Global Catastrophe Recap

First Half of 2023

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Executive Summary

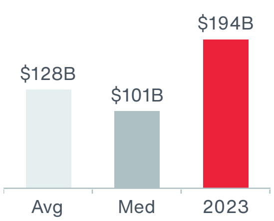
The first half of 2023 saw elevated disaster losses, with the fifth highest economic impact on record and the highest since 2011. This was largely driven by the destructive February earthquakes in Turkey & Syria, which was responsible for nearly half of the total and became the 11th deadliest global disaster in modern history.

Insured losses were largely driven by relentless severe convective storm activity in the United States with 8 multi-billion-dollar events, even though the single costliest disaster for the industry was the February earthquakes.

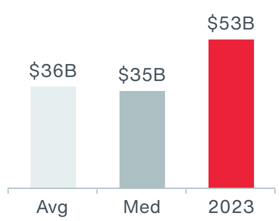
The world saw many remarkable events, including the two back-to-back billion-dollar disasters that impacted the North Island of New Zealand within a three-week period in the first quarter. The total number of events that resulted in at least $1.0 billion of insured losses (18) was the highest on record on price-inflated basis.

Disaster costs continued to be affected by inflationary pressure, still persistent in many parts of the world, as well as other societal factors. Impacts of many events provided important lessons for the future of disaster resilience.

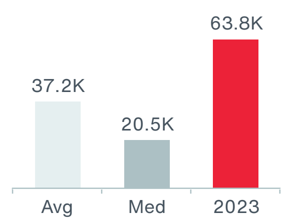
1H Global Economic Losses



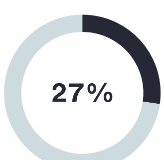
1H Global Insured Losses



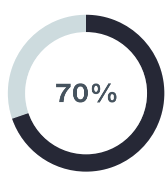
1H Global Fatalities



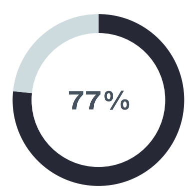
Protection Gap
Only a quarter of total losses covered by insurance



Severe Convective Storm
Costliest peril for insurers with 70% of global losses



United States
3/4 of global insured losses occurred in the United States



Total Events

Billion-Dollar Events (Economic)

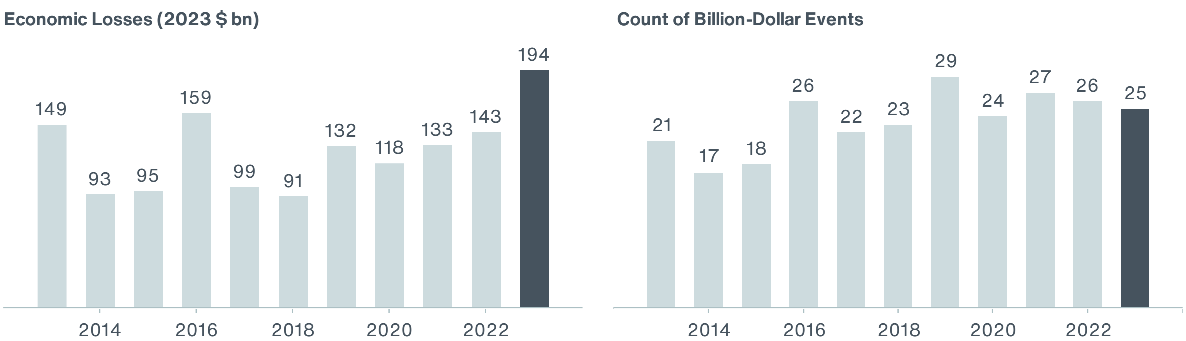
Billion-Dollar Events (Insured)

Averages and medians since 2000. All losses are in 2023 USD (adjusted for price inflation). Data: Aon Catastrophe Insight

Elevated Economic Losses Driven by Turkey Earthquake

Global economic losses from natural disasters in the first half of 2023 were preliminarily estimated at **$194 billion**, notably above the 21st-century average of $128 billion and **5th highest on record**. This year's losses already constitute 60% of the average annual global total. It is also anticipated that there will be robust loss development and the global losses will further increase. However, nearly half of the losses can be attributed to the destructive February earthquake sequence in Turkey and Syria. In total, 1H 2023 saw at least 25 individual billion-dollar economic loss events. All but one of those events were weather-related, with 17 registered in the U.S., followed by APAC (4), EMEA (3) and the Americas (1).

EXHIBIT 1: 1H Global Natural Disaster Losses



Data: Aon Catastrophe Insight

EXHIBIT 2: 1H 2023 Economic Loss Events

Data: Aon Catastrophe Insight

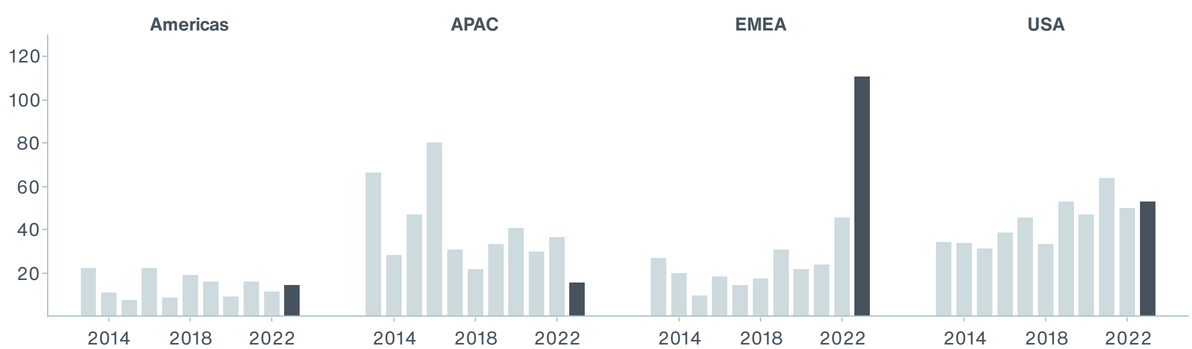
There are several estimates of economic loss for the Turkey & Syria Earthquake. The $91 billion figure includes total physical damage as estimated jointly by the Government of Turkey, the World Bank, the United Nations and the European Union. While there may be some loss development, this total makes the event the **11th costliest disaster on record globally** on a price-inflated basis. At least five other events generated losses exceeding $5 billion. While there were two APAC events in the top 10 table, both occurred in New Zealand, while no other event in Asia reached the $2 billion mark.

EXHIBIT 3: Top 10 Costliest Economic Loss Events in 1H 2023

Date	Event	Location	Deaths	Economic Loss (USD bn)
02/06	**Turkey & Syria Earthquakes**	Turkey & Syria	59,259	91.0
01/01-06/30	**La Plata Basin Drought**	Brazil, Argentina, Uruguay	N/A	9.9
05/13-05/17	**Emilia-Romagna Floods**	Italy	15	9.7
03/01-03/03	**Severe Convective Storm**	United States	13	6.1
01/01-06/30	**Drought**	Spain	N/A	5.6
03/31-04/01	**Severe Convective Storm**	United States	37	5.5
02/12-02/17	**Cyclone Gabriele**	New Zealand	11	3.9
06/21-06/26	**Severe Convective Storm**	United States	7	3.8
01/27-02/02	**Auckland Floods**	New Zealand	4	3.3
06/10-06/15	**Severe Convective Storm**	United States	3	3.1

As a result of the February earthquakes, economic losses in the **EMEA** region ($111 billion) were unprecedented and by far exceeded the previous 1H record, set in 1990. While losses in the Americas were close to both decadal and 21st-century averages, U.S. losses were up 23%, or 48%, respectively. On the other hand, 1H losses in the Asia-Pacific region were significantly below average and on their lowest since 2005.

EXHIBIT 4: 1H Economic Losses by Region (2023 USD bn)

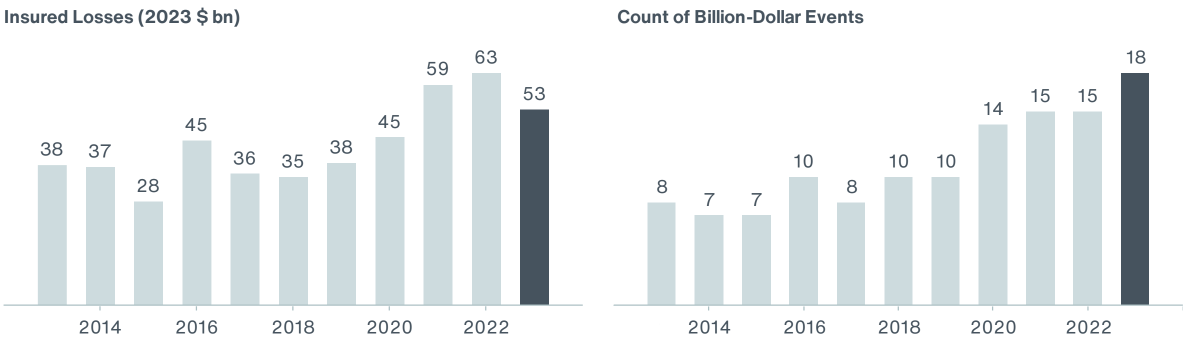


Data: Aon Catastrophe Insight

Insured Losses 4th Highest on Record, Driven by SCS

Global insured losses from natural disaster events in 1H 2023 were preliminarily 46% above the 21st-century average, and 25% above the decadal mean. This was also the **4th highest 1H total on record**, only after 2011, 2022 and 2021. Similarly to previous years, losses were driven by SCS activity, predominantly in the United States. There were at least 18 individual billion-dollar events, **the highest 1H total on record**, with 14 recorded in the United States, 2 in New Zealand, 1 in Turkey and 1 in Western & Central Europe.

EXHIBIT 5: 1H Global Insured Losses



Data: Aon Catastrophe Insight

EXHIBIT 6: 1H 2023 Insured Loss Events

Data: Aon Catastrophe Insight

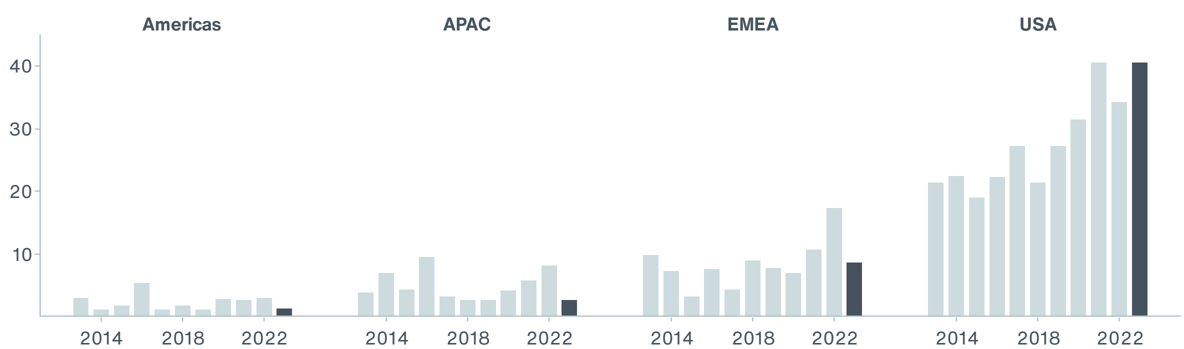
Severe convective storm events in the United States dominated the table of top 10 costliest events in terms of insured loss. However, the costliest event of the 1H of 2023 was the earthquake sequence in Turkey. Total losses from the event, considering both public and private insurance schemes, are estimated at more than TRY100 billion - or $5.6 billion, using the average February exchange rate and subsequent price inflation. Other important events included an early February winter storm in North America, as well as two billion-dollar events in New Zealand.

EXHIBIT 7: Top 10 Costliest Insured Loss Events in 1H 2023

Date	Event	Location	Deaths	Insured Loss (USD bn)
02/06	**Turkey & Syria Earthquakes**	Turkey & Syria	59,259	5.6
03/01-03/03	**Severe Convective Storm**	United States	13	4.9
03/31-04/01	**Severe Convective Storm**	United States	37	4.4
06/21-06/26	**Severe Convective Storm**	United States	7	3.0
06/10-06/15	**Severe Convective Storm**	United States	3	2.5
06/15-06/20	**Severe Convective Storm**	United States	5	2.5
04/18-04/22	**Severe Convective Storm**	United States	3	2.3
04/03-04/07	**Severe Convective Storm**	United States	5	2.3
05/09-05/14	**Severe Convective Storm**	United States	1	2.2
03/23-03/28	**Severe Convective Storm**	United States	23	1.8

Total 1H insured losses in the United States in 2023 reached at least $40 billion and were the 3rd highest on record after 2011 and 2021, with further loss development expected in the coming months. Despite unprecedented economic losses in EMEA, the region actually recorded insured losses close to the decadal average and only 23% above the mean since 2000, owing to the large earthquake protection gap in Turkey and Syria, as well as a relatively slow start to the SCS season in Europe and under-average windstorm losses. Insured losses in both APAC and Americas were below their means.

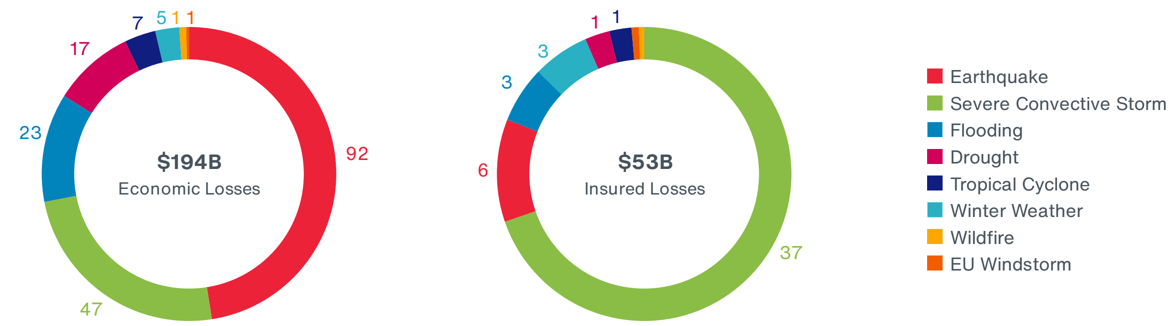
EXHIBIT 8: 1H Insured Losses by Region (2023 USD bn)



Data: Aon Catastrophe Insight

Peril Perspective: Remaining Protection Gaps Revealed

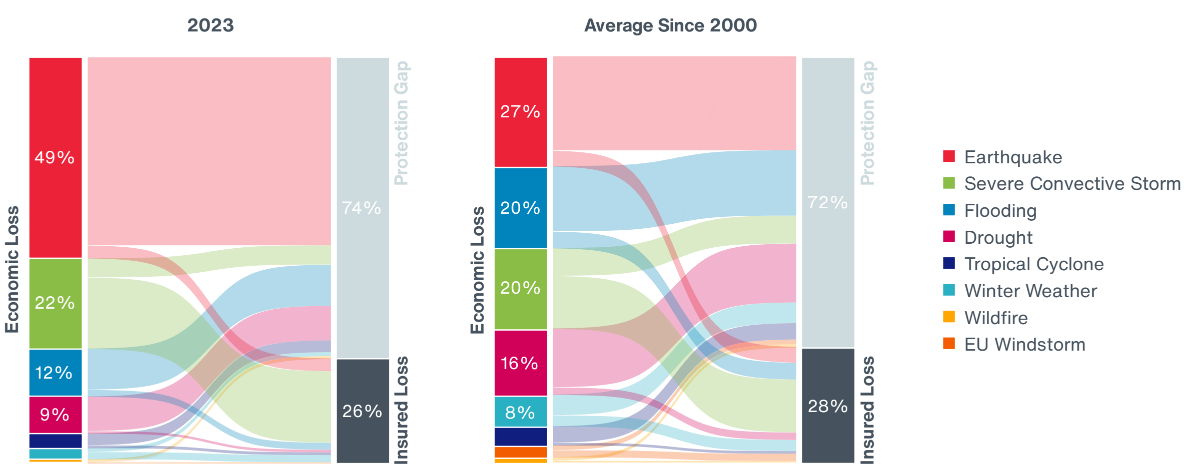
EXHIBIT 9: 1H 2023 Economic & Insured Losses by Peril (2023 USD bn)



Data: Aon Catastrophe Insight

Earthquake was by far the costliest type of natural disaster in terms of total economic losses. However, due to a large protection gap for the peril, insured losses were dominated by severe convective storms, with nearly $37 billion of global losses, surpassing the historical 1H record set in 2011. Remarkably, more than 95% of SCS losses occurred in the United States.

EXHIBIT 10: 1H Economic & Insured Losses by Peril and the Protection Gap (2023 USD bn)



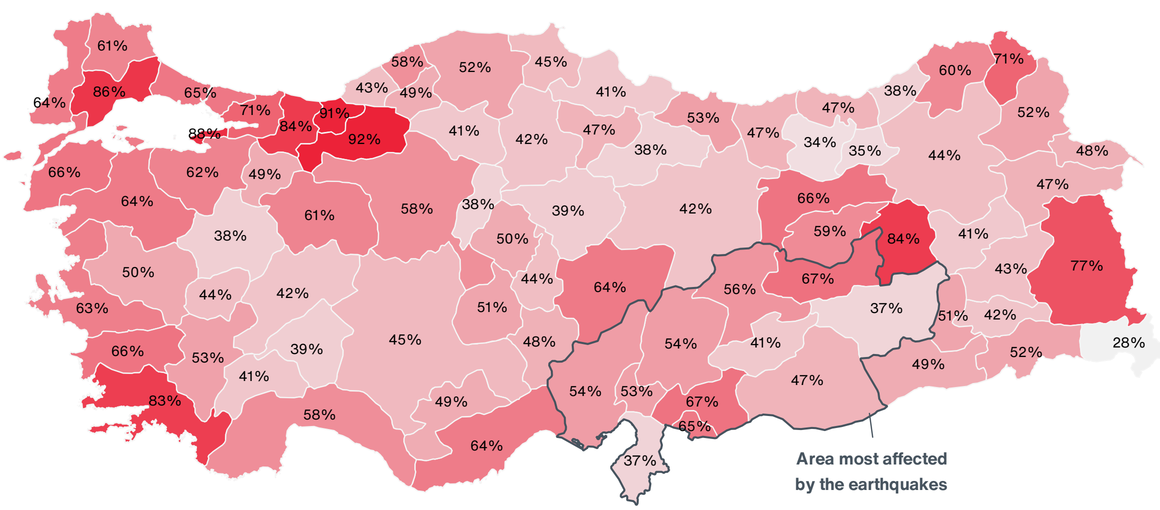
Data: Aon Catastrophe Insight

What Surprised Us in 1H 2023

1) Earthquakes in Turkey Highlight Issues of Underinsurance and Building Practices

On February 6, a devastating earthquake sequence started to affect Turkey & Syria. The event became the deadliest global disaster since 2010, the 11th deadliest overall, and by far the costliest and deadliest event in both countries' modern history. The Insurance Association of Turkey (TSB) estimated total losses to the private insurance sector at TRY76 billion ($4.0 billion). Additionally, the public insurance scheme facilitated by the TCIP (Turkish Catastrophe Insurance Pool) received nearly 600,000 claims, with total payments expected to reach TRY29.5 billion ($1.6 billion), according to the most recent estimates published by the entity.

EXHIBIT 11: Compulsory Earthquake Insurance Take-up Rate by Province



Data: TCIP

The scale of the disaster prompted large-scale relief operation and international aid. However, important factors hindered the relief and further contributed to the high death toll. These included cold weather at the time of the occurrence with rain, snow and very low temperatures, as well as the March flooding in Şanlıurfa and Adıyaman provinces, which affected the disaster area.

The event also highlighted the importance of enacting and enforcing modern building codes, which have the potential to prevent material losses and fatalities. Despite relatively strict and modern rules currently in place in Turkey, which were progressively enacted after the devastating 1999 İzmit earthquake, structural integrity and performance of building stock varied in the affected regions.

While unreinforced structures built before 1999 are generally expected to perform worse than modern buildings, many of the collapsed buildings were built relatively recently, with many total collapses of newly built multi-story residential buildings. This experience shows that regulation and enforcement of the building code rules are of critical importance.

Due to its significance, the event also prompted robust catastrophe modelling response. This process had to deal with several issues; for example, the main shock was only the beginning of a prolonged sequence of events with overlapping footprints. Moreover, the modelled footprints underwent several updates, which featured locally sourced seismological data. These proved to provide an improved understanding of the event and allowed for modelling in higher precision.

2) Unprecedented Weather-related Losses in New Zealand

During a three-week period between late January and mid-February, New Zealand recorded two back-to-back billion-dollar weather disasters, the severity of which broke historical records. Insured losses generated by these extreme precipitation events is comparable to total cumulative losses sustained by the local insurance sector since 2000; the costliest weather disaster till 2022 did not exceed $125 million in price-inflated losses.

It is also worth noting that these losses, which occurred within a short period of time on a relatively small area of the North Island (area of ~114,000 km^2), constitute a vast majority of insured losses recorded in the first six months of 2023 in the entire region of APAC (with a vast landmass of ~47 million km^2). However, the 2023 events still do not come anywhere close to the loss levels incurred by the destructive earthquakes in the South Island in 2010 & 2011 (see the table below).

EXHIBIT 12: New Zealand Top Insured Losses (2023 USD bn)

Costliest Events	Date	Insured Loss (2023 USD bn)
1st Christchurch Earthquake (2011)	May 21, 2011	21.1
Canterbury Earthquake (2010)	September 3, 2010	10.4
2nd Christchurch Earthquake (2011)	June 13, 2011	6.9
Kaikoura Earthquake (2016)	November 14, 2016	2.6
Cyclone Gabrielle (2023)	**February 12-17, 2023**	**1.2**
Auckland Flooding (2023)	**January 27- February 2, 2023**	**1.0**

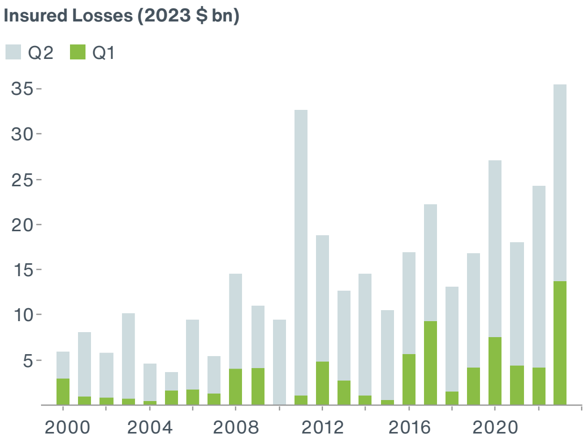
Despite large uncertainties and difficult quantification due to the small size of the affected area, initial attribution studies argued that climate change might have made similar events more likely.

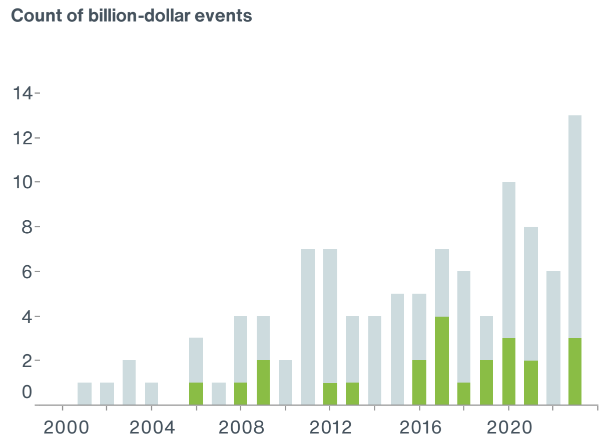
3) Consistently Increasing SCS Losses in the United States Near Historical Records

Relentless severe convective storm activity across the United States throughout the first half of 2023 reaffirmed the position of this “secondary” peril as the dominant global driver of insured losses. Considering preliminary estimates and potential loss development in the coming weeks and months, the 1H of 2023 will exceed the current record for the period, set in 2011. Remarkably, the first quarter was by far the costliest Q1 on record, if the outbreak of March 31 – April 1 is included, surpassing the previous record by nearly 50%.

As opposed to large, catastrophic events, which occasionally drive extreme losses from primary perils, SCS is characterized by higher (and increasing) frequency of smaller and medium-sized events. This is also demonstrated by a number of billion-dollar events, which was the highest on record in 2023 (see the graphic below).

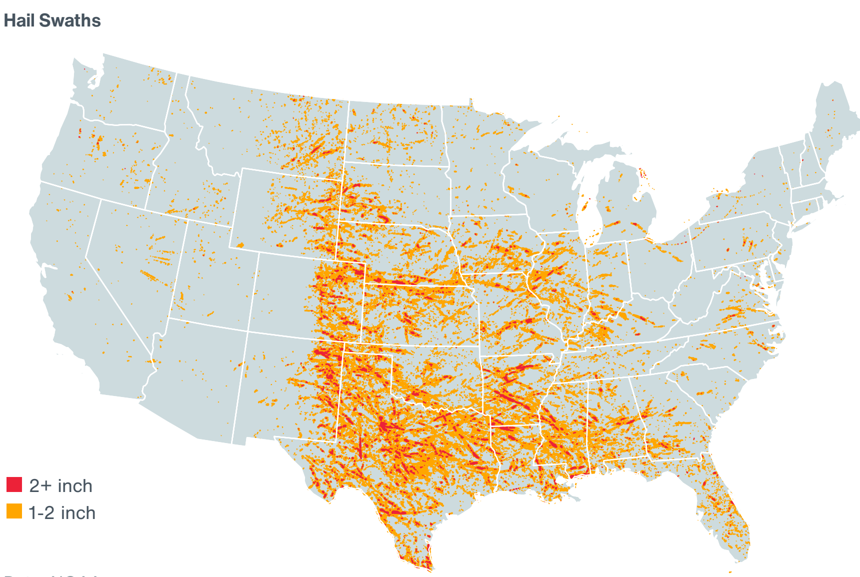
EXHIBIT 13: Q1/Q2 U.S. Insured Losses from SCS (2023 USD bn)

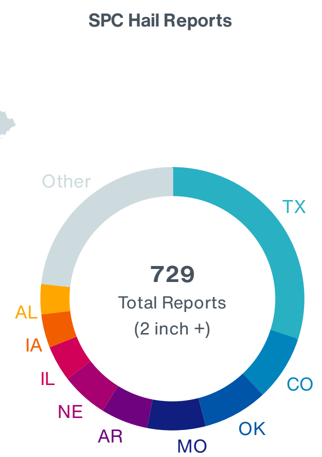




Data: Aon Catastrophe Insight

EXHIBIT 14: Q1/Q2 Hail Swaths and SPC Hail Reports by State





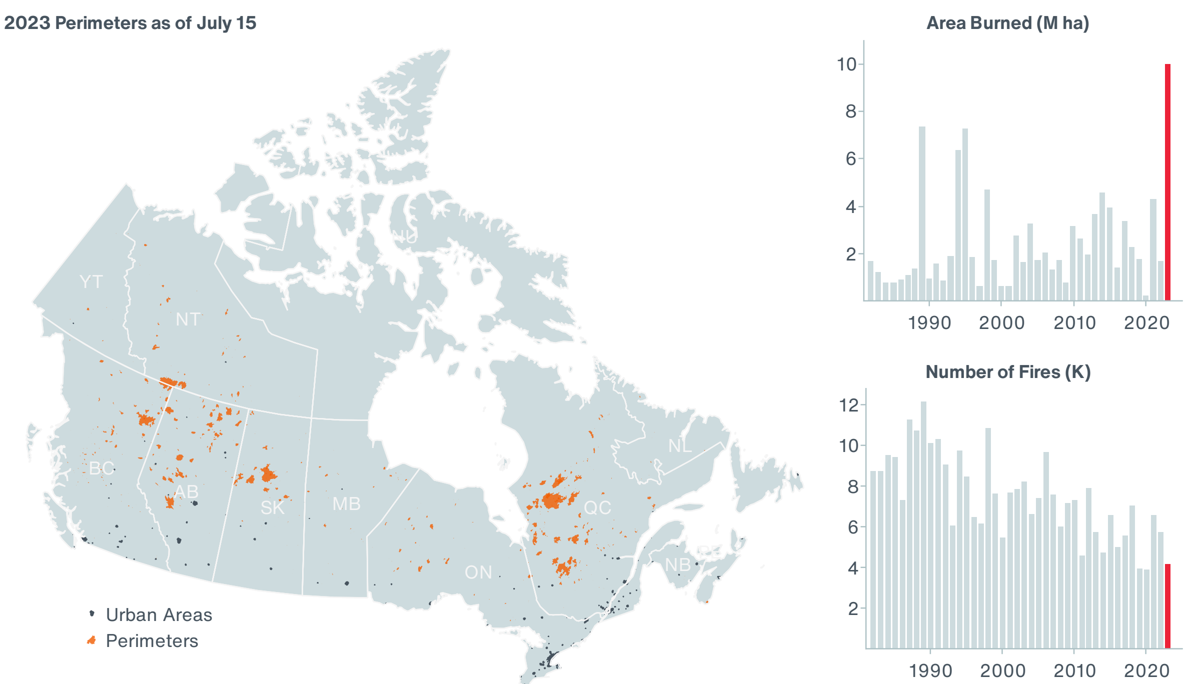
Data: NOAA

4) Manageable Material Losses, but Severe Health Hazard from Canada Wildfires

The prolonged wildfire activity across multiple Canadian provinces resulted in more than 8 million hectares of land being burned. While some human settlements were affected, notably the outskirts of Halifax in Nova Scotia by the Tantallon Wildfire, vast majority of the fires did not cause significant material damage to property and total insured losses in eastern Canada were initially anticipated to reach into the hundreds of millions CAD. As the fires mostly affected the interior of the vast Canadian territory far away from the population centers in the southern parts of the country, many of the large fires were left without suppression activity and were only monitored *to "minimize social disruption and/or significant value and resource impacts while achieving beneficial ecological, economic or resource management objectives"* (CIFFC).

At the same time, concerns related to non-material impacts emerged in the United States, where thick smoke plumes generated hazardous air conditions and potentially significant health impacts for tens of millions of people, particularly across the Northeast.

EXHIBIT 15: Canada Wildfires (2023 YTD)



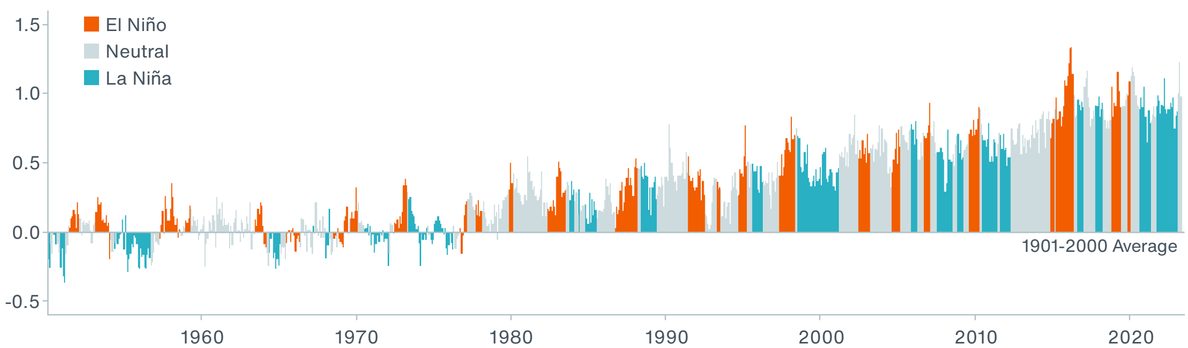
Data: National Resources Canada, CIFFC

Climate Perspective: The Evolving Risk

Climate and Oceans Exhibiting Signs of Continued Warming Amid El Niño

A warmer El Niño-Southern Oscillation (ENSO) phase (as defined by NOAA) is currently observed and expected to gradually strengthen and remain in place during the Northern Hemisphere winter of 2023/2024. What should be expected and what are the implications on the behavior of natural hazards? From a perspective of overall increasing trend in global land and ocean temperature, El Niño phase usually contributes to warmer years and months in climate record (see Exhibit 16).

EXHIBIT 16: Monthly Global Land and Ocean Temperature Anomalies 1950-2023 (˚C)



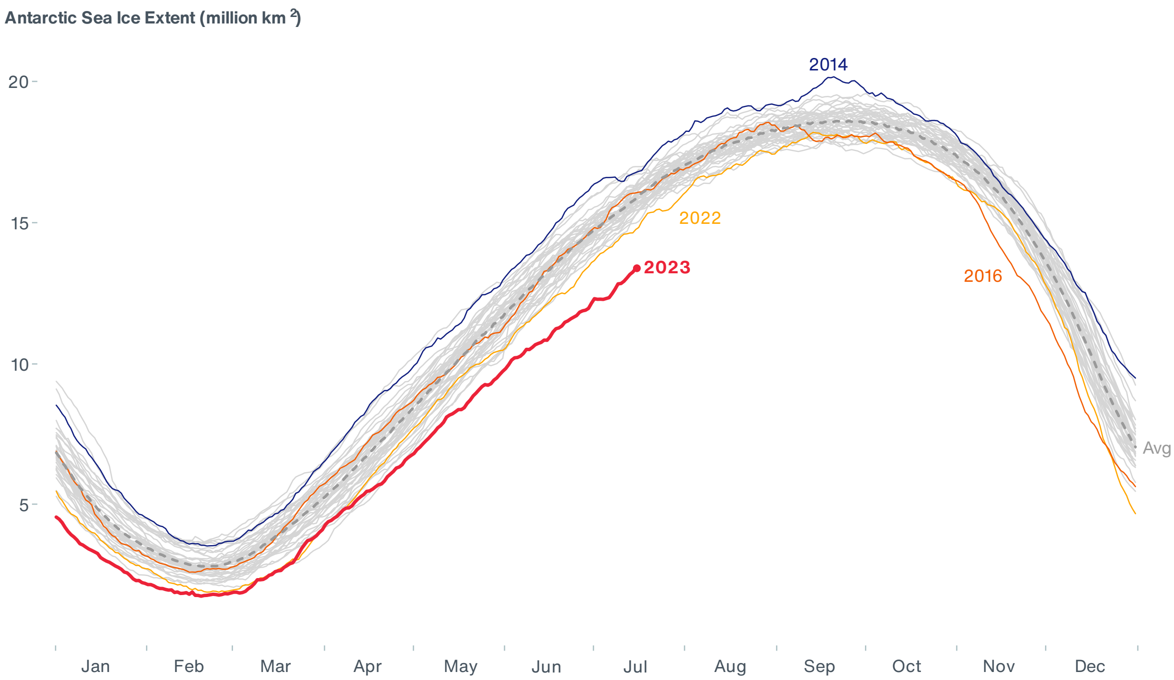
Data: NOAA/NCEI; Graphic: Aon Catastrophe Insight

Several climatological parameters are showing unprecedented behavior this year, including global sea surface temperatures well above long-term averages, record low Antarctic sea ice extent, and extreme heatwaves worldwide. During the first half of 2023, global **sea surface temperature** stood extremely high. Based on the Optimum Interpolation Sea Surface Temperature (OISST) series, gathered by satellites and buoys and collated by NOAA, temperatures higher than in any previous year since 1981 were recorded. This situation is unique as the ocean temperatures have already been at their record highs since March, even before El Niño conditions developed.

This year, some areas experienced water temperatures up to 5˚C (9˚F) higher than usual, a state of **marine heatwave** thus became more pronounced. Marine heatwaves are defined by the Physical Science Laboratory of NOAA as "*periods of persistent anomalously warm ocean temperatures, which can have significant impacts on marine life as well as coastal communities and economies.*" Marine heatwaves have been observed around the world and are expected to increase in intensity and frequency under anthropogenic climate change. During 1H of 2023, notable examples of sea surface temperatures well above normal were found in the North Atlantic, particularly off the north-east coast of England and west of Ireland.

Unprecedented conditions also developed in the polar regions. While the **Arctic Sea Ice extent** is not exhibiting extremely low extent this year, the total ice extent in the Antarctic continues to track at extreme record lows. The dramatically slow pace of ice growth through the autumn and early winter (spring and early summer in the Northern Hemisphere) is a topic of intense research. This year's anomaly was likely caused by warmer ocean conditions in the polar water layer and by warm winds blowing southward along the Western Peninsula, which was related to eastward position of the Amundsen Sea Low.

EXHIBIT 17: Antarctica Sea Ice Extent (as of July 15)



Data: Fetterer, F., K. Knowles, W. Meier, M. Savoie, and A. K. Windnagel. 2017, updated daily. Sea Ice Index, Version 3. Boulder, Colorado USA. NSIDC [7/3/2023]

Additionally, notable **heatwaves** occurred worldwide in the 1H of 2023, affecting millions of people across different regions of the world and breaking hundreds of all-time and monthly temperature records. The most remarkable deadly heatwaves hit Argentina and Uruguay in February and March, several rounds of extreme and prolonged heat have struck most of the countries in South-eastern Asia since April, including many densely populated provinces in China. Severe heatwave periods were reported in central and south Asia. The most recent extreme heat hit multiple locations across North America, particularly northern Mexico and the southern United States, or Canada, enhancing the worst wildfire season on record.

According to NOAA's 174-year record, April 2023 was the fourth-warmest April for the globe, May 2023 was the third warmest, and June 2023 was the warmest June globally. Slightly beyond the 1H Report timeframe, the 7 days between July 3-9 were the **hottest days on record globally** in terms of average global temperature, according to the Copernicus ERA5 data, marking the first week of July the hottest week on record with daily average surface air temperatures exceeding 17˚C (62.6˚F). These values broke previous record of 16.8˚C (62.2˚F) set in August 2016.

Impact of ENSO on Peril Behavior

ENSO phases affect the global climate and disrupt normal weather patterns, which can result in changed behavior of natural hazard patterns in some areas. The phases shift back and forth irregularly every two to seven years, bringing predictable changes in ocean surface temperature. El Niño conditions in the tropical Pacific are known to shift rainfall patterns in many different parts of the world.

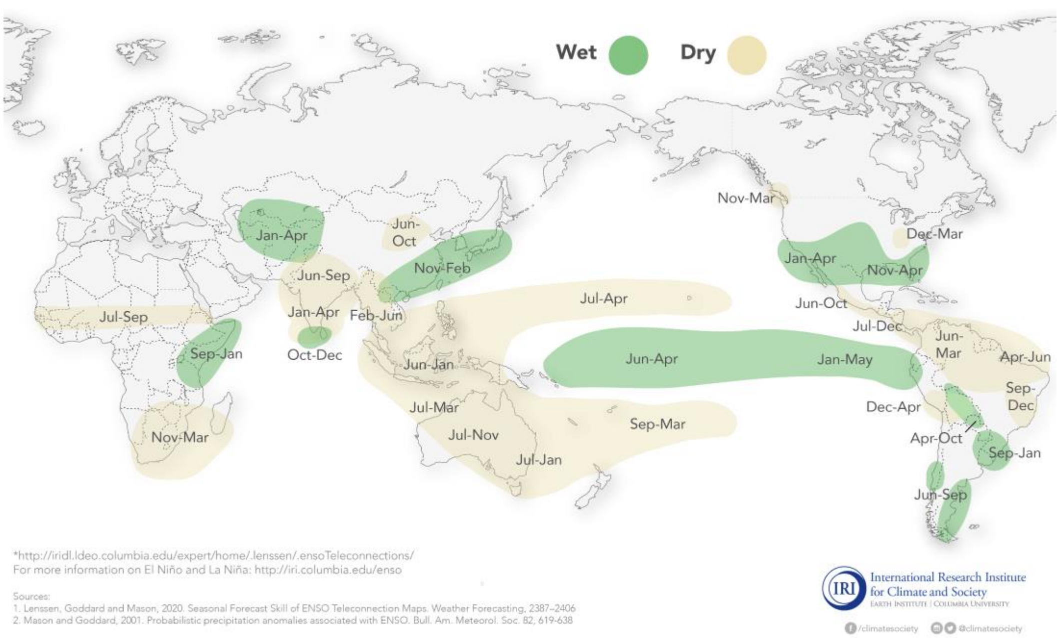
In the **United States**, ENSO phases have their strongest influence on seasonal climate during winter, however, some effects on the spring SCS or hurricane season can be recognised. As demonstrated below on Aon Catastrophe Insight data, the United States normally experiences relatively lower economic losses caused by severe convective storms, tropical cyclones, or drought, which is in a good agreement with ENSO impacts presented on NOAA's [Climate.gov]() portal or by [Columbia's Climate School IRI](). Reversely, flooding typically results in higher losses during El Niño phases.

Data shows that warm ENSO phase often brings more flooding-related losses also to the **Americas** region, particularly in the tropical west coast and south-eastern parts of South America. Throughout South America, weather patterns exhibit a substantial, yet regionally diverse, relationship with ENSO.

More flood-related losses have been reported in the **EMEA** region during El Niño phases, although the direct impacts of ENSO on the weather patterns in the North Atlantic–European region discussed in recent studies are not well understood. ENSO oscillations may be among the factors affecting polar front jet stream variability, which is consequently responsible for instances of extreme weather over the European region, according to [Hall et al. 2014]().

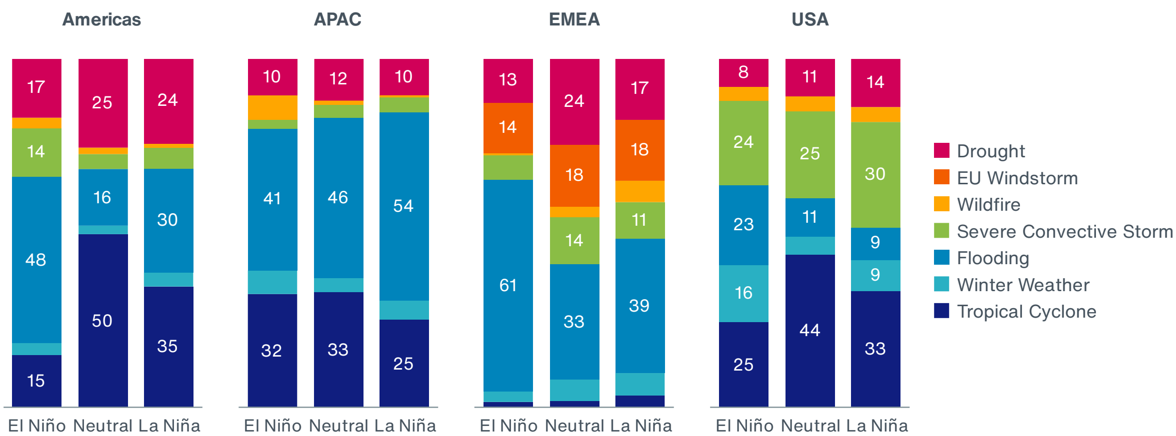
Please note that all earthquake-related losses were excluded from the analysis.

EXHIBIT 18: Typical Impacts of El Niño Warm Phase on Rainfall Patterns



Source: IRI, Earth Institute – Columbia University

EXHIBIT 19: Contribution of Natural Perils to Total Economic Losses since 1970 During ENSO Phases (%)



Data: Aon Catastrophe Insight

Appendix: 2023 Data

United States

Date(s)	Event	Location	Deaths	Economic Loss (2023 $ million)
01/01-06/30	Drought	United States	N/A	1,000
01/04-01/10	Flooding	California	0	1,400
01/07	Severe Convective Storm	Texas	0	80
01/11-01/16	Flooding	California	0	610
01/12	Severe Convective Storm	Alabama, Georgia	11	760
01/17-01/19	Flooding	California	0	225
01/23	Winter Weather	Northeast	0	25
01/24	Severe Convective Storm	South	0	255
01/31-02/02	Winter Weather	South	8	380
02/02-02/05	Winter Weather	Northeast	1	1,700
02/07-02/09	Severe Convective Storm	Indiana, Kentucky, Ohio, Texas	0	260
02/15-02/16	Severe Convective Storm	Oklahoma, Texas	0	250
02/21-02/22	Winter Weather	California, Arizona, New Mexico	0	405
02/21-02/23	Winter Weather	Midwest, Northeast	0	320
02/23-02/25	Winter Weather	California	0	320
02/26-02/28	Severe Convective Storm	Southwest	0	700
02/26-03/02	Winter Weather	California	0	175
03/01-03/03	Severe Convective Storm	Southeast, Midwest	13	6,100
03/09-03/12	Flooding	California, Nevada	2	250
03/13-03/15	Winter Weather	Northeast	0	215
03/13-03/15	Winter Weather	California	0	450
03/16-03/17	Severe Convective Storm	Oklahoma, Texas	0	695
03/21-03/23	Severe Convective Storm	California	5	500
03/23-03/28	Severe Convective Storm	Southeast	23	2,200
03/31-04/01	Severe Convective Storm	Midwest, Plains, Southeast	37	5,450
04/02-04/03	Severe Convective Storm	Texas	0	140
04/03-04/07	Severe Convective Storm	Southwest, Southeast, Midwest	5	2,800
04/12-04/14	Flooding	Florida	0	650
04/14-04/17	Severe Convective Storm	Southeast, Midwest	5	1,250
04/18-04/22	Severe Convective Storm	Southwest, Midwest	3	2,900
04/25-04/27	Severe Convective Storm	Oklahoma, Florida, Texas	0	1,250

04/28-04/30	Severe Convective Storm	Southeast, Northeast	0	1,125
05/02-05/09	Severe Convective Storm	Plains, Southeast, Midwest	0	1,250
05/09-05/14	Severe Convective Storm	Midwest, Plains	1	2,750
05/17-05/20	Severe Convective Storm	Texas	0	1,250
05/22-05/26	Severe Convective Storm	Texas, New Mexico, Colorado	2	625
05/23-05/30	Severe Convective Storm	West, Midwest	0	135
05/31-06/04	Severe Convective Storm	New Mexico, Oklahoma, Texas	0	200
06/05-06/08	Severe Convective Storm	Plains	0	500
06/10-06/15	Severe Convective Storm	South, Plains	3	3,150
06/15-06/16	Severe Convective Storm	Michigan, Ohio	0	500
06/15-06/20	Severe Convective Storm	Midwest, Southeast	5	3,100
06/20-06/30	Heatwave	South, Southeast	14	N/A
06/21-06/26	Severe Convective Storm	Plains, Southeast	0	3,750
06/26-07/02	Severe Convective Storm	Midwest, Plains, SE, NE	1	750

Remainder of North America (Non-U.S.)

Date(s)	Event	Location	Deaths	Economic Loss (2023 $ million)
02/02-02/05	Winter Weather	Canada	2	165
03/31-04/01	Severe Convective Storm	Canada	0	40
04/06-04/07	Winter Weather	Canada	0	360
05/01-06/30	Alberta Wildfires	Canada	0	10s of millions
05/28-06/04	Tantallon Wildfire	Canada	0	275
05/28-06/13	Wildfire	Canada	0	10 of millions
06/02-06/04	Flooding	Haiti	51	Millions
06/08-06/10	Flooding	Cuba	6	Millions
06/15-06/30	Heatwave	Mexico	167	N/A

South America

Date(s)	Event	Location	Deaths	Economic Loss (2023 $ million)
01/01-01/12	Flooding	Brazil	10	140
01/01-03/31	Drought	Brazil, Uruguay, Argentina	N/A	9,900
01/01-04/15	Flooding	Ecuador	30	200
01/17-01/18	Flooding	Brazil	5	10
02/01-02/08	Flooding	Brazil	0	25
02/01-03/06	Wildfire	Chile	26	605

02/05-02/08	Flooding	Peru, Bolivia	38	Millions
02/15-02/22	Flooding	Brazil, Paraguay	65	30
03/08-03/11	Storm Yaku	Peru	6	690
03/08-03/12	Flooding	Brazil	0	95
03/16-03/21	Flooding	Brazil	10	50
03/18	Earthquake	Ecuador, Peru	18	100
03/23-03/25	Flooding	Brazil	0	20
03/26	Landslide	Ecuador	65	Millions
04/10-04/14	Flooding	Peru	25	300
06/01-06/04	Flooding	Ecuador	0	Millions
06/15-06/16	Flooding	Brazil	16	205
06/23-06/28	Flooding	Chile	2	760

Europe

Date(s)	Event	Location	Deaths	Economic Loss (2023 $ million)
01/01	Flooding	Spain, Portugal	0	25
01/01-05/31	Drought	Spain	N/A	5,500
01/14-01/15	Windstorm Frederic	Western Europe	0	10s of millions
01/16	Windstorm Gerard (Gero)	Western Europe	0	105
01/16-01/17	Windstorm Fien (Harto)	Western Europe	1	65
02/01	Windstorm Oleg	Germany, Czech Republic, Poland	0	30
02/03-02/04	Windstorm Pit	Central Europe	0	55
02/04-02/05	Winter Weather	Austria, Italy, Switzerland	11	Negligible
02/17-02/18	Windstorm Otto	Western, Northern & Central Europe	0	75
03/08-03/13	Windstorm Larisa	Western & Central Europe	0	10s of millions
03/25-03/26	Windstorm Khusru	France, Central Europe	0	Millions
03/27-04/06	Winter Weather	Austria	0	55
03/29-04/15	Wildfire	Spain	0	110
03/31	Windstorm Mathis	Western & Central Europe	2	170
04/12	Windstorm Noa	Western Europe	0	Millions
04/29	Severe Convective Storm	Spain	0	65
05/01-06/15	Severe Convective Storm	Spain	0	120
05/05-05/07	Severe Convective Storm	Central Europe	0	10s of millions
05/13-05/17	Flooding	Central & Eastern Europe	0	10s of millions
05/13-05/17	Flooding	Italy	15	9,650
05/22-05/23	Flooding	Western & Central Europe	0	35

06/06-06/07	Flooding	Central Europe	1	Millions
06/08-06/12	Severe Convective Storm	Western, Central & Southern Europe	2	10s of millions
06/14-06/17	Flooding	Southern & Southeastern Europe	2	10s of millions
06/16	Earthquake	France	0	440
06/18-06/22	Severe Convective Storm	Western & Central Europe	1	1,300
06/23-06/26	Severe Convective Storm	Central & Southeastern Europe	3	10s of millions

Middle East

Date(s)	Event	Location	Deaths	Economic Loss (2023 $ million)
01/18	Earthquake	Iran	0	50
01/28	Earthquake	Iran	3	250
02/06-02/20	Earthquake	Turkey, Syria	59,259	91,000
03/15	Flooding	Turkey	17	25
03/24	Earthquake	Iran	0	Millions
04/20	Severe Convective Storm	Turkey	1	Negligible
06/29-06/30	Dust Storm	Iran	0	Unknown

Africa

Date(s)	Event	Location	Deaths	Economic Loss (2023 $ million)
01/17-01/28	Cyclone Cheneso	Madagascar	33	20
02/06-02/16	Flooding	Southern Africa	25	260
02/20-03/15	Cyclone Freddy	Southern Africa	1,434	655
03/22-03/25	Flooding	Somalia	22	Unknown
03/23-04/04	Flooding	Kenya, Ethiopia	41	Millions
04/01-04/12	Flooding	Central Africa	21	Unknown
04/01-04/30	Flooding	Angola	54	Millions
04/02	Landslide	DRC	20	Unknown
04/24-05/19	Flooding	Rwanda, Uganda, Kenya	160	100
05/02-05/04	Flooding & Landslides	DRC	443	10s of millions
05/06-05/10	Severe Convective Storm	Sierra Leone	15	Unknown
05/12-05/19	Flooding	Somalia	22	Millions
06/14-06/19	Flooding	South Africa	2	100

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Asia

Date(s)	Event	Location	Deaths	Economic Loss (2023 $ million)
01/01-06/30	Drought	China	N/A	775
01/01-02/25	Flooding	Philippines	55	20
01/05-01/09	Winter Weather	India	25	Negligible
01/10-01/28	Winter Weather	Afghanistan	166	Negligible
01/13-01/16	Winter Weather	China	0	40
01/17	Winter Weather	China	28	Negligible
02/01-02/28	Winter Weather	China	0	80
02/08	Flooding	Indonesia	0	Millions
03/06	Landslide	Indonesia	46	Negligible
03/11-03/14	Winter Weather	China	0	50
03/17-03/20	Severe Convective Storm	India	16	Negligible
03/17-03/21	Flooding	Pakistan	10	Negligible
03/20-03/25	Severe Convective Storm	China	0	320
03/21	Earthquake	Afghanistan, Pakistan	19	Millions
03/24-04/06	Flooding	Pakistan	14	Millions
03/29-04/03	Flooding	Indonesia	2	Millions
04/01-04/30	Severe Convective Storm	China	5	235
04/01-04/30	Flooding	China	0	990
04/01-05/15	Heatwave	Southeastern Asia	13	N/A
04/01-06/30	Heatwave	India	166	N/A
04/16	Severe Convective Storm	Cambodia	0	Millions
04/21-04/24	Severe Convective Storm	Southeastern Asia	19	Millions
04/21-04/24	Winter Weather	China	0	200
04/27	Flooding	Indonesia	0	15
04/29-05/02	Severe Convective Storm	Pakistan	12	Negligible
05/02	Earthquake	China	0	65
05/02-05/10	Flooding	China	0	95
05/03-05/09	Flooding	Indonesia	0	20
05/05-05/20	Severe Convective Storm	China	4	190
05/06-05/08	Winter Weather	China	0	70
05/07-05/10	Wildfire	Russia	21	50
05/13-05/15	Cyclone Mocha	Myanmar, Bangladesh, India	466	1,550
05/15-05/16	Winter Weather	China	0	70
05/21	Flooding	Indonesia	0	Millions

05/22-06/30	Flooding	China	21	1,850
05/23-05/24	Severe Convective Storm	Bangladesh	18	Negligible
05/23-05/31	Typhoon Mawar	Philippines, Japan	2	Millions
05/25-06/02	Heatwave	China	N/A	N/A
05/26	Severe Convective Storm	India	12	Negligible
05/27	Winter Weather	Pakistan	11	Negligible
05/28-06/02	Flooding	Japan	5	450
05/31	Flooding	Indonesia	0	Millions
06/01-06/04	Landslides	China	22	Negligible
06/08-06/15	Wildfire	Kazakhstan	15	Negligible
06/10	Severe Convective Storm	Pakistan	33	Millions
06/14-06/30	Seasonal Floods	India	7	250
06/15-06/16	Cyclone Biparjoy	India, Pakistan	12	255
06/19-06/24	Heatwave	Pakistan	22	N/A
06/25-06/30	Flooding	Pakistan	32	10s of millions

Oceania

Date(s)	Event	Location	Deaths	Economic Loss (2023 $ million)
01/27-02/02	Flooding	New Zealand	4	3,300
02/12-02/17	Cyclone Gabrielle	New Zealand	11	3,900
02/21-02/28	Severe Convective Storm	New Zealand	0	15
02/28-03/05	Cyclones Judy, Kevin	Vanuatu, Solomon Islands	0	50
05/23-05/31	Typhoon Mawar	Guam	2	250
05/26	Severe Convective Storm	Australia	2	135

Additional Report Details

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

DR = Drought, EQ = Earthquake, WS = EU Windstorm, FL = Flooding, SCS = Severe Convective Storm, WF = Wildfire, WW = Winter Weather, VL = Volcano, HW = Heatwave, LS = Landslide

TC = Tropical Cyclone, TS = Tropical Storm, TD = Tropical Depression, HU = Hurricane, TY = Typhoon, STY = Super Typhoon, CY = Cyclone

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

Structures 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 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. Damage estimates are determined based on 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.

Appendix includes all events that meet at least one of the following criteria to be classified as a natural disaster in Aon's Catastrophe Insight Database:

- Economic Loss: $50 million
- Insured Loss: $25 million
- Fatalities: 10
- Injured: 50
- Structures Damaged or Filed Claims: 2,000

Contacts

Michal Lörinc

Head of Catastrophe Insight

michal.lorinc@aon.com

Ondřej Hotový

Catastrophe Analyst

ondrej.hotovy@aon.com

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