Global Catastrophe Recap: First Half of 2019

July 2019

AON
Empower Results®

Table of Contents

Executive Summary

73 bn preliminary total of economic loss, 22% below average

20 bn preliminary total of insured loss, 26% below average

163 number of individual events, 17 below average

* Compared to 21st Century averages. All totals are in USD and are preliminary and subject to change.

78 percent portion of insured losses caused by severe weather and flooding perils

El Niño phase official arrival of El Niño announced by NOAA in February

73 percent preliminary estimate of global protection gap (4 percent above mean)

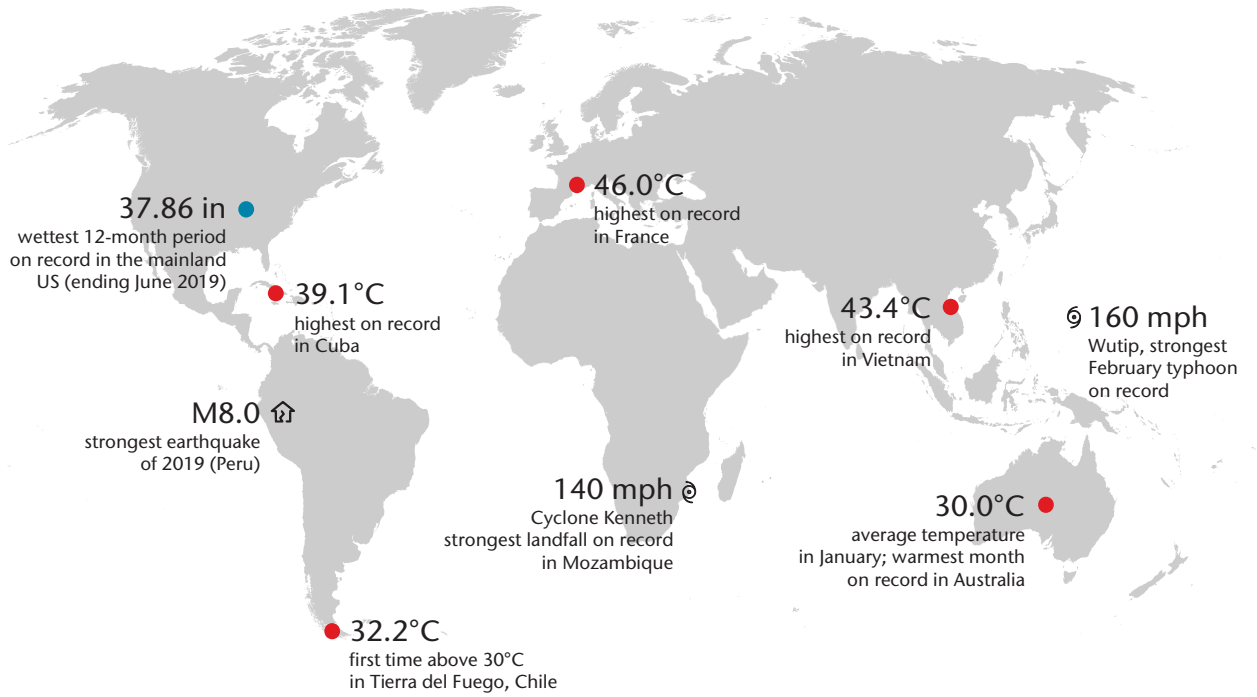
June 2019 hottest month of June recorded globally (NASA, Copernicus, JMA)

66 percent percentage of global insured losses incurred in the United States

3.8K deaths estimated number of deaths caused by natural disasters during 1H of 2019

17 / **4** 17 billion-dollar events; 6 each in the US & Asia; 4 insured billion-dollar events

1.85 million number of people affected by Cyclone Idai in Mozambique



Overview

Global natural disaster losses during the first half (1H) of 2019 were below average when compared against a 10-year (2009-2018) and 21st Century (2000-2018) baseline, but higher versus a longer-term view (1980-2018). As seen in Exhibit 1, economic losses were estimated at USD73 billion; or 40 percent lower compared to the previous decade (USD121 billion), 22 percent lower since 2000 (USD94 billion), but similar to the average since 1980 (USD74 billion) [1]. Insured losses were preliminarily estimated at USD20 billion; down 45 percent from the 10-year average (USD36 billion), down 26 percent from the 21st Century average (USD27 billion), but 6 percent higher since 1980 (USD19 billion). **These numbers are preliminary and subject to change as losses continue to develop.**

To offset any outlier years, median analysis shows that 2019 first half natural disaster losses were higher than the 1980-2018 (USD51 billion) and 2000-2018 (USD72 billion) values, but lower than then 10-year median (USD83 billion) on an economic basis. Insured losses were much higher versus the longer-term view (USD15 billion), but lower on the mid- (USD25 billion) and short-term view (USD28 billion).

EXHIBIT 1: 1H Global Natural Disaster Losses[2]

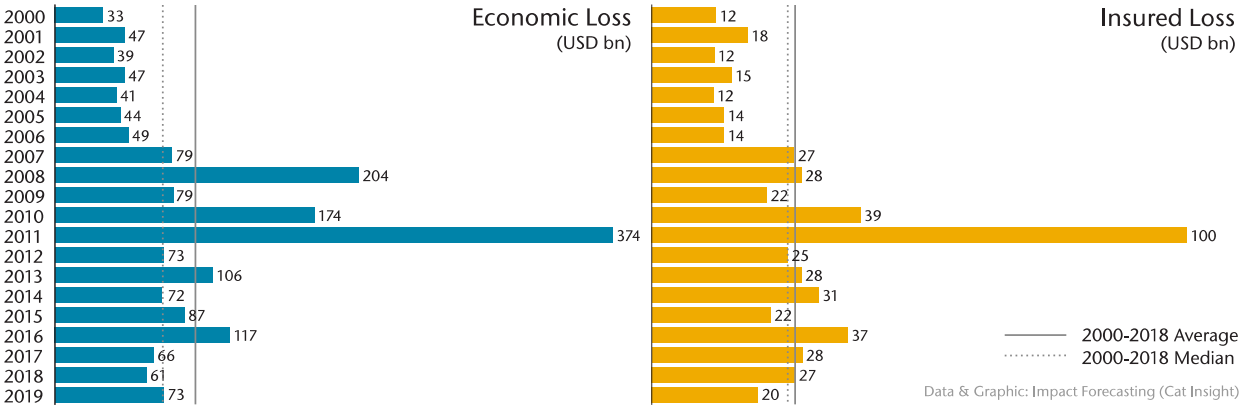
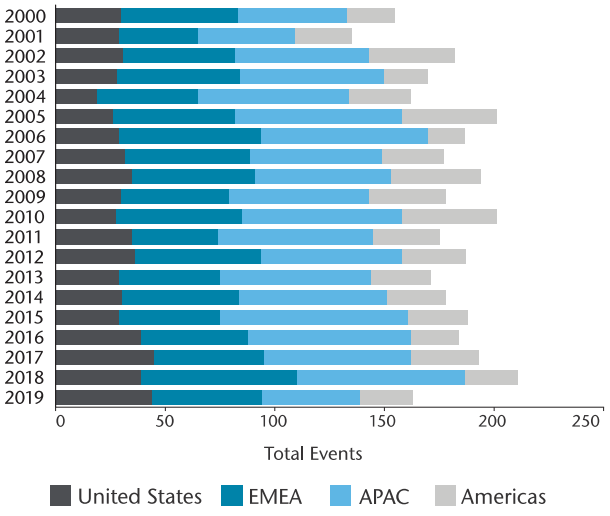


EXHIBIT 2: 1H Natural Disaster Events[3]

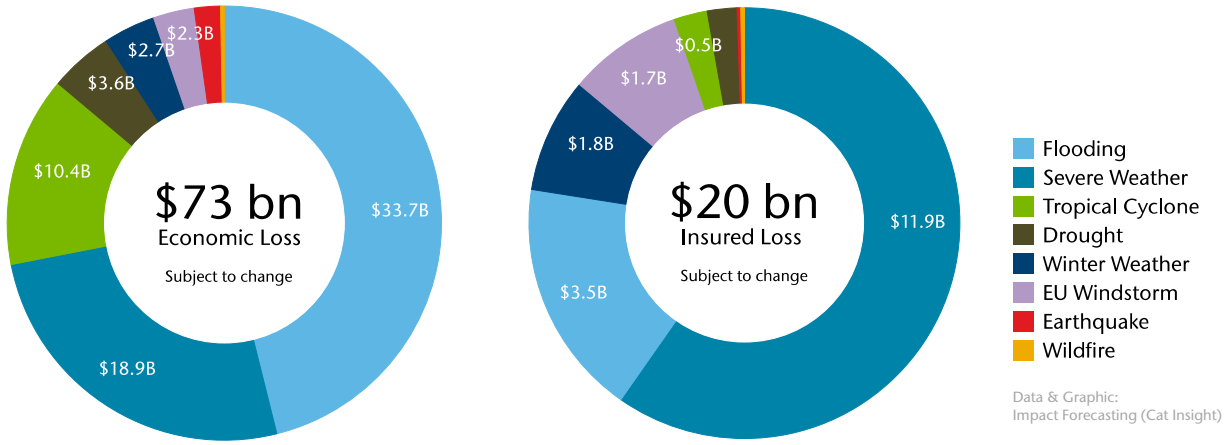


Data & Graphic: Impact Forecasting (Cat Insight)

There was a minimum of 163 natural disaster events that occurred in 1H 2019, which was below the 21st Century average of 180 and the median of 182. As a reminder, an event must meet pre-established criteria[3] to be entered into the Impact Forecasting database. The first six months of the year were marked by many small and medium-scale disasters which were impactful to many communities around the world, but not historically significant from a financial loss view. This was the case in Europe, Middle East & Africa (EMEA) with 50 recorded notable disasters, and Asia-Pacific (APAC) with 45. There were 37 such events in the United States and 20 in the Americas (Non-U.S.). Of note, APAC recorded the second lowest number of 1H disasters since 2000 – largely driven by fewer events in Asia, and the United States having its second-highest during the timeframe.

[1] For this document: Short-term refers to 2009-2018; medium-term refers to 2000-2018; long-term refers to 1980-2019
[2] Loss totals in billions USD and adjusted to today's dollars using the U.S. Consumer Price Index. Average & Median uses 2000-2018 as a baseline.
[3] An event must meet at least one of the following criteria to be classified as a natural disaster: economic loss of USD50M, insured loss of USD25M, 10 fatalities, 50 injured, or 2,000 homes/structures damaged and/or filed insurance claims

EXHIBIT 3: 1H 2019 Economic & Insured Losses by Peril

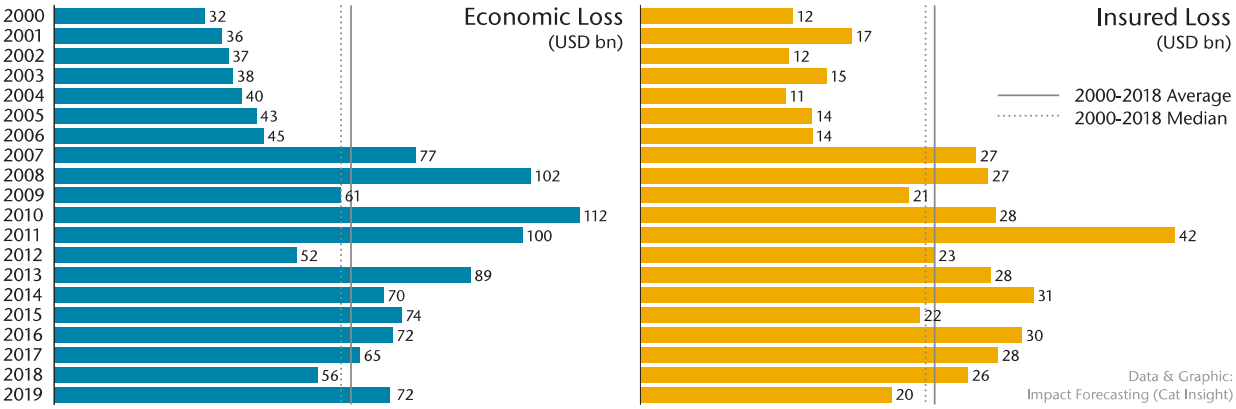


The Flooding and Severe Weather (thunderstorm) perils were the primary driver of economic and insured losses during the first half of 2019. Additionally, Severe Weather and European Windstorm were the only perils that showed higher-than-average insured losses, compared to the 21st Century baseline.

Weather Events[4]

Weather-only economic losses were estimated at USD72 billion, above the medium and long-term averages but slightly below the short-term mean. Insured losses were preliminarily estimated at USD20 billion and were lower than the short- and medium-term averages, but higher than the long-term average (USD16 billion).

EXHIBIT 4: 1H Global Weather Disaster Losses[5]



Fatalities

Natural disasters claimed roughly 3,800 lives during the first half of 2019; this number was significantly below the long-term average of 37,400 and the median of 8,500. Tropical cyclones and flooding were the deadliest perils of the first two quarters of 2019, being responsible for at least 1,500 and 1,425 deaths respectively. Most of the fatalities due to tropical cyclones in the first half of 2019 occurred in Africa. At nearly 1,400 casualties, this was the highest 1H toll on record for the peril on the continent since 1980.

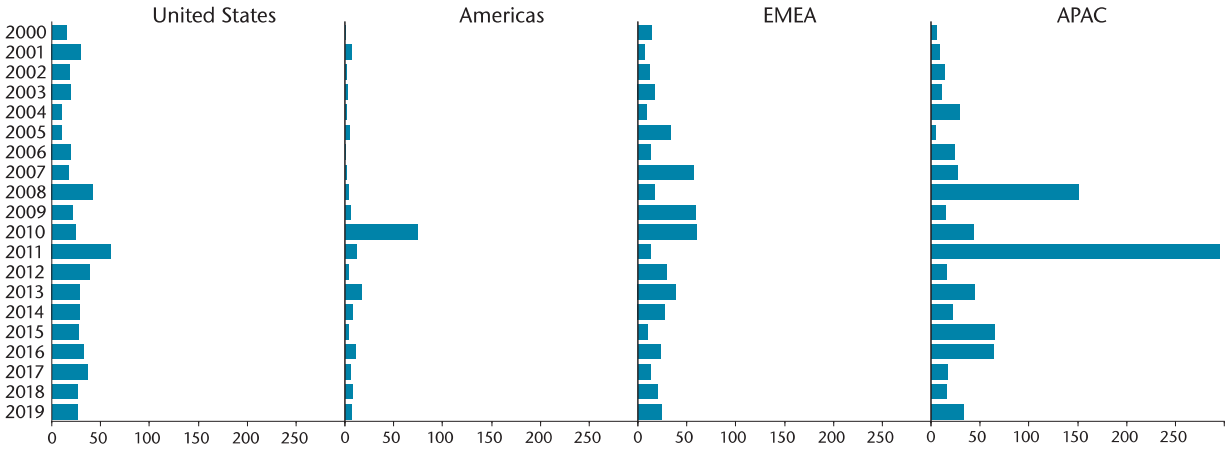
[4] Weather events are catastrophes spawned by atmospheric or oceanic-influenced scenarios. It does not include earthquakes, tsunamis or volcanoes.
[5] Loss totals in billions USD and adjusted to today's dollars using the U.S. Consumer Price Index. Average & Median uses 2000-2018 as a baseline.

Economic Loss Analysis

Losses by Region

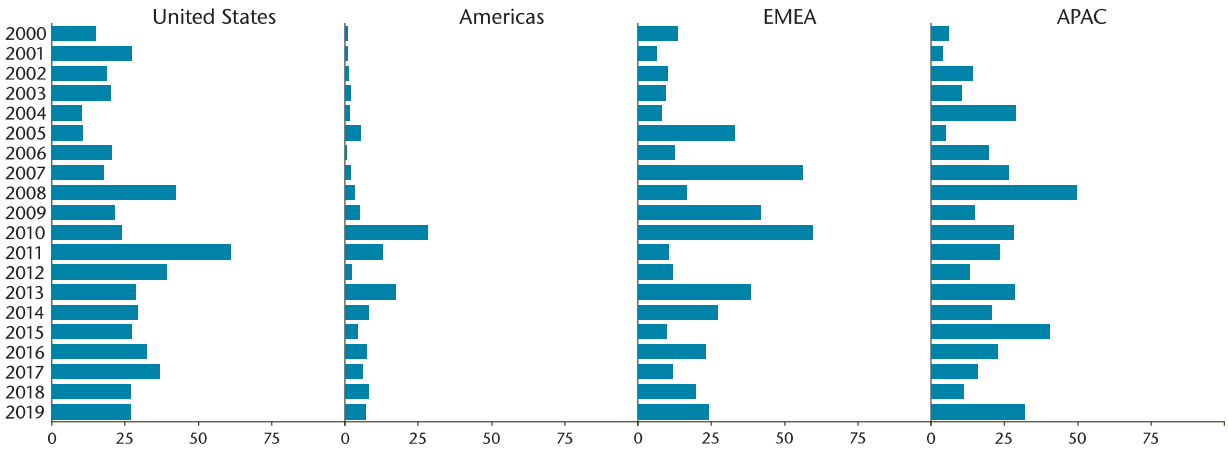
Economic losses resulting from natural catastrophes were below the 1H average for every region of the globe, except the United States which was 14 percent above the 21st Century average. However, the losses for all regions were higher than the respective medians since 2000. At USD17 billion, EMEA was 26 percent higher than the median, the highest percentage above its median of any region in 1H 2019.

EXHIBIT 5: Natural Disaster Economic Losses by Region (USD bn)



Data & Graphic: Impact Forecasting (Cat Insight)

EXHIBIT 6: Weather Disaster Economic Losses by Region (USD bn)



Data & Graphic: Impact Forecasting (Cat Insight)

Billion-Dollar Events

There were at least 17 separate billion-dollar events in 1H 2019. All but one of the events were weather-related, with the exception being the June 17 earthquake in Sichuan Province, China. The billion-dollar events were led by the U.S. (6) and APAC (6), followed by EMEA (4), and the Americas (1). The table below lists the eight events which reached the multi-billion-dollar threshold (economic loss of USD2.0 billion or greater). These loss totals are preliminary and subject to change.

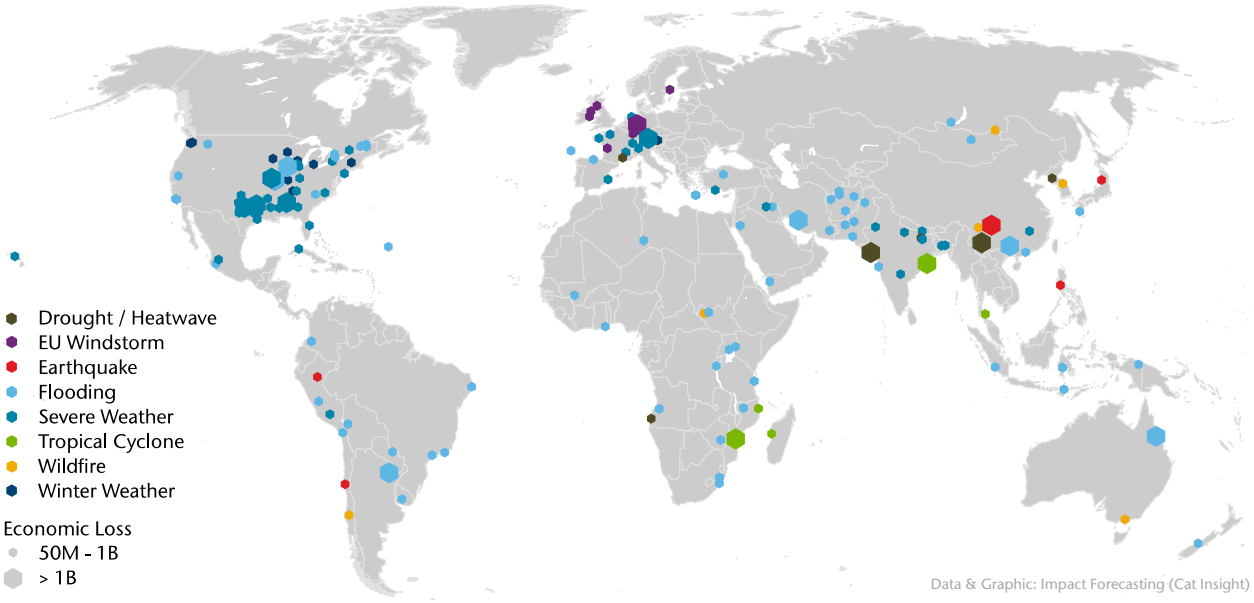
Date	Event	Location	Deaths	Economic Loss[1] (USD)
March/April	Iran Floods	Iran	77	8.3+ billion*
May 2-5	Cyclone Fani	India, Bangladesh	81	8.1+ billion
June 1-present	China Seasonal Flooding	China	225	7.7+ billion
March	MS & MO River Basin Floods	United States	10	5.0+ billion
May 1-present	AR, MS, & MO River Basin Floods	United States	0	4.0+ billion
May 27-30	Severe Weather	United States	0	2.8+ billion
January 1-20	Parana Floods	Argentina, Uruguay	0	2.4+ billion
March 4-17	Cyclone Idai	Mozambique, Southern Africa	1,303	2.2+ billion

[1] *Totals subject to change*

*Global free market currency conversion; unofficial local free market (Tehran) conversion cost is USD2.6 billion

The most notable economic loss events of 1H 2019 are mapped in Exhibit 7. Events which caused at least USD1.0 billion in damage are shown with larger-sized polygons, while other significant events that did not hit the billion-dollar threshold are indicated with a smaller and specific-colored polygon to denote event type. Note that the map includes a centrally located geocoded spot for where the most significant impacts were incurred during events which may have crossed multiple states, territories, or countries.

EXHIBIT 7: 1H 2019 Notable Economic Loss Events Map



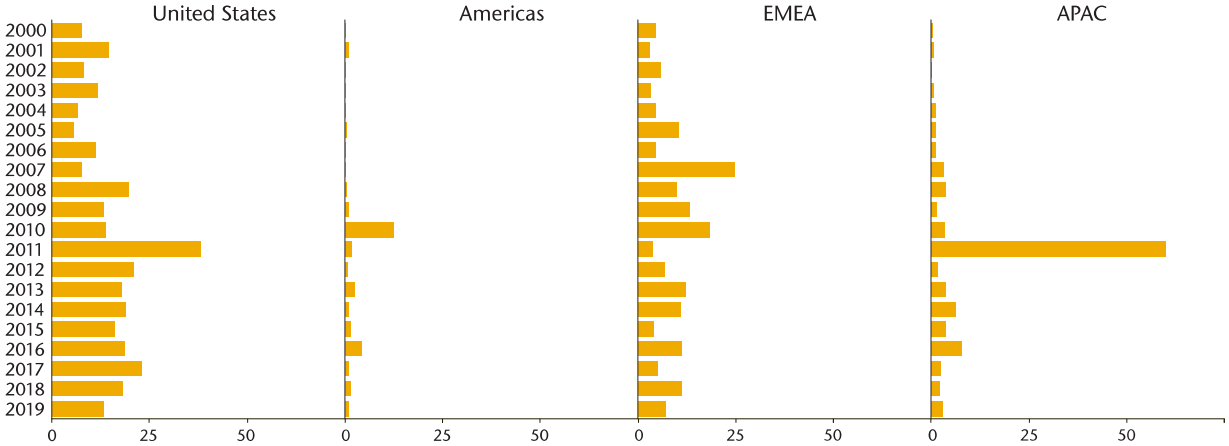
Insured Loss Analysis

Losses by Region

Insured losses – defined as claims payouts by the private insurance market and public insurance entities – during 1H were generally lower than the average and median dating to 2000. On a regional level, only APAC (USD2.4 billion) was higher than the regional median (USD2.1 billion) during that timeframe. This was primarily driven by flooding in Queensland, Australia between January 26 - February 7, Cyclone Fani in India between May 2-5, and seasonal flooding of the Yangtze and Yellow River basins in China. While the United States saw the highest insured loss (USD13 billion) of any region, it was lower than the 21-century average and median loss for the region.

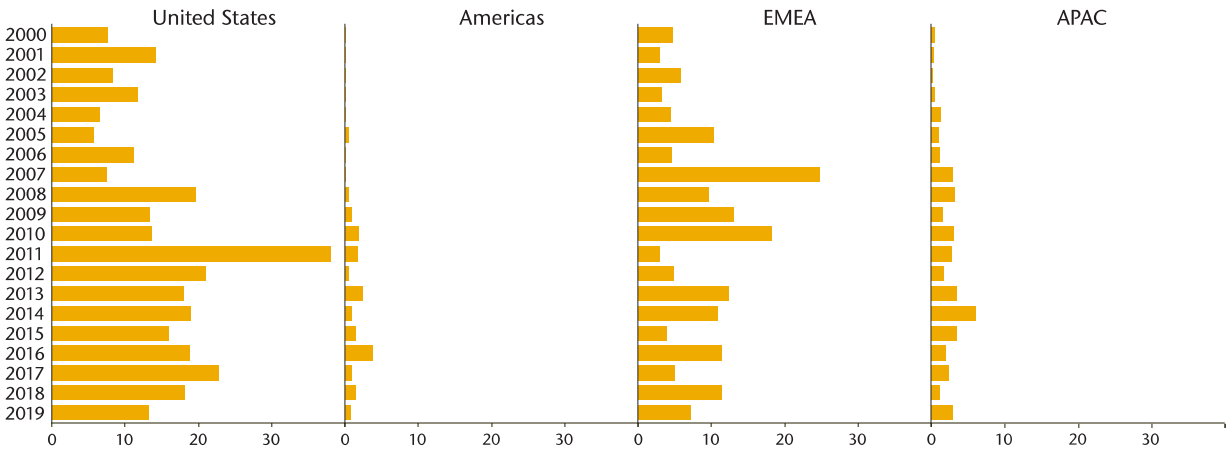
Please note that there is likely to be notable upward revisions for 1H insured payouts in both the United States and Europe. Large-scale events – such as ongoing flooding in the U.S. and severe hail and drought damage to crops in Europe during the month of June into July – will result in an extended period of farmers taking stock of damage to crop harvests and potential yields. Until this occurs, and all claims are filed, it will take time to fully gauge the financial cost.

EXHIBIT 8: Natural Disaster Insured Losses by Region (USD bn)



Data & Graphic: Impact Forecasting (Cat Insight)

EXHIBIT 9: Weather Disaster Insured Losses by Region (USD bn)



Data & Graphic: Impact Forecasting (Cat Insight)

Billion-Dollar Events

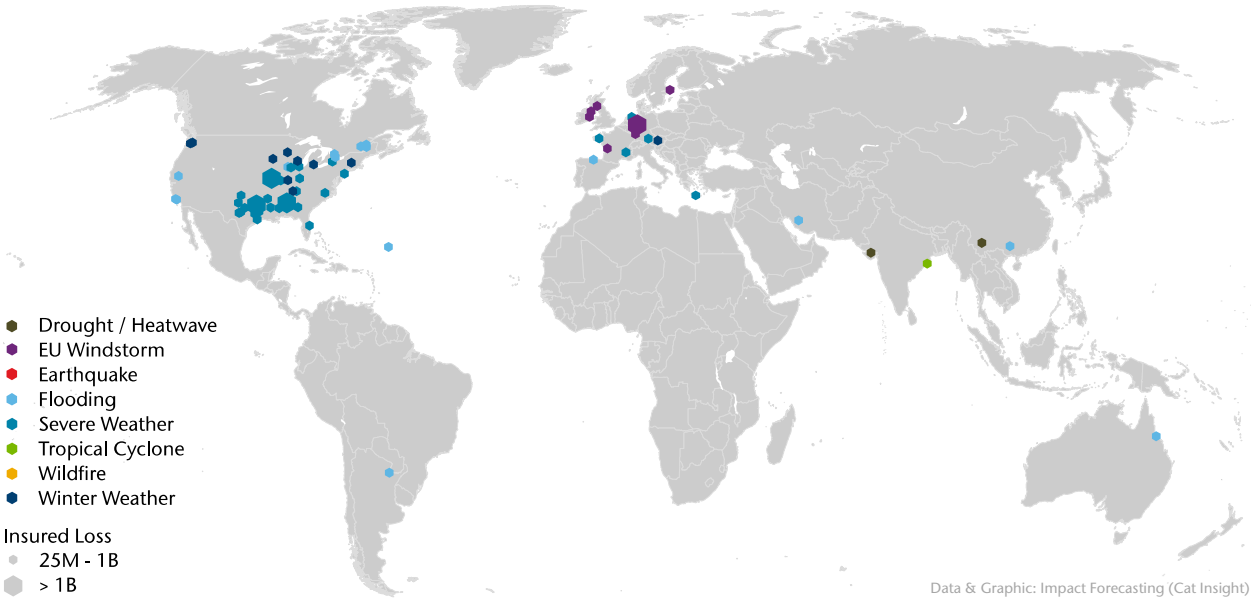
There were at least four individual billion-dollar events for the insurance industry in 1H 2019 – all of which were weather-related. Three billion-dollar events related to severe convective storms were cited in the U.S., while Europe recorded a billion-dollar loss due to Windstorm Eberhard in January. The table below lists each of these events. These loss totals are preliminary and subject to change.

Date	Event	Location	Deaths	Insured Loss (USD)[1]
May 27-30	Severe Weather	United States	0	2.0+ billion
March 23-25	Severe Weather	United States	0	1.2+ billion
March 10-11	Windstorm Eberhard	Western & Central Europe	2	1.1+ billion
February 22-26	Severe Weather	United States	4	1.0+ billion

[1] *Totals subject to change*

The most notable insured loss events of 1H 2019 are displayed in Exhibit 10. Events which caused at least USD1.0 billion in damage are shown with larger-sized polygons, while other significant events that did not hit the billion-dollar threshold are indicated with a smaller and specific-colored polygon to denote event type. Note that the map includes a centrally located geocoded spot for where the most significant impacts were incurred during events which may have crossed multiple states, territories, or countries.

EXHIBIT 10: 1H 2019 Notable Insured Loss Events Map



Additional Comments

As always it is critical to reiterate that losses during the first six months of the year do not have any correlation to eventual final year totals. Just one major event – regardless of natural peril – can entirely change the trajectory of a year from a financial loss perspective. The third quarter is historically the most expensive for natural disasters given the peak of tropical cyclone season in the Atlantic and Pacific Oceans.

For a more detailed analysis of 2019 natural disaster events, please see Aon's monthly Global Catastrophe Recap series, which can be found here.

For additional historical natural disaster loss data and other climatological information, please visit Aon's Catastrophe Insight website: http://catastropheinsight.aon.com

Contact Information

Adam Podlaha
Head of Impact Forecasting
Impact Forecasting
Aon
adam.podlaha@aon.com

Steve Bowen
Director & Meteorologist
Head of Catastrophe Insight
Impact Forecasting
Aon
steven.bowen@aon.com

Michal Lörinc
Senior Catastrophe Analyst
Impact Forecasting
Aon
michal.lorinc@aon.com

Anwesha Bhattacharya
Senior Analyst (Hydro-meteorologist)
Impact Forecasting
Aon
anwesha.bhattacharya@aon.com

About Aon

Aon plc (NYSE:AON) is a leading global professional services firm providing a broad range of risk, retirement and health solutions. Our 50,000 colleagues in 120 countries empower results for clients by using proprietary data and analytics to deliver insights that reduce volatility and improve performance.