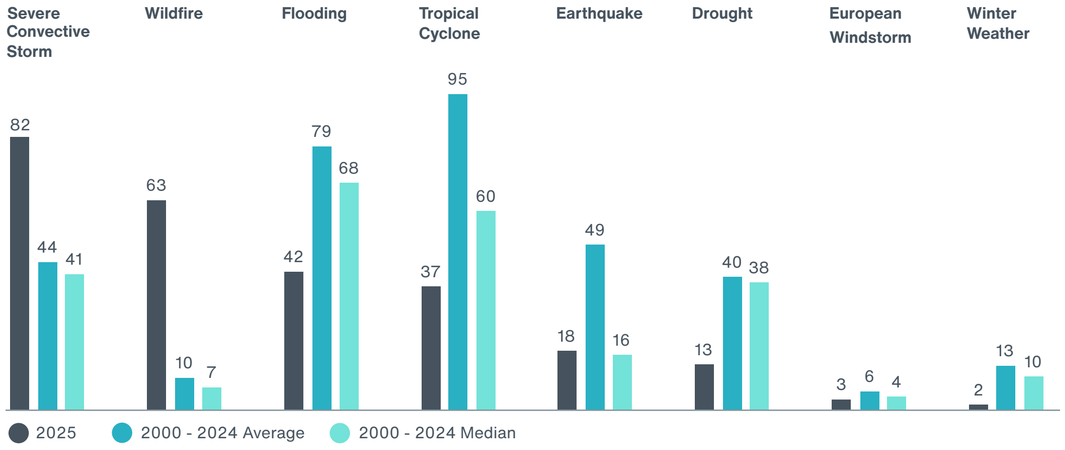
Exhibit 3: Global Economic Losses from Natural Disasters (2025 $B)



Data: Aon Catastrophe Insight

Global economic losses from natural disasters in 2025 were estimated to reach at least $260 billion and were lower than the 21st-century average ($336 billion) and median ($356 billion) on a price-inflated basis. They were significantly lower than the decadal mean and median ($388 and $373 billion, respectively). Economic losses emanating solely from weather-related disasters reached $242 billion, while earthquakes generated losses well below average at approximately $18 billion.

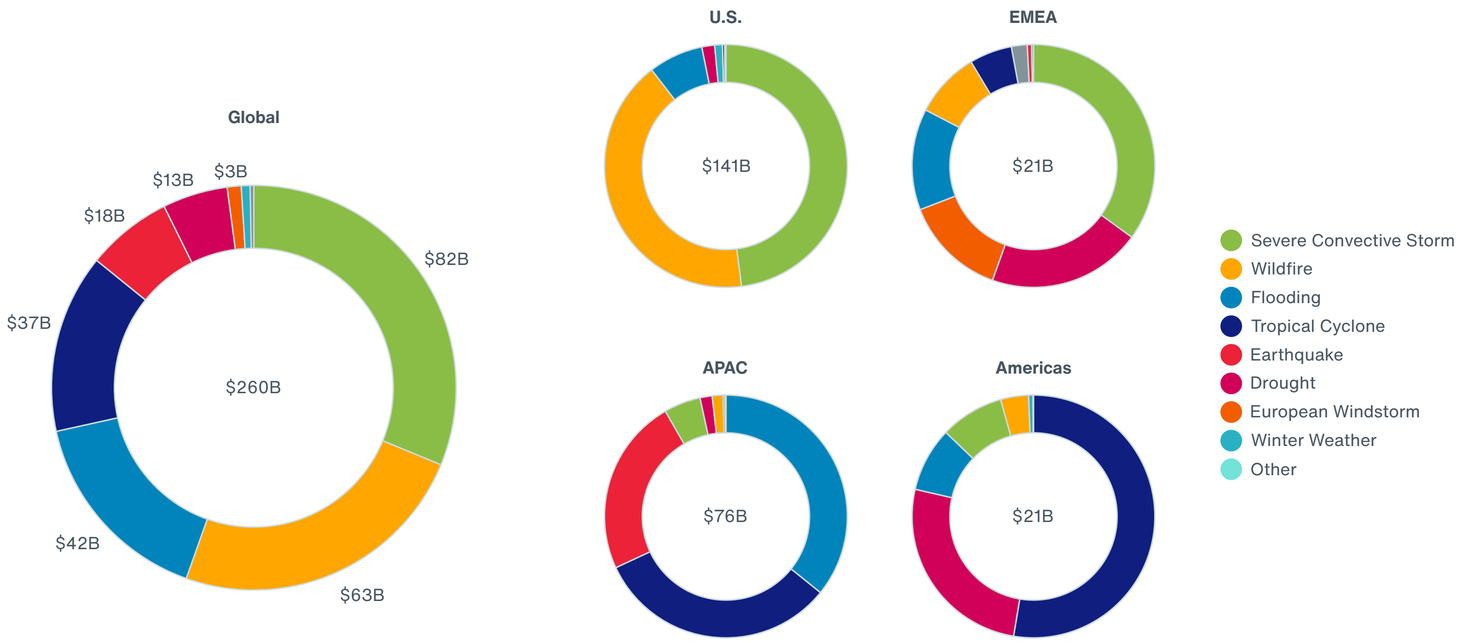
Exhibit 4: Global Economic Losses by Peril (2025 $B)



Data: Aon Catastrophe Insight

SCS and Wildfire were the only perils that exceeded their long-term loss averages in 2025. The year was marked by significantly reduced losses from tropical cyclones, with one of the lowest aggregated loss totals in this century. A notable reduction also occurred in losses related to flooding, the second-costliest peril on average. Please note that the tropical cyclone category includes impacts of flooding induced or exacerbated by tropical cyclones.

Exhibit 5: 2025 Global Economic Losses by Region and Peril



Data: Aon Catastrophe Insight

Nearly 55% of all global economic losses occurred in the U.S., followed by Asia and Pacific (APAC), Europe, the Middle East and Africa (EMEA) and the Americas. All regions except the U.S. experienced below-average economic losses.

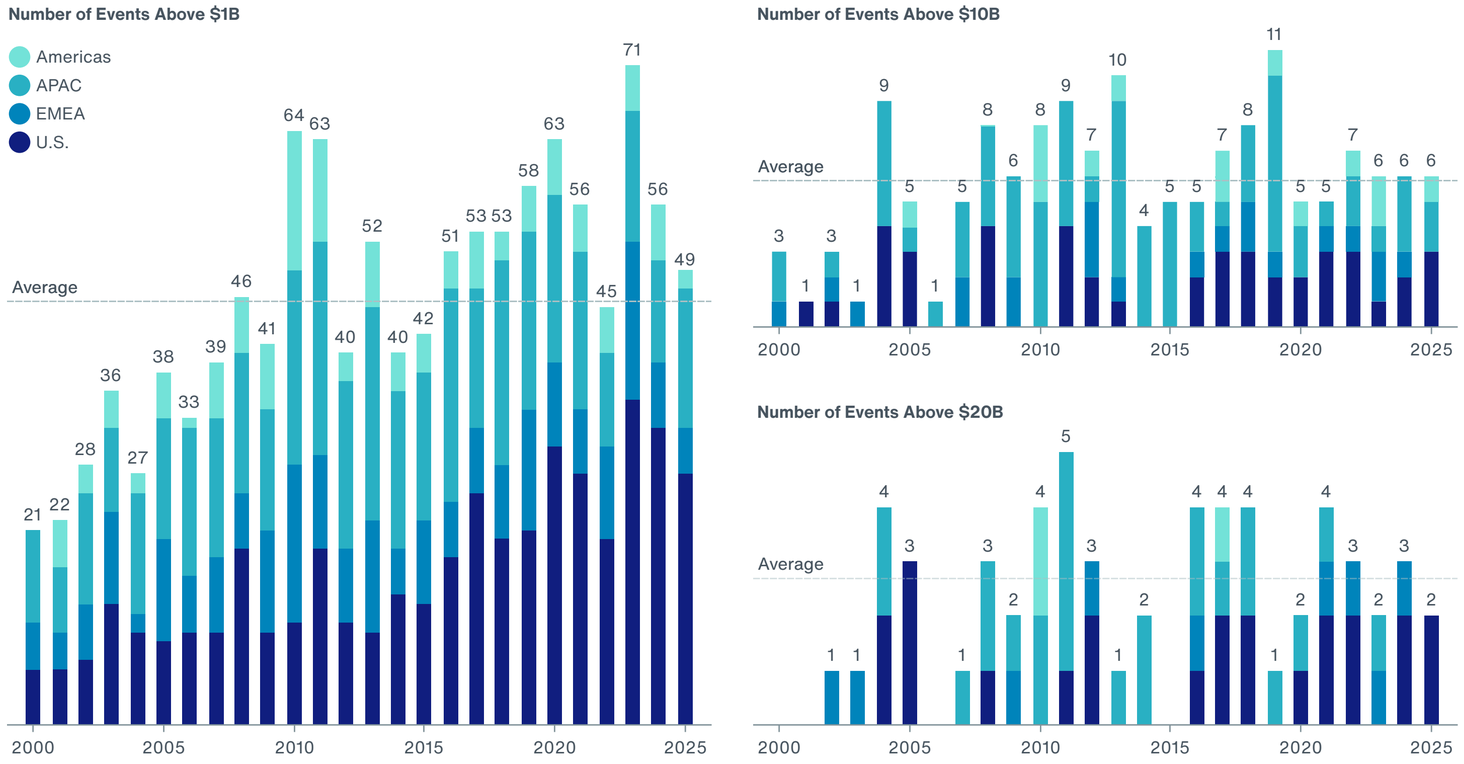
In contrast to 2024, hurricanes caused negligible losses in the U.S., while the vast majority was attributable to wildfire and SCS perils.

Summer storms were also the costliest peril in EMEA with more than $7 billion in economic losses, with several notable outbreaks in Central Europe, France and Italy.

While the Myanmar earthquake was the costliest individual event in APAC, flooding and tropical cyclone dominated the loss statistics. Flood-related impacts of storms such as Ditwah, Senyar and their remnants are accounted for in the tropical cyclone category for the purposes of this analysis.

Economic damage in the Americas region was dominated by the impact of Hurricane Melissa in the Caribbean.

Exhibit 6: Global Billion-Dollar Economic Loss Events

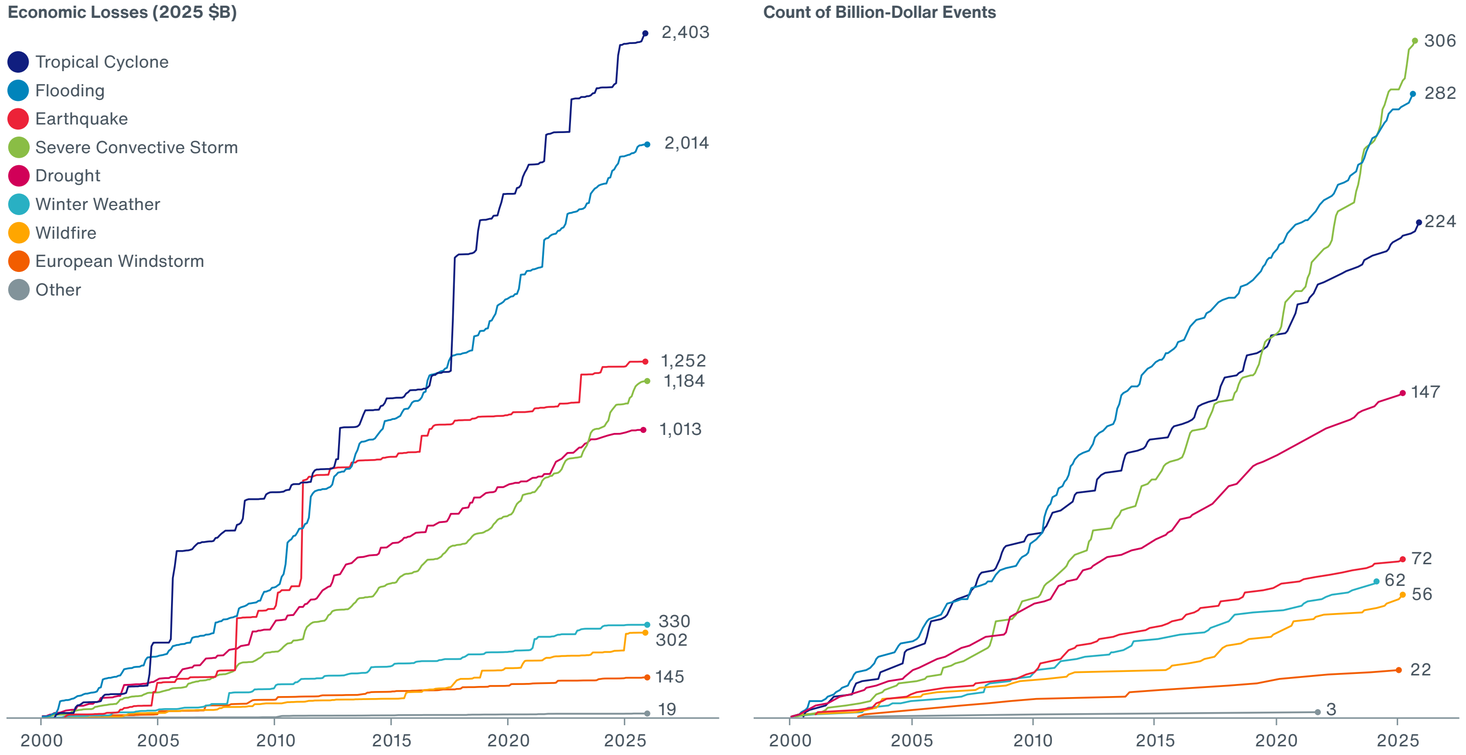


Data: Aon Catastrophe Insight

In 2025, there were 49 events causing economic losses over $1 billion — close to the average and significantly fewer than in 2024 or the record of 71 such events in 2023. As is typically the case, most of these events occurred in the U.S. (27), and the highest number was related to the SCS peril (21).

The events that resulted in economic losses above $10 billion were the Palisades and Eaton Fires in California, the SCS outbreak in the U.S. in mid-March, seasonal flooding in China, the Myanmar earthquake and Hurricane Melissa in the Caribbean. For the first time since 2020, there were no such events in EMEA.

Exhibit 7: Cumulative Global Economic Losses by Peril



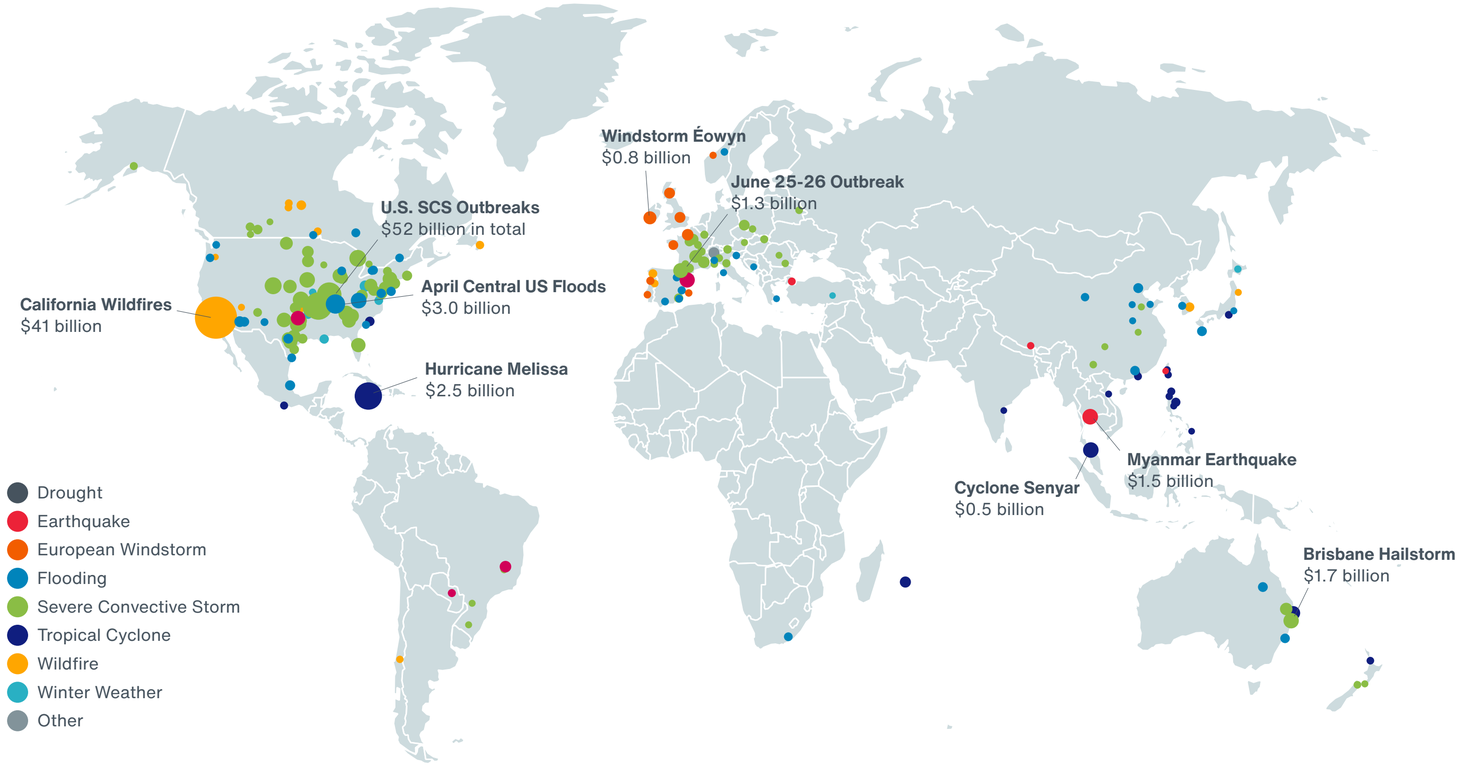
Data: Aon Catastrophe Insight

On a cumulative basis, the tropical cyclone peril has now resulted in more than $2.4 trillion in economic losses globally since 2000, adjusted for price inflation. Losses from flooding exceeded $2 trillion in 2025. All perils combined have so far generated approximately $8.65 trillion in global economic losses since 2000, which represents about 7.8% of global GDP in 2024.

In a matter of a few years, SCS is likely to become the third-costliest peril overall, owing to an increasing frequency of medium-sized loss events. This is a trend consistently seen in the U.S. and Europe, where the number of billion-dollar events is rising rapidly. The average annual growth rate highlights this shift. While all economic losses on a price-inflated basis have grown at 2.7% on average since 2000, SCS-related losses have been increasing by 6.8%.

Insured Losses Driven by Wildfire and SCS, Lower than Decadal Average

Exhibit 8: Notable 2025 Insured Loss Events



Data: Aon Catastrophe Insight

Natural disasters in 2025 resulted in global insured losses estimated at $127 billion, which was above the long-term average since 2000 ($99 billion) and more than 47% higher than the median of the same period ($86 billion).

However, this total was lower than the decadal average ($131 billion) and significantly lower than the average of the last five years ($148 billion).

The total includes losses sustained by private insurers as well as public insurance schemes. All loss estimates are expected to evolve into 2026 due to additional loss development and disclosure of official damage assessments for recent catastrophe events.

Despite the lack of U.S. hurricane landfalls, 2025 ranked among the industry's 10 costliest years and remained above average, as the global protection gap hit a record low of 51%. While the long-term trend of decreasing global protection gap is evident from historical data, the 2025 outlier was mainly a result of higher concentration of costly wildfire and SCS events in the U.S., which exhibit relatively higher coverage. Without the California wildfires, 2025 would be the least costly year for insurers since 2016 and the loss totals would fall below both average and median.

To read more about available reinsurance capital, please read the latest **Aon's Reinsurance Market Dynamics Report** (2).

Exhibit 9: Top 10 Global Insured Loss Events in 2025

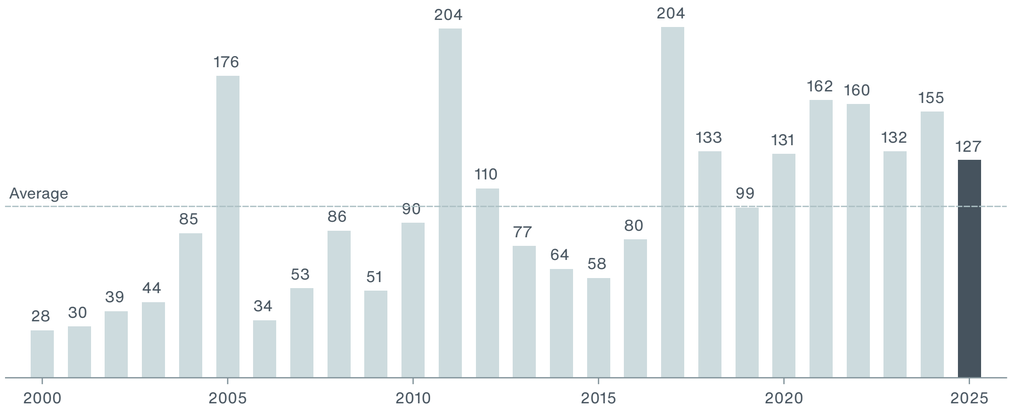
Date(s)	Event	Location	Insured Loss (2025 $B)
01/07-01/28	**Palisades Fire**	United States	23
01/07-01/28	**Eaton Fire**	United States	18
03/14-03/16	**SCS Outbreak**	United States	8.1
05/14-05/16	**SCS Outbreak**	United States	6.0
04/01-04/07	**Mississippi Valley Floods**	United States	3.0
05/17-05/20	**SCS Outbreak**	United States	2.5
10/24-10/31	**Hurricane Melissa**	Caribbean	2.5
06/15-06/17	**SCS Outbreak**	United States	2.0
04/17-04/20	**SCS Outbreak**	United States	2.0
03/28-03/31	**SCS Outbreak**	United States, Canada	1.9

Almost a third of all insured losses incurred in 2025 were caused by the Palisades and Eaton Fires in the first few weeks of the year and they remained at the top of the ranking. Together, they resulted in losses of approximately $41 billion. This resembles the ranking of 2024 events, which similarly featured two U.S. events at the top — Hurricanes Milton and Helene, which also collectively caused losses of more than $40 billion.

However, 2025 did not bring any U.S. hurricane landfalls and the only tropical cyclone that features in the top 10 was Hurricane Melissa, which devastated parts of Jamaica and Cuba and resulted in insured losses of approximately $2.5 billion.

All other top events primarily affected the U.S., headed by the two costly SCS outbreaks in mid-March and mid-May.

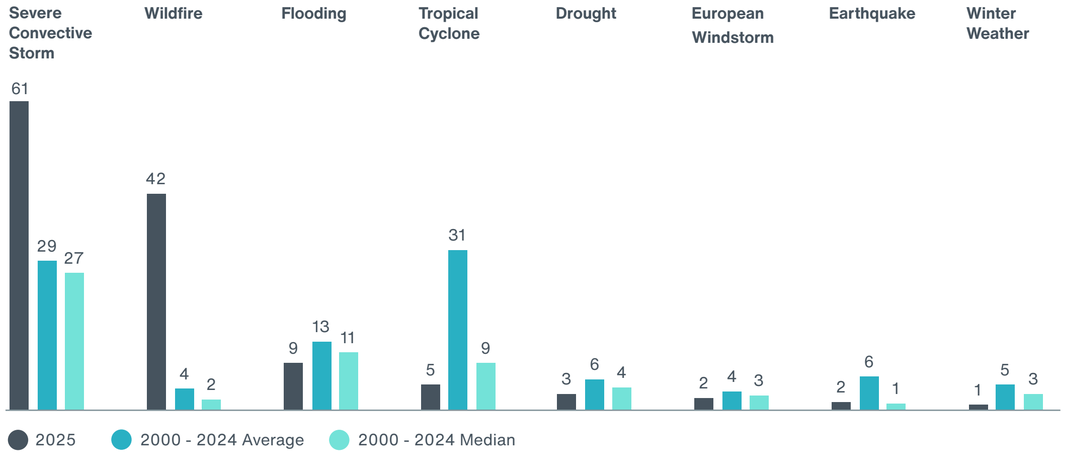
Exhibit 10: Global Insured Losses from Natural Disasters (2025 $B)



Data: Aon Catastrophe Insight

Global insured losses from natural disasters in 2025 reached at least $127 billion and were well above the 21st-century average ($99 billion) and median ($86 billion). On the other hand, the total was the lowest since 2019 and lower than the average for the last 10 years ($131 billion). In the historical record, 2025 ranks as the tenth-costliest year on a price-inflated basis.

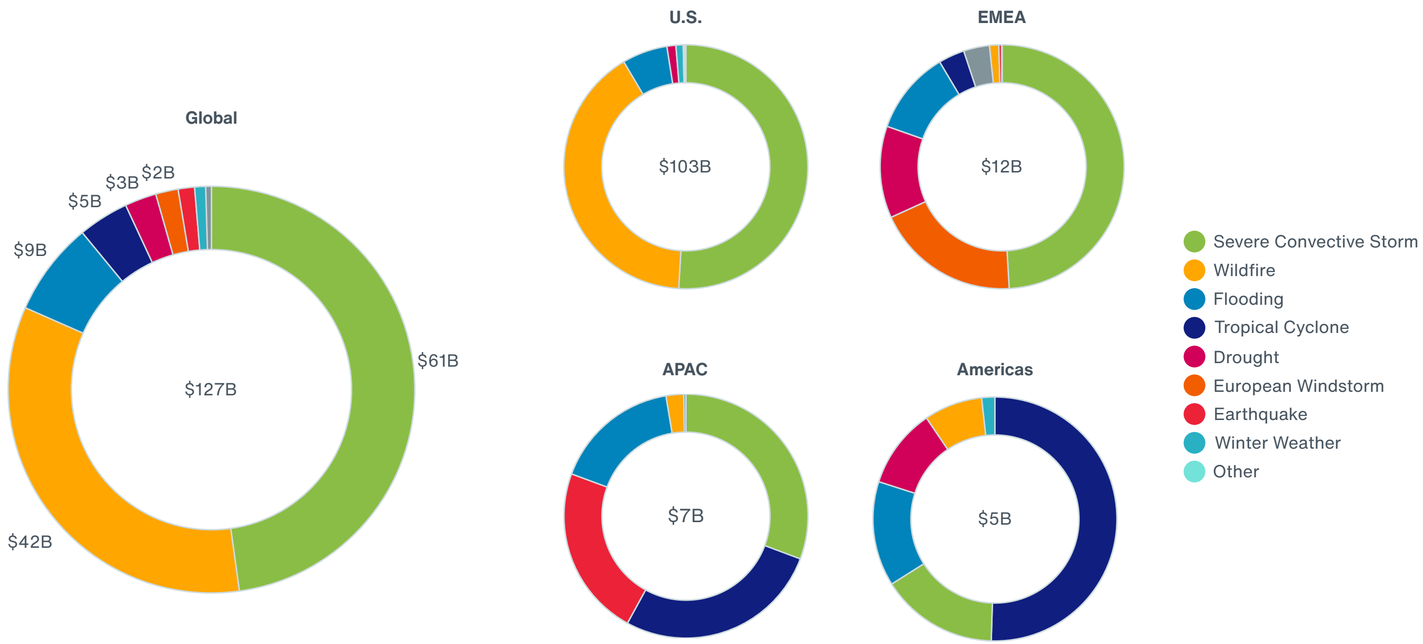
Exhibit 11: Global Insured Losses by Peril (2025 $B)



Data: Aon Catastrophe Insight

Insured losses from SCS were nearly twice as high as their long-term annual average and lead the peril breakdown for the third consecutive year. Wildfire was the only other peril that exceeded its average losses. All other perils were under their long-term means.

Exhibit 12: 2025 Global Insured Losses by Region and Peril



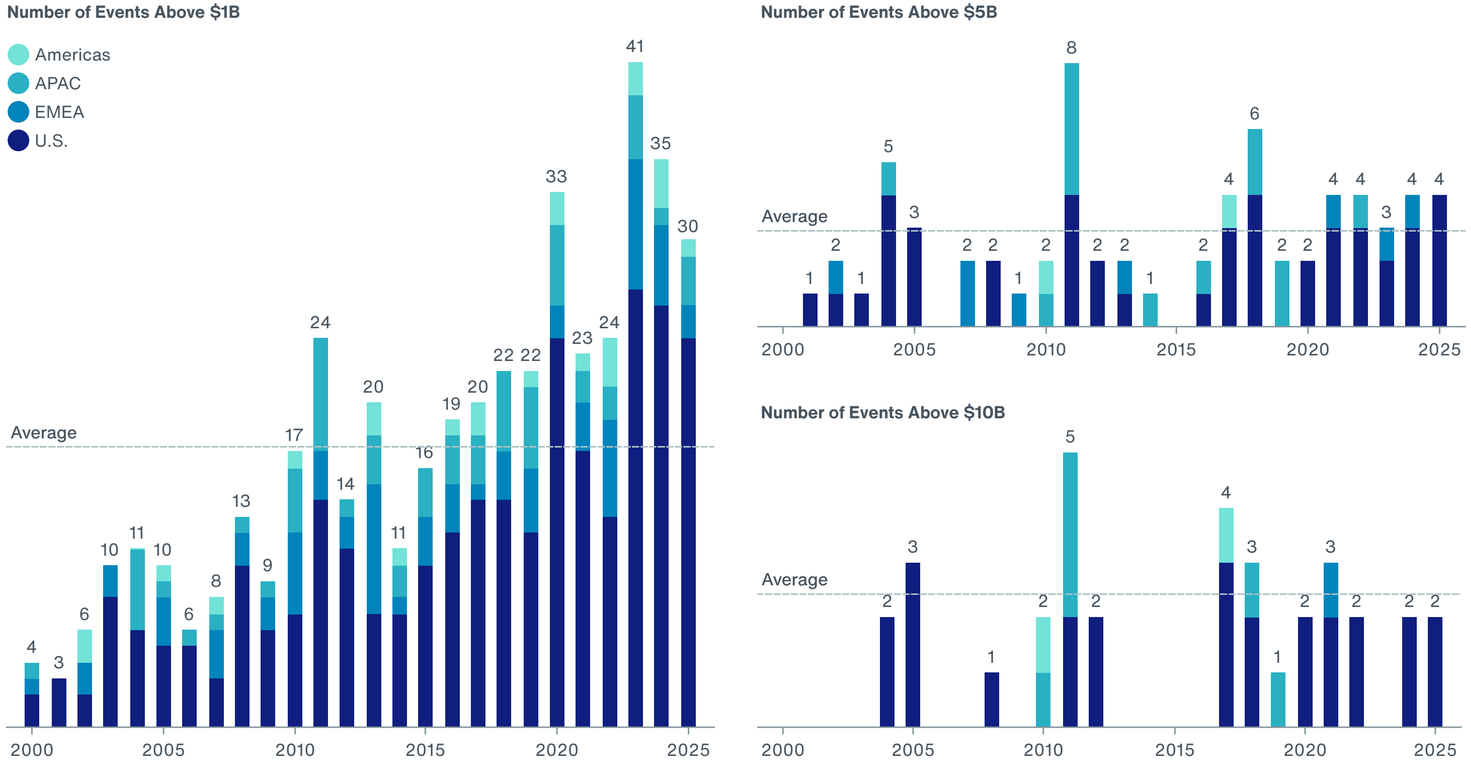
For the seventh time on record, annual insured losses in the U.S. reached more than $100 billion. For the third consecutive year, the main driver was the SCS peril, even though the California fires were the costliest individual events.

In contrast to 2024, flooding was not a major loss driver in EMEA in 2025 and most of the insured losses were attributable to summer and winter storms.

Due to relatively low catastrophe insurance coverage in parts of APAC, aggregated losses remained well below average despite multiple significant events, such as the Myanmar Earthquake and flooding in China and South and Southeast Asia. Industry losses in Australia and New Zealand were close to the decadal average and contributed by approximately $3.4 billion (USD).

On the other hand, industry losses in the Americas exceeded their average annual value, predominantly due to Hurricane Melissa's impact in Jamaica.

Exhibit 13: Global Billion-Dollar Insured Loss Events



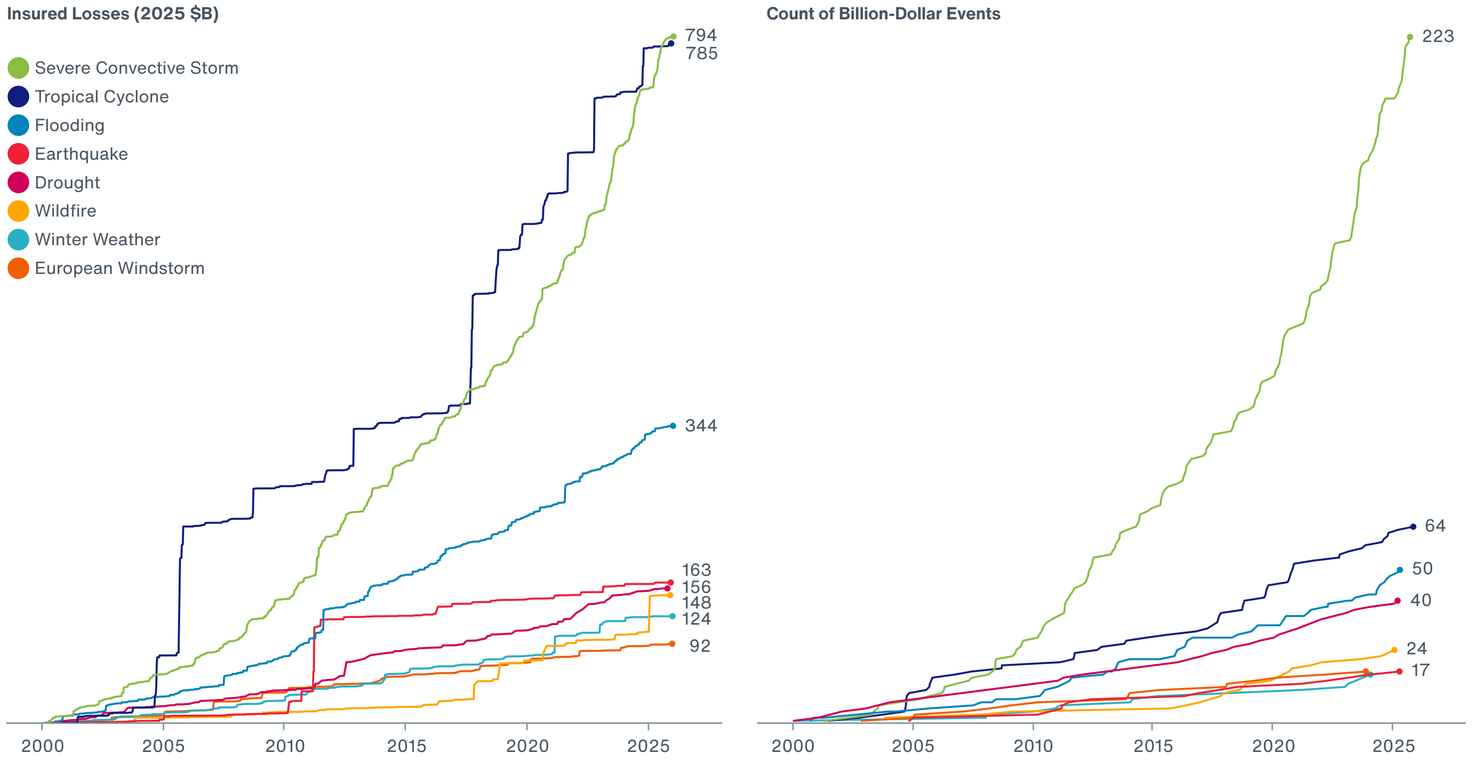
Data: Aon Catastrophe Insight

At least 30 events in 2025 resulted in losses in excess of $1 billion for the (re)insurance industry. This was well above the average of 17 and the fourth-highest total on record, after 2023, 2024 and 2020. For the purposes of this analysis, all events are only counted once, even if they caused billion-dollar losses in two regions. The analysis also considers price-inflated losses.

The U.S. dominated the count with 23 events, most of which were SCS outbreaks. The only other billion-dollar events were Hurricane Melissa in the Americas, Ex-Cyclone Alfred and the November hailstorm in Australia, the earthquake in Myanmar,, as well as drought and the late-June SCS outbreak in Europe.

The industry once again saw four events exceed the $5 billion mark, two of which were wildfires and two were SCS outbreaks, all in the U.S.

Exhibit 14: Cumulative Global Insured Losses by Peril

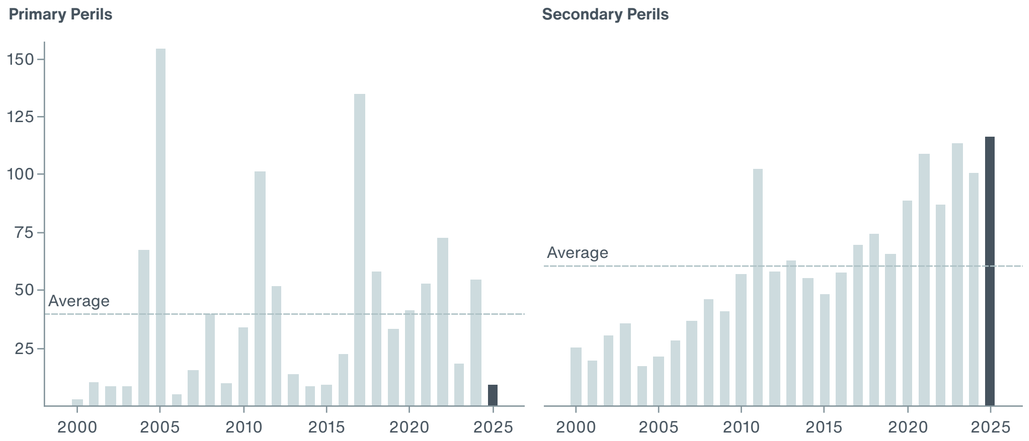


Data: Aon Catastrophe Insight

In 2025, SCS narrowly overtook tropical cyclones as the costliest peril of the 21st century on a cumulative basis, with approximately $794 billion in losses for the industry on a price-inflated basis. This was possible due to a relatively benign Atlantic Hurricane season with no U.S. hurricane landfalls and the continuing trend of gradually increasing SCS losses. This also occurred for a short period of time in the spring of 2017, before the trio of devastating hurricanes Harvey, Irma and Maria generated nearly $125 billion in industry losses in less than a month's time.

The statistics of billion-dollar event frequency continued to be dominated by SCS, with at least 223 such events since 2000 — a total that exceeds the combined count of the next six perils.

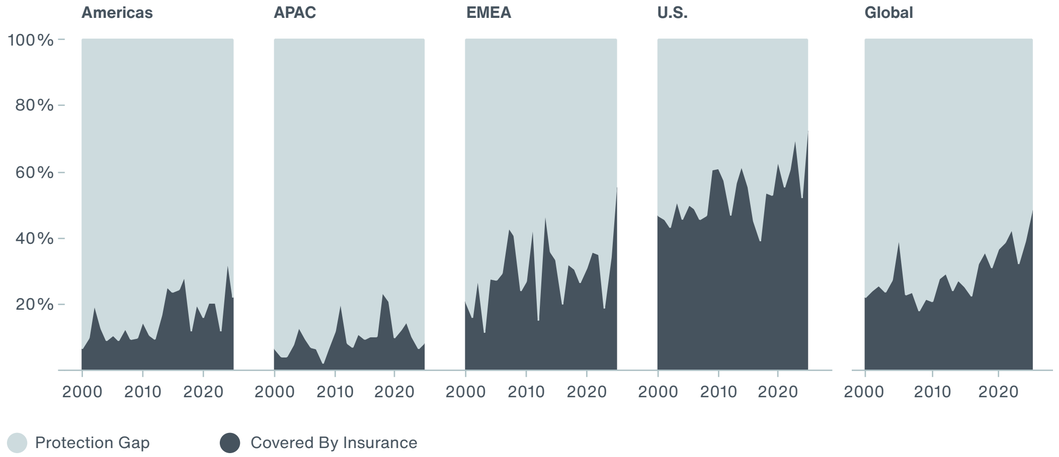
Exhibit 15: Global Insured Losses From Primary and Secondary Perils (2025 $B)



Data: Aon Catastrophe Insight

Secondary perils generated the highest insured losses on record and extended their lead over primary perils in 2025. On a cumulative basis since 2000, they have generated industry losses of at least $1.56 trillion, while tropical cyclones, earthquakes, and European windstorms (traditionally considered as primary or peak) have generated roughly $1.04 trillion. Addressing the trend of gradually increasing secondary losses requires innovative risk mitigation strategies that prioritize resilience to more frequent, smaller-scale disasters alongside traditional efforts to manage primary risk perils.

Exhibit 16: Protection Gap by Region

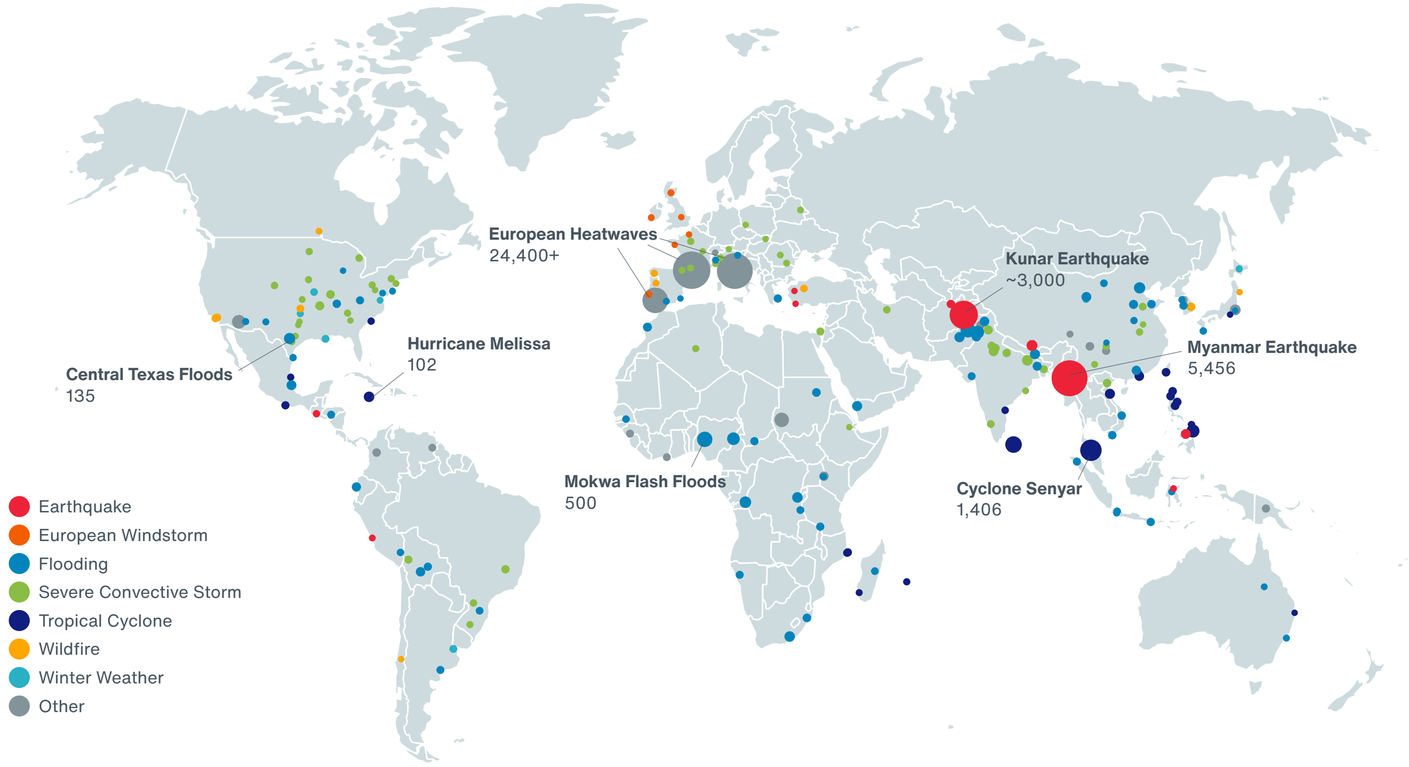


Data: Aon Catastrophe Insight

The global protection gap in 2025 decreased to its lowest level on record. While there is a long-term decreasing trend, the 2025 outlier is mainly a result of major disasters occurring in the U.S. EMEA also experienced a low gap due to a higher proportion of SCS and windstorm losses. Insurers in Americas and APAC continued to cover only a small portion of total disaster damage.

Global Disaster Fatalities Reach at Least 42,000, Most Due to Earthquakes and Heatwaves

Exhibit 17: Notable 2025 Human Loss Events



Data: Aon Catastrophe Insight

At least 42,000 people lost their lives globally due to natural disasters in 2025. This is below both the 21st-century average (75,700) and median (44,250) and notably lower than the death toll in 2024 (70,550).

From the regional perspective, nearly 14,000 disaster-related deaths occurred in Asia, while more than 24,500 — almost all of which were related to heatwaves — occurred in Europe.

Natural disasters since 2000 have resulted in more than 1.9 million fatalities worldwide. The deadliest perils were earthquake and tsunami (765,000), heatwaves (700,000), tropical cyclone (214,000) and flooding (190,000). In 2025, earthquakes and heatwaves have similarly resulted in the highest number of deaths.

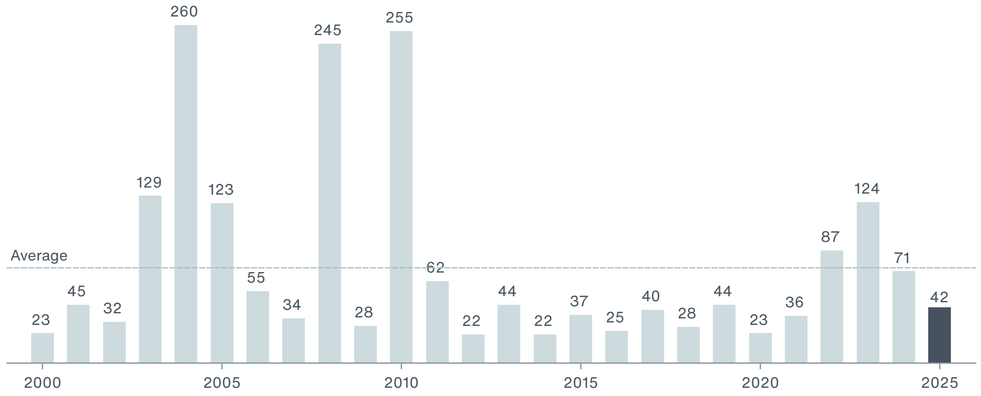
Exhibit 18: Top 10 Global Human Loss Events in 2025

Date(s)	Event	Location	Fatalities
06/01-08/31	**European Heatwaves**	Western, Central, Southern Europe	24,400
03/28	**Myanmar Earthquake**	Myanmar, Thailand, China, Vietnam	5,456
08/31	**Kunar Earthquake**	Afghanistan	3,000
11/25-12/01	**Cyclone Senyar**	Malaysia, Indonesia, Thailand	1,406
11/26-12/04	**Cyclone Ditwah**	Sri Lanka, India	643
05/29	**Mokwa Flash Floods**	Nigeria	500
08/15-08/17	**Monsoon Floods**	Pakistan	450
04/01-10/31	**Maricopa Heatwaves**	United States	425
08/31	**Tarasin Landslide**	Sudan	400
10/31-11/07	**Typhoon Kalmaegi**	Philippines, Vietnam, Thailand	288

There were four events that claimed more than 1,000 lives: multiple heatwaves in Europe from June to August (24,400), the Myanmar Earthquake in March (5,456), Kunar Earthquake in Afghanistan in August (~3,000), and flooding induced by Cyclone Senyar in Southeast Asia in December (1,406).

Some of the death toll estimates will continue to evolve into 2026. Heatwave fatalities are often adjusted long after the events, as excess mortality data becomes available. Another reason is the lack of reliable estimates, or multiple differing claims from various groups, particularly in countries suffering from internal conflict. These factors often lead to underreported fatality counts, particularly for extreme heat and cold events.

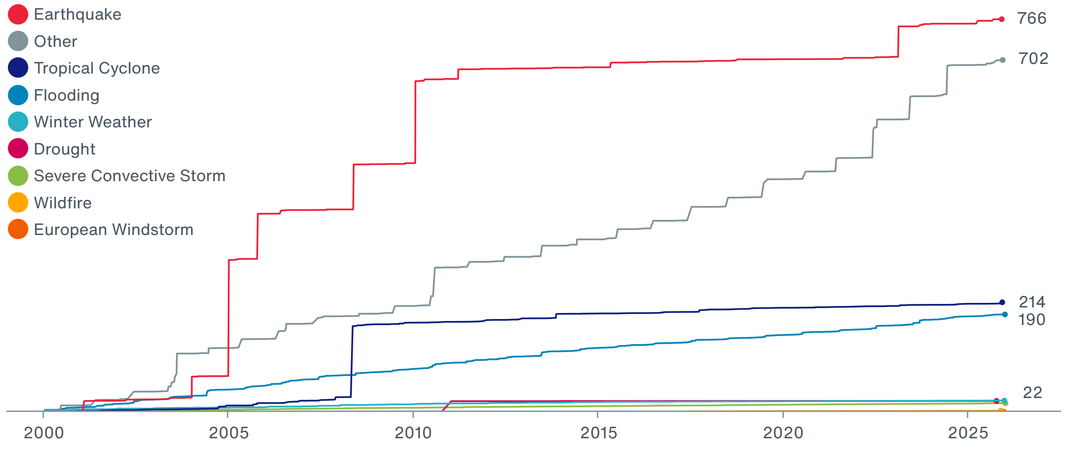
Exhibit 19: Global Natural Disaster Fatalities (Thousands)



Data: Aon Catastrophe Insight

Preliminary estimates of fatalities initially place 2025 under the long-term average of the 21st century. However, additional revisions might increase the annual total, especially due to heatwave events. This was the case for 2024, which is now close to the average.

Exhibit 20: Cumulative Global Fatalities by Peril (Thousands)



Data: Aon Catastrophe Insight

As seen on the cumulative fatality statistics, the recent spike in annual fatalities can be mostly attributed to the increase in heatwave-related deaths (included in the 'Other' category). Apart from earthquakes and heatwaves, the only event that caused more than 25,000 deaths was Cyclone Nargis in 2008.

2025 Regional Catastrophe Review

Explore natural disaster activity and loss trends in each region

United States

U.S. Flood Risk to Rise

Analysis of climate projections of future flood depths from Aon's Climate Risk Monitor, combined with population density exposed to flooding, indicates that overall pluvial flood risk in the U.S. could increase by approximately 12% under a medium-emissions scenario and by about 19% under a high-emissions scenario by the middle of the century.

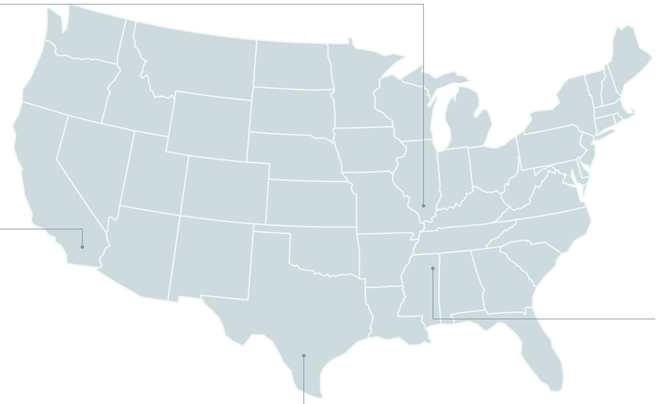
Severe Convective Storms
Third-highest insured losses on record with at least 19 billion-dollar events

$68B economic and $52B insured losses

California Wildfires
The costliest wildfires on record globally

$58B economic and $41B insured losses

Central Texas Floods in July
Catastrophic flash flooding with 135 fatalities



Mississippi Valley Floods
Widespread flooding in April

$4.5B economic and $3B insured losses

>210 mph/338 kph
Peak wind speed from Enderlin, ND tornado, the first EF-5 tornado in the U.S. in 12 years

3
Number of Category 5 hurricanes in the Atlantic in 2025, second-highest annual total on record

14
Number of 24-hour periods with a 1-in-1000-year flooding event, the most in the U.S. since 2002

0
First season since 2015 to feature zero hurricanes in the Gulf of Mexico or the mainland U.S.

Above-Average Economic and Insured Losses

Economic losses from natural disasters in the U.S. were estimated at $141 billion in 2025, significantly lower than last year but still well above the 21st-century average of $117 billion. Remarkably, insured losses reached $103 billion, meaning that public and private insurers covered around 73% of all losses in 2025. This resulted in the lowest protection gap on record for the U.S. across the 21st century.

Palisades and Eaton Fires: Largest Loss Contributors

Over 40% of all economic and insured annual losses in the U.S. were attributable to the Palisades and Eaton Fires. At a combined $41 billion in insured losses, both events are now the costliest wildfires in U.S. and world history, surpassing the Camp Fire (2018) insured loss total of $13 billion (2025 USD). Additionally, the Palisades and Eaton Fires have made 2025 the costliest wildfire year in U.S. history, producing higher losses than the next two costliest years (2017 and 2018) combined.

Third-Highest SCS Annual Loss Total in U.S. History

U.S. SCS activity caused $68 billion and $52 billion in economic and insured loss, respectively, in 2025. Both figures are the third-highest on record, only behind those figures set in 2023 and 2024. In 2025, the U.S. also recorded 19 separate SCS events with insured losses of at least $1 billion — second only to 2023, which saw 22 such events.

Remarkably, nearly a third of all annual SCS losses were driven by just three SCS outbreaks on March 14-16, May 14-16 and May 17-20. These outbreaks also contributed to the high U.S. tornado activity observed this year. Over 3,300 tornado warnings were issued by the National Weather Service (NWS) while roughly 1,560 preliminary tornado reports were submitted to the Storm Prediction Center (SPC). Additionally, the SPC received around 17,100 preliminary reports of strong winds, the third-highest annual total since 2010.

Notable Flood and Drought Activity

Several significant flooding events occurred across the U.S. in 2025. One of the costliest took place in early April within the Mississippi Valley, where flash flooding caused severe damage across Kentucky, Tennessee and Arkansas. Flooding in early July triggered over $1 billion in damage and 135 fatalities in Texas's Hill Country region, while over 3,100 buildings were flooded in a separate event in Milwaukee roughly five weeks later. Several other notable flooding events occurred in Ruidoso, New Mexico, across the southwestern U.S. due to tropical cyclone remnants in October, and over the western U.S., especially western Washington, in early December due to multiple atmospheric rivers.

Conversely, persistent drought in the U.S. resulted in $2.4 billion in economic losses and $1.2 billion in crop insured losses over all of 2025. Both figures are well below their long-term averages and among the lowest annual totals recorded in the 21st century.

Lowest Hurricane-Related Losses in a Decade

For the first time in a decade, no hurricanes made landfall anywhere in the U.S. in 2025. As a result, tropical cyclone-related economic and insured losses remained below $1 billion, the lowest figures seen since 2015. This ended a remarkable streak of high-impacting hurricane seasons from 2016-2024, where annual economic and insured losses averaged over $75 billion and $30 billion, respectively. Meanwhile in 2025, nearly all U.S. losses were attributed to just Tropical Storm Chantal's impacts over the Mid-Atlantic region in early July.

Americas
(non-U.S.)

Climate Insights: Brazil Drought to Worsen, with Compounding Risk

Scientific research indicates a high level of confidence that the frequency and severity of drought in Brazil will increase due to climate change, especially across the central region and Amazon basin. Increased drought, combined with hotter temperatures, is also expected to increase the frequency of fire weather conditions in the future (compound hot, dry, and windy events).

Eastern Mexico Floods
Heavy rainfall damaged thousands of homes, causing 76 fatalities

Early estimates indicate $750M in economic damages

Brazil Drought
Prolonged drought in the Brazil Amazonian region

Nearly $5B in expected losses in 2025 alone

Canadian Wildfires
Significant wildfire activity across Manitoba, Ontario and Saskatchewan

Over $500M in direct economic losses

Hurricane Melissa
The region's costliest event in 2025 with $11B in economic damages and 100+ fatalities

406 kph/252 mph
Hurricane Melissa, the highest wind gust ever recorded by a dropsonde

530 mm/21 inches
record-breaking rainfall in Veracruz, Mexico between October 6-9

892 millibar
Hurricane Melissa's central pressure, tying for the most intense Atlantic Hurricane landfall

48%
monthly hydropower contribution to electricity generation in Brazil in August, 2nd lowest on record

Overview

Economic losses from natural disasters in the Americas (excluding the U.S.) reached at least $21 billion, below the long-term average, driven primarily by Hurricane Melissa, seasonal droughts across central South America, flooding in Mexico and wildfires in Canada. Insured losses for the region were below average at approximately $5 billion.

Hurricane Melissa Dominated Insured Loss Activity

Over 50% of all economic and insured annual losses in the Americas were attributable to the devastating impact of Hurricane Melissa, one of the most powerful hurricanes to make landfall on record. In its aftermath, Melissa left $11 billion in economic damages across Jamaica, Haiti and Cuba, with $2.5 billion insured losses in Jamaica alone. The storm caused catastrophic wind, storm surge and inland flooding impacts, affecting more than five million people, damaging hundreds of healthcare facilities, and severely disrupting critical infrastructure.

Brazil Drought Woes Continue

Seasonal droughts across Brazil in 2025 have caused approximately $5 billion in agricultural losses. The Brazilian Amazon region is facing one of the most intense and prolonged droughts on record. In 2023, South America witnessed one of the costliest drought losses on record with over $16 billion in damages in La Plata Basin alone. Plagued by water scarcity and ravaging wildfires in the Amazon region, drought losses continued to be devastating in 2024. Southeast Brazil has shown signs of recovery in 2025, but below-average precipitation in the Amazon region continues to exacerbate the regional turmoil. Hydropower contribution to national electric power generation, typically around 66%, dipped below 50% in August. This is only the second time on record. Notably, Paraguay also experienced intense droughts in peak agricultural season (January to March) with agricultural losses amounting to over $700 million, or roughly 1.5% of national GDP.

Flooding in Mexico Reveals Regional Protection Gap

Heavy rainfall between October 8 and 10 along central Mexico's Gulf coast caused severe flooding and landslides leading to 76 fatalities, and damage to over 50,000 homes and thousands of schools, hospitals, and businesses. Triggered by prolonged, extreme rainfall from the interaction of the remnants of Hurricanes Priscilla and Raymond with a Gulf tropical disturbance, the event inundated large portions of Veracruz, Puebla, Hidalgo, San Luis Potosí and Querétaro. The event was characterized by a high concentration of losses in residential housing, local infrastructure and small and mid size commercial enterprises in areas with relatively modest insurance penetration.

Canadian Wildfire Losses Remain Elevated

Wildfire activity across Canada remained a significant contributor to regional losses in 2025 with over $500 million in aggregated damages. The Flin Flon Fire complex along the Manitoba–Saskatchewan border emerged as the standout event. Other notable Canadian wildfires include the Kingston Fire during August in eastern Ontario that caused significant disruption to transport corridors and power infrastructure, and the Lac du Bonnet Fire during May that threatened residential and commercial properties and critical infrastructure in a popular recreational area.

Waking Up to the Growing Climate Risk

Across Brazil, the perfect storm is brewing for coffee producers and consumers alike. The world's top three coffee-producing countries, Brazil, Colombia and Vietnam, are facing intensifying droughts due to climate change, threatening to disrupt the global supply chain and shake up your morning cup. Brazil alone has suffered $139 billion in drought-related losses over the past 30 years, and new analysis from Aon's Climate Risk Monitor suggests high drought conditions could endanger roughly 54% of global coffee crops by 2050.

Learn How Insurers can Protect Morning Coffee from Climate Threats Learn How Insurers can Protect Morning Coffee from Climate Threats

EMEA

(Europe, Middle East and Africa)

Flood Risk in Africa Could Rise Over 20%

Projections from Aon's Climate Risk Monitor indicate increased risk of extreme precipitation and flash flooding over most of the continent, with countries in the Sahel region (e.g., Niger, Burkina Faso, Chad) projected to experience increased risk of over 20% by 2050 under a medium-emissions scenario.

Climate-Induced Losses in Europe
Combined economic loss of $6.2B due to drought and wildfires

Over 24,400 fatalities due to multiple heatwaves

African Rainy Season
At least 1,500 people died from floods, flash floods and landslides, with Nigeria, DRC and South Africa hit hardest

June 25 – 26 SCS Outbreak
The costliest 2025 event in the region

$1.6B economic and $1.3B insured losses, majority in France

Cyclone Garance in Réunion
The island's costliest event on record

$1.0B economic and $0.4B insured losses

217 kph/135 mph
maximum wind gust produced by Windstorm Éowyn, recorded at Cairnwell station, Scotland

50.5°C/122.9°F
highest temperature recorded in Silopi, Turkey, on July 25, setting all-time national record

393K hectares/971K acres
area burned by wildfires across Spain, the highest in decades

10M cubic meters/ 13M cubic yards
total volume of rock and ice released during the collapse of the Birch Glacier in Switzerland

Lowest Economic and Insured Losses in Decades

Natural disasters in the EMEA region resulted in at least $21 billion in economic losses, well below the 21st-century average of $54 billion, marking the lowest loss since 2006. Insurers covered approximately $12 billion, also under the long-term mean of $15 billion. These figures were much lower than in 2024, when major flood events significantly increased costs across the region.

Heatwaves, Drought and Wildfires Contributed to Losses

In 2025, western and southern European countries experienced severe droughts, causing billions of euros in economic and insured losses. Spain, Italy, France, Germany, the United Kingdom and Belgium reported significant impacts. Widespread wildfires in Spain and Portugal accounted for an additional $1.8 billion in economic losses. From the human loss perspective, there were multiple European heatwaves that killed thousands of people across the region.

Severe Convective Storm Losses Close to 2024 Figures

Following the unprecedented SCS losses experienced by European insurers between 2021 and 2023, the year 2025 saw a reduction in losses, aligning closely with those recorded in 2024 ($4.3 billion). The most significant SCS event, which occurred on June 25-26 and was linked to low-pressure systems Alexander and Bastian, resulted in an estimated insurance loss of $1.3 billion, primarily impacting France.

Windstorm Losses Driven by Éowyn

In 2025, aggregated losses from European windstorms were lower than the average for the 21st century, as mostly minor and moderate events occurred. At least five windstorms resulted in losses in the hundreds of millions USD. The most destructive event was Windstorm Éowyn (also known as Gilles), which led to about $780 million in industry losses and over a billion dollars in economic damages in Ireland and the UK between January 23 and 25. For Irish insurers, Éowyn was the costliest windstorm on record.

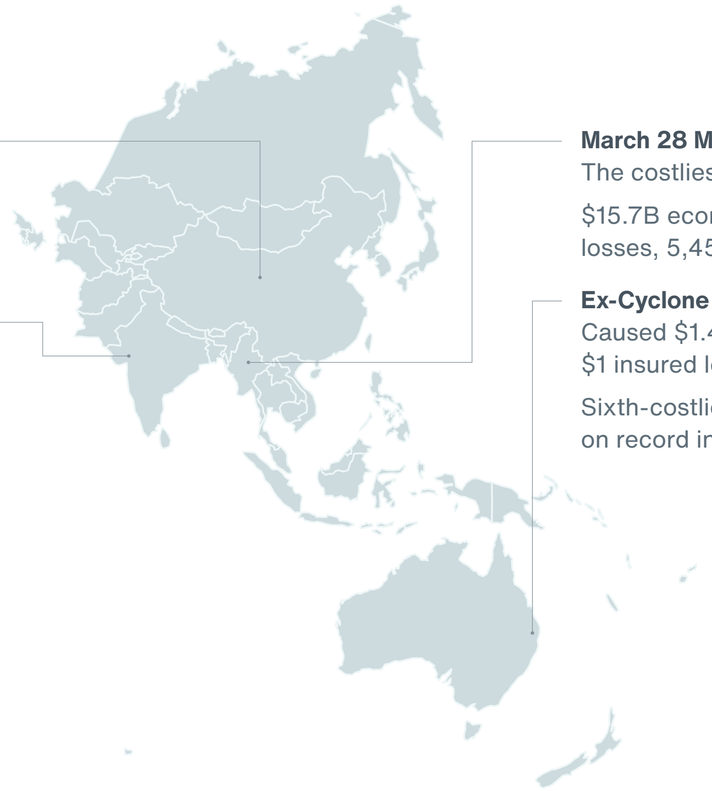
Other Notable Events in EMEA

The region saw several other notable disaster events in 2025. On February 27-28, Cyclone Garance struck Réunion, a French overseas department, causing extensive damage with insurance losses of about $400 million and economic losses exceeding $1 billion, making it the island's costliest event. On May 28, Switzerland experienced a significant industry event when a glacier collapse under the Bietschhorn Mountain caused extensive damage to the village of Blatten. The total insured losses were estimated at $400 million, making it the most expensive non-flood or SCS event on record. Outside of Europe, seasonal rains and flooding caused major economic and humanitarian losses across Africa this year, with Nigeria, Democratic Republic of the Congo and South Africa hit hardest. At least 1,500 people died from floods, flash floods and landslides in 2025.

APAC
(Asia and Pacific)

Climate Insights: Fewer, but More Severe Cyclones Likely for Australia

While there is medium confidence that the overall frequency of tropical cyclones — particularly in western parts of Australia — will continue to decline, the proportion of severe storms is expected to rise, with wind speeds potentially increasing by about 4% by 2100 under a high-emissions scenario.



North China Flooding
In late July, flooding casued damage of $13.9B, making it the second-costliest event of 2025 in the region

Punjab Monsoon Flooding
In late August and September, monsoonal flooding devastated the breadbasket region, causing more than $3B in economic losses

March 28 Myanmar Earthquake
The costliest 2025 event in the region

$15.7B economic and $1.6B insured losses, 5,456 casualties

Ex-Cyclone Alfred
Caused $1.4B economic and $1 insured losses

Sixth-costliest tropical cyclone on record in Oceania

1.1M hectares/2.7M acres
inundated by Cyclone Ditwah, almost 17% of Sri Lanka's land area

270kph/170mph
Typhoon Ragasa's 1-minute maximum sustained winds

1.9 million
people evacuated from southern Guangdong province ahead of Typhoon Ragasa's impact

7.7
magnitude of the powerful earthquake near Mandalay, Myanmar

Below-Average Economic and Insured Losses

In APAC, economic losses from natural disasters reached at least $76 billion, which is 41% below the 21st-century average. Most of the damage was driven by the Myanmar earthquake, flooding in northern and southwest China, cyclones Ditwah and Senyar, Typhoon Matmo, as well as several flooding, drought and wildfire events, each of which surpassed the one-billion-dollar loss threshold. Insured losses in 2025 exceeded $7 billion, which was 54% below the 21st century average.

Myanmar Earthquake: The Deadliest Event

Accounting for more than 20% of the year's economic losses in APAC, the earthquake that struck Southeast Asia in late March caused nearly $16 billion in economic losses and $1.6 billion in insured losses. Killing nearly 5,500 people, the event was the deadliest and most devastating earthquake globally since the 2023 Turkey-Syria earthquake.

China's Flooding: North and South

Two significant flooding events struck China in mid-June (Guangdong) and late July (Beijing), causing an aggregated economic loss of $18.4 billion. Combined with all reported events in 2025, the seasonal flooding in China approached $21.5 billion, which was consistent with the 21st-century average of $23 billion.

Cyclonic Activity in Asia

Cyclones Ditwah and Senyar were the costliest storms, striking Sri Lanka, India and Southeast Asia in late November and early December, causing a combined economic loss of $11.5 billion. Despite its relatively low intensity, Cyclone Ditwah proved particularly damaging with a death toll of around 640 people, making it the deadliest natural disaster to hit Sri Lanka since the 2004 Tsunami. Moreover, early October Tropical Cyclone Matmo hit four countries — the Philippines, China, Vietnam and Thailand — causing economic losses of $4.3 billion. Among the most impactful were Typhoon Ragasa and Tropical Storm Wipha, each of which caused economic losses exceeding $1 billion.

Wildfire Flames in South Korea

In late March, parts of South Korea were devastated by an enormous wildfire, which caused economic losses of approximately $1 billion. The country also suffered from a major flooding event in mid-July, which caused at least $740 million in economic losses.

Losses in Australia and New Zealand

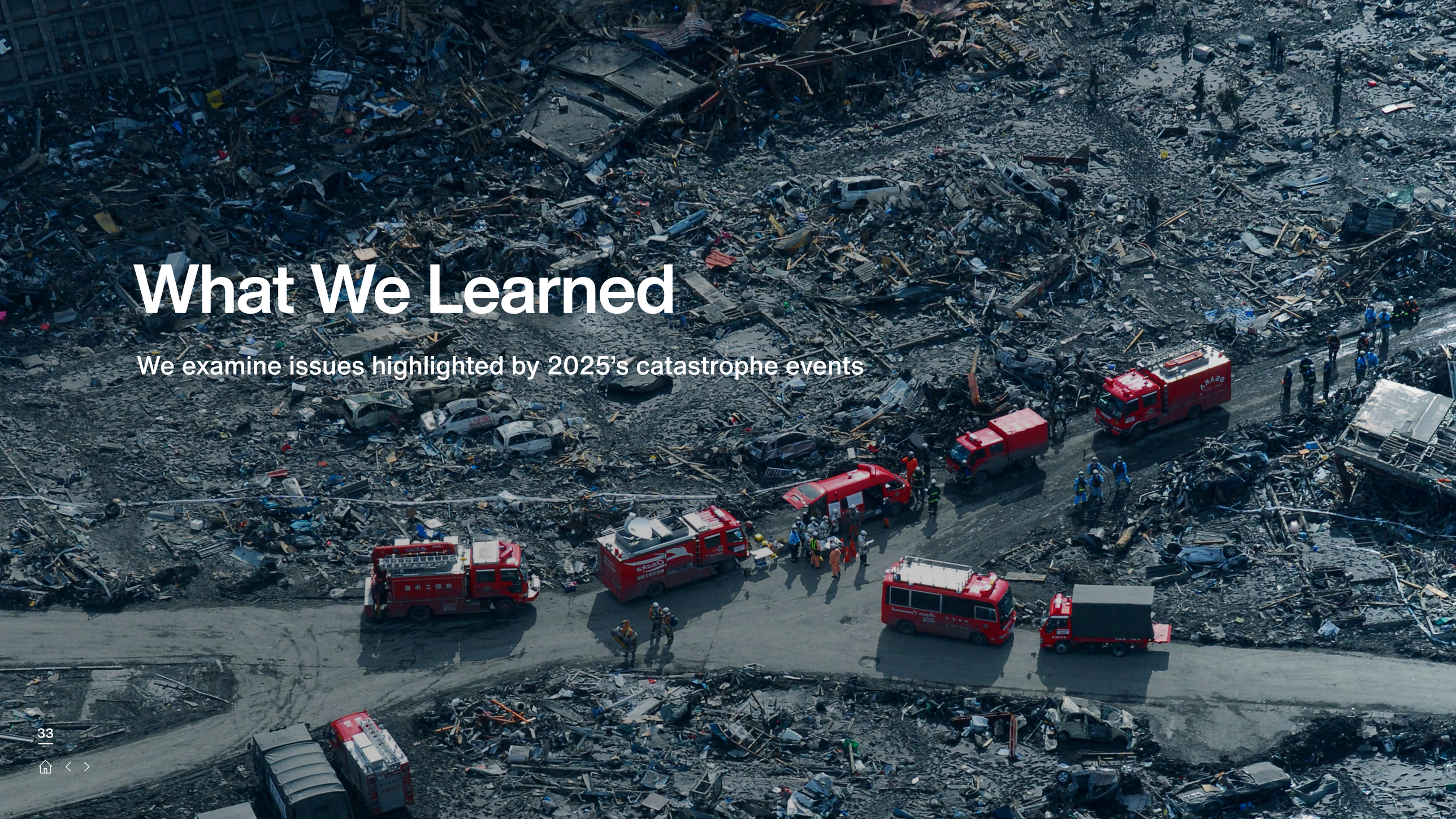
Australia experienced two billion-dollar (USD) insured loss events: impact of Ex-Cyclone Alfred in Queensland and New South Wales, and the hailstorm that struck Brisbane and the state of Queensland in November. Flooding also generated notable economic damage: North Queensland flooding in late January ($300 million) and Hunter flooding in late May ($270 million).

Other Notable Events

Significant flooding in India and Pakistan at the end of August resulted in economic losses of $3 billion. Beyond typhoons and floods, China also suffered other notable events, such as the earthquake on the Tibetan Plateau ($1.3 billion) and drought ($1.2 billion).

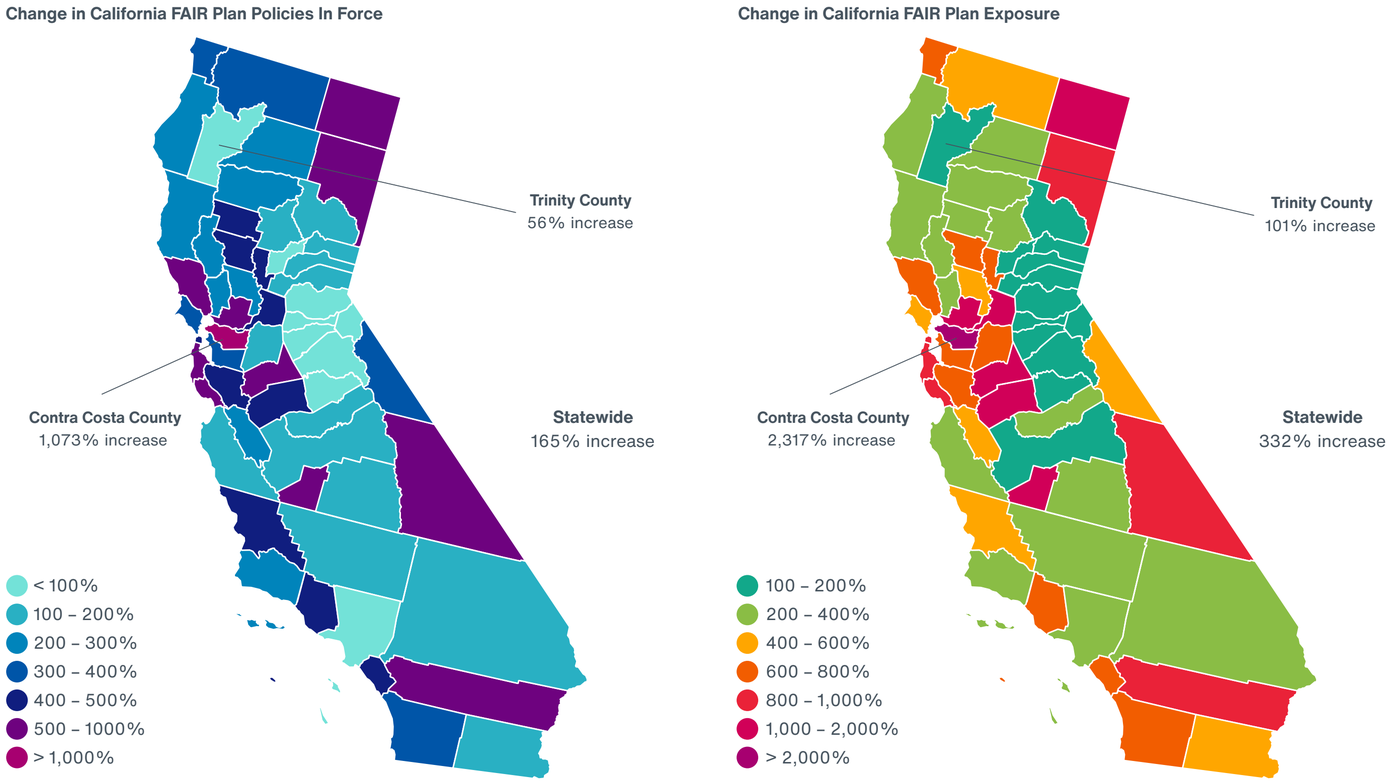
What We Learned

We examine issues highlighted by 2025’s catastrophe events



How Wildfire, Flood and SCS are Redefining U.S. Property Coverage

Exhibit 21: Change in California FAIR Plan Policies in Force and Exposure by County (2021 – 2025)



Data: California Fair Access to Insurance Requirements (FAIR) Plan Association

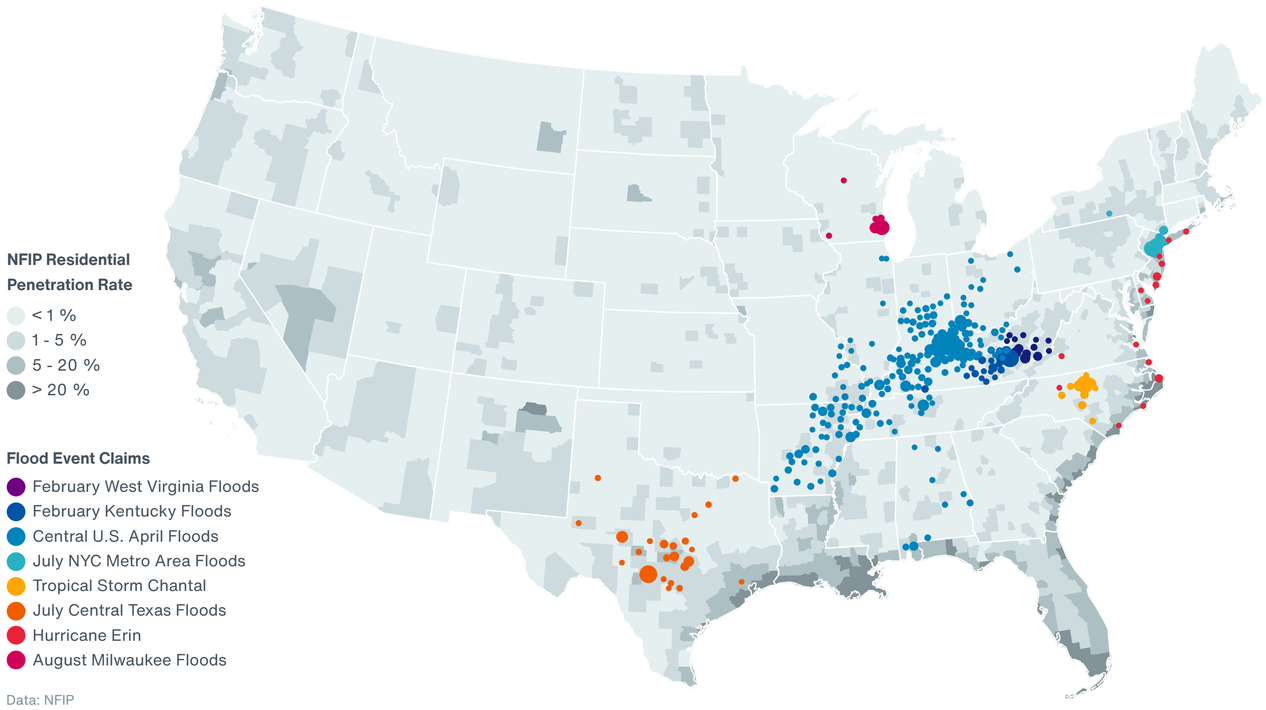
January 2025 California Wildfires: FAIR Plan Updates and Legislative Action

As the two costliest events of 2025 globally, the Palisades and Eaton Fires underscore the high wildfire risk already well-known to insurers and policyholders across California. The California FAIR Plan has become the primary insurance source for the highest-risk areas, especially in recent years. Since 2021, policies in force have grown 165%, and statewide exposure has surged 332%.

Persistent growth in the FAIR Plan and recent costly fires are straining the available capital pool and undermining the association's original goal of attrition. These issues are compounded by reduced alternative coverage, as many insurers cite restrictions from state regulators as major barriers. Increasing pool capital and encouraging private insurers to re-enter the market are crucial for the state. Recent legislative action from the California Department of Insurance (CADOI) aims to address these challenges.

In October 2025, California's governor signed a legislative package aimed to enhance consumer protection for state homeowners. The package included the FAIR Plan Stability Act (3), enabling the Plan to access additional capital and secure financial stability in the event of a major fire. Additionally, the CADOI reported in October 2025 (4) that at least five insurers are returning to the market under the Sustainable Insurance Strategy, a CADOI initiative (5) adopted in September 2023 aiming to improve consumer market conditions.

Exhibit 22: NFIP Claims for 2025 Events and Residential Penetration Rates



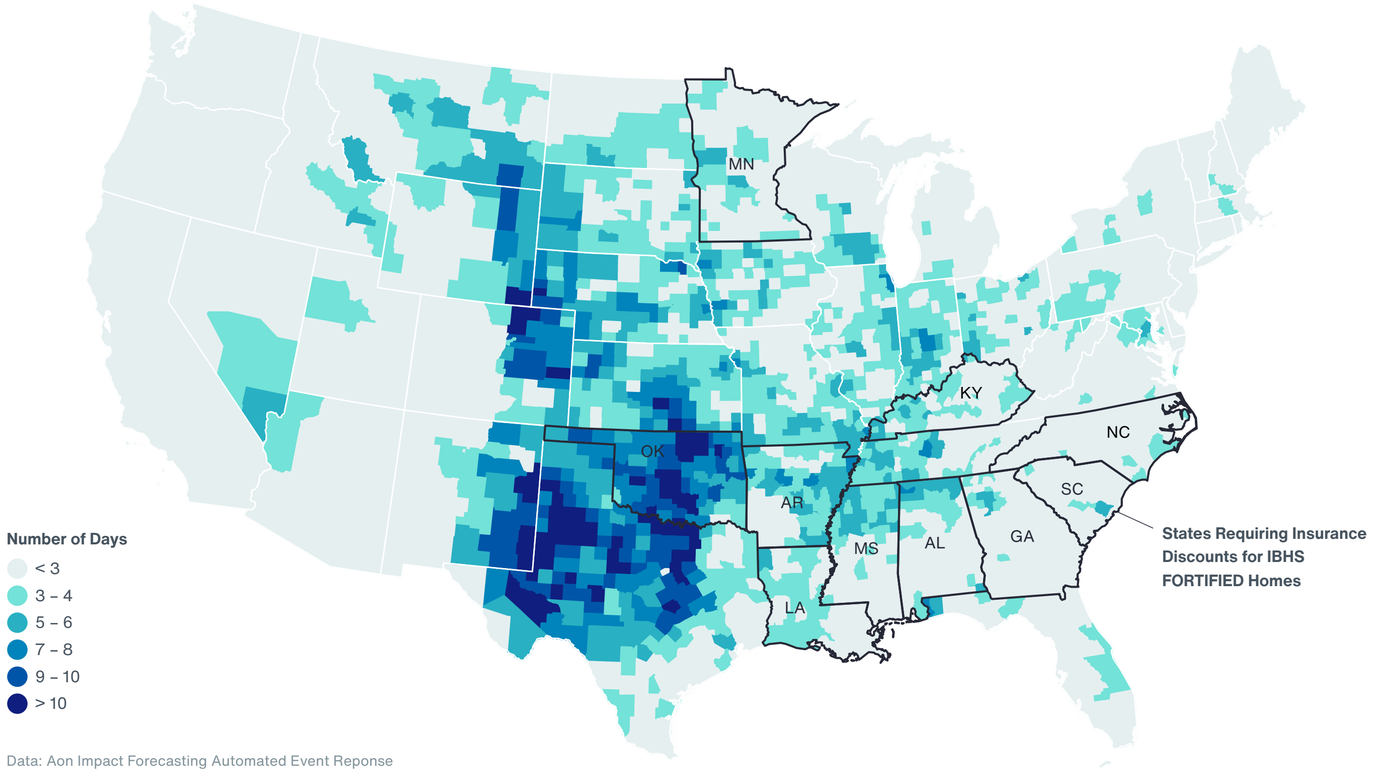
Data: NFIP

U.S. Flooding: NFIP Underinsurance, Market Opportunities and Mitigation Efforts

While not the most dominant peril in 2025, flooding and its impacts remain a prominent issue for the U.S. The most devastating floods occurred in Central Texas (July), Milwaukee, Wisconsin (August) and the Mid-Mississippi Valley (April). Across these events, over 160 people were killed while the National Flood Insurance Program (NFIP) paid over $150 million in claims. Unfortunately, these affected areas also remain underinsured against flooding risk. For all counties that received NFIP payouts, only 2.6% of residential structures are covered by the program. Further compounding this issue is the uncertain future of the NFIP. Despite these complications, many options still exist for insurers and communities to mitigate future flooding risks.

Possible NFIP coverage changes provide an opportunity for private insurers to expand into the U.S. flood market. Small progress has already occurred as private home flood policies (6) doubled and private flood revenue (7) increased by 240% from 2020-2024. To potentially accelerate this growth, a better understanding of future extreme rainfall and flooding risk is vital. For insurers, tools like Aon's Climate Risk Monitor (8) offer key insights for assessing and managing exposures to climate risk. Moreover, increasing flood risk under future climate scenarios requires innovative flood mitigation strategies for the broader insurance market. Initiatives such as nature-based infrastructure combined with traditional flood defenses are emerging as useful, cost-effective options (9). Other unique concepts have also slowly gained interest, including homes designed to float in floods, known as amphibious structures (10).

Exhibit 23: Days With At Least 1 Inch Hail or 60 mph Wind Gusts in March - June 2025



Data: Aon Impact Forecasting Automated Event Reponse

U.S. SCS: Enhanced Protection and Insurance Discounts for IBHS FORTIFIED Homes

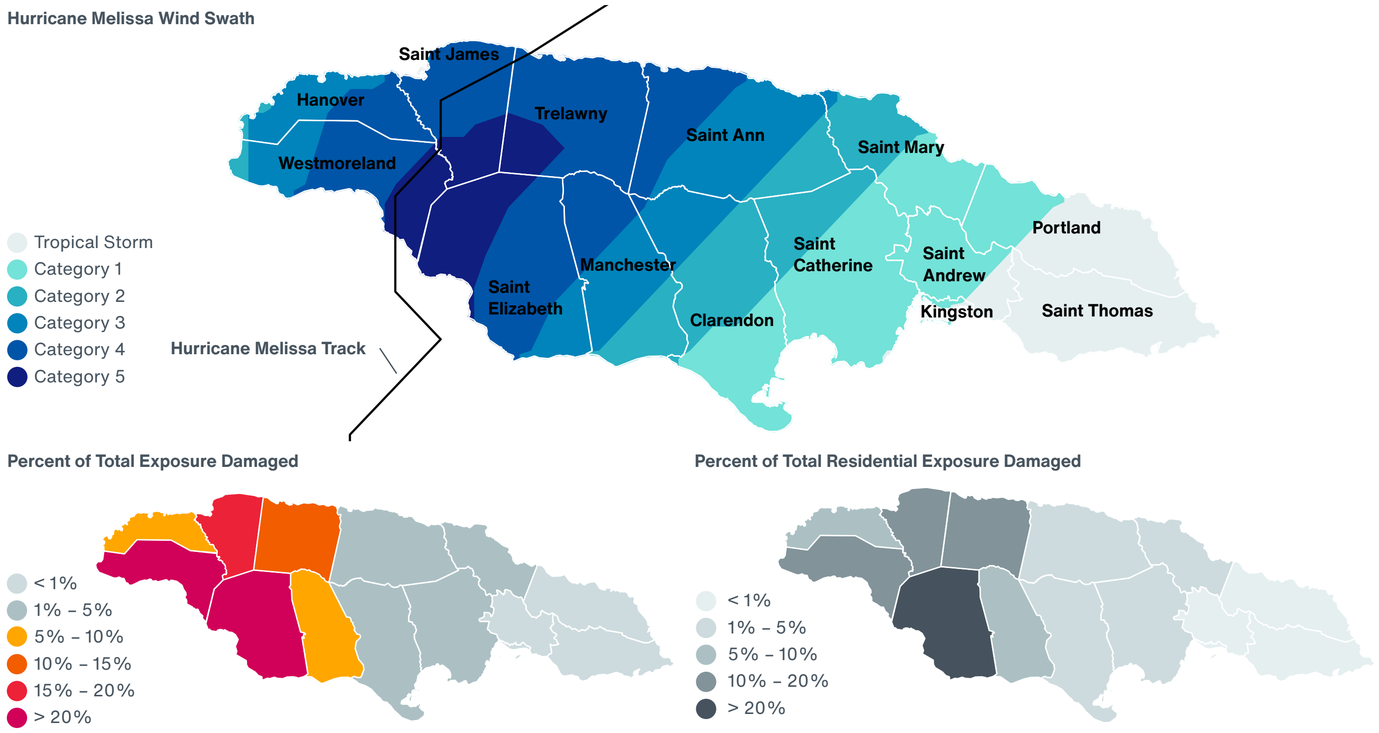
Severe convective storm impacts across the U.S. continue to accelerate rapidly in the 21st century. Six out of the top seven annual SCS loss years have been recorded since 2020. Most notably, 2025 marked the third consecutive year exceeding $65 billion in economic losses and $50 billion in insured losses.

SCS risks are not likely to decrease in the near future, either. In the U.S., urban land areas nationwide have grown by 14% from 2000-2020 (11). The expanding urban footprint, alongside rising material and construction costs, indicates SCS-related losses may continue to increase, underscoring the relevance of SCS mitigation strategies — even as the insurance market softens.

One viable option for SCS property resiliency lies within the Insurance Institute for Business & Home Safety's (IBHS) FORTIFIED building standard (12). This voluntary construction program offers enhanced protection against severe weather for residential, multifamily and commercial buildings. Some program success has been noted in the southeast U.S., after the passage of Hurricane Sally in September 2020. An IBHS post-storm study found that 95% of FORTIFIED building homes within the storm path across Alabama had minimal or no damage (13). Moreover, at least 10 states in the U.S. require insurance discounts for homes meeting FORTIFIED building standards. Alabama, for example, has helped drive investment into the program through the Strengthen Alabama Homes initiative (14).

Resilience in Action: Alternative Risk Transfer Bridges Jamaica's Hurricane Melissa Recovery Gap

Exhibit 24: Hurricane Melissa Wind Swath and Damage Incurred in Jamaica by Parish



Data: ERN, NOAA, The World Bank, GFDRR

Hurricane Melissa: Catastrophe Bonds and Multi-Layered insurance Tower Provide Event Response Benefits for Jamaica

At nearly $9 billion in economic losses, Hurricane Melissa now ranks as the costliest hurricane in Jamaica's history. This figure is equivalent to over 40% of the nation's gross domestic product (GDP), according to the Global Rapid Post-Disaster Damage Estimation's (GRADE) latest report (15). Melissa is also just the latest in a long history of tropical cyclones to devastate Jamaica, unfortunately. Given the nation's high risk of hurricanes and other natural disasters, the Jamaican government has been at the forefront of financial resilience in the Caribbean. Through its National Natural Disaster Risk Financing Policy (NNDRFP), Jamaica has constructed a multi-layered insurance tower in recent years, enabling the island nation to respond rapidly to natural catastrophes. The lowest layers consist of budgetary provisions and domestic reserves, followed by contingent credit lines for small- to medium-sized events. The top two layers contain parametric covers, using a blend of modeled loss indices and parametric triggers (16).

For Hurricane Melissa, the Jamaican government secured over $650 million in liquidity less than two months after landfall. This included $91 million from the Caribbean Catastrophe Risk Insurance Facility (CCRIF) and $150 million from their World Bank-supported catastrophe bond, both of which utilized parametric triggers. While this still falls short of the damage total, Jamaica has also recently obtained a three-year $6.7 billion package from several development banking agencies and the International Monetary Fund (IMF) to help close the recovery financing gap (17).

Despite the success seen with the current disaster risk transfer mechanisms in place, building resilience challenges persist following Melissa. As the GRADE report notes, Jamaica's housing stock continues to exhibit high vulnerability to hurricane impacts. In fact, residential structures accounted for 42% of all damage caused by Hurricane Melissa, while some parishes closest to the storm's track saw more than 10% of all residential exposure incurring damage, highlighting an opportunity to enhance building resilience in the recovery period. Options for improved residential resilience listed in the GRADE report include hurricane straps, improved roof anchoring and wind-resistant roof geometries.

Additional Parametric Insurance Examples in India and Syria

Jamaica is far from the only disaster-prone country to utilize parametric coverage. In 2024, the northeastern Indian state of Nagaland became the first state in India to purchase a state-level parametric disaster risk transfer cover. The policy was placed with SBI General Insurance and backed by a panel of reinsurers (GIC Re, Munich Re, Hannover Re and SCOR). The program provides a sum insured of 50 crore INR ($6 million), with the state contributing approximately 4 crore INR ($450,000) in premiums. The goal is to protect the state against extreme natural hazard events, including heavy rainfall and associated impacts. In 2024, excessive rainfall triggered Nagaland's parametric cover as SBI General paid 1.06 crore INR ($119,000) toward the state's first-ever parametric claim under this scheme (18).

At the micro level, India has also become a test for parametric solutions targeting women exposed to extreme heat in the informal economy — where most jobs are undocumented and typically paid cash on a daily basis. The Self Employed Women's Association (SEWA) has codeveloped a parametric heat insurance product that pays cash when temperatures cross predefined thresholds for two or more days. This allows women to cut back work during heatwaves without losing their income. Informal women workers can gain access to these coverage benefits for roughly $3-4 per year in premium, with an additional $4-5 per year covered by program partners. Notably, during the May 2024 heatwaves alone, more than 46,000 women across 22 districts received payouts totaling hundreds of thousands in USD (19).

Outside of India, the World Food Programme (WFP) constructed a macro-level parametric policy for severe droughts in Syria in early 2025. The policy is triggered when a combination of satellite-based rainfall and vegetation indices drop below pre-agreed thresholds, indicating severe drought conditions. Up to $9.25 million is provided to the WFP to fund rapid food and cash-based assistance operations for affected families (20). Soon after its inception, a severe drought in June 2025 triggered the coverage and paid out $7.9 million. This allowed the WFP to quickly tackle food insecurity by assisting nearly 120,000 people in Syria within a matter of weeks (21).

Protect People, Power and Productivity: The Case for Heat Resilience

The third-hottest year on record was marked by notable heatwaves and temperature extremes worldwide. In 2025, at least 25,000 fatalities were heat-related globally, underscoring the substantial risks these conditions present to public health as well as their considerable economic consequences.

Health Consequences

Extreme heat poses significant risks to health and may have life-threatening consequences. When temperatures soar, the body's ability to cool itself is compromised, leading to dehydration, painful cramps, exhaustion, and in severe cases heat stroke, which can result in organ failure or death. High temperatures also worsen conditions like heart disease, asthma, chronic lung disease and kidney disorders by increasing strain on vital organs. Vulnerable groups — including older adults, infants, people with chronic illnesses, outdoor workers, and those without access to air conditioning — are at especially high risk.

Annually, heatwaves account for more than 25,000 deaths, making them the most lethal of weather-related hazards. It should be noted that this number is likely underestimated, as official records often underreport heat-related fatalities or omit them entirely from tracking systems.

Economic Consequences

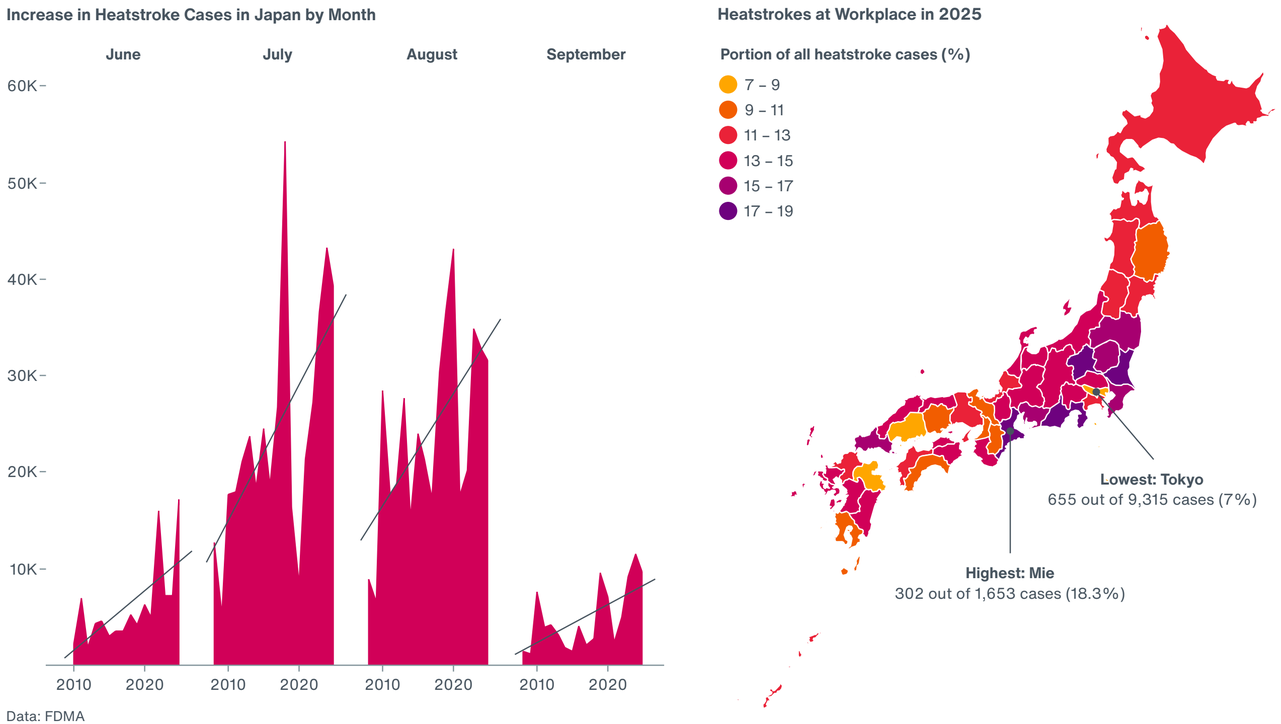
Extreme heat exacerbated by climate change has wide-ranging economic consequences. It increasingly threatens global energy supply and reliability, as electricity demand rises alongside the increased consumption of Artificial Intelligence (AI) and data centers. It significantly impacts workforce through displacement, health and wellbeing, productivity and overall performance, especially in outdoor sectors like construction, agriculture and delivery services, where heat stress slows work or forces shutdowns. Crop yields can fall due to heat damage and water stress, driving up food prices and threatening farmers' livelihoods. Businesses and households face higher costs for cooling and equipment, while power grids are strained, increasing the risk of blackouts and infrastructure damage. Health impacts from heatwaves — such as hospitalizations and lost workdays — also raise healthcare costs and reduce labor supply. Over time, repeated extreme heat events can lower economic growth, discourage investment in highly exposed regions and deepen existing social and regional inequalities.

Planning for Heat Resilience

Extreme heat has shifted from a rarity to a persistent peril already impacting public health systems, infrastructure and labor standards. As climate influences the frequency and severity of heatwaves, investment in resilient infrastructure and protecting people is critically important. Heat resilience refers to the capacity of a system to anticipate, withstand, adapt to and recover from extreme heat in ways that maintain its essential functions — protecting people's health and livelihoods, and strengthening institutional capacities, local economies, infrastructure and the environment.

Extreme heat is rapidly emerging as a leading cause of climate-driven disasters, and there is an urgent need for enhanced climate services to deal with this challenge. With only 54% of meteorological services issuing warnings for extreme temperatures, expanding heat-health warning systems in just 57 countries could save thousands of lives each year, according to ESCAP report (22). While there is evidence that adaptation to extreme heat is taking place to a certain extent in some regions, large adaptation and research gaps still prevail (23). Moreover, the measurement of extreme heat has often been inconsistent, lacking globally accepted metrics for identifying severity thresholds.

Exhibit 25: Japan Affected by Heatstrokes in 2025



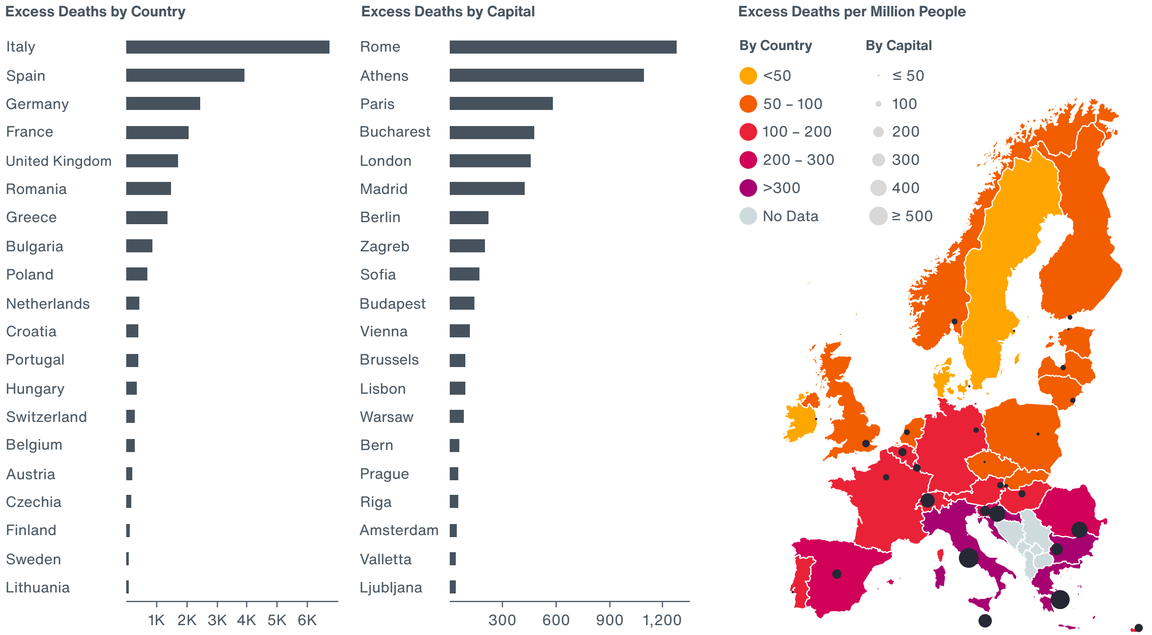
Data: FDMA

Heat-Related Consequences in Japan

Japan experienced substantial economic and human losses from extreme heat in 2025. According to the FDMA (24), at least 117 people died, making it the third consecutive year with over 100 fatalities. For the first time on record, more than 100,000 people were hospitalized with heatstroke. Most incidents happened during July and August when maximum temperatures were well above average, but increased cases in June and September signaled a longer period of extreme heat risk, as documented on the long-term data.

Comprehensive heat-related casualty statistics by FDMA reveal that more than 38% of all heatstroke cases in Japan occurred within residential settings, while over 13% were reported at workplaces nationwide. The highest incidence rates for these cases were observed in densely populated central regions of Japan. In Japan, work-related heat illness is generally covered by the national Workers' Accident Compensation Insurance system. Since June 2025, employers are legally required to implement heatstroke prevention measures — such as conducting risk assessments, ensuring rest breaks, providing hydration and offering cooling options — to prevent accidents related to high temperatures. In addition to increased employer compensation, significant working hours are lost due to heat-related illnesses. Across Asia and the Pacific, the number of working hours lost to heat stress has more than doubled over the past 30 years. This trend results from continued exposure to extreme heat in labor-intensive sectors, including agriculture, construction and industry, especially in South and Southeast Asia, where there are large rural workforces and limited capacity to adapt (22).

Exhibit 26: Impact of Heatwaves Across Europe in 2025

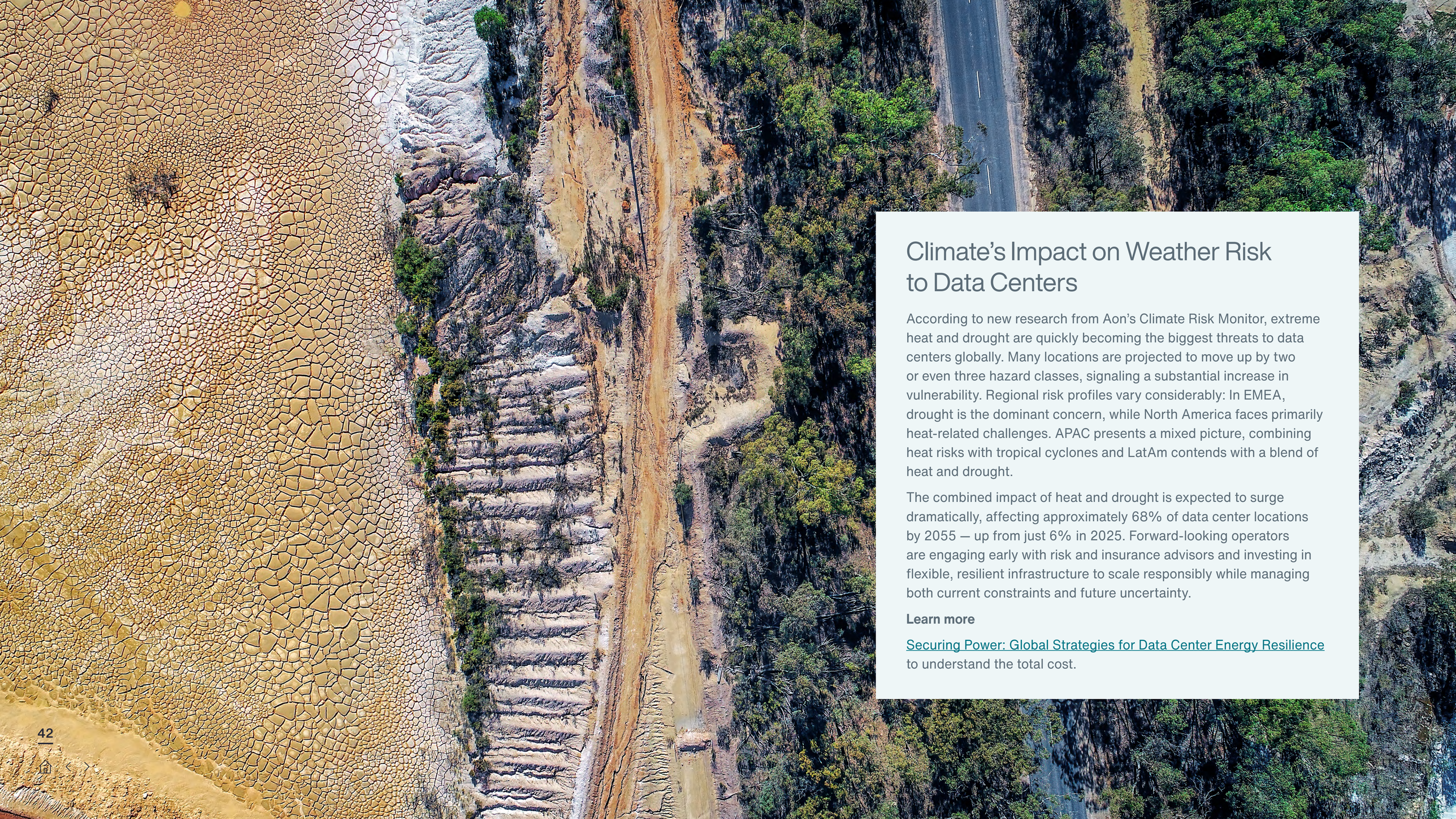


Data: Imperial Grantham Institute

June/July Deadly Heat in Europe

One of the most severe heatwaves of 2025 struck much of Europe in late June and early July, with many heat records being set across European cities. The Imperial Grantham Institute (25) estimated over 2,300 excess deaths due to the high temperatures in 12 cities, with climate change responsible for about 1,500 of them — roughly tripling the impact. Milan was estimated to be the hardest hit, with approximately 499 heat-related deaths. As only selected cities were studied, the actual death toll is expected to be much higher. However, official reports often underestimate heat-related fatalities. The same institute estimated that there were over 24,400 excess deaths due to heat in summer 2025. Rome, Athens and Paris were among the cities expected to be most affected (26).

Europe, a continent that is both warming quickly and experiencing demographic shifts toward older populations, is increasingly vulnerable to health risks caused by heat. According to recent research (27) (28), each degree of global temperature rise could result in hundreds more heat-related deaths per million people every year by 2100 across various population-climate scenarios, especially impacting Western, Southern and Eastern Europe.



Climate's Impact on Weather Risk to Data Centers

According to new research from Aon's Climate Risk Monitor, extreme heat and drought are quickly becoming the biggest threats to data centers globally. Many locations are projected to move up by two or even three hazard classes, signaling a substantial increase in vulnerability. Regional risk profiles vary considerably: In EMEA, drought is the dominant concern, while North America faces primarily heat-related challenges. APAC presents a mixed picture, combining heat risks with tropical cyclones and LatAm contends with a blend of heat and drought.

The combined impact of heat and drought is expected to surge dramatically, affecting approximately 68% of data center locations by 2055 — up from just 6% in 2025. Forward-looking operators are engaging early with risk and insurance advisors and investing in flexible, resilient infrastructure to scale responsibly while managing both current constraints and future uncertainty.

Learn more

Securing Power: Global Strategies for Data Center Energy Resilience to understand the total cost.

Accurate Forecasting and Early Planning Essential for Mitigating Losses

In 2025, timely and accurate disaster and weather forecasts, improved by AI-based models, proved crucial for disaster-prone regions. Advanced technology enabled better planning and protection, shifting efforts from reaction to preparation, which reduced casualties, strengthened risk management and enhanced resilience.

Advances in Tsunami Early Warning Systems

On July 29, global monitoring systems detected a large earthquake offshore of the Kamchatka Peninsula of Russia, and widespread tsunami warnings were issued across the Pacific region. Millions of people were told to evacuate across locations at risk, two million in Japan alone.

The response to the 8.8-magnitude earthquake underscores significant progress in scientific understanding of tsunamis over the past twenty years. In the wake of the catastrophic events of 2004 and 2011, notable advancements in the study of tsunami mechanisms has led to enhanced mitigation strategies, contributing to global disaster risk reduction efforts.

One of the most important advances for public safety has been the improvement of tsunami warning systems for coastal areas. The Pacific Tsunami Warning System (PTWS) was crucial in protecting lives thanks to its timely and coordinated alerts. Lessons from past events also prompted significant changes in urban planning, which reduced the impact on Russia's coastal communities.

Moreover, NASA's GUARDIAN (29) network, newly updated with an AI component just a day before the Kamchatka earthquake, alerted scientists in near-real-time to the tsunami moving across the ocean. The system detects GPS satellite orbit changes caused by low-frequency sound and gravity waves in the ionosphere from the uplifted water and air during a tsunami.

While effective warning systems have been established for earthquake-induced tsunamis, significant challenges remain in developing comparable systems for tsunamis caused by other mechanisms such as landslides and volcanic eruptions. Advances in technology, including the application of artificial intelligence, can transform these warning systems in the future.

Strengthening China's Resilience to Typhoons

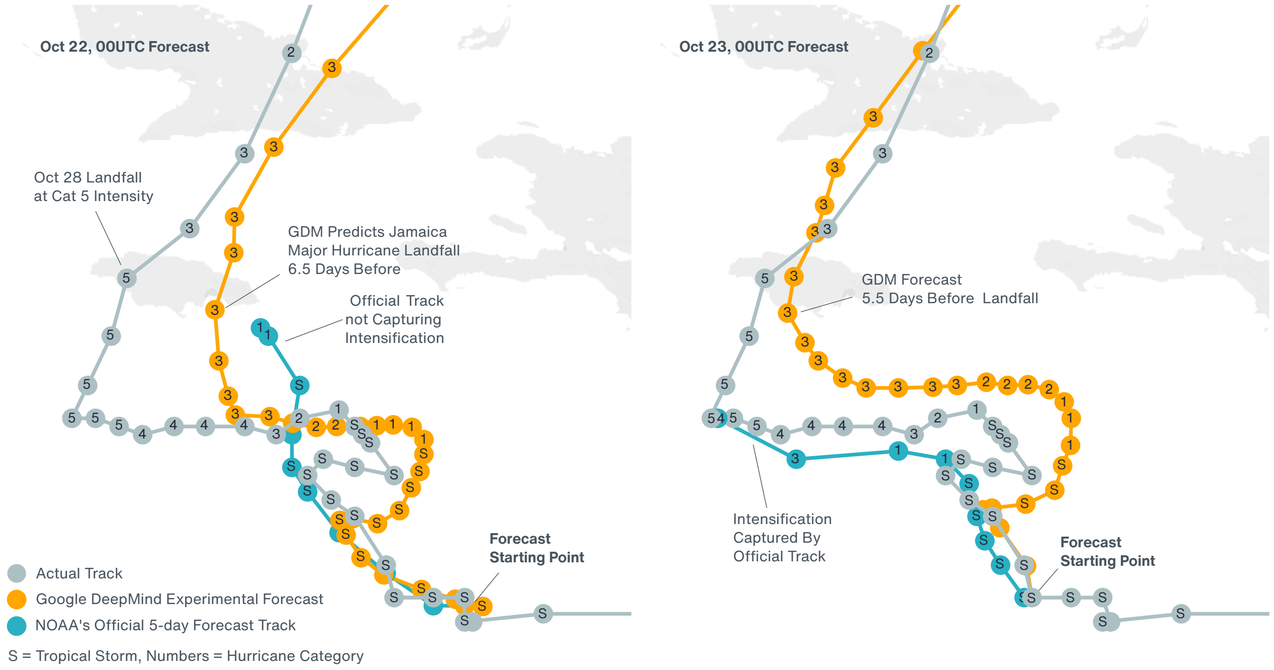
China's meteorological departments have delivered enhanced proactive meteorological services by initiating early warnings and multi-departmental collaborations ahead of typhoon impacts (30). With advanced technologies like satellite remote sensing, radar networks and UAV observations, they monitored typhoon paths and intensities in real time.

These efforts significantly reduced risks, saved lives and properties during typhoons hitting in 2025, including Fung-wong, Wutip, Danas, Wipha, Co-May, Podul, Tapah, Mitag, Ragasa and Matmo.

AI-Based Tools for Earlier and More Efficient Warnings

2025 marked the first year that the National Hurricane Center (NHC) utilized artificial intelligence model guidance for their forecasts, according to NOAA officials. This was especially valuable in the case of Hurricane Melissa, which was among the strongest landfalling storms on record in the Atlantic Basin. For NHC forecasters, AI models such as Google's DeepMind Ensemble provided a high degree of confidence in Melissa's eventual rapid intensification and track over western Jamaica as much as three days in advance. This enabled the NHC, for the first time in its history, to correctly forecast a storm's eventual Category 5 intensity as soon as it first reached Category 1 (31). While long-term performance over the next several hurricane seasons
will be crucial to properly evaluate AI models, the forecasting abilities seen from Google DeepMind were successful overall for Hurricane Melissa. The capabilities shown in this event highlight AI's effectiveness as a supplemental tool alongside existing hurricane model forecast solutions.

Exhibit 27: AI-based Forecast for Melissa Compared to NHC's Official and the Actual Track

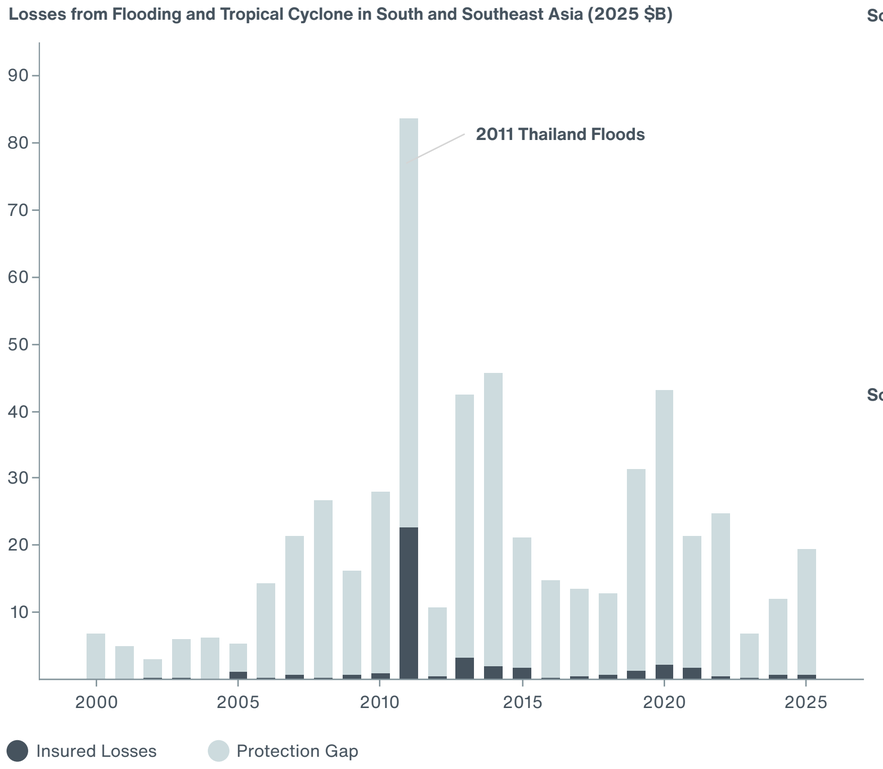


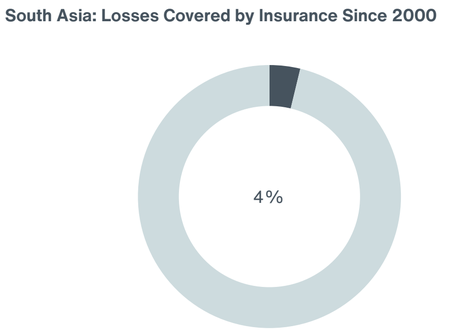
Data: NOAA, Google Weather Lab, Google LLC. (2025)

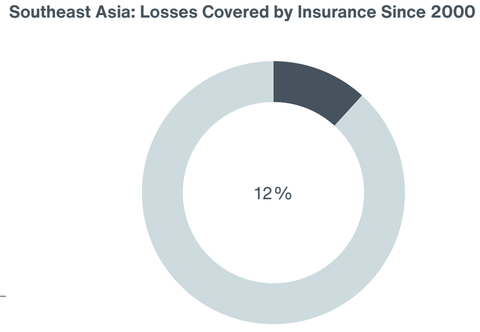
Beyond extreme storms like Melissa, AI is poised to transform forecasting and early warning systems in 2026 for floods, air quality and energy, among other parameters. ECMWF's Artificial Intelligence Forecasting System (AIFS), the first fully operational global AI model, has shown up to 20% better skill than its conventional counterpart while using roughly 1,000 times less energy and delivering forecasts much faster (32). Microsoft's Aurora can predict major air pollutants globally five days ahead in under a minute, at orders of magnitude lower computational cost (33). The World Meteorological Organization (WMO) is championing open-source models, transparent verification and equitable access to forecast model outputs validated through fair principles (34). The Weather Prediction Model Intercomparison Project (WP-MIP) is currently underway, involving 19 AI weather models from 12 public and private organizations, and is expected to help grow AI adoption to support national services and Early Warnings for All (35).

Major Flooding Across Asia Reveals Protection Gap Opportunity

Exhibit 28: Flooding and Cyclone Losses in South and Southeast Asia







Data: Aon Catastrophe Insight

During 2025, flood-related losses across South and Southeast Asia were dominated by monsoon floods and tropical cyclones, from June onward.

From June to August, Tropical Storm Wipha, and Typhoons Wutip, Kajiki and Co-May impacted the Philippines, Vietnam, Thailand, Laos and Myanmar, causing more than 150 deaths, damage to more than 200,000 homes, over 480,000 acres (194,000 hectares) of crops, and combined losses of about $2.5–3 billion.

From late August to mid-September, Punjab monsoon floods in India and Pakistan caused over 260 deaths and $3 billion in losses to housing and agriculture. Pakistan witnessed over 1,000 monsoon flooding fatalities across the season.

From late September through November, Bualoi, Ragasa, Matmo, Kalmaegi and Fung-wong affected the Philippines, Vietnam and Thailand, driving more than 500 deaths, and upwards of $5 billion in losses. Tropical Storm Ditwah inundated one-fifth of Sri Lanka's land area, causing 643 deaths and more than $6 billion in losses. Cyclonic Storm Senyar in late November was the most catastrophic single event, causing over 1,400 deaths and $5.5 billion in damage across Thailand and Indonesia.

India's Stagnant Insurance Penetration and Coverage Gap

As flood remains an underinsured peril globally, Asian markets continue to grapple with low property insurance penetration and sizeable protection gaps.

Recent data released by the Insurance Regulatory and Development Authority of India (IRDAI) shows that insurance penetration rate — in this context defined as the ratio of annual insurance premiums to national GDP — has remained stagnant at 3.7% in 2025, down from 4.2% in 2021 (36). This decline is mainly due to accelerated GDP growth in recent years. The non-life (property and related) insurance penetration held steady at 1% despite the underlying economic growth. This underscores a persistent challenge of expanding insurance coverage across the nation beyond keeping pace with economic output, and closing the wide gap with global non-life average penetration of 4.3%. The IRDAI is actively implementing measures to address profitability concerns among insurers in Southeast Asia's largest insurance market.

Rising Uptake in Philippines

According to the Philippine Insurance Commission (37), the non-life sector posted a year-on-year increase of 13% in premiums, rising from $906.5 million in Q3 2024 to over $1 billion as of Q3 2025. Total insurance penetration climbed to 1.85% as of Q3 2025, an increase of 0.11 percentage points from Q3 2024, with the non-life insurance component estimated at 1.1%, suggesting gradual progress in strengthening financial resilience against natural catastrophes.

Thailand Lags Amid Rising Flood Losses

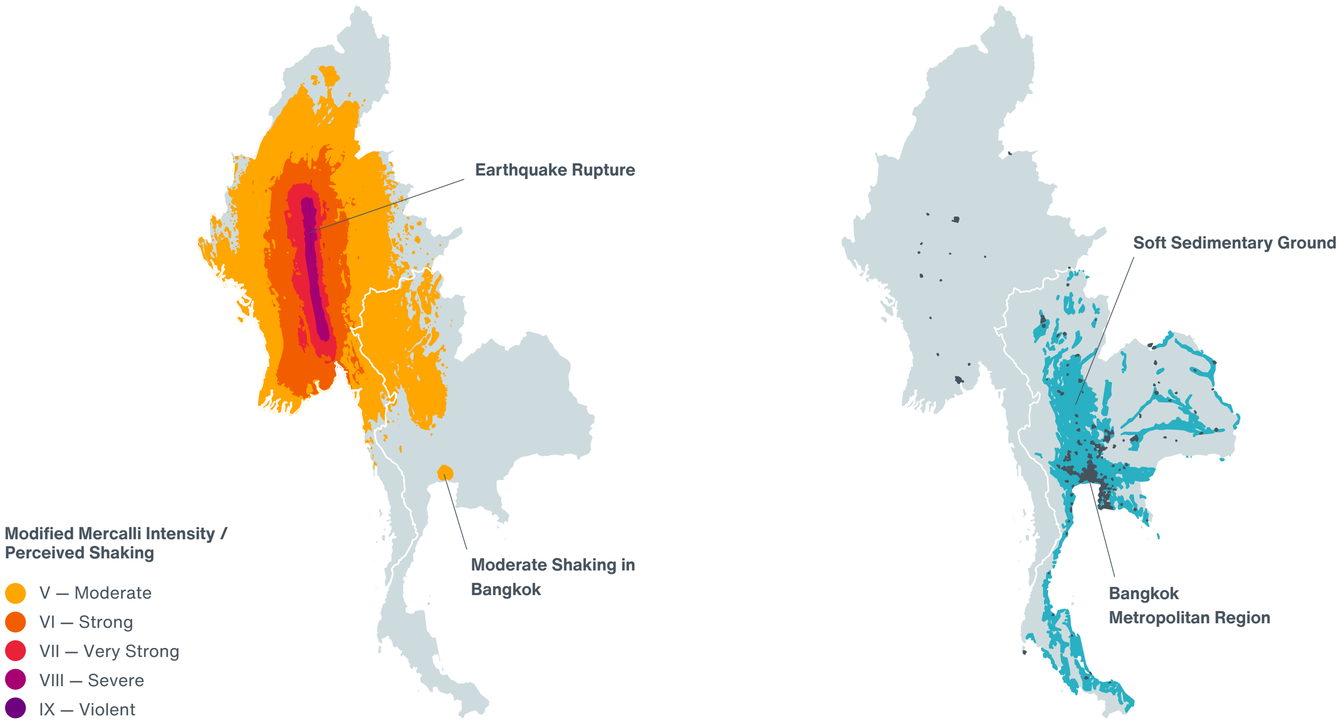
The 4th Insurance Development Plan (2021-2025) by the Thai Office of the Insurance Commission outlined price competition, higher costs and over-concentration of motor insurance (59%) in the non-life segment as major challenges to overcome by 2025 (38). With non-life insurance penetration at around 1.7% and earthquake risks typically bundled into broader natural catastrophe policies, the agency acknowledged that frequent natural disasters — including floods, droughts and storms — cause losses beyond what the Thai insurance industry can manage alone. This presents an opportunity for foreign reinsurance companies to codevelop the market with the local insurers by helping extend and clarify catastrophe coverage and support ongoing improvements in risk modeling.

Vietnam's Dynamic but Underpenetrated Market

Vietnam's general insurance market remains relatively small, with premiums amounting to 2.3–2.8% of GDP despite double-digit average annual growth in premiums over the past decade. The non-life insurance penetration stands at 0.8% (39). Recent regulatory reforms have aimed to strengthen risk governance and attract foreign capital, while government investment in large scale infrastructure, renewable energy and urban development is driving strong demand for property and engineering covers. Frequent storms, flooding and saltwater intrusion in the Mekong Delta are adding urgency to expand catastrophe protection. Together with emerging parametric solutions for climate-sensitive sectors such as coffee farming, these trends position Vietnam as one of Southeast Asia's most dynamic but still underinsured markets for closing the flood and climate protection gap.

Myanmar Quake Redefines Risk, Exposes Blind Spots in Cat Modeling

Exhibit 29: Vulnerability of Bangkok to Long-Distance Seismic Waves



Data: USGS

Supershear Devastation in the 2025 Myanmar Earthquake

On March 28, 2025, an earthquake with moment magnitude of 7.7 struck the Sagaing Region of Myanmar, with an epicenter close to Mandalay, the country's second-largest city. The quake caused widespread damage across central Myanmar and was felt as far away as Thailand, Vietnam and China. Its overall impact was intensified by an ongoing humanitarian crisis within the country, although the losses were partially mitigated by financial assistance and humanitarian aid provided by multiple nations.

What Made This Earthquake Unusual?

As opposed to 'ordinary' earthquakes, where shaking builds up more gradually, the Myanmar event was driven by a supershear rupture. In this case, the rupture along the fault propagated faster than the shear waves that carry the damaging tremors to cities. This is typically linked to high stress on large, relatively straight strike-slip faults, often in areas where no major earthquake has occurred for a long time. As a result, energy becomes concentrated in the direction of rupture, producing very intense shaking over a short period of time and, consequently, disproportionately large losses (40).

Myanmar Damage Extreme, Thailand Comparably Lower

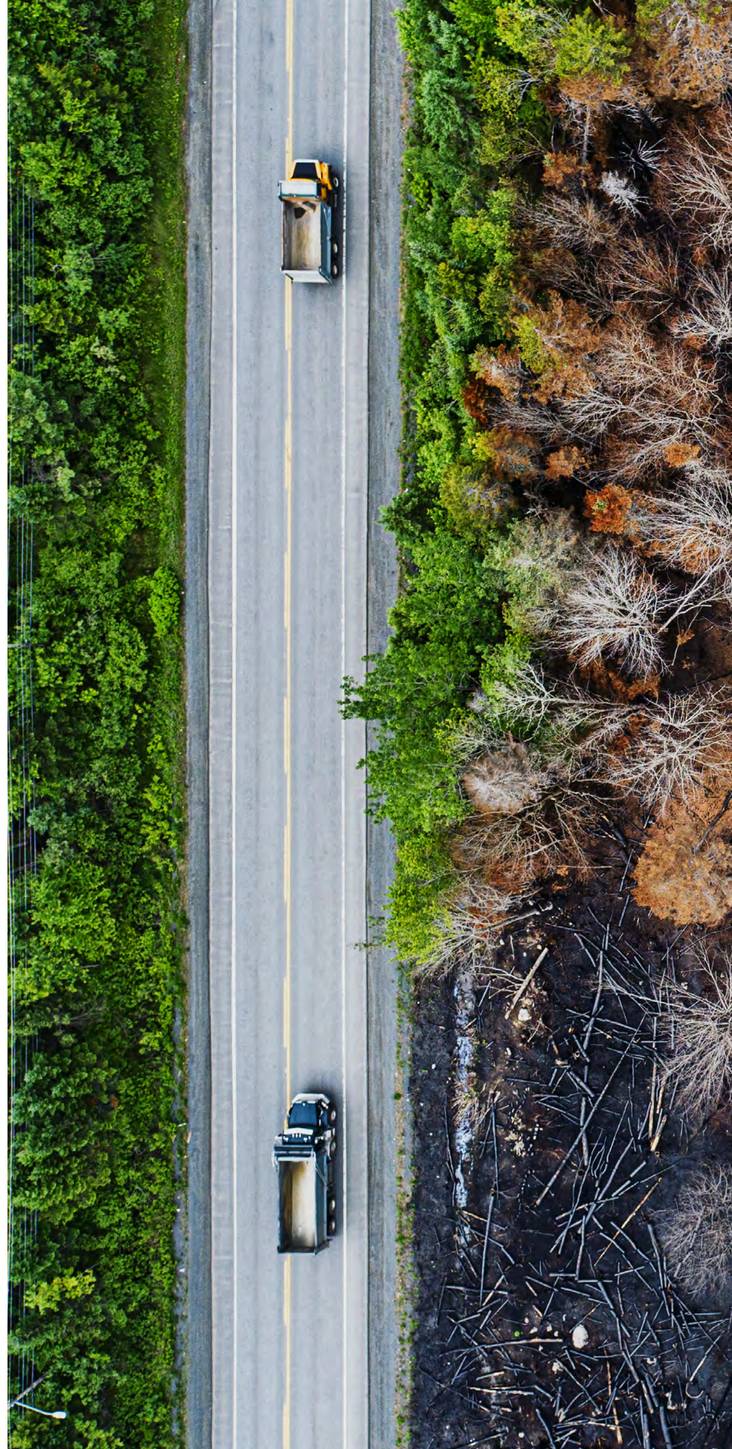
Although this catastrophe killed nearly 5,500 people and caused nearly $16 billion in economic damage, the majority of losses were recorded in Myanmar, where the impact was further exacerbated by a humanitarian crisis. By contrast, while Bangkok lies several hundred miles from the earthquake source, it still experienced a considerable impact for the re/insurance market, including non-structural building damage and over 100 fatalities. This was primarily due to the city's subsurface conditions — soft sediments — which made Bangkok unusually prone to long-distance seismic waves.

Hazard Modeling Challenges

It is these long-distance seismic waves that are severely underrepresented in traditional catastrophe modeling techniques. Most models focus on very strong shaking close to the fault and pay less attention to moderate but long-lasting waves that can still cause serious impacts hundreds of kilometers (miles) away. In places like Bangkok, soft sediments under the city amplified these waves, leading to far more non-structural damage, equipment failures and disruption to daily life than many models would have predicted.

How Should the Reinsurance Sector Adapt?

In Thailand, particular focus should be placed on engineering-informed underwriting of high-value assets, with an emphasis on vulnerability to non-structural damage (facades, interiors, equipment) even when the earthquake originates far away. In Myanmar, reducing the protection gap — especially for non-commercial and locally owned assets — could be supported by a wider use of parametric solutions rather than traditional indemnity covers. This builds on approaches already used by NGOs and micro-insurers, providing faster, more transparent payouts in a market with limited claims infrastructure and data quality.



Plotting a Path to Climate Resilience

As climate volatility escalates, insurers face a critical inflection point. Traditional responses like hiking premiums and cutting coverage are no longer enough. Insurers must shift from a reactive, post-loss mindset to a proactive one — by applying forward-looking climate data, analytics, loss mitigation and product innovation into strategic underwriting and operational decision-making.

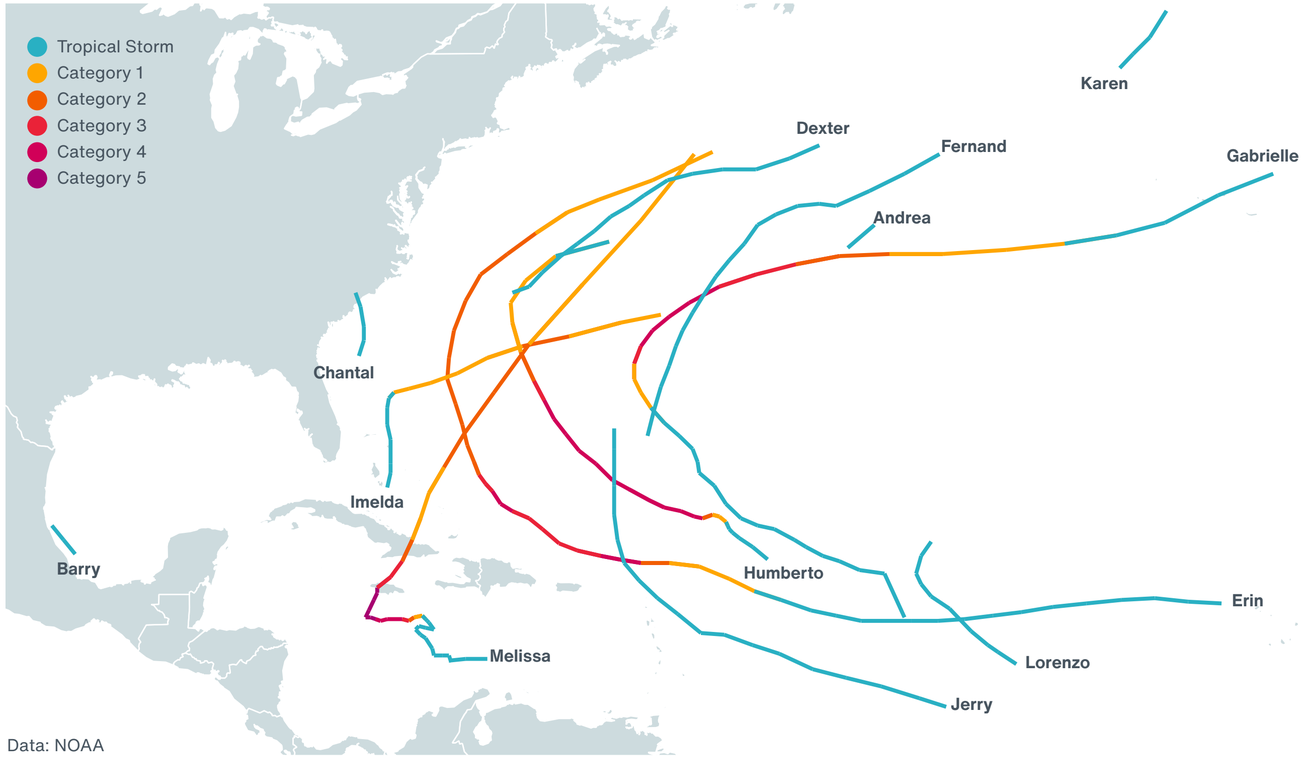
Investing in resilience enables insurers to reduce volatility, strengthen customer relationships and capture new market opportunities. The Climate Resilience Maturity Curve helps insurers assess their current capabilities and identify targeted actions to improve resilience and drive profitable growth.

Learn more

How Insurers are Turning Risk Exposure into Resilience Advantage

2025 Tropical Cyclone Risk: Rapid Intensification and Flooding Drive Risk

Exhibit 30: North Atlantic Named Storm Tracks During 2025



Data: NOAA

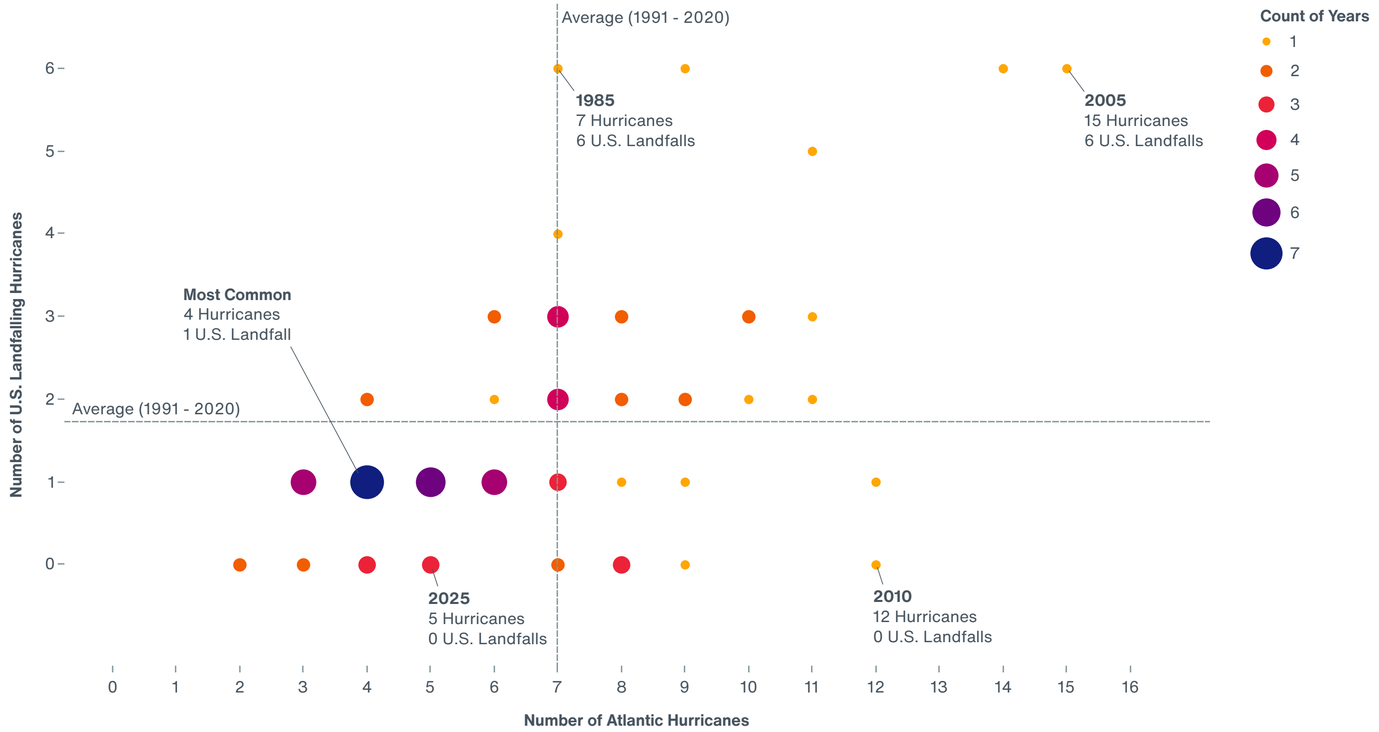
The 2025 Atlantic hurricane season was marked by cases of explosive hurricane intensification. Yet, in a striking contrast, the season exhibited below average hurricanes, and none made landfall in the U.S. With 13 named storms and only five hurricanes, the 2025 season managed to attain a near-average ACE.

Below-Average Hurricanes, Above-Average Intensification

The 2025 season exhibited a super concentration of the seasonal ACE into four cyclonic episodes. Erin, Gabrielle, Humberto and Melissa underwent extreme rapid intensification and tied the record for the rapidly intensifying storms in a year. From late August to mid-September, high-pressure conditions over the Subtropical Atlantic transported drier air into the tropics and suppressed convective activity. Elevated vertical wind shear in the western Atlantic further reduced tropical cyclone formation.

Hurricane Melissa was the defining event of the 2025 season and the most intense tropical cyclone globally. The storm rapidly intensified over the western Caribbean before striking Jamaica on October 28 with estimated sustained winds above 185 mph (295 kph). Melissa devastated large portions of Jamaica's infrastructure and went on to cause severe damage in Haiti and Cuba.

Exhibit 31: Count of Years Grouped By Atlantic Hurricane Frequency and US Landfalls since 1950



Data: NOAA

Seasonal Forecasts Foretold “Major” Hurricane Activity

Seasonal predictions like those from NOAA and Colorado State University were spot on in terms of raw power for the 2025 Atlantic hurricane season, evident in the rapid intensification of four major hurricanes. In this long view, the available energy in the open waters is a good predictor of hurricane intensity because warm water fuels hurricanes. However, it does not steer them, and it does little to predict how many convective clusters in the Tropical Atlantic will organize into tropical storms.

Atmospheric Steering Pattern During the Season

While sea surface temperatures and other thermodynamic factors were supportive of intensification, the dynamical steering environment did not favor classic long track U.S. landfalls. A “weak” Bermuda High during the expected peak season could not push storms Erin, Fernand, Gabrielle and Humberto toward the U.S. before they naturally curved northward. These storms stayed over the open Atlantic rather, underscoring how a weakening or eastward shift of the Bermuda High during the climatological peak can substantially alter regional landfall risk.

Landfall Risk is not Proportional to Hurricane Counts

For a given year, the link between the frequency of Atlantic hurricanes and those that make U.S. landfall is weak. In 2025, five Atlantic hurricanes formed, yet none made landfall — joining the ranks of 1978 and 2006. Even 1992, the year of Hurricane Andrew, saw only four Atlantic hurricanes. There have been years with 12 Atlantic hurricanes but zero (2010) and one U.S. landfall (1969). Conversely, years with below-average activity have seen multiple catastrophic landfalls, such as 1985 when six out of seven hurricanes made landfall.

What Does This Mean for Risk Management in 2026?

The 2025 season was another reminder that storm counts alone are not a reliable indicator of landfall risk or potential impacts. As the factors suppressing cyclone formation in the Atlantic flipped in the late season, the ocean gave birth to one of the most intense hurricanes on record: Hurricane Melissa. Communities and insurers cannot become complacent after a year with no U.S. landfalls. Every season carries risk, and the next could be very different.

TC activity in other basins – West Pacific

The 2025 Western North Pacific typhoon season was very active in terms of the number of land-impacting storms and featured multiple catastrophic events. The year culminated with 28 named storms, 17 of which attained typhoon strength.

Super Typhoon Ragasa (or Nando) was the second-most intense TC of 2025 globally. With a peak minimum central pressure of 905 hPa, Ragasa severely impacted northern Luzon in the Philippines and Hualien County in Taiwan in late September. The storm generated catastrophic flooding and landslides that killed 29 people, injured more than 200 and caused $100 million in economic damage.

Typhoon Kajiki (Isang) in late August affected the Philippines, Hainan Island and northern Vietnam, contributing to at least 17 deaths and hundreds of millions of dollars in damage across Guangdong, Hainan and Vietnam. In mid-October, Severe Tropical Storm Fengshen (Ramil) made multiple landfalls over Luzon. Fengshen produced extensive flooding and landslides in both the Philippines and Vietnam, killing at least 54 people and causing an estimated $360 million in economic losses.

Exhibit 32: 2025 Global Tropical Cyclone Activity by Basin Compared to Climatology

Basin	Named Storms		Hurricanes (Category 1+)		Major Hurricanes (Category 3+)	
	2025	Climo	2025	Climo	2025	Climo
Northern Hemisphere	**66**	**61**	**34**	**34**	**13**	**18**
North Atlantic	13	14	5	7	4	3
North Indian	5	5	1	2	0	1
East and Central Pacific	20	17	11	9	4	5
West Pacific	28	25	17	16	5	9
Southern Hemisphere	**36**	**26**	**16**	**14**	**10**	**6**
South Indian	24	16	13	9	9	4
South Pacific	12	10	3	5	1	2
Global	**102**	**87**	**50**	**48**	**23**	**24**

Late season storm Typhoon Fung-wong (Uwan) struck the Philippines, Taiwan and the Ryukyu Islands of Japan in early November, resulting in at least 34 fatalities and nearly 150 injuries. Typhoon Matmo (Paolo), another catastrophic event, produced extreme rainfall and widespread flooding in China, Thailand, Vietnam and the Philippines, with total losses estimated near $3.5 billion and roughly 40 fatalities.

East and Central Pacific

The 2025 Eastern and Central Pacific hurricane season rebounded strongly from the below-average activity of 2024, finishing as an active, above-normal year. In the Eastern Pacific basin, 18 named storms formed, of which 10 became hurricanes and three intensified into major hurricanes. The Central Pacific saw two named storms, one of which attained major hurricane status. Altogether, the basin generated an accumulated cyclone energy (ACE) of about 127, substantially higher than in 2024 and above the long-term average.

Warmer-than-average waters off the coast of Mexico and a neutral ENSO background state supported an early start to the season (Tropical Storm Alvin on May 28) and frequent cyclogenesis. Activity intensified in June, with Hurricane Erick becoming the earliest major hurricane on record to make landfall in Mexico. Erick and several other hurricanes brought damaging winds, heavy surf and intense rainfall to parts of southern and western Mexico.

Another powerful storm, Hurricane Kiko, achieved peak sustained winds of 125 mph (200 kph) late in the season. Most of these high-end hurricanes either remained offshore or weakened prior to landfall, limiting the scale of coastal devastation compared to their potential. Preliminary statistics attribute around 45 fatalities and several hundred million dollars in economic losses basin-wide, with Mexico bearing most direct impacts.

North Indian

The 2025 North Indian Ocean cyclone season was near average in storm counts but exceptional in human and economic toll. The season proved to be one of the costliest on record for this basin. Despite the absence of Category 3-equivalent “very severe” or stronger cyclones, five named storms and numerous, rain-heavy, deep depressions produced nearly 3,000 confirmed fatalities and an estimated $22.3 billion in economic losses.

The Bay of Bengal was a particularly active region with numerous low intensity but high impact systems generating torrential monsoon-enhanced rains across eastern and northeastern India, Bangladesh, Myanmar, Nepal, Bhutan. The impacts of one such system extended far into north central India, Nepal, Bhutan, Bangladesh and Tibet, combining intense precipitation, floods and landslides. This event alone caused more than 100 deaths.

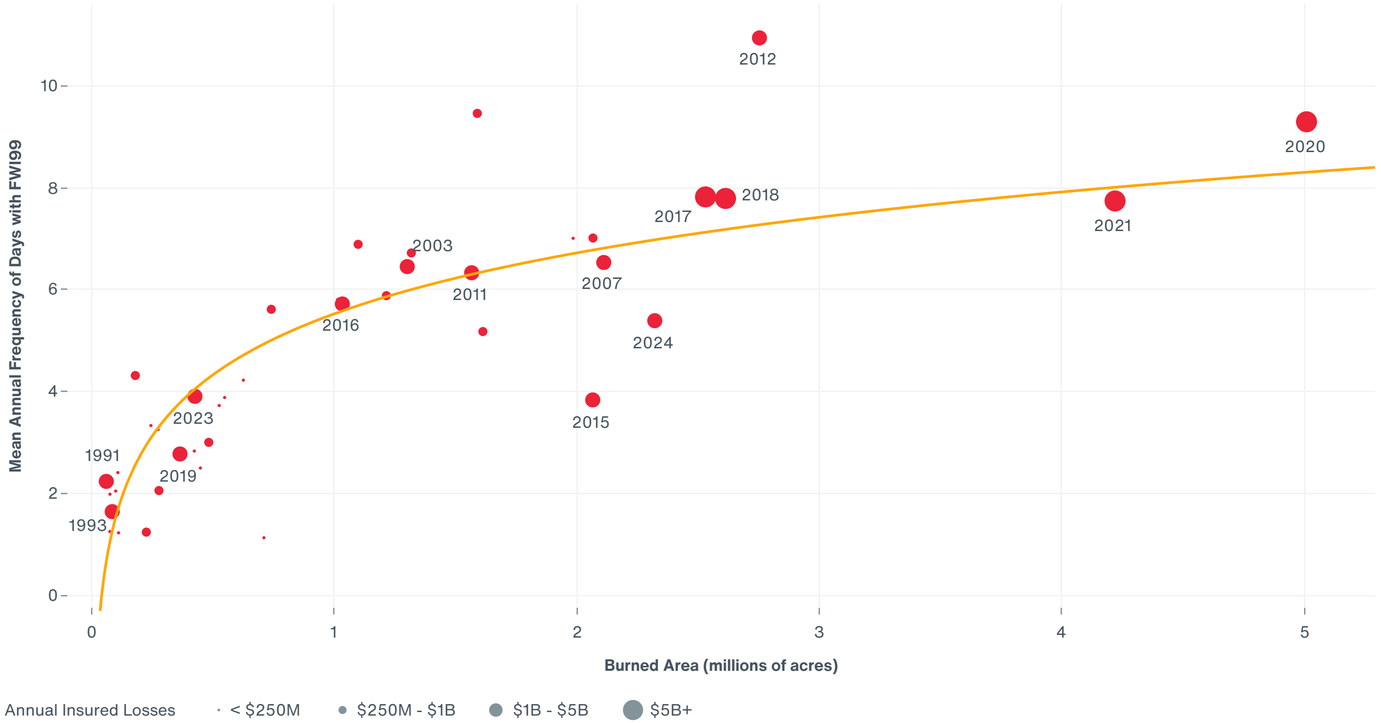
Severe Cyclonic Storm Montha made landfall in Andhra Pradesh in late October, causing widespread flooding, infrastructure damage and agricultural losses in Andhra Pradesh and Telangana. Montha killed at least 15 people and inflicted more than $700 million in damages across India and Sri Lanka.

Cyclonic Storm Senyar intensified in the eastern Bay of Bengal before crossing southern Thailand and Malaysia. Senyar caused more than 2,100 deaths mainly across Thailand and Indonesia, making it one of the deadliest tropical cyclones ever recorded in Southeast Asia. It caused billions of dollars in economic damage across Thailand and Indonesia, with preliminary estimates suggesting over $4 billion in economic damages.

Cyclonic Storm Ditwah formed soon after Senyar and led to some of the deadliest and most catastrophic flooding in Sri Lanka in recent decades. The storm generated prolonged heavy rains across Sri Lanka, Tamil Nadu and Puducherry, with severe infrastructure disruption and substantial agricultural losses. Ditwah caused at least 643 deaths and over $6 billion in damages across Sri Lanka and India.

Wildfire Losses Point to Climate's Escalating Influence and Need for Better Resilience

Exhibit 33: Correlation of Fire Weather and Burned Area in the Western United States



Data: ERA5-Land and MTBS/MODIS, Aon Catastrophe Insight. Analysis by Aon

Over 90% of U.S. wildfire losses this century occurred in the last decade, punctuated by the devastating Eaton and Palisades Fires in Los Angeles County, California, with over $40 billion in insured losses, the highest ever for a wildfire event. These events last year, together with the 2021 Marshall Fire in Boulder, Colorado and the 2023 Lahania Fire in Lahaina, Hawaii, epitomize the significant loss events from extreme fires in the past decade.

Notably, these catastrophic events all occurred under extreme fire weather conditions typified by Fire Weather Index (FWI) values in the top few percentiles. According to new Aon research conducted in collaboration with University of California, Merced, climate change has increased the frequency of such extreme FWI days, primarily through hotter and drier conditions that increase aridity and desiccates fuels like grasses, shrubs and trees. This leads to a longer seasonal window when fuels are conducive to fire, increasing opportunities for ignition and spread.

In addition to losses, the increase in extreme FWI days in recent years is also significantly correlated with the log of annual burned area in the western U.S. (r=0.84), with about 71% of the year-to-year variability explained by the frequency of extreme FWI days. There is high scientific confidence that the frequency of extreme fire weather conditions will continue to increase in a warming climate (41).

Short-Term Climate Swings are Raising the Stakes in Los Angeles

In addition to the long-term increasing trend in fire weather due to climate change, shorter-term climate variability like the El Niño Southern Oscillation (ENSO) can also influence wildfire risk. Wildfire risk in LA county was compounded by ENSO-mediated volatility of the water cycle (42).

ENSO can drive shifts in the winter jet stream and associated storm tracks and rainfall patterns over Southern California on interannual timescales (43). The climate system transitioned from a strong El Niño in 2023-2024 to La Niña conditions in early 2025.

Back-to-back wet winters in 2023 and 2024 increased fuel availability by encouraging biomass buildup of fast-growing grasses and brush. The sudden swing to La Niña conditions and a protracted dry season into 2025 then drastically increased the flammability of this increased fuel load (44).

No Clear Climate Signal in Extreme Winds

The LA fires and other significant recent events were governed by strong and dry winds which brought fire from the wildlands into the built environment where the fire spread from structure to structure. Despite the importance of extreme winds on active fire spread, there is no clear evidence to suggest such winds will become stronger in the future (45) (46). Instead, climate change is increasing the frequency of underlying extreme fire weather conditions, thereby increasing the chances that (mostly random) high-wind events like the Santa Ana winds will overlap with dry vegetation and an ignition source.

Data and Design as the New Firebreaks

Climate change is increasing the severity and complexity of many hazards, but it is also modulating them in nuanced and complex ways that exposes our underlying vulnerability. Wildfire catastrophes are increasingly catching communities off-guard, occurring in locations or seasons where the risk is perceived as low, or in communities that are ill-prepared for wildfire.

Integrating new data sources and innovative techniques into traditional risk modeling are critical as risk managers explore ways to effectively quantify and manage their evolving wildfire risk. Equally important is sustained investment in resilience. By prioritizing measures like fire prevention, home hardening, strategic vegetation management and community preparedness planning, we can significantly increase the resilience of our assets — including those in wildland-urban interface communities — to wildfires.

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Appendices

2025 Notable Global Disasters

The list below includes notable global events that meet, or are expected to meet, at least one of the following criteria to be classified as a natural disaster in Aon's Catastrophe Insight Database: **$50+ million in economic loss, $25+ million in insured losses, 10+ fatalities, 50+ injured, or 2,000+ structures damaged or claims filed**. Economic losses provided here are inflation-adjusted (using the U.S. CPI), may be rounded and are subject to future development.

Peril abbreviations: DR = Drought, EQ = Earthquake, FL = Flooding, HW = Heatwave, LS = Landslide, SCS = Severe Convective Storm, TC = Tropical Cyclone, WF = Wildfire, WS = European Windstorm, WW = Winter Weather

United States (1/5)

Date(s)	Peril/Event	Location	Fatalities	Economic Loss ($M)
01/01-12/31	Drought	Nationwide	N/A	2,400
01/04-01/06	Winter Weather	Great Plains, Mid-Atlantic	10	50
01/07-01/28	Eaton Fire	California	18	25,000
01/07-01/28	Palisades Fire	California	12	33,000
01/07-01/09	California Windstorm	California	0	200
01/09-01/11	Winter Weather	Southeast	0	150
01/12-01/13	Severe Convective Storm	Alaska	0	75
01/21-01/22	Winter Weather	Southeast	13	230
01/21-01/25	Winter Weather	Midwest, Northeast	0	560
01/31-02/07	Flooding	West	2	230
02/10-02/12	Winter Weather, SCS	Southeast	2	160
02/13-02/19	Flooding, SCS, WW	Nationwide	18	1,980

United States (2/5)

Date(s)	Peril/Event	Location	Fatalities	Economic Loss ($M)
02/17-02/19	Winter Weather	Nationwide	4	150
02/22-02/25	Flooding	West	0	150
03/03-03/05	SCS, Winter Weather	Midwest, Southwest	6	2,350
03/07-03/10	Severe Convective Storm	Southeast	0	1,600
03/14-03/16	Severe Convective Storm	Nationwide	43	10,100
03/14-03/20	Wildfire, Dust Storm	South	12	400
03/18-03/19	Severe Convective Storm	Midwest	0	700
03/22-03/24	Severe Convective Storm	Southeast	0	950
03/25	Severe Convective Storm	Texas	0	900
03/26-03/28	Flooding	South	5	400
03/27-03/28	Severe Convective Storm	Midwest	0	15
03/28-03/31	SCS, Winter Weather	Midwest, Southeast	8	1,900
04/01-10/31	Heatwave	Arizona	425	N/A
04/01-04/07	Flooding, SCS	Midwest, Southeast	25	4,550
04/10-04/11	Severe Convective Storm	Southeast	0	250
04/14-04/15	Severe Convective Storm	Mid-Atlantic	0	750
04/17-04/20	Severe Convective Storm	Central, East	5	2,550
04/21-04/26	SCS, Flooding	Great Plains	1	900
04/27-04/30	SCS, Flooding	Central, East	4	900

United States (3/5)

Date(s)	Peril/Event	Location	Fatalities	Economic Loss ($M)
05/01-05/05	Severe Convective Storm	Southeast, Mid-Atlantic	1	1,900
05/05-05/08	Severe Convective Storm	Southeast	0	1,250
05/09-05/14	SCS, Flooding	Southeast, Mid-Atlantic	1	600
05/11-06/15	Wildfire	Minnesota	0	10
05/14-05/16	Severe Convective Storm	Central, East	30	7,900
05/17-05/20	Severe Convective Storm	Great Plains, Southeast	0	3,100
05/22-05/26	Severe Convective Storm	Great Plains, Southeast	0	1,500
05/28-05/30	Severe Convective Storm	Southeast, Mid-Atlantic	2	1,000
06/01	Severe Convective Storm	Texas	1	1,200
06/02-06/03	Severe Convective Storm	Central	2	500
06/03-06/04	Severe Convective Storm	Southwest	0	125
06/05-06/07	Severe Convective Storm	Central, East	2	2,200
06/08-06/10	Severe Convective Storm	Central, East	5	1,250
06/11-06/25	Rowena Wildfire	Oregon	0	10
06/15-06/17	Severe Convective Storm	Central, East	8	2,500
06/18-06/19	Severe Convective Storm	Midwest, Mid-Atlantic	0	1,350
06/19-06/22	Severe Convective Storm	Midwest, Mid-Atlantic	6	800
06/24-06/26	Severe Convective Storm	Central, East	0	1,250
06/27-06/29	Severe Convective Storm	Central, Southeast	0	950

United States (4/5)

Date(s)	Peril/Event	Location	Fatalities	Economic Loss ($M)
07/01-07/03	Severe Convective Storm	Central, East	0	750
07/03-07/07	Central Texas Floods	Texas	135	1,100
07/04-08/31	Dragon Bravo Fire	Arizona	0	50
07/04-07/07	Severe Convective Storm	Colorado	0	125
07/05-07/07	Tropical Storm Chantal	Mid-Atlantic	6	400
07/06-07/09	Severe Convective Storm	Central, East	0	625
07/08	Ruidoso Floods	New Mexico	3	80
07/10-07/13	Severe Convective Storm	Central, East	0	650
07/14-07/19	Severe Convective Storm	Central, East	0	750
07/18-08/03	Burdoin Fire	Washington	0	25
07/20-07/26	Severe Convective Storm	Central, East	0	950
07/27-07/29	Severe Convective Storm	Midwest, Northeast	0	750
07/30-08/03	Severe Convective Storm	Central, East	0	750
08/08-08/11	Severe Convective Storm	Plains, Midwest	5	1,900
08/09-08/10	Milwaukee Floods	Wisconsin	1	300
08/13-08/14	Severe Convective Storm	Northeast	0	300
08/15-08/19	Severe Convective Storm	Midwest, Plains	0	1,500
08/17-08/22	Hurricane Erin	Mid-Atlantic	0	25
08/21-08/22	Flooding, SCS	Southeast, Mid-Atlantic	0	100

United States (5/5)

Date(s)	Peril/Event	Location	Fatalities	Economic Loss ($M)
08/21-08/25	Severe Convective Storm	Arizona, Nevada	0	300
08/23-08/24	Severe Convective Storm	Northeast, Plains	0	200
09/02-09/14	TCU September Lightning Fire	California	0	10
09/03-09/06	Severe Convective Storm	Central, Northeast	0	1,250
09/14-09/17	Severe Convective Storm	Plains	0	1,200
09/21-09/23	SCS, Flooding	Plains, Southeast	1	450
09/26-09/27	SCS, Flooding	Arizona	4	300
10/10-10/14	Flooding, SCS	Colorado, Arizona, New Mexico	0	500
10/11-10/14	Flooding, SCS	East	3	200
10/24-10/26	SCS, Flooding	Texas, Florida, Oklahoma	0	750
10/28-10/31	SCS, Flooding	Northeast, Texas	2	400
11/01	Severe Convective Storm	Texas	0	225
11/23-11/26	SCS, Winter Weather	Plains, Midwest, Southeast	0	250
12/08-12/11	Flooding, Landslide	Washington, Oregon	0	200
12/15-12/17	Flooding, Landslide, SCS	Northwest	0	50
12/17-12/19	Winter Weather, Flooding	West, Plains, Northeast	0	650
12/23-12/25	Flooding, SCS, Winter Weather	California	4	100
12/28-12/31	SCS, Winter Weather	Midwest, Plains, Northeast	0	100

North America (non-U.S.) (1/2)

Date(s)	Peril/Event	Location	Fatalities	Economic Loss ($M)
01/27	Severe Convective Storm	Canada	0	15
02/15-02/19	Winter Weather	Canada	0	120
02/24-02/26	Flooding	Canada	0	170
03/15-03/18	Flooding	Canada	0	80
03/28-03/31	SCS, Winter Weather	Canada	1	510
04/02-04/03	Flooding	Canada	0	150
04/27-04/30	Severe Convective Storm	Canada	0	80
05/08-06/20	Shoe Wildfire	Canada	0	50
05/13-05/23	La du Bonnet Wildfire	Canada	2	100
05/25-06/25	Flin Flon Wildfire	Canada	0	250
06/02-06/12	La Ronge Wildfire	Canada	0	50
06/15-06/20	Hurricane Erick	Mexico, Central America	21	250
07/03	Severe Convective Storm	Canada	0	10s of millions
07/13	Severe Convective Storm	Canada	0	130
07/13-07/14	Flooding	Canada	0	110
07/18-07/19	Severe Convective Storm	Canada	0	10s of millions
07/27	Severe Convective Storm	Canada	0	Millions
08/03-08/28	Kingston Wildfire	Canada	0	90

North America (non-U.S.) (2/2)

Date(s)	Peril/Event	Location	Fatalities	Economic Loss ($M)
08/03-08/09	Severe Convective Storm	Canada	0	20
08/20-08/21	Severe Convective Storm	Canada	0	330
08/31-09/06	Severe Convective Storm	Canada	0	10
09/06-09/07	Flooding	Mexico	0	Millions
09/11-09/13	Flooding, Severe Convective Storm	Canada	0	80
09/14-09/16	Flooding	Mexico	2	Millions
09/23-09/24	Flooding	Mexico	1	N/A
10/07-10/11	Flooding	Mexico	76	750
10/24-10/31	Hurricane Melissa	Caribbean	102	11,000
12/15-12/17	Flooding	Canada	0	80
12/28-12/31	Winter Weather, Flooding	Canada	0	70

South America (1/2)

Date(s)	Peril/Event	Location	Fatalities	Economic Loss ($M)
01/01-01/31	Severe Convective Storm	Bolivia	18	N/A
01/01-02/28	Flooding	Peru	7	N/A
01/01-03/31	Severe Convective Storm	Brazil	24	500
01/01-03/31	Drought	Paraguay	N/A	700
01/01-05/31	Flooding	Ecuador	49	N/A
01/01-05/31	Flooding	Bolivia	58	N/A
01/01-06/30	Drought	Brazil	N/A	4,800
01/11-01/16	Flooding	Brazil	11	Millions
01/15-02/15	Wildfire	Chile	1	260
03/07	Flooding	Argentina	16	380
06/13-06/25	Severe Convective Storm	Brazil	4	110
06/15	Earthquake	Peru	2	Millions
06/24	Landslide	Colombia	27	N/A
06/30-07/03	Winter Weather	Argentina, Chile, Uruguay	15	N/A
07/08	Earthquake	Guatemala	7	N/A
08/22-08/23	Flooding	Brazil	0	N/A
08/26-08/26	Flooding	Brazil	0	N/A
08/30-08/31	Santa Rosa Storm	Argentina	0	N/A

South America (2/2)

Date(s)	Peril/Event	Location	Fatalities	Economic Loss ($M)
10/12	Landslide	Venezuela	14	N/A
11/07-11/09	Severe Convective Storm	Brazil	7	22
11/20-11/25	Flooding, SCS	Brazil	0	10
12/01	Landslide	Peru	12	N/A
12/12-12/15	Flooding	Bolivia	20	36

Europe (1/3)

Date(s)	Peril/Event	Location	Fatalities	Economic Loss ($M)
01/05-01/07	Windstorm Floriane	Western, Northern Europe	1	470
01/17-01/19	Windstorm	Norway, Sweden	0	20
01/23-01/25	Windstorm Éowyn	Ireland, United Kingdom	2	1,050
01/26-01/29	Windstorm Herminia, Flooding	Western, Northern Europe	1	280
02/14-02/15	Flooding	Italy, Greece	0	110
03/02-03/07	Flooding	Spain	1	60
03/01-09/30	Drought	Spain, Italy, France, Belgium, Germany, United Kingdom	N/A	4,300
03/01-09/30	Wildfires	Portugal	3	800
03/01-09/30	Wildfires	Spain	6	1,000
03/02-03/07	Flooding	Spain	1	60
03/04-03/06	Flooding	Norway	0	40
03/17-03/18	Flooding	Spain	3	60
03/19-03/21	Windstorm Martinho	Portugal, Spain	0	100
03/26-03/31	Flooding, Landslides	Southeastern Europe	0	10
04/16-04/18	Flooding	Italy	3	110
04/23	Earthquake	Turkey	0	100
05/02-05/19	Severe Convective Storm	Spain	0	190
05/03	Severe Convective Storm	France	0	480

Europe (2/3)

Date(s)	Peril/Event	Location	Fatalities	Economic Loss ($M)
05/05-05/09	Severe Convective Storm	Central, Southeastern Europe	0	40
05/19-05/21	Severe Convective Storm, Flooding	France, Italy, Spain	3	230
05/22-05/24	Severe Convective Storm	Southeastern Europe	2	30
05/28	Glacier Collapse	Switzerland	1	440
05/31-06/01	Severe Convective Storm	Western, Central Europe	0	820
06/01-08/31	Heatwaves	Western, Central, Southern Europe	21,000	N/A
06/03-06/05	Severe Convective Storm	Western, Central Europe	1	270
06/13-06/15	Severe Convective Storm	Western, Central Europe	5	240
06/16	Severe Convective Storm	Italy, Croatia	0	90
06/22-06/23	Severe Convective Storm	Western, Central Europe	4	300
06/23-07/02	Heatwave	Western, Central, Southern Europe	2,300	N/A
06/25-06/26	Severe Convective Storm	Western, Central, Southern Europe	0	1,550
06/30	Severe Convective Storm, Landslide	Austria, Italy, Switzerland	1	120
07/02-07/03	Severe Convective Storm	Western, Central Europe	0	80
07/06-07/08	Severe Convective Storm	Central, Eastern, Southeastern Europe	1	80
07/08-07/09	Wildfire	France	0	10
07/09-07/14	Severe Convective Storm	Central, Eastern Europe	2	60
07/11-07/12	Flooding	Spain, France	0	60
07/19	Severe Convective Storm	France, Austria, Switzerland	0	40

Europe (3/3)

Date(s)	Peril/Event	Location	Fatalities	Economic Loss ($M)
07/20-07/22	Severe Convective Storm	Western, Southern Europe	1	100
07/23-07/24	Severe Convective Storm	Southeastern Europe	0	50
08/08-08/17	Heatwave	Western, Central Europe	1,100	N/A
08/14-08/17	Severe Convective Storm	Western, Southern Europe	2	50
08/20-08/23	Severe Convective Storm	Italy, Romania	3	30
08/28-08/31	Severe Convective Storm	Southern Europe	0	40
09/04	Severe Convective Storm	Western, Central Europe	0	550
09/08-09/09	Severe Convective Storm	Western, Central Europe	0	30
09/20-09/23	Flooding, SCS	Western, Southern Europe	4	40
09/25-09/29	Ex-Gabrielle, Flooding	Portugal, Spain, Italy	0	30
10/03-10/04	Windstorm Amy (Ex-Humberto)	Western, Northern Europe	3	470
10/09-10/13	Flooding	Spain	0	100
10/23-10/26	Windstorm Benjamin	Western Europe	1	600
11/13-11/17	Windstorm Claudia, Flooding	Western Europe	3	30
11/15-11/22	Flooding	Western, Southeastern Europe	3	40
12/09	Windstorm Bram, Flooding	United Kingdom, Ireland, France	0	60
12/04-12/07	Flooding	Greece, Cyprus	2	30
12/27-12/28	Windstorm Johannes	Northern Europe	3	90

Middle East (1/1)

Date(s)	Peril/Event	Location	Fatalities	Economic Loss ($M)
04/10-04/12	Winter Weather	Turkey	0	50
04/14	Dust Storm	Iraq	0	N/A
04/27-05/05	Severe Convective Storm	Iran	9	N/A
06/01	Dust Storm	Iran	0	N/A
06/01-06/30	Drought	Syria	N/A	50
06/02	Earthquake	Turkey	1	N/A
07/20-07/25	Wildfire	Turkey	10	Millions
08/10	Earthquake	Turkey	1	10
08/27-09/30	Flooding	Yemen	82	N/A
10/27	Earthquake	Turkey	0	Millions
12/07-12/11	Flooding, Winter Weather	Turkey, Israel, Iraq, Palestine	20	N/A
12/28-12/29	Severe Convective Storm	Lebanon, Israel, Palestine	17	Millions

Africa (1/2)

Date(s)	Peril/Event	Location	Fatalities	Economic Loss ($M)
01/11-01/14	Cyclone Dikeledi	Southeastern Africa	14	20
02/01-02/20	Flooding	South Africa, Botswana	31	170
02/15-02/28	Flooding	Madagascar	11	N/A
02/27-02/28	Cyclone Garance	Réunion, Mauritius	5	1,050
02/27-03/01	Cyclone Honde	Madagascar	3	10
03/01-03/31	Flooding	Namibia	16	N/A
03/06-03/16	Cyclone Jude	Southeastern Africa	21	110
04/04-04/11	Flooding	Democratic Republic of the Congo	165	N/A
04/16-04/25	Flooding	Nigeria	13	N/A
05/08-05/09	Flooding	Democratic Republic of the Congo	104	N/A
05/14-05/15	Flooding	Tanzania	21	N/A
05/15	Severe Convective Storm	Algeria	5	N/A
05/20-05/21	Landslide	Ivory Coast	13	N/A
05/29	Flooding	Nigeria	500	N/A
06/07-06/10	Flooding	South Africa, Lesotho	103	290
06/14-06/20	Flooding	Democratic Republic of the Congo	77	N/A
06/25-07/20	Severe Convective Storm	Ethiopia	1	Millions
07/01-09/30	Flooding	Nigeria	238	30

Africa (2/2)

Date(s)	Peril/Event	Location	Fatalities	Economic Loss ($M)
08/17-08/19	Flooding	Uganda	5	N/A
08/20	Landslide	Guinea	15	N/A
08/25-08/30	Flooding	Democratic Republic of the Congo	13	N/A
08/27-08/31	Flooding	Sudan	32	N/A
08/30-09/11	Flooding	Gambia	9	N/A
08/31	Landslide	Sudan	400	N/A
09/01-09/30	Flooding	Chad	22	N/A
10/30-11/01	Landslides, Flooding	Uganda, Kenya	55	N/A
11/02-11/15	Severe Convective Storm	Burundi	0	Millions
11/11-11/12	Flooding	Democratic Republic of the Congo	10	N/A
12/14	Flooding	Morocco	41	Millions

Asia (1/6)

Date(s)	Peril/Event	Location	Fatalities	Economic Loss ($M)
01/01-02/28	Winter Weather	Japan	4	70
01/01-12/31	Drought	China	0	1,180
01/02	Earthquake	China	0	40
01/07	Earthquake	China, Nepal	126	1,270
01/13-01/16	Flooding	Malaysia, Indonesia	17	5
01/20	Earthquake	Taiwan	0	170
02/08	Landslide	China	29	Millions
02/26-03/10	Wildfires	Japan	1	70
03/01-09/30	Drought	Russia	0	20
03/01-03/31	Winter Weather	China	0	350
03/01-03/31	Severe Convective Storm	China	1	100
03/01-03/10	Flooding	Indonesia	10	100
03/20-03/22	Severe Convective Storm	India	2	Millions
03/21-03/31	Wildfires	South Korea	31	1,000
03/28	Earthquake	Myanmar, Thailand, China, Vietnam	5,456	15,720
04/01-04/30	Severe Convective Storm	China	12	260
04/01-04/30	Winter Weather	China	0	20
04/01-04/30	Flooding	China	0	30

Asia (2/6)

Date(s)	Peril/Event	Location	Fatalities	Economic Loss ($M)
04/09-04/10	Severe Convective Storm	India, Nepal	114	N/A
04/11-04/12	Severe Convective Storm	China	5	150
05/01-09/30	Heatwave	Japan	117	N/A
05/01-05/31	Flooding	China	42	380
05/01-05/31	Winter Weather	China	3	Millions
05/01-05/31	Dust Storm	China	0	40
05/01-05/31	Severe Convective Storm	China	7	210
05/02-05/05	Severe Convective Storm	India	21	N/A
05/12	Severe Convective Storm	Bangladesh	14	N/A
05/13	Severe Convective Storm	China	0	220
05/14-05/29	Severe Convective Storm	Philippines	0	N/A
05/22	Severe Convective Storm	India	34	N/A
05/22	Landslide	China	19	20
05/24-05/25	Flooding	Vietnam, Thailand, Indonesia	25	10
05/26-05/27	Severe Convective Storm	India	11	N/A
05/31-06/01	Flooding	India, Bangladesh	44	N/A
06/03	Landslide	China	3	20
06/10-06/20	Flooding	India	15	N/A

Asia (3/6)

Date(s)	Peril/Event	Location	Fatalities	Economic Loss ($M)
06/06-06/15	Typhoon Wutip	Southeast Asia	17	310
06/14-06/15	Severe Convective Storm	India	65	N/A
06/14-06/15	Severe Convective Storm	India	25	N/A
06/17-06/23	Flooding	China	51	4,350
06/23	Severe Convective Storm	Vietnam	27	10
06/25	Flooding	Indonesia	4	N/A
06/26-06/30	Flooding	Pakistan	57	N/A
06/30-07/04	Flooding	Afghanistan	4	N/A
06/26-07/03	Severe Convective Storm	India	44	N/A
07/01-07/31	Severe Convective Storm	China	2	610
07/01-08/31	Heatwave	South Korea	29	N/A
07/04-07/09	Typhoon Danas	China, Taiwan, Philippines	0	240
07/06	Flooding	Indonesia	3	N/A
07/10-07/17	Flooding	Bangladesh, Myanmar	0	N/A
07/10	Flooding	Japan	0	N/A
07/14-07/18	Heatwave	China	0	N/A
07/15-07/24	Tropical Storm Wipha	China, Hong Kong, Macau, Philippines, Vietnam, Thailand	60	1,150
07/16-07/20	Flooding	South Korea	24	740

Asia (4/6)

Date(s)	Peril/Event	Location	Fatalities	Economic Loss ($M)
07/16-07/20	Flooding	Laos, Thailand	0	N/A
07/18-07/22	Flooding	China	27	380
07/19-07/19	Flooding	Pakistan	86	N/A
07/24-07/29	Flooding	China	144	14,020
07/24-07/30	Typhoon Co-May	China, Philippines, Vietnam	29	600
07/29-07/30	Earthquake	Russia, U.S., Samoa	0	10
08/01-08/31	Severe Convective Storm	China	6	250
08/06-08/15	Typhoon Podul	Taiwan, China	0	330
08/07-08/17	Flooding	China	73	1,860
08/14	Flooding	India	60	N/A
08/15-08/17	Flooding	Pakistan	450	N/A
08/12-08/16	Flooding	Japan	8	350
08/17	Earthquake	Indonesia	2	Millions
08/19	Flooding	South Korea	3	20
08/19	Flooding	Mongolia	10	N/A
08/21	Tropical Storm Lingling	Japan	0	N/A
08/22-08/26	Typhoon Kajiki	Philippines, Vietnam, China, Thailand	31	300
08/26	Landslide	India	30	N/A

Asia (5/6)

Date(s)	Peril/Event	Location	Fatalities	Economic Loss ($M)
08/27-09/11	Flooding	India, Pakistan	260	3,000
08/31	Earthquake	Afghanistan	3,000	180
09/04-09/05	Tropical Storm Peipah	Japan	1	170
09/09-09/11	Flooding	Indonesia	23	Millions
09/10-09/11	Flooding	Japan	1	50
09/13-09/16	Severe Convective Storm	China	0	500
09/20-09/25	Typhoon Ragasa	Philippines, Taiwan, Hong Kong, Macau, China, Vietnam	29	1,560
09/22-09/30	Typhoon Bualoi	Philippines, Vietnam, Thailand	83	820
09/27	Earthquake	China	0	50
10/01	Earthquake	Philippines	72	100
10/01-10/07	Typhoon Matmo	Philippines, China, Vietnam, Thailand	31	4,330
10/01-10/31	Flooding	China	6	400
10/03-10/05	Flooding	Nepal, India	84	20
10/05	Severe Convective Storm	Bangladesh	0	50
10/12-10/23	Tropical Storm Fengshen	Philippines, Vietnam	8	50
10/25-10/31	Flooding	Thailand, Vietnam	27	70
10/25-10/31	Tropical Storm Motha	India	8	600
10/31-11/07	Typhoon Kalmaegi	Philippines, Vietnam, Thailand	288	600

Asia (6/6)

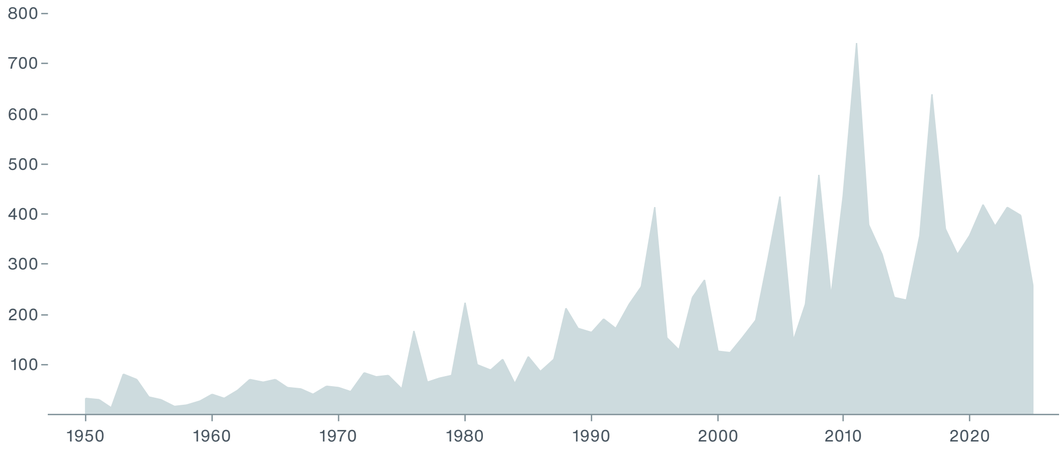
Date(s)	Peril/Event	Location	Fatalities	Economic Loss ($M)
11/02	Earthquake	Afghanistan	26	10
11/03-11/07	Flooding	China	1	50
11/03-11/13	Typhoon Fung-wong	Philippines, Taiwan	34	130
11/25-12/01	Cyclone Senyar	Malaysia, Indonesia, Thailand	1,406	5,370
11/26-12/04	Cyclone Ditwah	Sri Lanka, India	643	6,050

Oceania (1/1)

Date(s)	Peril/Event	Location	Fatalities	Economic Loss ($M)
01/29-02/05	Flooding	Australia	2	310
03/06-03/11	Ex-Cyclone Alfred	Australia	1	1,360
04/17-04/18	Ex-Cyclone Tam	New Zealand	0	50
04/29-05/01	Severe Convective Storm	New Zealand	0	20
05/20-05/31	Flooding	Australia	3	270
06/26-07/03	Severe Convective Storm	New Zealand, Australia	0	50
10/25	Severe Convective Storm	Australia	0	330
10/31	Landslide	Papua New Guinea	21	N/A
11/23-11/25	Severe Convective Storm	Australia	0	2,000

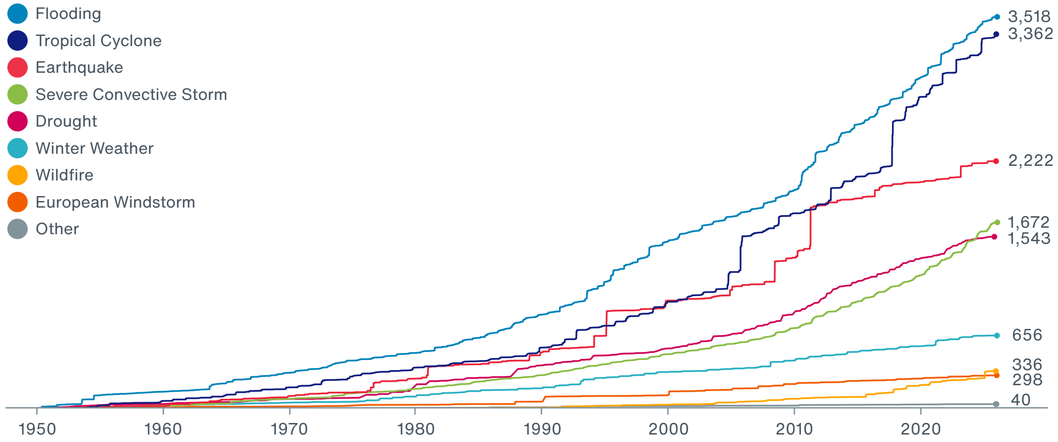
Long-Term Global Disaster Losses

Exhibit 34: Global Economic Losses From Natural Disasters Since 1950 (2025 $B)



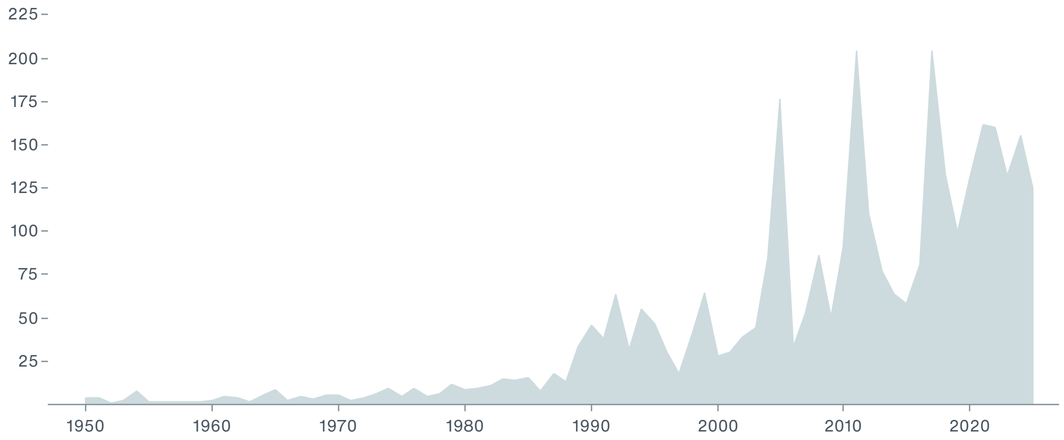
Data: Aon Catastrophe Insight

Exhibit 35: Cumulative Global Economic Losses by Peril Since 1950 (2025 $B)



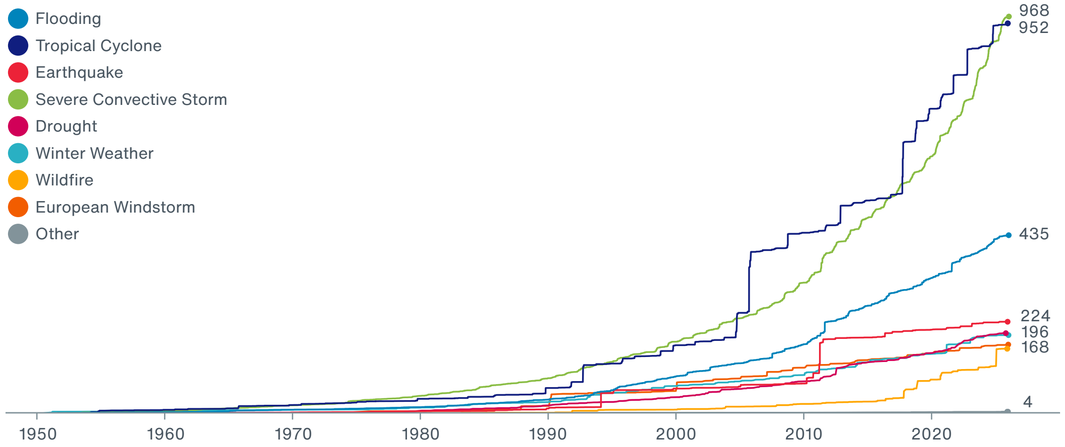
Data: Aon Catastrophe Insight

Exhibit 36: Global Insured Losses From Natural Disasters Since 1950 (2025 $B)



Data: Aon Catastrophe Insight

Exhibit 37: Cumulative Global Insured Losses by Peril Since 1950 (2025 $B)



Data: Aon Catastrophe Insight

Costliest Natural Disasters by Peril

The following tables provide a look at specific global natural disaster events since 1900. Please note that the adjusted-for-inflation (in 2025 $) totals were converted using the U.S. Consumer Price Index (CPI). Insured losses include those sustained by private industry and government entities such as the U.S. National Flood Insurance Program (NFIP). Inflation-adjusted losses are used since they represent actual incurred costs in today's dollars. Normalized values, while very valuable for analyzing historical scenarios using today's population, exposure and wealth, are hypothetical. Please note that some of these values have been rounded to the nearest whole number. 2025 disaster events that ranked among the top 10 costliest events are highlighted.

Exhibit 38: Top 10 Costliest Global Economic Loss Events (1900 – 2025)

Date(s)	Event	Location	Economic Loss (Nominal $B)	Economic Loss (2025 $B)
March 11, 2011	Tohoku Earthquake, Tsunami	Japan	235	342
January 17, 1995	Great Hanshin Earthquake	Japan	103	222
August 2005	Hurricane Katrina	United States	125	207
May 12, 2008	Sichuan Earthquake	China	122	182
August 2017	Hurricane Harvey	United States	125	165
September 2017	Hurricane Maria	Puerto Rico, Caribbean	90	118
October 2012	Hurricane Sandy	U.S., Caribbean, Canada	77	108
September 2022	Hurricane Ian	U.S., Cuba	96	104
September 2017	Hurricane Irma	U.S., Caribbean	77	102
January 17, 1994	Northridge Earthquake	United States	44	98

Exhibit 39: Top 10 Costliest Global Insured Loss Events (1900 – 2025)

Date(s)	Event	Location	Insured Loss (Nominal $B)	Insured Loss (2025 $B)
August 2005	Hurricane Katrina	United States	65	107
September 2022	Hurricane Ian	U.S., Cuba	54	59
March 11, 2011	Tohoku Earthquake, Tsunami	Japan	35	51
September 2017	Hurricane Irma	U.S, Caribbean	33	44
August / September 2021	Hurricane Ida	U.S., Caribbean	36	43
October 2012	Hurricane Sandy	United States	30	42
August / September 2017	Hurricane Harvey	United States	30	40
September 2017	Hurricane Maria	Puerto Rico, Caribbean	30	39
August 1992	Hurricane Andrew	U.S., Bahamas	16	37
January 17, 1994	Northridge Earthquake	United States	15	34

Exhibit 40: Top 10 Costliest Tropical Cyclones: Economic Loss (1900 – 2025)

Date(s)	Event	Location	Economic Loss (Nominal $B)	Economic Loss (2025 $B)
August 2005	Hurricane Katrina	United States	125	207
August / September 2017	Hurricane Harvey	United States	125	165
September 2017	Hurricane Maria	U.S., Caribbean	90	118
October 2012	Hurricane Sandy	U.S., Caribbean	77	108
September 2022	Hurricane Ian	U.S., Cuba	96	104
September 2017	Hurricane Irma	U.S., Caribbean	77	102
August / September 2021	Hurricane Ida	U.S., Caribbean	75	89
September 2024	Hurricane Helene	U.S., Mexico, Cuba	80	82
August 1992	Hurricane Andrew	U.S., Bahamas	27	63
September 2008	Hurricane Ike	U.S., Caribbean	38	57

Exhibit 41: Top 10 Costliest Tropical Cyclones: Insured Loss (1900 – 2025)

Date(s)	Event	Location	Insured Loss (Nominal $B)	Insured Loss (2025 $B)
August 2005	Hurricane Katrina	United States	65	107
September 2022	Hurricane Ian	U.S., Cuba	54	59
September 2017	Hurricane Irma	U.S., Caribbean	33	44
August / September 2021	Hurricane Ida	U.S., Caribbean	36	43
October 2012	Hurricane Sandy	U.S., Caribbean, Canada	30	42
August / September 2017	Hurricane Harvey	United States	30	40
September 2017	Hurricane Maria	U.S., Caribbean	30	39
August 1992	Hurricane Andrew	U.S., Caribbean	16	37
September 2008	Hurricane Ike	U.S., Caribbean	18	27
September 2024	Hurricane Helene	U.S., Mexico, Cuba	21	22

Exhibit 42: Top 10 Costliest Severe Convective Storm Events: Economic Loss (1900 – 2025)

Date(s)	Event	Location	Economic Loss (Nominal $B)	Economic Loss (2025 $B)
August 2020	Midwest Derecho	United States	14	17
April 2011	Super Tornado Outbreak	United States	10	15
May 2011	Joplin Tornado, SCS	United States	9.1	13
April 1965	Palm Sunday Outbreak	United States	1.2	12
April 1974	Super Outbreak	United States	1.5	10
March 2025	SCS Outbreak	United States	10	10
March / April 1973	SCS Outbreak	United States	1.3	9.5
May 2003	SCS Outbreak	United States	4.5	8.0
May 2025	SCS Outbreak	United States	7.8	7.9
July 2023	European Hailstorms	Europe	7.1	7.5

Exhibit 43: Top 10 Costliest Severe Convective Storm Events: Insured Loss (1900 – 2025)

Date(s)	Event	Location	Insured Loss (Nominal $B)	Insured Loss (2025 $B)
August 2020	Midwest Derecho	United States	9.2	11
April 2011	Super Outbreak	United States	7.6	11
May 2011	Joplin Tornado / SCS	United States	7.0	10
March 2025	SCS Outbreak	United States	8.0	8.1
May 2025	SCS Outbreak	United States	6.0	6.0
May 2003	SCS Outbreak	United States	3.3	5.8
May 2024	SCS Outbreak	United States	5.2	5.4
July 2013	Storm Andreas	Europe	3.8	5.3
March 2023	SCS Outbreak	United States	4.9	5.3
March 2024	Central U.S. SCS Outbreak	United States	4.8	5.0

Exhibit 44: Top 10 Costliest Floods: Economic Loss (1900 – 2025)

Date(s)	Event	Location	Economic Loss (Nominal $B)	Economic Loss (2025 $B)
June-December 2011	Thailand Floods	Thailand	45	65
June-September 1998	Yangtze River Floods	China	31	62
June-August 2010	Yangtze River Floods	China	39	58
July 2021	European Floods (Bernd)	Western, Central Europe	44	53
June-August 1993	Mississippi Floods	United States	21	47
June-September 2020	China Seasonal Floods	China	35	44
July-August 1931	Yangtze River Floods	China	2.0	43
June-August 1953	Japan Floods	Japan	3.2	39
May-August 2016	Yangtze River Floods	China	28	38
June-September 2021	China Seasonal Floods	China	31	37

Exhibit 45: Top 10 Costliest Earthquakes: Economic Loss (1900 – 2025)

Date(s)	Event	Location	Economic Loss (Nominal $B)	Economic Loss (2025 $B)
March 11, 2011	Tohoku Earthquake, Tsunami	Japan	235	342
January 16, 1995	Great Hanshin Earthquake	Japan	103	222
May 12, 2008	Sichuan Earthquake	China	122	182
January 17, 1994	Northridge Earthquake	United States	44	98
February 6, 2023	Turkey and Syria Earthquake	Turkey, Syria	90	97
November 23, 1980	Irpinia Earthquake	Italy	20	76
April 14, 2016	Kumamoto Earthquake	Japan	38	52
October 23, 2004	Chuetsu Earthquake	Japan	28	48
February 27, 2010	Chile Earthquake	Chile	30	45
December 7, 1988	Armenian Earthquake	Armenia (Present Day)	16	44

Exhibit 46: Top 10 Costliest Wildfires: Insured Loss (1900 – 2025)

Date(s)	Event	Location	Insured Loss (Nominal $B)	Insured Loss (2025 $B)
January 2025	Palisades Fire	United States	23	23
January 2025	Eaton Fire	United States	18	18
November 2018	Camp Fire	United States	10	13
October 2017	Tubbs Fire	United States	8.7	11
November 2018	Woolsey Fire	United States	4.2	5.4
August 2023	Maui / Hawaii Fire	United States	4.3	4.5
October 1991	Oakland Fire	United States	1.7	4.0
October 2017	Atlas Fire	United States	3.0	4.0
May 2016	Horse Creek Fire	Canada	2.9	3.9
September-October 2020	Glass Fire	United States	3.0	3.7

Exhibit 47: Top 10 Global Human Fatality Events in the Modern Era, Excluding Drought and Heatwave Events (1950 – 2025)

Date(s)	Event	Location	Economic Loss (2025 $B)	Fatalities
November 1970	Cyclone Bhola	Bangladesh	0.7	300,000
July 27, 1976	Tangshan Earthquake	China	39	242,769
July 1975	Typhoon Nina	Taiwan, China	7.2	230,029
December 2004	Indian Ocean EQ, Tsunami	Indian Ocean Basin	32	226,408
January 12, 2010	Port-au-Prince Earthquake	Haiti	12	160,000
April 1991	Cyclone Gorky	Bangladesh	4.3	139,000
May 2008	Cyclone Nargis	Myanmar	19	138,366
August 1971	Vietnam Floods	Vietnam	N/A	100,000
October 8, 2005	Kashmir Earthquake	Pakistan	11	88,000
May 12, 2008	Sichuan Earthquake	China	182	87,652

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