

AON



Q3 Global Catastrophe Recap

October 2022



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Insured Losses Now Likely to Exceed \$100B, for the Third Year in a Row

Preliminary global natural disaster losses by the end of the third quarter of 2022 were close to the average when compared to the 21st Century baseline, while aggregated losses sustained by the insurance sector were anticipated to notably exceed averages since both 2000 and 2012 and approach the average of the last 5 years. This comparison is highly dependent on the eventual financial outcome of Hurricane Ian, which hit the United States at the end of September. While initial estimates suggest that total losses from Ian will likely run into the tens of billions USD, it is expected that the final numbers will not be settled for months to come. This type of loss development is standard and expected in the aftermath of larger scale events. **Preliminary year-to-date economic losses, including an initial view of Hurricane Ian based on various publicly available estimates, were \$227 billion, with roughly \$99 billion of the total expected to be covered by public and private insurers.**



\$227B

Preliminary overall economic loss by end of Q3 2022

2,306 mm

Rainfall in Sydney as of Oct 11. The city beat its 1950 record of 2,194 mm with another 2.5 summer months to go.

10

Cat 1+ landfalling storms in Q3; Bonnie, Chaba, Fiona, Hinnamnorr, Ian, Kay, Muifa, Nanmadol, Noru, Orlene

\$99B

Covered by public and private insurers

16,700+

Number of deaths related to heatwaves in Europe this year. New study led by Aon found heatwave as the deadliest peril.

8°C

Temperature anomalies compared to seasonal normal measured in Greenland in September

Economic and Insured Loss Analysis

While secondary perils such as severe convective storm and flooding dominated losses in the first half of the year, losses from primary perils accelerated in the third quarter due to tropical cyclone activity in the Atlantic and Western Pacific, with Hurricane Ian anticipated to be the costliest singular weather event for the year, and potentially one of the costliest insured loss events on record globally.

The United States accounted for the highest percentage of year-to-date losses (\$114 billion), with APAC (\$56 billion) and EMEA (\$42 billion) behind. Losses in the U.S. and EMEA were above average, while APAC saw below average losses. It is anticipated that there will be robust loss development especially with the realization of cost(s) associated with late tropical cyclone development worldwide. Recurring La Niña conditions and the likelihood of above normal hurricane activity can potentially trigger impactful events in the remaining quarter, with additional costs arising from inflationary pressure.

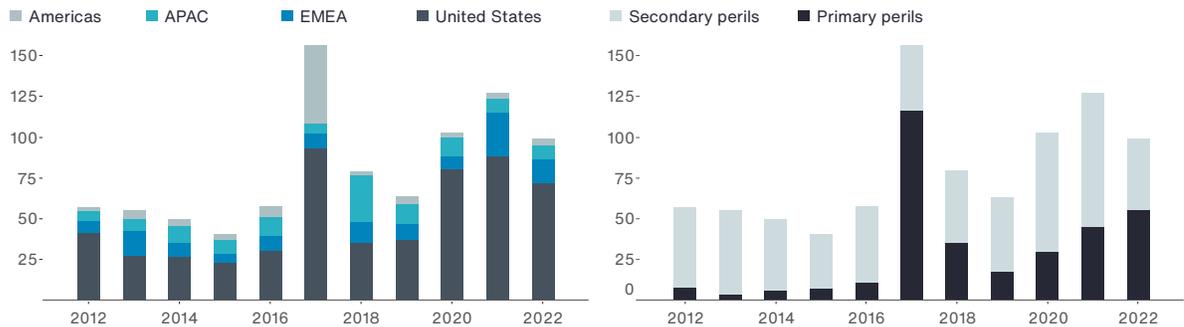
Exhibit 1: Global Q1-Q3 Economic Losses (2022 \$ billion)



Data: Aon (Catastrophe Insight)

Anticipated insured losses from Hurricane Ian constitute a significant portion of the global insured losses, simultaneously driving Tropical Cyclone as the costliest peril for the insurance industry to date. The U.S. losses now take up more than 70 percent of the total insured losses year-to-date.

Exhibit 2: Global Q1-Q3 Insured Losses (2022 \$ billion)



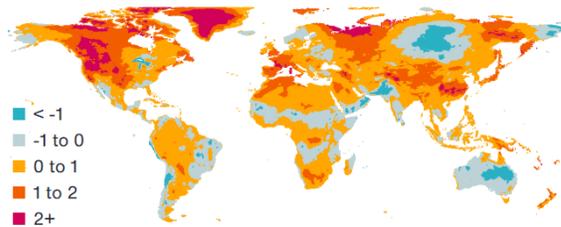
Data: Aon (Catastrophe Insight)

Natural Hazard Overview

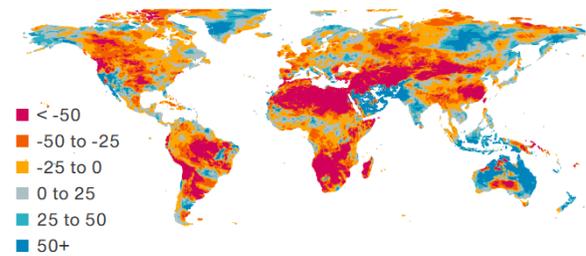
Extreme heatwaves and drought conditions gripped large parts of Europe and China during the first half of Q3, with both regions experiencing extended summers. The last month of Q3 was characterized by intense tropical cyclones, with Hurricane Ian and Fiona in the Atlantic basin, and Super Typhoon Noru and Nanmadol in Western Pacific.

Exhibit 3: Q3 2022 Temperature and Precipitation Anomalies vs Climatology (1991-2020)

Temperature Anomaly (°C)



Precipitation Anomaly (%)



Data: ERA5 / Copernicus / ECMWF. Graphic: Aon (Catastrophe Insight)

Per NOAA: July and August were the sixth warmest for the globe dating to 1880, September tied with 2021 as the fifth warmest. September also marked the 453rd consecutive month for global land and ocean temperatures to be above the 20th century baseline average. The tables below highlight the Top 10 warmest months in the official observed record; primarily populated by years in the 21st Century.

Exhibit 4: Warmest July, August and September Months

July		August		September	
Year	Temp Anomaly °C / °F	Year	Temp Anomaly °C / °F	Year	Temp Anomaly °C / °F
2016	+0.92°C / 1.66°F	2016	+0.98°C / 1.76°F	2015	+0.94°C / 1.69°F
2019	+0.92°C / 1.66°F	2020	+0.93°C / 1.67°F	2016	+0.94°C / 1.69°F
2021	+0.92°C / 1.66°F	2017	+0.92°C / 1.66°F	2019	+0.94°C / 1.69°F
2020	+0.91°C / 1.64°F	2019	+0.92°C / 1.66°F	2020	+0.93°C / 1.67°F
2017	+0.90°C / 1.62°F	2015	+0.91°C / 1.64°F	2022	+0.88°C / 1.58°F
2022	+0.88°C / 1.58°F	2022	+0.90°C / 1.62°F	2021	+0.88°C / 1.58°F
2015	+0.85°C / 1.53°F	2021	+0.89°C / 1.60°F	2017	+0.86°C / 1.55°F
2018	+0.82°C / 1.48°F	2014	+0.82°C / 1.48°F	2018	+0.82°C / 1.48°F
1998	+0.74°C / 1.33°F	2018	+0.79°C / 1.42°F	2014	+0.79°C / 1.42°F
2010	+0.73°C / 1.31°F	2009	+0.72°C / 1.30°F	2012	+0.74°C / 1.33°F

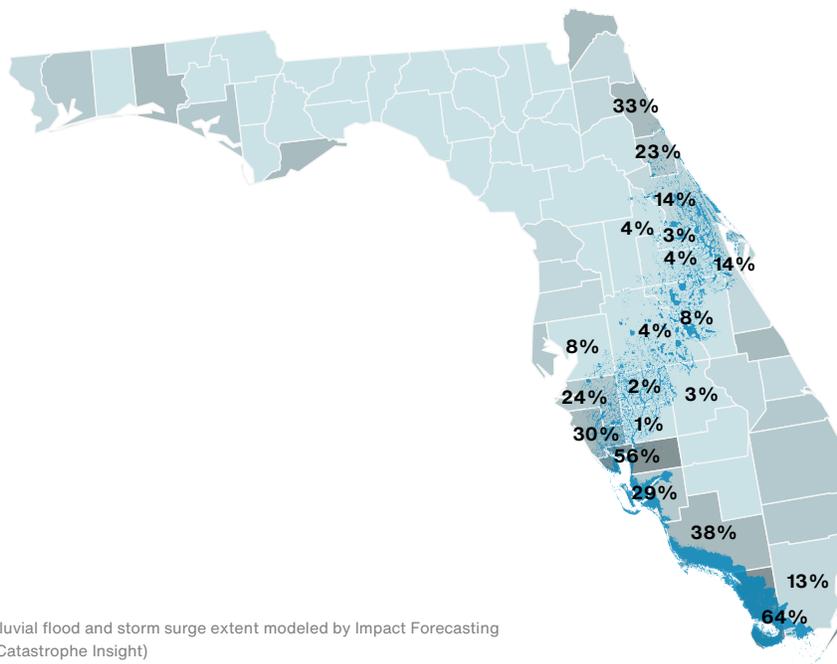
Hurricane Ian Puts a Strain on Florida's Insurers

Catastrophic impact from Hurricane Ian is generally expected to result in a substantial financial loss in the tens of billions USD and the event will most likely become the costliest event of the year to date, and one of the costliest tropical cyclones recorded globally.

A large part of the toll will result from the widespread wind-related damage across the peninsula, with most of the impact concentrated along the western and central Florida counties. It is noteworthy that many of the properties impacted by hurricane-force winds were also affected by Hurricane Irma in 2017.

Additional losses were expected due to catastrophic storm surge on the western coast and additional inland flooding because of heavy rainfall. Even though the inland precipitation-induced flooding in Florida might have gotten less attention, losses from this subperil were not negligible. Moreover, most of the damage occurred in inland counties, which generally have lower NFIP take-up rates and most of the damage will thus not be covered by insurance. This is in contrast with the coastal counties affected by storm surge, which generally have above-average flood coverage.

Exhibit 5: Inland flooding generally affected counties with lower NFIP take-up rates



Overlaid with pluvial flood and storm surge extent modeled by Impact Forecasting
Graphic: Aon (Catastrophe Insight)

Even though several firms and entities issued preliminary statements on expected volume of insured losses, it is too early to provide a definitive number, as damage assessment and liquidation of losses will certainly take a long period of time in the coming months and the eventual toll will be affected by demand surge, inflation and other factors.

Exhibit 6: Top 10 Costliest Tropical Cyclones: Insured Loss (1900-2021)

Year	Hurricane	Location	Insured Loss (Nominal \$ billion)	Insured Loss (2022 \$ billion)
2005	Katrina	United States	65	95
2017	Irma	U.S., Caribbean	33	39
2021	Ida	U.S., Caribbean	36	38
2012	Sandy	U.S., Caribbean, Canada	30	38
2017	Harvey	United States	30	35
2017	Maria	U.S., Caribbean	30	35
1992	Andrew	U.S., Caribbean	16	33
2008	Ike	U.S., Caribbean	18	24
2005	Wilma	U.S., Caribbean	13	18
2004	Ivan	U.S., Caribbean	11	16

Europe Engulfed by Heat and Drought

Parts of Europe experienced severe **drought**, amplified by several record-setting **heatwaves** during the summer of 2022. These conditions led to substantial agricultural losses and thousands of heat-related fatalities. The pattern also led to favorable conditions for **wildfire** development.

Record-breaking Heatwaves

Historic and record-setting extreme temperatures engulfed Europe several times during the summer months of 2022, further exacerbating drought conditions and wildfire development. Two separate major heatwaves hit Europe in mid-June and mid-July, affected hundreds of millions of people particularly in western, southern and central parts of the continent, and claimed a significant human casualty toll. Using excess mortality rate data, heatwave in mid-June claimed at least 3,700 lives, while more than 13,000 people died due to extreme heat during mid-July event. *It is important to note that these numbers of heat-related fatalities are approximated, and totals are expected to be even higher.* The abnormal heat periods during Q3 resulted in several new all-time heat records in multiple countries (see Table below).

Country	Location	Temperature (°C)	Detail
Portugal	Pinhão	47.0 (116.6°F)	2022 temperature maximum, national July record
UK	Coningsby	40.3 (104.5°F)	National all-time record
Wales (UK)	Hawarden	37.1 (98.8°F)	All-time record
Scotland (UK)	Floors Castle	35.1 (95.2°F)	All-time record
Ireland	Phoenix Park, Dublin	33.0 (91.4°F)	2 nd highest on national record (since 1887)
UK	Kenley Airfield	25.8 (78.4°F)	National all-time minimum (overnight) record

Extensive Drought Impact

Persistent hot and dry weather gradually worsened drought conditions across the continent. The cumulative severe precipitation deficit led to reduced river discharges, significantly affecting many sectors of the economy and their supply chains. For example, low water levels disrupted cooling systems of power plants and lowered hydropower generation in the energy sector. Shipping on several important European rivers (Danube, Rhine, Po etc.) was disrupted. Water and heat stress substantially reduced crop yield and caused notable **agricultural loss**. Additionally, notable damage on buildings was incurred in some territories due to land subsidence. In mid-August, nearly 50% of Europe was under “orange warning” conditions and 17% under “red alert” conditions, according to the Combined Drought Indicator by European Drought Observatory, indicating areas that may be affected by agricultural drought.

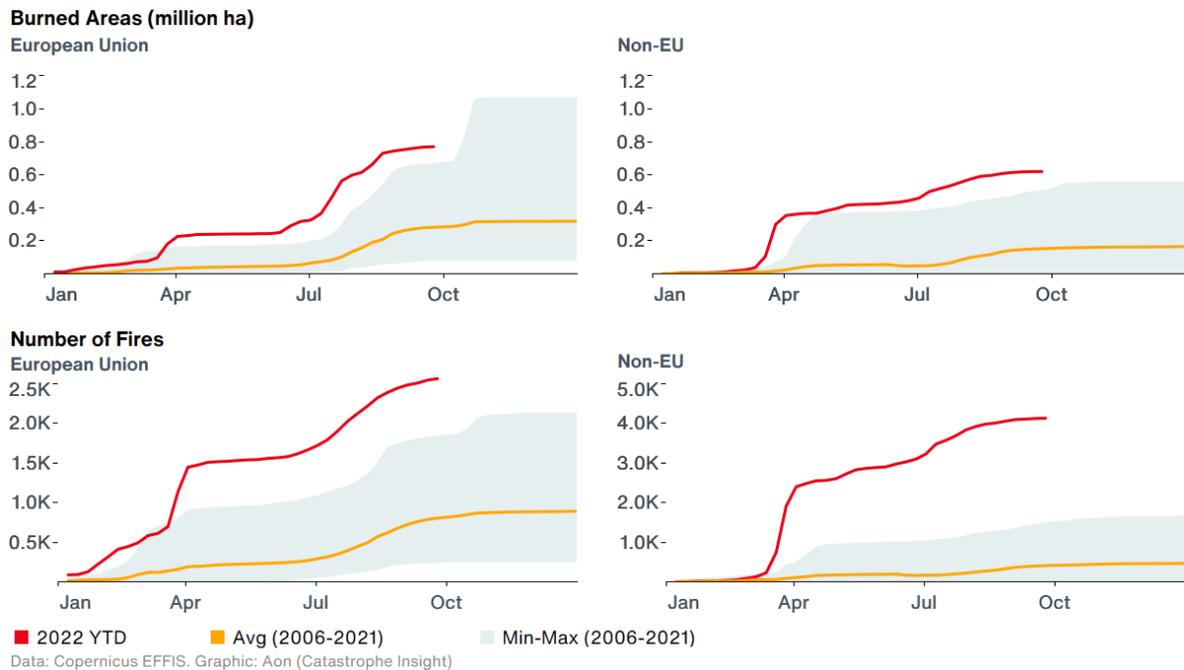
Assessment of drought-related losses throughout the continent remains ongoing. However, to date, losses to agriculture, buildings and infrastructure were anticipated to be in billions (USD) in **Spain, Italy, France, and Hungary**. Together with additional losses incurred elsewhere in the region, total economic losses in Europe were anticipated to reach more than €19 billion (\$19 billion) in total. European drought in 2022 is expected to become the second costliest after historic drought in 2003 when a broad area of Europe was significantly affected, and total economic loss exceeded \$26 billion (2022 USD).

Above-average Wildfire Activity

In addition to the intense heatwaves and severe drought, the European continent has seen a significant increase in wildfires occurrence. Substantial heat during summer months has amplified fire risk across many territories. Extreme or even very extreme fire danger warning was issued in many parts of Europe during July and August.

Both indicators, cumulative total burned area and number of fires registered by EFFIS were above the long-term average and above the maximum since 2006 in both European Union and non-EU European countries, as of the end September (see Graphics below). To date, **Spain** recorded the largest extent burned by wildfires in Europe in 2022, nearly 300,000 ha (741,000 ac), more than four times larger than the national average of years 2006-2021, according to the data from EFFIS. Among the worst affected countries were also **Portugal** or **France**, where a large fire in **Gironde Department** burned more than 20,000 ha (49,400 acres) alone.

Exhibit 7: 2022 European Wildfires extent as of September 30



Final Thoughts

In summer 2022, heat occurrence, drought conditions and wildfire activity were exceptional but not unexpected. Extreme events that occurred are in line with the global trend and support conclusions from the last IPCC Assessment Report that indicates an increase in the frequency and intensity of these perils. Consequently, Europe and other regions may face more frequent implications for human health and wellbeing, food supplies and agriculture, transport, energy prices or impact on natural ecosystems.

Regarding climate projections and current temperature increase that is generally faster than the world average in Europe, prolonged periods with impact of severe drought, devastating wildfires and deadly heatwaves are expected to be more frequent, probably with earlier onset in the future.

Social Concerns Amid Pakistan Floods

Melting glaciers and prolific monsoonal rain resulted in historic flooding that devastated a large part of Pakistan in Q3. The event resulted in nearly 1,700 fatalities, with around 20% of the deaths related to indirect causes such as diseases and malnutrition. The United Nations (UN) increased the aid appeal for Pakistan fivefold to \$816 million on October 3 to address emerging public health risks. While actual flood damages and accompanying insured losses were not expected to exceed those seen in China or Australia this year, the overall impact to the Pakistani economy is likely substantial and far-reaching.

Glacier Melting

Pakistan experienced its second warmest March and warmest April this year. Temperatures in Jacobabad exceeded 38°C (100°F) for more than 51 consecutive days since March and reached a high of 51°C (123.8°F) on May 14. The table shows the highest temperature recorded each month:

March	April	May	June	July	August
45.5°C (113.9°F)	49.0°C (120.2°F)	51.0°C (123.8°F)	49.0°C (120.2°F)	48.0°C (118.4°F)	45.5°C (113.9°F)
Sh.Benazirabad	Jacobabad	Jacobabad	Jacobabad	Nok Kundi	Nok Kundi

Pakistan hosts the highest number of glaciers in the world outside of the polar regions. Long-term exposure to high temperatures can result in excessive melting and associated hazards. Between June and September 2022, there were at least 75 glacial lake outburst floods (GLOF) and 90 flash flood incidents arising from heavy glacier melting in Gilgit-Baltistan and Khyber Pakhtunkhwa, northern Pakistan. Glacier melting raises the river stage in the Gilgit river, which connects with the Indus River downstream. The UN set up dozens of early warning systems in the northern valley and is planning to map glaciers in northern Pakistan within the next eighteen months to quantify the melting layers.

Exhibit 8: NASA images of the flood extent on August 4, 2022 (left) and August 28, 2022 (right)



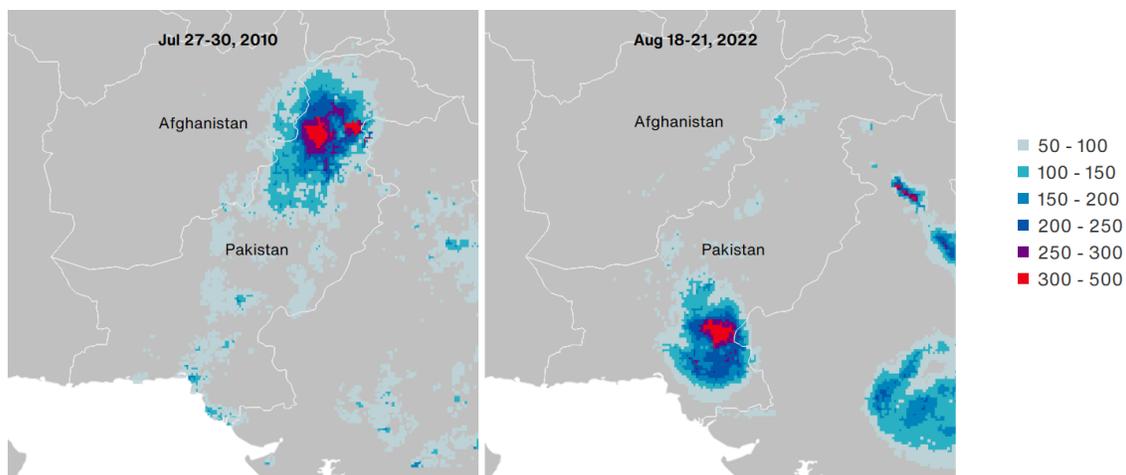
Record-breaking Rainfall

The main driver behind the catastrophic floods in southern part of Pakistan was record monsoonal rainfall. The country observed its wettest July (+180%) and wettest August (+243%) since 1961, with the southern provinces, Balochistan and Sindh, showing monthly anomalies of +450% and +307% in July, and +590% and +726% in August. Multiple spells of well-pronounced lows barreled the southern region as the monsoon axis was located south of its normal position this year. The wettest day in July was July 25 when Badin received 219 mm (8.6 in), and August 19 was the wettest August day as Padidan recorded 355 mm (14.0 in). The number of broken daily and monthly rainfall records was very significant, particularly in August. Overall, the country experienced seven widespread rainfall events between July and August.

The below exhibit depicts the anomaly in total precipitable water column this season compared to 2010, which was the costliest floods in Pakistan. Well-above average total precipitable water covered the entirety of Pakistan in 2022, while it was mainly confined to the northwest in 2010. Other factors such as the high-level jet stream in the north influenced the rainfall pattern in 2010.

Both the 2010 and 2022 events were driven by the presence of prevailing La Niña conditions. However, the 2010 Pakistan flood occurred mainly over northern and central Pakistan in Punjab and Khyber Pakhtunkhwa, resulting in 1,985 deaths and 2.1 million damaged homes. Rainfall was 70% and 102% above the long-term average for July and August respectively that year. The heaviest rainfall event occurred between July 27-30, where a daily record of 274 mm (10.8 in) was observed in Peshwar. Satellite review of the 96-hour rainfall showed both events were comparable with the 2022 event slightly larger in extent. The 2010 event, however, put more downstream communities at risk given the terrain conditions. Pakistan 2017 census also marked dense populations in northern and central Pakistan, especially in Punjab and the Islamabad Capital Territory.

Exhibit 9: GPM satellite estimate of 96-hour rainfall in mm in 2010 and 2022 events



Final Thoughts

By the end of Q3, seasonal floods in Pakistan had caused nearly 1,700 deaths and 13,000 injuries. A significant number of the fatalities in the last few weeks of September came from acute malnutrition or waterborne diseases such as typhoid, diarrhea and malaria. Hospitals were overwhelmed as thousands

of health facilities were destroyed. Industries also began to experience effects from the secondary impacts, with textile factories shutting down due to cotton shortages.

Affected by both melting glaciers in the north and warming oceans in the south, Pakistan is one of the most vulnerable countries exposed to the financial costs and physical risks of climate change. Modeling study by Pakistan Meteorological Department (PMD) projected the number of consecutive wet days in the southern part of the country to increase in future with the rise in sea surface temperatures in the Arabian Sea. In addition, monsoon currents might be laden with more moisture under a warming atmosphere.

With livelihood of many still affected by the recent flood, the nation will need a lot of resources and time to rebuild, while likely facing more pronounced natural hazard events in the future. Smart rebuilding efforts need to be undertaken to mitigate against the next deadly waves of natural hazard occurrences.



Appendix: 2022 Data

United States

Date	Event	Location	Deaths	Economic Loss
1/1-12/31	DR	Nationwide	N/A	4.0+ billion
1/2-1/3	WW	Southeast, Mid-Atlantic	5	495+ million
1/8-1/9	SCS	Plains, South	0	60+ million
1/14-1/17	WW	Southeast, Mid-Atlantic	3	900+ million
1/21-1/22	SCS	California	0	175+ million
1/28-1/30	WW	Mid-Atlantic, Northeast	4	50+ million
2/1-2/5	WW	Rockies, Plains, Mid-Atlantic, Northeast	10	500+ million
2/16-2/18	WW	Plains, South, Mid-Atlantic, Northeast	0	355+ million
2/21-2/22	SCS	Plains, South	0	865+ million
3/5-3/7	SCS	Midwest, Mid-Atlantic, Northeast	8	790+ million
3/11-3/13	SCS	South, Mid-Atlantic	0	220+ million
3/14-3/16	SCS	Plains, South	0	520+ million
3/17-3/19	SCS	Plains, South	0	35+ million
3/17-3/25	WF	Texas	1	30+ million
3/21-3/23	SCS	Plains, South	5	825+ million
3/29-4/1	SCS	Plains, South	2	1.25+ billion
3/30-4/1	WF	Tennessee	0	15+ million
4/2-4/4	SCS	Florida	0	295+ million
4/3-4/7	SCS	Plains, South	3	1.25+ billion
4/4	SCS	Northwest	0	75+ million
4/6-5/31	WF	New Mexico	0	475+ million
4/10-4/14	SCS	Plains, Midwest, South	1	2.15+ billion
4/12-4/15	WF	New Mexico	2	15+ million
4/15-4/17	SCS	Plains, South	0	810+ million
4/18-4/19	WW	Northeast	0	25+ million
4/21-4/24	SCS	Plains, Midwest	0	605+ million
4/25-5/10	FL	Plains, Midwest	0	50+ million
4/26-4/30	SCS	Plains, Midwest	3	565+ million
5/1-5/3	SCS	Plains, Midwest	0	1.1+ billion
5/4-5/6	SCS	Plains, South, Mid-Atlantic	0	875+ million
5/9-5/10	SCS	Plains, Midwest	0	1.8+ billion



5/11-5/12	WF	California	0	50+ million
5/11-5/12	SCS	Plains, Midwest	5	2.57+ billion
5/13-5/16	SCS	Plains, South, Mid-Atlantic	0	405+ million
5/17-5/19	SCS	Midwest	0	215+ million
5/19-5/22	SCS	Plains, South, Midwest	2	1.85+ billion
5/21-5/23	SCS	Midwest, Mid-Atlantic, Northeast	0	75+ million
5/23-5/25	SCS	Plains, South	0	365+ million
5/26-5/27	SCS	South, Northeast	0	50+ million
5/29	SCS	Plains	0	200+ million
5/30-6/2	SCS	South, Plains	0	650+ million
6/1-6/30	HW	Arizona, Tennessee, Texas	55	N/A
6/1-6/3	SCS	Plains	0	100+ million
6/2-6/6	FL	Florida	0	350+ million
6/4-6/8	SCS	Plains, Midwest, Mid-Atlantic	0	1.85+ billion
6/9-6/10	SCS	Plains, South	0	25+ million
6/11-6/14	FL	Rockies	0	50+ million
6/11-6/17	SCS	South, Midwest, Northeast	3	2.0+ billion
6/16-6/18	SCS	Midwest, South, Mid-Atlantic	1	60+ million
6/19-6/21	SCS	Plains, Midwest	0	75+ million
6/22-6/23	SCS	Mid-Atlantic, Northeast	0	125+ million
6/23-6/24	SCS	Plains	0	75+ million
7/1-7/7	SCS	Midwest	0	440+ million
7/7-7/13	SCS	Mid-Atlantic	0	860+ million
7/15-7/25	FL	Southwest	2	175+ million
7/17-7/21	SCS	Mid-Atlantic, Midwest, Southeast	3	75+ million
7/21-7/25	SCS	Mid-Atlantic, Midwest	0	1.2 billion
7/22-7/31	WF	California	0	90+ million
7/25-7/28	FL	Missouri, Kentucky	28	1.2 billion
7/26-7/31	FL	Southwest	3	282+ million
7/29-8/10	WF	California	7	50+ million
8/1-8/4	SCS	Midwest	1	200+ million
8/5-8/12	FL	Southwest, West	2	30+ million
8/11-8/12	SCS	Northwest	0	200+ million
8/18-8/22	FL	South	2	250+ million
8/20-8/21	SCS	Iowa, Illinois	0	100+ million
8/27-8/29	SCS	Midwest	4	250+ million
8/28-9/7	SCS	West, Mid-Atlantic	1	80+ million

9/1-9/4	SCS	Arizona	0	40+ million
9/2-9/9	WF	California	2	35+ million
9/11-9/12	SCS	Illinois, Wisconsin	0	50+ million
9/18-9/21	SCS	Illinois	0	50+ million
9/28-10/1	HU lan	Florida, North Carolina, South Carolina	132	10s of billions

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

Date	Event	Location	Deaths	Economic Loss
1/1-12/31	DR	Mexico	N/A	600+ million
1/24	EQ	Haiti	2	Millions
1/30-1/31	FL	Haiti, Dominican Republic	5	Millions
2/4-2/6	FL	Puerto Rico	0	16+ million
2/17-2/19	WW	Canada	0	219+ million
3/6	WW	Canada	0	15+ million
4/15-4/16	SCS	Canada	0	27+ million
4/22-4/25	FL	Canada	0	157+ million
4/30	FL	Guadeloupe	3	25+ million
5/1-9/11	FL	Guatemala	42	200+ million
5/21	SCS	Canada	12	1.35+ billion
5/28-5/31	TC Agatha	Mexico	9	50+ million
5/30-5/31	FL	Canada	0	35+ million
6/2-6/6	FL	Cuba	3	25+ million
6/13-6/15	FL	Canada	0	50+ million
6/16-6/17	SCS	Canada	0	58+ million
6/18-6/20	SCS	Canada	0	46+ million
6/20-6/21	SCS	Canada	0	40+ million
6/23-6/24	SCS	Canada	0	66+ million
6/28-6/29	SCS	Canada	0	40+ million
7/1-7/3	TS Bonnie	Nicaragua, El Salvador, Costa Rica	5	25+ million
7/7-7/8	SCS	Canada	0	39+ million
7/15-7/17	SCS	Canada	0	54+ million
7/18-7/21	SCS	Canada	0	120+ million
7/23-7/25	SCS	Canada	0	40+ million
7/29-7/31	SCS	Canada	0	50+ million
8/1-8/4	SCS	Canada	0	65+ million
9/13-9/14	SCS	Canada	0	50+ million
9/17-9/20	FL	Central America	15	11+ million

9/18-9-25	HU Fiona	Caribbean, Canada	31	3.09+ billion
9/19	EQ	Mexico	4	25+ million
9/27	HU Ian	Cuba	5	500+ million

South America

Date	Event	Location	Deaths	Economic Loss
1/1-12/31	DR	Argentina	N/A	500+ million
1/1-12/31	DR	Brazil	N/A	4.0+ billion
1/1-5/31	FL	Ecuador	11	385+ million
1/1-1/14	FL	Brazil	15	50+ million
1/15-2/28	WF	Argentina	0	732+ million
1/16-1/17	FL	Brazil, Uruguay	0	Millions
1/20	SCS	Brazil	2	24+ million
1/27-1/30	FL	Brazil	31	67+ million
1/28-2/1	FL	Ecuador	28	50+ million
2/7-2/9	SCS	Brazil	0	21+ million
2/8	FL	Colombia	16	Millions
2/12-2/13	SCS	Brazil	1	Millions
2/15-2/16	FL	Brazil	232	25+ million
2/18-2/19	FL	Colombia	1	Millions
3/1-5/31	FL	Suriname	0	20+ million
3/16-9/30	FL	Colombia	88	32+ million
3/24-3/25	FL	Brazil	0	5+ million
3/26	EQ	Ecuador	0	Millions
3/31-4/2	FL	Brazil	23	131+ million
4/7-4/10	SCS	Brazil	0	10+ million
4/15-4/30	FL	Venezuela	0	Millions
4/22-4/23	SCS	Brazil	0	20+ million
5/1-5/30	FL	Brazil	2	18+ million
5/4-5/6	FL	Brazil	3	91+ million
5/15-5/18	TC Yakecan	Brazil, Uruguay	2	50+ million
5/25-5/28	FL	Brazil	129	450+ million
6/21	FL	Brazil	0	11+ million
7/1-7/5	FL	Brazil	12	27+ million
7/3	EQ	Peru	0	Millions
9/22-9/23	FL	Venezuela	10	Negligible

Europe

Date	Event	Location	Deaths	Economic Loss
1/1-12/31	DR	Western, Southern & Central Europe	N/A	20+ billion
1/10-1/11	FL	France	1	Millions
1/12-1/13	WS Gyda	Norway	0	17+ million
1/16-1/17	WS Hannelore	Northern, Eastern & Central Europe	0	111+ million
1/24-1/25	Storm Elpis	Greece	0	20+ million
1/29-1/30	WS Malik	Western, Northern & Central Europe	7	509+ million
1/30-1/31	WS Corrie	Western Europe	0	Millions
2/3-2/6	WW	Austria, Switzerland	11	Negligible
2/6-2/7	WS Roxanna	Western & Central Europe	0	152+ million
2/16-2/17	WS Dudley	Western & Central Europe	9	875+ million
2/18-2/19	WS Eunice	Western & Central Europe	17	4.3+ billion
2/20-2/21	WS Franklin	Western & Central Europe	0	771+ million
4/1-4/4	WW	Western Europe	N/A	900+ million
4/4	WS Mirella	Germany, Poland	0	Millions
4/6-4/7	WS Nasim	Western & Central Europe	0	248+ million
4/8-4/9	WS Diego	Western & Central Europe	0	83+ million
4/22	EQ	Bosnia & Herzegovina	1	25+ million
5/2-5/3	FL	Spain	0	32+ million
5/15-5/16	SCS	Western & Central Europe	0	38+ million
5/19	SCS	Western & Central Europe	0	70+ million
5/20	SCS	Western & Central Europe	0	466+ million
5/22-5/25	SCS	Western & Central Europe	0	470+ million
6/2-6/6	SCS	Western & Central Europe	0	1.6+ billion
6/9-6/10	SCS	Central & Southeastern Europe	2	12+ million
6/11-6/25	WF	Spain	0	55+ million
6/13-6/19	HW	Western, Southern & Central Europe	3,700+	N/A
6/15-6/16	SCS	Central Europe	0	57+ million
6/19-6/24	SCS	Western & Central Europe	3	2.3+ billion
6/26-6/29	SCS	Western & Central Europe	2	1.2+ billion
6/30-7/1	SCS	Western & Central Europe	0	341+ million
7/2-7/31	WF	Portugal	0	25+ million
7/4-7/5	SCS	Southern & Central Europe	0	96+ million
7/7-7/20	HW	Western, Southern & Central Europe	13,000+	N/A
7/9-7/31	WF	Spain	0	50+ million
7/20-7/23	SCS	Western & Central Europe	0	94+ million

7/25	SCS	Germany	0	51+ million
8/4-8/6	SCS	Western & Central Europe	1	Unknown
8/12-8/13	SCS	Italy	0	25+ million
8/14-8/17	SCS	Western, Central & Southern Europe	0	28+ million
8/17-8/21	SCS	Western & Central Europe	13	247+ million
8/25-8/28	SCS	Germany, Spain	0	60+ million
8/30	SCS	Spain	1	25+ million
9/2	FL	Bulgaria	0	47+ million
9/2-9/8	SCS	France, Italy	0	25+ million

Middle East

Date	Event	Location	Deaths	Economic Loss
1/1-1/6	FL	Oman, Iran	14	95+ million
3/17	EQ	Iran	0	35+ million
6/24-6/27	FL	Turkey	0	243+ million
7/2	EQ	Iran	0	142+ million
7/22-7/29	FL	Iran	95	200+ million
7/23-7/24	FL	Yemen	14	Unknown
8/1-8/5	FL	Yemen	16	Unknown

Africa

Date	Event	Location	Deaths	Economic Loss
1/1-12/31	DR	Somalia, Ethiopia, Kenya, Malawi	N/A	2+ billion
1/1-1/25	FL	Rwanda	15	Negligible
1/8-1/9	FL	South Africa	10	66+ million
1/13-1/20	FL	Zambia	3	Millions
1/15-1/16	FL	South Africa	1	99+ million
1/17	FL	Madagascar	10	Negligible
1/21-2/2	SCS	DRC	26	Negligible
1/22-1/25	TS Ana	Madagascar, Mozambique, Malawi	142	25+ million
2/2-2/7	CY Batsirai	Madagascar, Mauritius, Reunion	123	190+ million
2/4-2/5	FL	South Africa	4	25+ million
2/15-2/16	CY Dumako	Madagascar	14	Millions
2/22-2/24	CY Emnati	Madagascar	15	15+ million
3/8-3/18	CY Gombe	Madagascar, Mozambique, Malawi	72	95+ million
4/8-4/15	FL	South Africa	455	3.0+ billion
4/23-4/25	FL	DRC, Rwanda	20	5+ million

4/26	FL	Tanzania	10	Millions
4/26-4/27	TS Jasmine	Madagascar	10	Millions
5/1-9/30	FL	Sudan	146	10+ million
6/1-8/5	FL	Chad	22	Millions
6/1-7/31	FL	Nigeria	300	Millions
6/1-9/30	FL	Niger	168	Millions
6/16-6/21	FL	Ivory Coast	12	Millions
7/21-7/23	FL	Central African Republic	13	Millions
7/25-9/14	FL	Mauritania	19	Millions
7/30-8/1	FL	Uganda	29	Millions
9/6	FL	Uganda	15	Millions

Asia

Date	Event	Location	Deaths	Economic Loss
1/1-12/31	DR	China	N/A	8.4+ billion
1/1-6/30	FL	Vietnam	68	131+ million
1/1-1/6	FL	Pakistan, Afghanistan	14	5+ million
1/2	EQ	China	0	51+ million
1/6-1/19	FL	Indonesia	11	Millions
1/7-1/8	WW	Pakistan	23	Negligible
1/8	EQ	China	0	510+ million
1/14	EQ	Indonesia	0	Millions
1/17	EQ	Afghanistan	28	Negligible
1/20-1/24	WW	China	0	101+ million
1/20-1/25	FL	Pakistan	12	Negligible
1/22	EQ	Japan	0	50+ million
1/25-1/29	WW	China	0	280+ million
2/1-2/3	WW	China	0	140+ million
2/5-2/9	WW	China	0	80+ million
2/6	WW	Afghanistan	15	Negligible
2/10-2/16	FL	Indonesia	1	Millions
2/11-2/14	WW	China	0	287+ million
2/16-2/22	WW	China	1	756+ million
2/25	EQ	Indonesia	18	Millions
2/25-3/2	FL	Malaysia, Thailand	12	Millions
3/14-3/17	SCS	China	0	105+ million
3/16	EQ	Japan	4	8.7+ billion

3/20-3/22	FL	China	0	23+ million
3/27-4/2	SCS	Vietnam	0	41+ million
4/3-4/5	FL	Thailand	0	Millions
4/8-4/13	TS Megi	Philippines	214	200+ million
4/11-4/15	SCS	China	3	130+ million
4/23-4/25	SCS	China	0	120+ million
4/27-4/29	FL	China	4	40+ million
4/28-5/9	HW	India, Pakistan	90	N/A
5/1-9/30	HW	Japan	80	N/A
5/2-5/7	FL	Afghanistan	29	Negligible
5/9-5/13	FL	China	1	240+ million
5/11-5/13	SCS	China	4	90+ million
5/16-6/1	SCS	Nepal	20	Negligible
5/17-10/31	FL	India	1,883	1.8+ billion
5/17-9/30	FL	Bangladesh	141	500+ million
5/20-5/23	FL	Indonesia	4	Millions
5/22-8/25	HW	South Korea	7	N/A
5/23-5/29	FL	China	9	521+ million
5/23-5/26	SCS	China	7	75+ million
5/28-5/29	SCS	China	7	75+ million
6/1	EQ	China	4	41+ million
6/1-9/30	FL	China	239	12.3+ billion
6/5-9/30	FL	Nepal	130	Millions
6/10	EQ	China	0	93+ million
6/10-6/14	SCS	China	13	300+ million
6/14-9/10	FL	Pakistan	1693	5.6+ billion
6/19-6/23	SCS	China	5	180+ million
6/20-6/24	WW	Afghanistan	12	Negligible
6/21-6/22	FL	Afghanistan	19	Negligible
6/22	EQ	Afghanistan, Pakistan	1,163	120+ million
7/1-8/31	HW	China	35	N/A
7/2-7/4	TY Chaba	China	3	460+ million
7/5-7/11	FL	Afghanistan	63	Millions
7/24-8/1	FL	Afghanistan	39	Negligible
7/25-7/28	SCS	China	24	630+ million
7/27	EQ	Philippines	11	75+ million
8/3-8/4	FL	Japan	2	100+ million

8/8-8/9	FL	South Korea	14	420+ million
8/10-8/12	TD Mulan	Vietnam, Laos, Thailand	5	Millions
8/13	FL	Afghanistan	31	Negligible
8/13-8/14	TS Meari	Japan	0	Millions
8/16-8/21	FL	Afghanistan	63	Negligible
8/17-8/18	FL	Indonesia	0	5+ million
8/23-8/26	TS Ma-on	Philippines, China	4	32+ million
8/26-9/1	SCS	China	18	150+ million
9/1-9/6	STY Hinnamnor	Japan, South Korea, Philippines	13	332+ million
9/5	EQ	China	97	835+ million
9/14-9/16	TY Muifa	China	0	437+ million
9/18-9/21	TY Nanmadol	Japan	4	1.2+ billion
9/23-9/24	TS Talas	Japan	3	75+ million
9/25-9/29	STY Noru	Philippines, Vietnam, Thailand	20	435+ million

Oceania

Date	Event	Location	Deaths	Economic Loss
1/8-1/13	FL	Australia	2	75+ million
1/15-1/16	VL	Tonga, Pacific Rim	4	117+ million
2/9-2/13	CY Dovi	New Zealand, Vanuatu, New Caledonia	0	80+ million
2/23-3/31	FL	Australia	22	7.5+ billion
3/20-3/21	SCS	New Zealand	0	113+ million
6/9-9/14	SCS	Australia, New Zealand	1	18+ million
7/2-7/6	FL	Australia	0	379+ million
7/11-7/27	SCS	New Zealand	1	50+ million
9/10	EQ	Papua New Guinea	10	Millions

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, TC = Tropical Cyclone, WF = Wildfire, WW = Winter Weather, VL = Volcano, HW = Heatwave

TD = Tropical Depression, TS = Tropical Storm, 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.

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