AON

Global Catastrophe Recap

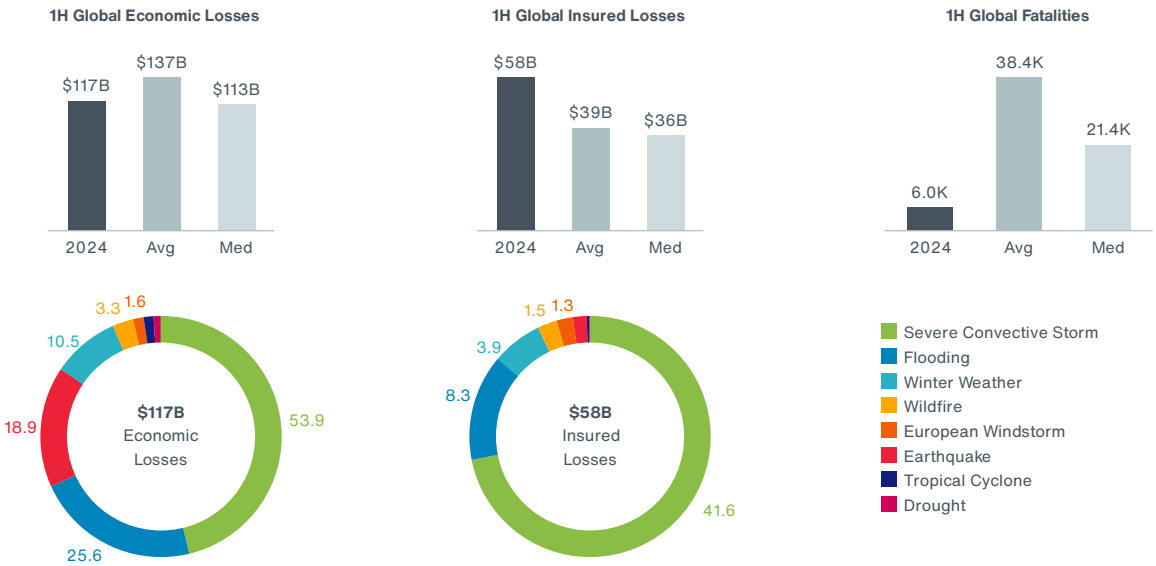
First Half 2024

Table of Contents

Executive Summary

The first half (1H) of 2024 saw multiple notable disaster events, which drove total year-to-date **economic losses above at least $117 billion**. This was lower than the 21st-century 1H average of $137 billion and significantly lower than losses in the first half of 2023 ($226 billion). The second quarter was marked not only by multiple costly severe convective storm events in the United States, but also by a number of significant flood events in Germany, Brazil, United Arab Emirates and China.

Insured losses in the first half of 2024 are expected to reach at least $58 billion, well above the 21st-century average of $39 billion. It is nevertheless lower than in the previous three years, which all saw global losses exceeding $60 billion by the end of June at current price levels. However, outlook for the next six months is marked by heightened expectations of potentially costly hurricane season, as well as continuing convective storm activity in the United States and Europe. By early July, the second named storm of the season, Hurricane Beryl, already resulted in potentially multi-billion-dollar losses.



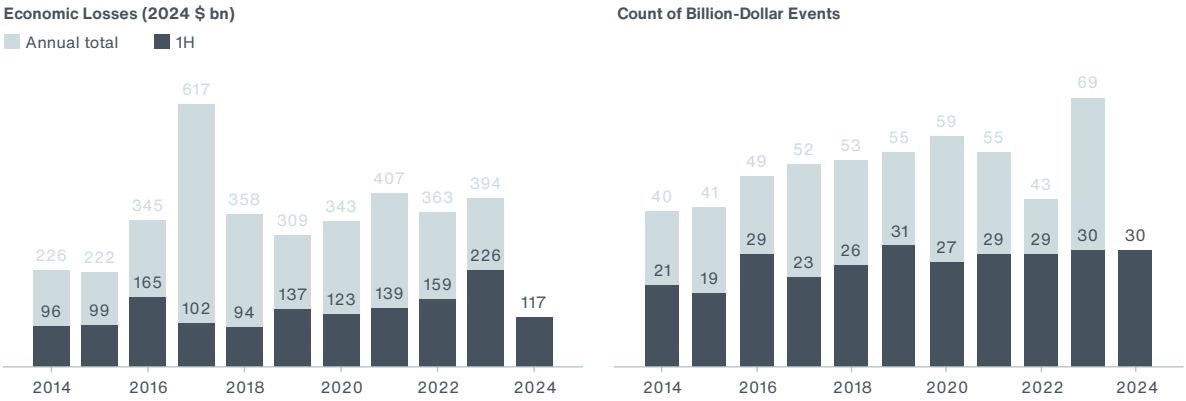
The insurance **protection gap** can be preliminarily estimated at only 50%, one of the lowest 1H gaps on record, largely a result of the higher contribution of SCS insured losses. Total number of **fatalities** was estimated at more than 6,000, significantly below long-term averages and the lowest since 2020.

The situation in the **re/insurance industry** was characterized by the continuing return to more stable and predictable market conditions, with remaining uncertainty and volatility related to the ongoing hurricane season and secondary peril losses. In many regions, higher proportion of losses was expected to be retained by insurers and the global reinsurer capital increased to record levels in Q1, with both traditional and alternative capital reaching new highs. Reduction of the inflation rates continued globally, but still failed to fall below 3% in the United States. Continued trends are also reflected in adjustment of historical losses to current price levels, included in this report.

Economic Losses Lower than Average so far in 2024

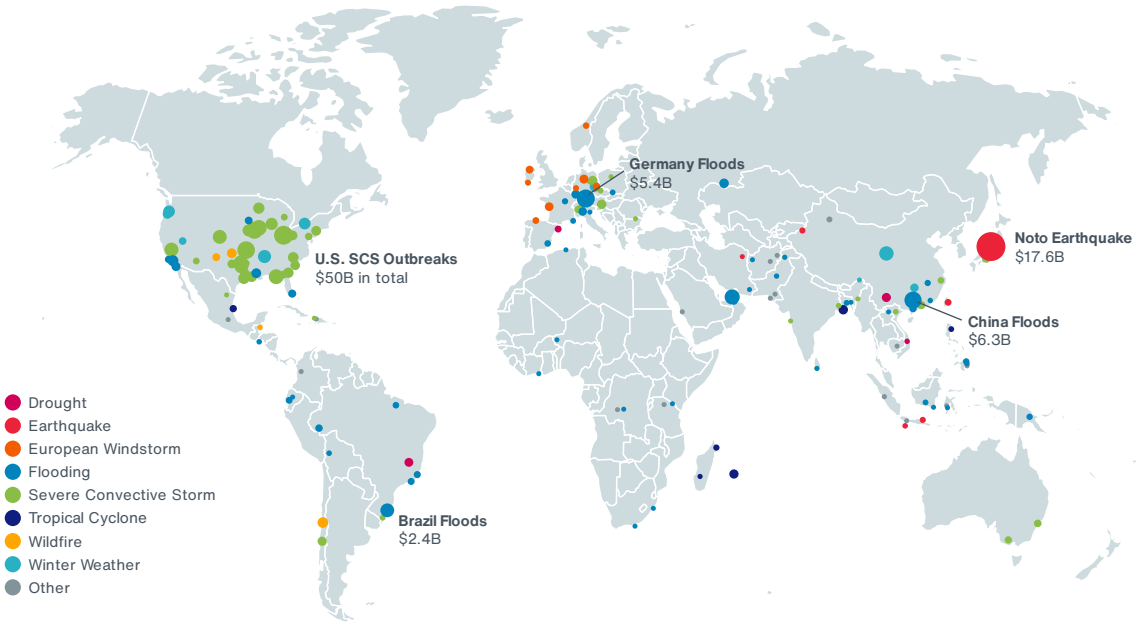
Global economic losses due to natural disasters in the first half of 2024 were preliminarily estimated at **$117 billion**, approximately 15 percent lower than the long-term first half mean since 2000 ($137 billion), and slightly above the median ($113 billion). The number of billion-dollar events was 30, 22 of which occurred in the United States, two in South America, four in Asia and two in EMEA. It is worth noting that these numbers are subject to change as individual event loss estimates tend to evolve even months after the date of occurrence.

EXHIBIT 1: 1H Global Economic Losses from Natural Disasters



Data: Aon Catastrophe Insight

EXHIBIT 2: 1H 2024 Economic Loss Events



Data: Aon Catastrophe Insight

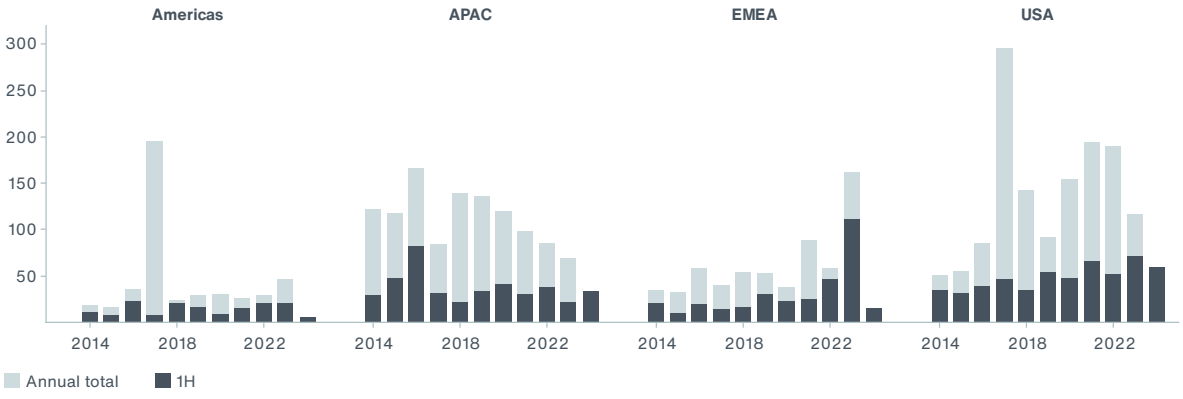
The Noto earthquake, which occurred on January 1, still remains the costliest event of the year to date in terms of total economic losses with more than $17 billion in direct damage. Apart from a number of significant severe convective storm events in the United States, extensive flooding events in southern Germany and in China also rank high in the table of top events.

EXHIBIT 3: Top 5 Costliest Economic Loss Events in 1H 2024

Date	Event	Location	Fatalities	Economic Loss (2024 $ bn)
01/01	Noto Earthquake	Japan	299	17.9
06/09-07/14	South & Central China Floods	China	150	6.3
03/12-03/16	Severe Convective Storm	United States	3	5.9
06/01-06/07	South Germany Floods	Germany	6	5.4
05/06-05/10	Severe Convective Storm	United States	6	5.0

According to preliminary estimates, economic losses in the United States were well above their long- and short-term averages, largely due to significant severe convective storm activity. However, all other regions recorded below-average losses in the first half of the year. Notably, EMEA region has recorded only approximately $15 billion in economic losses so far in 2024, in a substantial decrease from last year, which saw the extremely costly earthquake in Turkey and Syria.

EXHIBIT 4: 1H Economic Losses by Region (2024 $ bn)

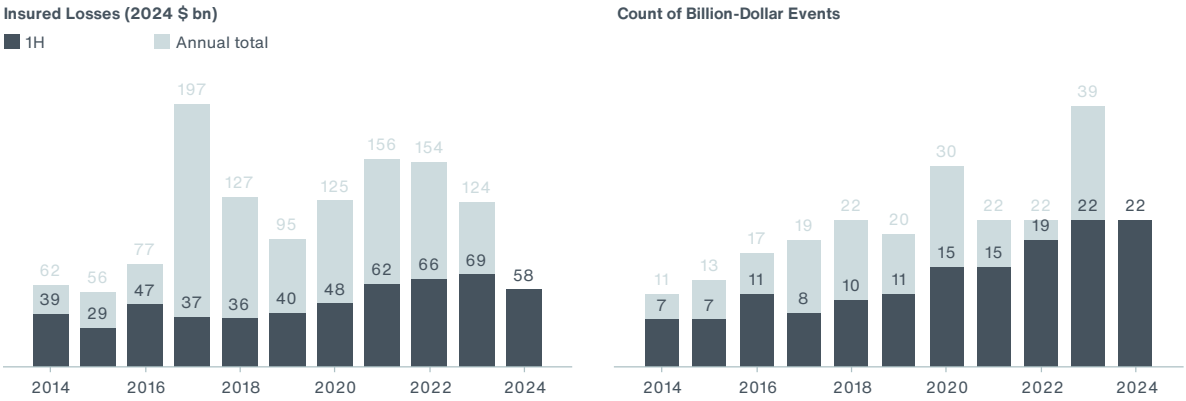


Data: Aon Catastrophe Insight

Insured Losses Exceed $58B, Driven by SCS and Flooding

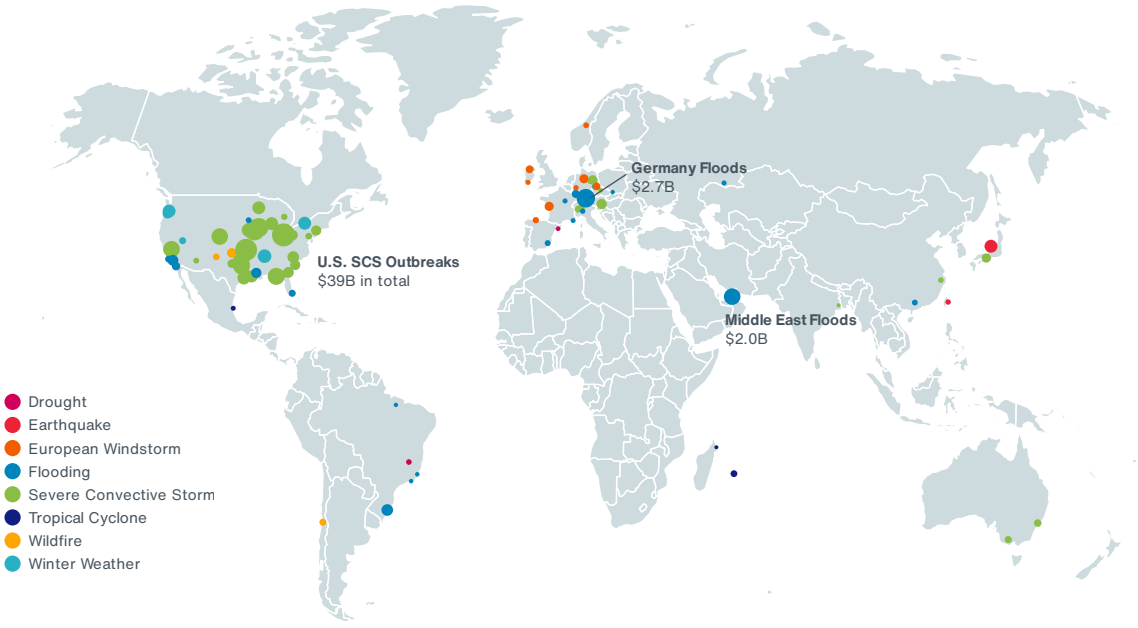
Global insured losses from natural disaster events in the first half of 2024 are estimated to reach at least **$58 billion**, which was significantly higher than average since 2000 ($39 billion) and median of the same period ($36 billion). It is nevertheless a slight decrease compared to the costly years of 2021-2023, which all saw losses exceeding $60 billion in the 1H. The financial toll of the first six months was dominated by the severe convective storm peril with roughly three quarters of the total, yet flooding and winter weather were also responsible for a notable part of the aggregated loss.

EXHIBIT 5: 1H Global Insured Losses



Data: Aon Catastrophe Insight

EXHIBIT 6: 1H 2024 Insured Loss Events



Data: Aon Catastrophe Insight

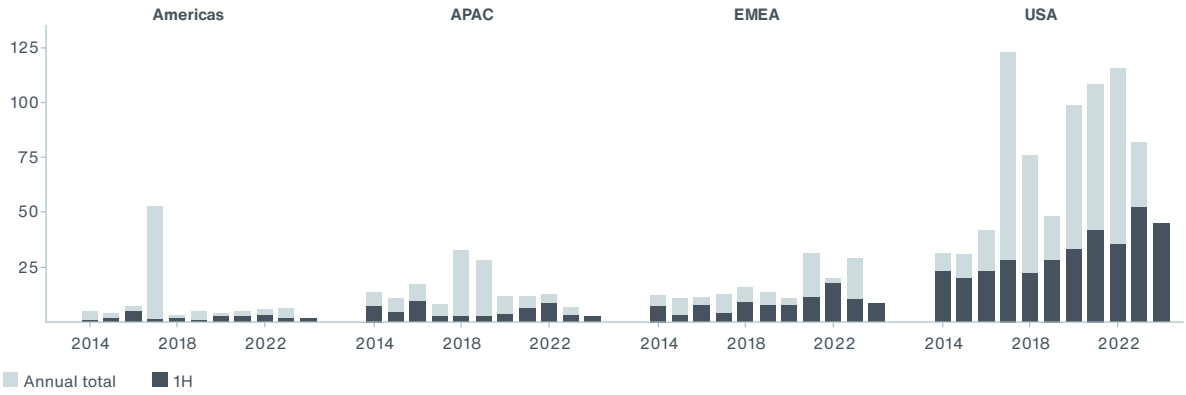
Severe convective storms in the United States generated majority of the global insured losses in the first half of 2024. Notable additions to the global financial toll were also flooding events in Germany and the United Arab Emirates.

EXHIBIT 7: Top 5 Costliest Insured Loss Events in 1H 2024

Date	Event	Location	Fatalities	Insured Loss (2024 $ bn)
03/12-03/16	Severe Convective Storm	United States	3	4.7
05/06-05/10	Severe Convective Storm	United States	6	4.0
05/17-05/22	Severe Convective Storm	United States	5	3.8
06/01-06/07	South Germany Floods	Germany	6	2.7
05/25-05/26	Severe Convective Storm	United States	26	2.3

Natural disasters in the United States accounted for nearly 80 percent of global insured losses in the first half of 2024, reaching nearly $46 billion. This was more than 90 percent higher than the long-term 1H average since 2000. While insured losses in EMEA were about 12 percent higher than its respective average, insurers in APAC and Americas regions faced lower-than-average losses.

EXHIBIT 8: 1H Insured Losses by Region (2024 $ bn)



Data: Aon Catastrophe Insight

Evolving Tornado and SCS Risk in the United States

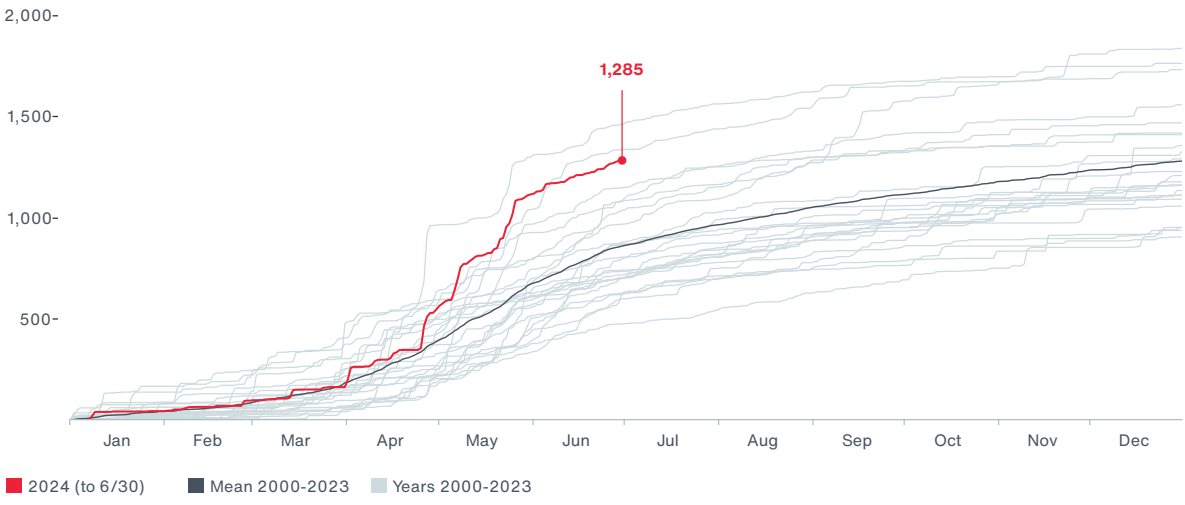
Overview

An exceptionally active period of continuous severe weather in April and May has already made 2024 an unforgettable year for SCS in the United States. In fact, May 2024 had the second most preliminary May severe weather reports on record, according to the Storm Prediction Center (SPC). Although severe weather typically peaks in Q2 in the U.S., SCS-related insured losses through June have exceeded $36 billion. Remarkably, this is the 2nd highest figure on record through Q2, only behind 2023.

Losses were driven by several key events primarily within the month of May. A significant severe weather outbreak over the central and southern U.S. on May 6-10 generated over 165 tornadoes and more than $5 billion in total economic damage. Memorial Day Weekend in late May was highlighted by deadly, persistent SCS activity which killed nearly 30 people and injured over 150 more. Additionally, Texas has been especially impacted by multiple large SCS events in 2024, including a notable derecho event in downtown Houston that generated wind gusts of up to 100 mph (161 kph).

This past spring also exhibited heightened tornadic activity, including several violent and destructive twisters. Multiple communities such as Marietta (OK), Greenfield (IA), and Barnsdall (OK) experienced catastrophic damage due to powerful EF-4 tornadoes. Affected areas saw numerous homes flattened, hundreds of structures heavily damaged, and dozens of people killed or injured.

EXHIBIT 9: Preliminary Annual Tornado Reports from the Storm Prediction Center (2000-2024)



Data: NOAA

Historical Year for Tornadoes

Tornadic activity in the United States has been remarkable thus far in 2024. Aggregations of preliminary tornado reports from the SPC in 2024 are already the 3rd-highest on record since 2000 on an annual basis, behind only 2008 and 2011. However, a majority of this year's tornadic activity was heavily concentrated in Q2.

According to the SPC, 2024 featured the 2nd-most tornado reports on record for April-May (801 tornadoes). This figure was slightly higher than that of 2019 (782 tornadoes) but still firmly behind the high benchmark set in 2011 (1,083 tornadoes).

Utilizing Current Research

Another historic year for SCS-related losses again highlights the need for an improved understanding of SCS loss drivers. As per a recent study from Aon, much of the continually increasing SCS losses appear to be largely due to exposure growth[1]. However, improved portfolio management is also crucial to help insurers mitigate growing SCS-related losses. Utilizing ongoing research in the atmospheric sciences community is one way insurers can obtain additional, valuable insight into evolving SCS risk.

For example, a large portion of tornadoes in 2024 occurred within the traditional "tornado alley" of the Great Plains, which includes states such as Nebraska, Kansas, and Oklahoma. However, recent studies have noted a general southeastward shift in tornadic activity, away from "tornado alley" and into the southeastern United States[2,3]. One implication of this shift is that the Southeast contains a higher density of people and exposure, including more vulnerable structures such as mobile homes[4]. Increased tornado risk in the Southeast is further compounded by the growing presence of nocturnal tornadoes in the same area, an important element that helps explain this region's high rate of tornado-related fatalities[5].

Costly Flood Events Highlight Protection Gap

Southern Germany Floods

Significant flooding affected southern Germany, particularly the federal states of Baden-Württemberg and Bavaria, in early June. Widespread floods left six people dead, prompted evacuations of thousands of people, and resulted in notable property and agricultural damage. A state of emergency was declared in several districts and cities across the federal states of Baden-Württemberg and Bavaria in southern Germany and thousands of people were forced to temporarily leave their homes.

EXHIBIT 10: Largest Insured Loss Events in Germany (2024 USD bn)

Costliest Events	Date	Insured Loss (2024 USD bn)
Bernd Flooding	July 12-18, 2021	11.6
Windstorm Kyrill	January 18, 2007	4.8
Hailstorm Andreas	July 26-28, 2013	4.6
2013 Central Europe Floods	May 27-June 10, 2013	3.4
2002 Central Europe Floods	August 6-28, 2002	3.0
Southern Germany Floods	**June 1-7, 2024**	**2.7***

** preliminary. Losses are adjusted for price inflation only*

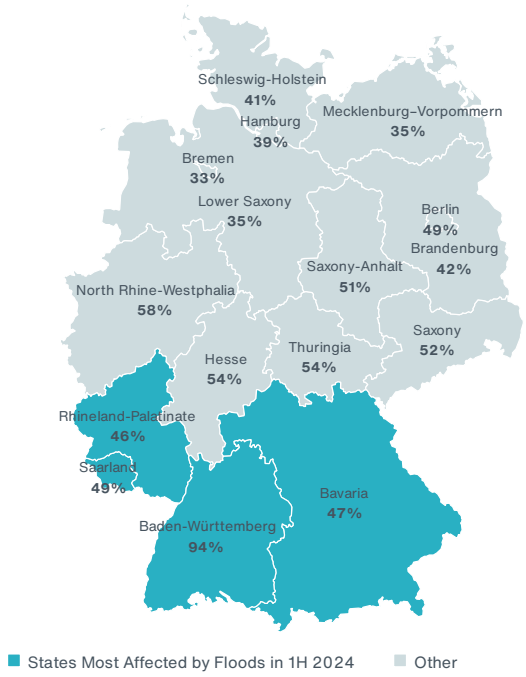
Changes in Insurance Penetration

State-level data shows that flood insurance penetration is very high in Baden-Württemberg at roughly 94%, while other federal states, including Bavaria, exhibit lower take-up rates[6]. Similarly to other European countries, discussions on potential changes to insurance protection mechanisms and on the introduction of compulsory insurance continued to take place in Germany as well. However, as a result of disagreement between the federal, state-level and industry stakeholders, with the states calling for a compulsory scheme, the current system remains in place. Recently, a potential compromise solution has been proposed: to make it mandatory for insurance companies to offer flood insurance.

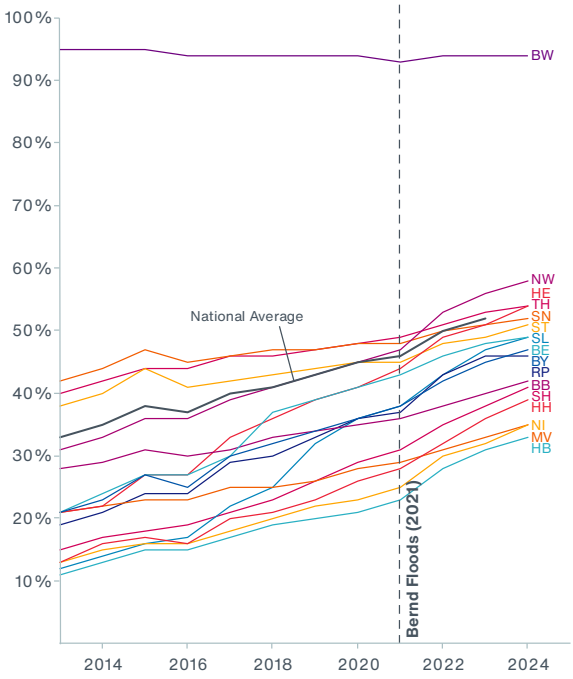
An accelerated upward trend in flood insurance take-up rate has been seen after the catastrophic flooding in July 2021. The event, known as Bernd, was by far the costliest natural disaster in German history. The event, which resulted in 206,000 insurance claims and a total loss of €8.75 billion according to the data from GDV, was followed by a period of lengthy loss development and claims settlement, which stands at 90% of completion even three years after the event took place.

EXHIBIT 11: Flood Insurance Take-up Rates in Germany

Floood Insurance Take-up Rate in Germany (as of 2024)



Floood Insurance Take-up by State since 2013



Data: GDV

Other Events

Unprecedented rainfall episodes and widespread flooding hit **Rio Grande do Sul** state in southern Brazil in April and May, notably the city of Porto Alegre, brought catastrophe exposures into sharp focus for Brazil's insurers. In a scientific report by the World Weather Attribution Group, climate change and the current El Niño episode are listed among the factors that to some extent contributed to the severity of the event. However, infrastructural failures and the long-term lack of investments and maintenance of sufficient flood protection measures significantly contributed to the overall outcome[7].

Historic flooding in **Dubai** on April 15 similarly highlighted infrastructural and socio-economic issues that contributed to the severity of the event. Insufficient drainage infrastructure in rapidly growing cities and the need for better adaptation measures once again came into focus. In terms of potential climate change influence, disagreement between model results and observations prevented authors of the attribution study[8] from "concluding with certainty that human-induced climate change is the main driver making this event more likely".

Extensive flooding in Southern and Central **China**, which ensued in June, resulted in significant economic losses of more than $6.3 billion, yet only a small portion of the toll ($440 million) was covered by insurance, despite recent increases in take-up rates.

Atlantic Hurricane Season of 2024 has Started

Updated Hurricane Season Forecasts

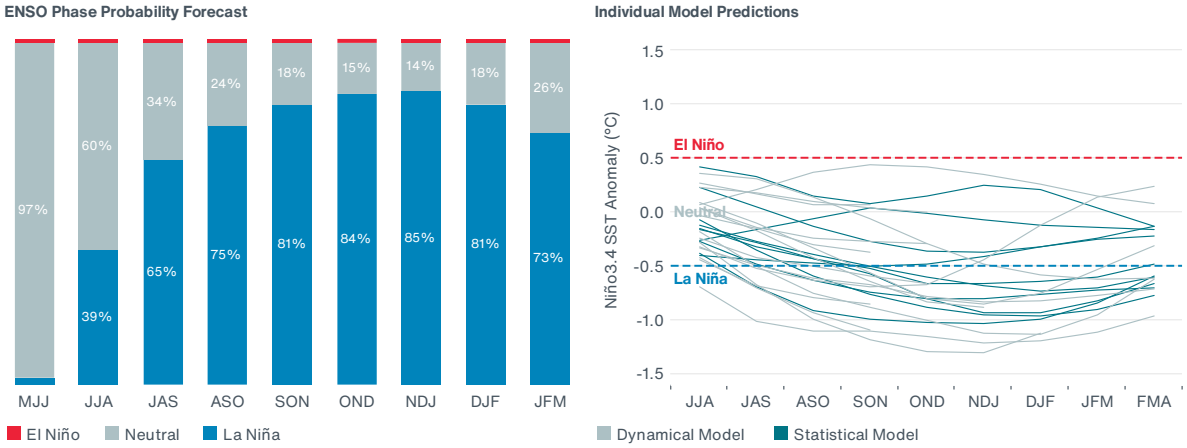
In the past several months, multiple groups and institutions have updated their long-range forecasts for the upcoming North Atlantic Hurricane season, with some of them adjusting their already very high predictions further upwards. All of these forecasts suggest that 2024 will likely be very active, with the average number of expected hurricanes hovering around 11-12.

EXHIBIT 12: Selected 2024 Hurricane Season Forecasts

Forecast Source	Issued	Named Storms	Hurricanes	Major Hurricanes (Cat 3+)	ACE
Colorado State University	July 9	25	12	6	230
Tropical Storm Risk	July 5	26	13	6	240
University of Arizona	June 23	23	10	5	231
NOAA	May 23	17-25	8-13	4-7	-
UK Met Office	May 22	22	12	4	212
NC State University	April 16	15-20	10-12	3-4	217
ECMWF	May	23	13	-	240
Average (NOAA 1991-2020)		**14**	**7**	**3**	**123**
Record High		**30** (2020)	**15** (2005)	**7** (2005)	**259** (1933)
Record Low		**1** (1914)	**0** (1907, 1914)	**0** (33x since 1851)	**2.5** (1914)

The timing of a shift to La Niña conditions is seen as one of the critical factors for the 2024 hurricane season as it typically aids storm formation via a reduction in wind shear, which hinders tropical cyclone development. Above-average sea surface temperatures (SST) will also continue to play a key role in the upcoming season, as warm seawater greatly enhances tropical cyclone formation and potential rapid intensification. According to NOAA, the Atlantic hurricane season may also coincide with an above-average west African monsoon. This phenomenon typically produces clusters of storms that progress into the Atlantic Ocean, some of which serve as seeds for future tropical cyclones.

Exhibit 13: Latest Probabilistic ENSO Model Projections

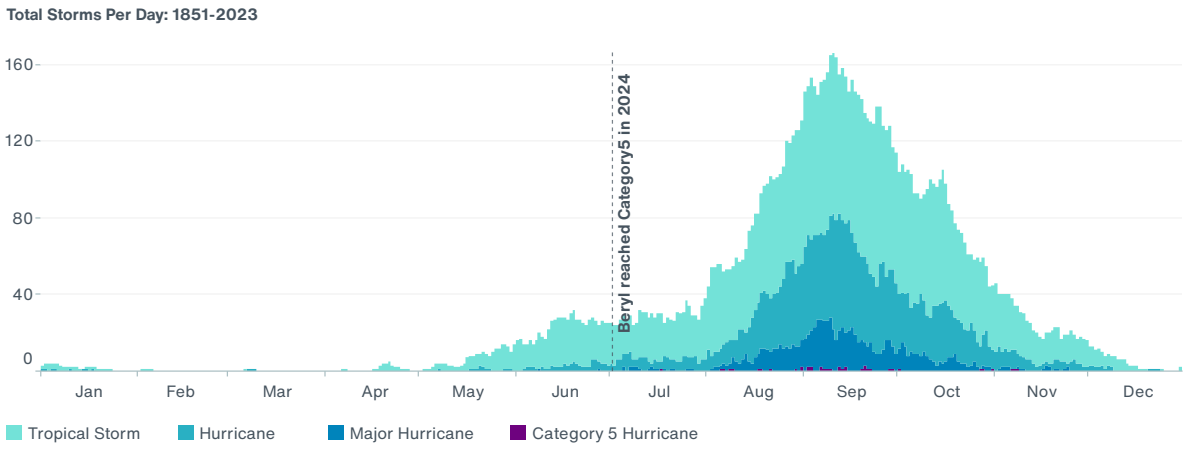


Data: IRI, Columbia University Climate School

Serving as a potential signal of what may lie ahead, Hurricane Beryl recently broke many meteorological records in the North Atlantic, which included becoming the earliest-forming category 5 storm in history for the basin. Despite battling intense wind shear and land interaction, impressive ocean temperatures along the storm's track enabled it to survive for nearly 2 weeks. Beryl subsequently caused extensive impacts within the Caribbean and south-central United States. Affected areas saw significant property and infrastructure damage, flash flooding, widespread power outages, and at least 44 fatalities.

How consequential the rest of the hurricane season will be remains to be seen as Beryl was only the 2nd named storm for the Atlantic basin. However, improving atmospheric conditions going into the season's peak (September 10) and ocean temperatures continually hovering at all-time record levels certainly favor explosive tropical cyclone activity over the next few months.

Exhibit 14: Atlantic Tropical Cyclone Climatology



Data: NOAA

Aon and Columbia University Renew Collaboration

Aon and Columbia University renew collaboration project

Recently, Aon has renewed its collaboration with Columbia University, a preeminent research university for weather and climate science. This renewal will leverage new research to better quantify the uncertainty of climate change impacts on tropical cyclones, while also broadening the scope of the engagement to identify correlation of climate risk across different perils and regions.

Key Findings

The initial phase of this collaboration integrated the latest peer-reviewed climate science into Aon's Impact Forecasting tropical cyclone catastrophe model suite, facilitating explicit quantification of expected future losses due to climate change. Key findings relevant to (re)insurers include:

- Climate-attributed US hurricane losses could increase by at least 10% over the next 20 years, but underlying uncertainty in loss projections reflect the overall scientific uncertainty of future tropical frequency changes[9].
- The uncertainty around future loss projections motivates adoption of risk management and climate adaption strategies that are resilient to a wide range of possible outcomes.
- Aerosol concentrations are a key driver of Atlantic hurricane frequency, helping to explain past historical hurricane trends while also suggesting that future reduction of aerosols may lead to relatively more storms.
- Climate models appear to be incorrectly representing the pattern of ocean warming in the Pacific in response to greenhouse gases, which could mean that near-term projections of severe weather – such as tropical cyclone activity in the North Atlantic and severe convective storms in the US – are underestimated[10].

Appendix: 1H 2024 Data

United States

Date(s)	Event	Affected Region(s)	Fatalities	Economic Loss Estimate ($ mn)
01/08-01/10	Severe Convective Storm	Nationwide	5	2,850
01/10-01/14	Winter Weather	Nationwide	0	1,450
01/12-01/15	Winter Weather	West	7	1,750
01/15-01/21	Winter Weather	Southeast, Plain, Midwest	73	1,850
01/16-01/18	Winter Weather	West	6	650
01/19-01/23	Flooding	West	5	500
01/22-01/28	Flooding	Nationwide	0	700
01/31-02/01	Flooding	West	0	150
02/04-02/06	Flooding	California	9	1,100
02/08-02/13	Severe Convective Storm	Midwest, Southeast	1	1,300
02/17-02/21	Flooding	California	0	150
02/26-02/29	Severe Convective Storm	Nationwide	0	1,400
02/26-03/09	Wildfire	Texas	2	700
02/28-03/04	Winter Weather	West	2	200
03/07-03/11	Severe Convective Storm	Southwest, Midwest	0	750
03/11-03/15	Winter Weather	California, Colorado	0	150
03/12-03/16	Severe Convective Storm	Northeast	3	5,900
03/21-03/23	Severe Convective Storm	Texas	0	650
03/23-03/27	Severe Convective Storm	California, Southeast	2	250
03/29-04/05	Severe Convective Storm	California, Midwest	5	2,500
04/06-04/12	Severe Convective Storm	Nationwide	1	2,750
04/14-04/16	Severe Convective Storm	Pennsylvania, Virginia	0	150
04/15-04/16	Severe Convective Storm	Texas, Missouri	0	150
04/17-04/20	Severe Convective Storm	Southeast	0	1,150
04/19-04/21	Severe Convective Storm	Texas	0	400
04/25-04/29	Severe Convective Storm	Midwest, Southwest	5	1,500
04/30-05/02	Severe Convective Storm	Kansas, Oklahoma, Texas	4	625
05/03-05/05	Severe Convective Storm	Texas	0	375
05/06-05/10	Severe Convective Storm	Nationwide	6	5,000
05/11-05/14	Severe Convective Storm	Southwest, Southeast	4	1,000
05/15-05/17	Severe Convective Storm	Southwest, Southeast	8	1,250

05/17-05/22	Severe Convective Storm	Nationwide	5	4,800
05/23-05/24	Severe Convective Storm	Midwest, Southwest	0	750
05/25-05/26	Severe Convective Storm	Nationwide	26	2,800
05/27-05/29	Severe Convective Storm	Southwest	2	2,600
05/30-06/01	Severe Convective Storm	Southwest, Southeast	2	2,500
06/02-06/05	Severe Convective Storm	Nationwide	1	750
06/06-06/10	Severe Convective Storm	Nationwide	0	650
06/08-06/10	Severe Convective Storm	Colorado	0	200
06/11-06/15	Flooding	Florida	2	300
06/12-06/13	Severe Convective Storm	Midwest, Southwest	0	1,250
06/14-06/18	Severe Convective Storm	Nationwide	0	250
06/17-06/27	Wildfire	New Mexico	2	1,500
06/19-06/23	Severe Convective Storm	Nationwide	0	800
06/19-06/20	Tropical Storm Alberto	Texas	0	150
06/20-06/23	Flooding	Minnesota, Iowa, South Dakota	2	750
06/25-06/26	Severe Convective Storm	Nationwide	2	1,900
06/27-06/30	Severe Convective Storm	Nationwide	1	250

North America (Non-U.S.)

Date(s)	Event	Affected Region(s)	Fatalities	Economic Loss Estimate ($ mn)
01/12-01/21	Winter Weather	Canada	0	230
02/26-02/29	Flooding	Canada	0	25
03/01-06/30	Heatwave	Mexico	155	N/A
04/11-04/13	Severe Convective Storm	Canada	0	40
05/03	Landslide	Haiti	13	Negligible
05/16	Severe Convective Storm	Canada	0	45
05/21	Severe Convective Storm	Haiti	0	Millions
05/22	Severe Convective Storm	Mexico	9	Unknown
06/11-06/21	Flooding	Central America	24	Millions
06/14-06/18	Severe Convective Storm	Canada	0	40
06/19-06/20	Tropical Storm Alberto	Mexico	4	135
06/23	Severe Convective Storm	Canada	0	30
06/30-07/01	Tropical Storm Chris	Mexico	0	Millions

South America

Date(s)	Event	Affected Region(s)	Fatalities	Economic Loss Estimate ($ mn)
01/01-03/31	Flooding, Landslides	Bolivia	52	50
01/01-06/30	Drought	Brazil	N/A	465
01/12	Landslide	Colombia	37	Negligible
01/13-01/14	Flooding	Brazil	12	120
01/16-01/18	Flooding	Brazil	0	30
01/29-02/29	Flooding, Landslides	Ecuador	8	100
02/02-02/09	Wildfire	Chile	131	1,000
02/21-03/02	Flooding	Brazil, Peru, Bolivia	2	190
03/01	Flooding	Brazil	0	80
03/21	Severe Convective Storm	Brazil	0	20
03/22-03/26	Flooding	Brazil	27	140
04/28-05/03	Flooding	Brazil	182	2,450
06/10-06/16	Severe Convective Storm	Chile	1	540
06/14-06/17	Flooding	Ecuador	19	Unknown

Europe

Date(s)	Event	Affected Region(s)	Fatalities	Economic Loss Estimate ($ mn)
01/01-03/31	Drought	Spain	N/A	100
01/02-01/04	Windstorm Henk	Western & Central Europe	3	500
01/21-01/22	Windstorm Isha	Western & Central Europe	4	250
01/23-01/24	Windstorm Jocelyn	Western & Central Europe	1	240
01/31-02/01	Windstorm Ingunn	Norway	0	60
02/22-02/23	Windstorm Louis	Western & Northern Europe	1	430
03/08-03/11	Flooding, Winter Weather	Southern & Western Europe	13	20
03/27-03/28	Windstorm Nelson	Western Europe	4	100
03/30-04/04	Flooding, SCS	Western, Central, Eastern Europe	7	50
04/06-04/10	WS Kathleen & Pierrick	Western Europe	2	30
04/15-04/16	WS Renata / Yupadee	Western & Central Europe	0	30
04/18-04/24	Winter Weather	Western & Central Europe	0	795
05/14-05/17	Severe Convective Storm	Western & Central Europe	0	170
05/15-05/17	Flooding	Italy	1	380
05/17-05/18	Flooding	Germany, France	0	440
05/19-05/20	Severe Convective Storm	Central Europe	0	20

05/19-05/22	Severe Convective Storm	Central & Southeastern Europe	1	5
05/27-05/28	Severe Convective Storm	Central Europe	0	25
06/01-06/07	Flooding	Germany	6	5,400
06/04	Flooding	Poland	0	20
06/06-06/09	Severe Convective Storm	Central Europe	2	650
06/10-06/12	Flooding	Spain	0	80
06/17-06/20	Severe Convective Storm	Central & Western Europe	1	490
06/21-06/23	SCS & Flooding	Central & Southeastern Europe	3	170
06/25-06/28	Severe Convective Storm	Central Europe	0	410
06/28-07/02	Severe Convective Storm	Central & Western Europe	7	330

Africa

Date(s)	Event	Affected Region(s)	Fatalities	Economic Loss Estimate ($ mn)
01/01-01/02	Tropical Storm Alvaro	Madagascar	19	Millions
01/07-01/20	Flooding	South Africa	41	Millions
01/11-01/20	Flooding	Congo, DRC	240	Unknown
01/13	Landslide	Tanzania	22	Negligible
01/14-01/16	Tropical Storm Belal	Réunion, Mauritius	6	570
03/20-04/30	Flooding	Eastern Africa	576	Unknown
03/26-03/29	Cyclone Gamane	Madagascar	19	50
04/13	Landslide	DRC	15	Negligible
06/01-06/03	Flooding	South Africa	22	Unknown
06/04-06/06	Flooding	Algeria	15	Unknown
06/10-06/20	Flooding	Niger	21	Unknown
06/15-06/25	Flooding & Landslides	Ivory Coast	25	Negligible

Middle East

Date(s)	Event	Affected Region(s)	Fatalities	Economic Loss Estimate ($ mn)
02/12-02/13	Flooding & SCS	United Arab Emirates, Oman	6	100
04/08-04/17	Flooding & SCS	Middle East	34	3,200
04/16-04/24	Flooding	Iran	10	Unknown
06/01-06/20	Heatwave	Saudi Arabia	1,000+	N/A
06/18	Earthquake	Iran	4	Millions

Asia

Date(s)	Event	Affected Region(s)	Fatalities	Economic Loss Estimate ($ mn)
01/01	Earthquake	Japan	299	17,900
01/01-06/30	Drought	China	N/A	520
01/01-06/30	Drought	Vietnam	N/A	10
01/14-01/19	Flooding	Philippines	18	Millions
01/17	Winter Weather	China	28	Negligible
01/19-01/23	Winter Weather	China	0	370
01/22	Earthquake	China, Kazakhstan	3	40
01/22	Landslide	China	44	Millions
01/22-02/03	Flooding	Philippines	22	10
02/04-02/08	Winter Weather	China, Japan	11	2,750
02/06	Landslide	Philippines	98	Negligible
02/18-02/19	Avalanche	Afghanistan	27	Negligible
02/27-03/04	Floods & Winter Weather	Pakistan, Afghanistan, Iran	105	Millions
03/01-03/19	Flooding	Indonesia	51	20
03/22	Earthquake	Indonesia	0	40
03/25	Severe Convective Storm	China	0	80
03/31	Severe Convective Storm	India	5	10
03/31-04/03	Severe Convective Storm	Pakistan	10	Unknown
04/01-04/30	Severe Convective Storm	China	12	310
04/01-04/10	Flooding	Russia, Kazakhstan	10	650
04/03	Earthquake	Taiwan	13	880
04/13	Landslide	Indonesia	20	Negligible
04/16	Severe Convective Storm	Japan	0	440
04/19-04/25	Flooding	China	24	1,650
04/25-05/05	Heatwave	Southeastern Asia	45	N/A
04/25-04/26	Landslide	Indonesia	12	Negligible
04/27	Earthquake	Indonesia	0	10
04/28-04/29	Flooding	Pakistan	17	Unknown
04/30-05/01	Severe Convective Storm	Vietnam	1	Millions
05/01	Flooding	China	48	Millions
05/01-05/31	Flooding	China	3	170
05/01-05/31	Severe Convective Storm	China	13	140
05/03-05/05	Flooding	Indonesia	12	Unknown
05/05	Severe Convective Storm	India	1	Millions

05/10-05/11	Flooding	Afghanistan	347	Unknown
05/10-05/13	Severe Convective Storm	India	17	Unknown
05/10-05/15	Severe Convective Storm	Sri Lanka	10	Unknown
05/11	Landslide	Indonesia	67	Millions
05/15-06/12	Flooding	Sri Lanka	37	Unknown
05/17-05/18	Flooding	Afghanistan	150	Unknown
05/18-05/27	Heatwave	India, Pakistan	219	N/A
05/24-05/27	Typhoon Ewiniar	Philippines	6	20
05/26-05/27	Cyclone Remal	Bangladesh, India	84	620
06/01-06/19	Flooding	Bangladesh	31	20
06/04-06/07	Flooding	Indonesia	6	Unknown
06/09-07/14	Flooding	China	150	6,350
06/20-06/30	Heatwave	Pakistan	568	N/A
06/23-06/24	Landslide	Afghanistan	12	Unknown

Oceania

Date(s)	Event	Affected Region(s)	Fatalities	Economic Loss Estimate ($ mn)
02/13-02/14	Severe Convective Storm	Australia	0	170
03/19	Flooding & Landslide	Papua New Guinea	23	60
04/03-04/08	Severe Convective Storm	Australia	0	210

References

1 Aon, 2023: Rising Losses from Severe Convection Storms Mostly Explained by Exposure Growth

2 Agee, E., J. Larson, S. Childs, and A. Marmo, 2016: Spatial Redistribution of U.S. Tornado Activity between 1954 and 2013. *J. Appl. Meteor. Climatol.*, **55**, No. 8, 1681-1697, https://doi.org/10.1175/JAMC-D-15-0342.1

3 Gensini V.A., and H.E. Brooks, 2018: Spatial trends in United States tornado frequency. *Npj Clim. Atmos. Sci.*, **1**, 38, https://doi.org/10.1038/s41612-018-0048-2

4 Strader S.M., and W.S. Ashley, 2018: Finescale Assessment of Mobile Home Tornado Vulnerability in the Central and Southeast United States. *Wea. Climate Soc.*, **10**, No. 4, 797-812, https://doi.org/10.1175/WCAS-D-18-0060.1

5 Ashley S.A., A.J. Krmenec, and R. Schwantes, 2008: Vulnerability due to Nocturnal Tornadoes. *Wea. Forecasting.*, **23**, No. 5, 795-807, https://doi.org/10.1175/2008WAF2222132.1

6 Gesamtverband der Deutschen Versicherungswirtschaft e.V. (2023). Naturgefahrenreport 203. (In German)

7 Clarke E. et al., 2024: Climate change, El Niño and infrastructure failures behind massive floods in southern Brazil. Grantham Institute for Climate Change

8 Zachariah, M. et al., 2024: Heavy precipitation hitting vulnerable communities in the UAE and Oman becoming an increasing threat as the climate warms. Grantham Institute for Climate Change

9 Fosu B. et al., 2024: Assessing Future Tropical Cyclone Risk Using Downscaled CMIP6 Projections. Journal of Catastrophe Risk and Resilience, submitted January (2024), revised July (2024).

10 Sobel A.H. et al., 2023: Near-term tropical cyclone risk and coupled Earth system model biases. Proc Natl Acad Sci U S A., 120(33), doi: 10.1073/pnas.2209631120

Disclaimer

Please note that any financial loss estimate is preliminary and subject to change. These estimates are provided as an initial view of the potential financial impact from a recently completed or ongoing event based on early available assessments. Significant adjustments may inevitably occur.

All financial loss totals are in US dollars ($) unless noted otherwise.

Structures are defined as any building — including barns, outbuildings, mobile homes, single or multiple family dwellings, and commercial facilities — that is damaged or destroyed by winds, earthquakes, hail, flood, tornadoes, hurricanes, or any other natural-occurring phenomenon.

Claims are defined as the number of claims (which could be a combination of homeowners, commercial, auto, and others) reported by various public and private insurance entities through press releases or various public media outlets.

Damage estimates are obtained from various public media sources, including news websites, publications from insurance companies, financial institution press releases, and official government agencies. Economic loss totals are separate from any available insured loss estimates. An insured loss is the portion of the economic loss covered by public or private insurance entities. In rare instances, specific events may include modeled loss estimates determined from utilizing Impact Forecasting's suite of catastrophe model products.

Fatality estimates as reported by public news media sources and official government agencies.

The information contained herein and the statements expressed are of a general nature and are not intended to address the circumstances of any particular individual or entity. Although we endeavor to provide accurate and timely information and use sources we consider reliable, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation.

Contacts

Contact the authors:

Michal Lörinc
Head of Catastrophe Insight
michal.lorinc@aon.com

Ondřej Hotový
Catastrophe Analyst
ondrej.hotovy@aon.com

Antonio Elizondo
Senior Scientist
antonio.elizondo@aon.com

Tomáš Čejka
Catastrophe Analyst
tomas.cejka@aon.com

About Aon:

Aon plc (NYSE: AON) exists to shape decisions for the better — to protect and enrich the lives of people around the world. Our colleagues provide our clients in over 120 countries with advice and solutions that give them the clarity and confidence to make better decisions to protect and grow their business. Follow Aon on Twitter and LinkedIn.
Stay up-to-date by visiting the Aon Newsroom and sign up for News Alerts here.