Global Catastrophe Recap:
First Half of 2020

July 2020
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Executive Summary

**Global Catastrophe Recap: First Half of 2020**

**Total Economic Losses (USD)**
- 23% below average since 2000

**Total Insured Losses (USD)**
- 8% above average since 2000

- **75 bn**
- **30 bn**

**77%** portion of insured losses caused by Severe Weather

**60%** preliminary estimate of global protection gap

**69%** global insured losses incurred in the United States

- **207** notable events - 22 above average; 191 were weather-related
- **191**
- **20** billion-dollar economic loss events; 10 in the US, of which 7 had $1B+ of insured loss

**Severe Weather: main loss driver**

- Calgary Hailstorm: costliest on record for Canadian insurers
- 10 billion-dollar Severe Weather events in the United States
- Hailstorms & East Coast Low in Australia: $1.75+ billion insurance payouts

**Earth & Climate: records broken**

- NOAA: Globally 2nd warmest 1H on record: 1.07˚C / 1.93˚F above 20th Century mean
- Warmest March on record in South America & Gulf of Mexico

- **38˚C / 100.4˚F** highest on record observed above the Arctic Circle
- **18.4˚C / 65.1˚F** highest on record in Antarctica

**Europe: active storm season**

- Windstorm Ciara / Sabine: $2.0 billion insured cost; 1.0+ million claims
- 11 notable windstorm events; above-average seasonal losses

**Asia: floods & cyclone**

- Cyclone Amphan: strongest on record in the Bay of Bengal
- $15 billion economic loss
- Seasonal floods in China: 1H cost near $6 billion

**Lives lost: 2,200+**

- 75 tornado-related deaths in the US; most since 2011
- 565+ fatalities across Africa due to flooding
Overview

Global natural disaster losses during the first half (1H) of 2020 were well below average when compared against a 10-year (2010-2019) and 21st Century (2000-2019) baseline, but close to a longer-term view (1980-2019). As seen in Exhibit 1, economic losses were estimated at USD75 billion; or 41 percent lower compared to the previous decade (USD125 billion), 23 percent lower since 2000 (USD98 billion), but close to the average since 1980 (USD78 billion) \(^1\). Insured losses were estimated at USD30 billion; down 21 percent from the 10-year average (USD38 billion), up 8 percent from the 21st Century average (USD28 billion), but 54 percent higher since 1980 (USD20 billion). **These numbers are preliminary and will change as losses continue to develop.** To offset any outlier years, median analysis shows that 1H economic losses were higher than 1980-2019 (USD59 billion) and 2000-2019 (USD70 billion), but lower than the 10-year median (USD90 billion). Insured losses were much higher versus the longer-(USD15 billion) and the mid-term view (USD27 billion) and tied with the short-term view (USD30 billion).

**EXHIBIT 1: 1H Global Natural Disaster Losses\(^2\)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Economic Loss (USD bn)</th>
<th>Insured Loss (USD bn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>174</td>
<td>40</td>
</tr>
<tr>
<td>2011</td>
<td>112</td>
<td>108</td>
</tr>
<tr>
<td>2012</td>
<td>73</td>
<td>26</td>
</tr>
<tr>
<td>2013</td>
<td>124</td>
<td>36</td>
</tr>
<tr>
<td>2014</td>
<td>69</td>
<td>29</td>
</tr>
<tr>
<td>2015</td>
<td>65</td>
<td>24</td>
</tr>
<tr>
<td>2016</td>
<td>107</td>
<td>12</td>
</tr>
<tr>
<td>2017</td>
<td>75</td>
<td>Average</td>
</tr>
<tr>
<td>2018</td>
<td>107</td>
<td>Average</td>
</tr>
<tr>
<td>2019</td>
<td>73</td>
<td>Average</td>
</tr>
<tr>
<td>2020</td>
<td>107</td>
<td>Average</td>
</tr>
</tbody>
</table>

**EXHIBIT 2: 1H Natural Disaster Events\(^3\)**

- Drought
- Earthquake
- European Windstorm
- Flooding
- Severe Weather
- Tropical Cyclone
- Wildfire
- Winter Weather
- Other

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\(^1\) For this document: Short-term refers to 2010-2019; medium-term refers to 2000-2019; 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 uses 2000-2019 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
There was a minimum of 207 natural disaster events that occurred in 1H 2020, which was above the 21st Century average of 185 and the median of 189. As a reminder, an event must meet pre-established criteria to be entered into the Aon (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. The number of events was above the 21st Century average in all regions except the Americas (Non-U.S.). From a natural peril standpoint, there was an unusually low number of significant earthquakes, while Europe experienced an active windstorm season.

Weather Events

Weather-only economic losses were estimated at USD71 billion, above the medium and long-term averages; but slightly lower than the short-term average. Insured losses were preliminarily estimated at above USD29 billion and were also higher than all three thresholds.

Fatalities

Natural disasters claimed roughly 2,200 lives during the first half of 2020; this number was significantly below the long-term average (since 1980) of 39,800 and the median of 7,700. Flooding was the deadliest natural peril of the first six months of 2020, being responsible for nearly 60 percent of the toll. The Asia-Pacific region recorded the highest death toll (1,002), even though the value was at its lowest since at least 1972.
Economic Loss

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 12 percent above the 21st Century average. However, median analysis shows losses in APAC were higher by 67 percent and in Americas by 25 percent. EMEA recorded losses that were 29 percent below the median. Please note that rounding might result in a difference between the global total and the sum of regional values.

EXHIBIT 5: 1H Natural Disaster Economic Losses by Region (USD bn)

Costliest Events

There were at least 20 separate billion-dollar events in 1H 2020. All but two of the events were weather-related, with the exception being Puerto Rico and Zagreb Earthquakes. The billion-dollar events were led by the U.S. (10) and APAC (5), followed by EMEA (3), and the Americas (2). 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.

EXHIBIT 6: 1H Multi-Billion-Dollar Economic Loss Events (USD bn)

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Location</th>
<th>Deaths</th>
<th>Economic Loss (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 15-21</td>
<td>Cyclone Amphan</td>
<td>India, Bangladesh</td>
<td>133</td>
<td>15.0 billion</td>
</tr>
<tr>
<td>June</td>
<td>Seasonal Monsoon Floods</td>
<td>China</td>
<td>119</td>
<td>5.6 billion</td>
</tr>
<tr>
<td>April 10-14</td>
<td>Severe Weather</td>
<td>United States</td>
<td>38</td>
<td>3.5 billion</td>
</tr>
<tr>
<td>April 6-9</td>
<td>Severe Weather</td>
<td>United States</td>
<td>0</td>
<td>2.8 billion</td>
</tr>
<tr>
<td>March 27-30</td>
<td>Severe Weather</td>
<td>United States</td>
<td>0</td>
<td>2.5 billion</td>
</tr>
<tr>
<td>February 9-10</td>
<td>Windstorm Ciara (Sabine)</td>
<td>Western, Central &amp; Northern Europe</td>
<td>14</td>
<td>2.3 billion</td>
</tr>
<tr>
<td>March 2-5</td>
<td>Severe Weather</td>
<td>United States</td>
<td>25</td>
<td>2.0 billion</td>
</tr>
</tbody>
</table>

Loss totals in billions USD and adjusted to today’s dollars using the U.S. Consumer Price Index.
Insured Loss

Losses by Region

Insured losses resulting from natural catastrophes were well below the 1H average in APAC (down 46 percent), and EMEA (down 30 percent). However, the United States and Americas recorded above-average losses with 36, or 33 percent increase, respectively. Moreover, APAC loss compared to the 21st-Century median, which offsets the record year of 2011, was 39 higher.

EXHIBIT 7: 1H Natural Disaster Insured Losses by Region (USD bn)

Costliest Events

There were at least 9 separate billion-dollar events in 1H 2020, all of which were weather-related. Severe convective storms generated 7 billion-dollar events in the United States alone, while one occurred in Australia in January. Windstorm Ciara (Sabine) impacted large part of Europe in February.

EXHIBIT 8: 1H Billion-Dollar Insured Loss Events (USD bn)

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Location</th>
<th>Deaths</th>
<th>Insured Loss (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 10-14</td>
<td>Severe Weather</td>
<td>United States</td>
<td>38</td>
<td>2.7 billion</td>
</tr>
<tr>
<td>April 6-9</td>
<td>Severe Weather</td>
<td>United States</td>
<td>0</td>
<td>2.1 billion</td>
</tr>
<tr>
<td>February 9-10</td>
<td>Windstorm Ciara (Sabine)</td>
<td>Western, Central &amp; Northern Europe</td>
<td>14</td>
<td>2.0 billion</td>
</tr>
<tr>
<td>March 27-30</td>
<td>Severe Weather</td>
<td>United States</td>
<td>0</td>
<td>1.9 billion</td>
</tr>
<tr>
<td>March 2-5</td>
<td>Severe Weather</td>
<td>United States</td>
<td>25</td>
<td>1.5 billion</td>
</tr>
<tr>
<td>April 21-24</td>
<td>Severe Weather</td>
<td>United States</td>
<td>7</td>
<td>1.2 billion</td>
</tr>
<tr>
<td>January 19-20</td>
<td>VIC, ACT, NSW Hailstorms</td>
<td>Australia</td>
<td>0</td>
<td>1.1 billion</td>
</tr>
<tr>
<td>May 20-24</td>
<td>Severe Weather</td>
<td>United States</td>
<td>2</td>
<td>1.0 billion</td>
</tr>
<tr>
<td>May 27-28</td>
<td>Severe Weather</td>
<td>United States</td>
<td>0</td>
<td>1.0 billion</td>
</tr>
</tbody>
</table>

* Loss totals in billions USD and adjusted to today’s dollars using the U.S. Consumer Price Index.
Natural Perils

Loss Breakout by Peril

EXHIBIT 9: 1H 2020 Economic & Insured Losses by Peril (USD bn)

Severe convective storms were the primary driver of economic losses, and accounted for nearly 80 percent of global insured losses. While droughts, earthquakes, and wildfires were significantly below average, tropical cyclone peril spiked by 270 percent above the 21st-Century average due to the devastating Cyclone Amphan. Tropical cyclone-related losses in the first six months exceeded USD15 billion for only the third time on record, the other two occurrences recorded in 2001 (Tropical Storm Allison in the US) and 2008 (Cyclone Nargis in Myanmar).

Cumulative Losses by Peril

EXHIBIT 10: 1H Cumulative Economic & Insured Loss by Peril (USD bn)

Cumulative chart of losses since 2000 (Exhibit 10) shows a leading role of the earthquake peril due to catastrophic events in Japan (2011,2016), China (2008), Chile (2010) or New Zealand (2011). However, the largest long-term contributor to 1H global insured losses is the severe weather peril, with notable growth over the past two decades. Its 2020 total was the second highest after the record year of 2011.

9 Loss totals in billions USD and adjusted to today’s dollars using the U.S. Consumer Price Index.
Weather & Climate Anomalies: 1H 2020 Review

The daily station data from NOAA’s GHCN (Global Historical Climatology Network) allows us to visualize anomalous monthly global weather and climate events during 1H 2020. The maps below indicate stations which tied or broke a monthly record of max or min temperature and/or accumulated precipitation total. Climate stations with more than 100 years of data records were highlighted. The final dataset only included stations which had a total record of at least 30 years with 90% or higher data completeness during the most recent 30-year period.

EXHIBIT 11: Monthly temperature records broken/tied in 1H 2020

For maximum temperature, 556 unique stations tied or broke a monthly record during 1H 2020, of which 103 had a record length greater than 100 years and 112 reported a record in more than one month. For minimum temperature, 217 unique stations tied or broke a monthly record during 1H 2020, of which 29 had a record length greater than 100 years and 40 reported a record in more than one month.

EXHIBIT 12: Precipitation records broken/tied in 1H 2020

For total precipitation, 863 unique stations tied or broke a monthly total precipitation record during 1H 2020, of which 124 had a record length greater than 100 years and 41 reported a record in more than one month. It is important to note that the GHCN dataset contains weather and climate observations from 180+ countries and is updated daily, however spatial and temporal coverage is not uniform. The highest concentration of stations with the longest and most complete records are primarily located in the United States, western Europe, and Australia; with the lowest station concentrations in Africa and South America.
Analysis: How 1H Losses Evolve

As emphasized previously, economic and insured loss totals for 1H 2020 are to be considered preliminary. As a rule, the full financial account of large-scale events can take months or years to completely settle. This happens for various reasons, including loss creep, delayed release of official damage assessments, claims litigation, or data releases by various agencies or companies on a quarterly or annual basis. The Catastrophe Insight group puts a high emphasis on a constant historical “reanalysis” - revisiting, updating and adding historical events, expanding the database to previously under-reported countries, to ensure our analyses are based on the most robust and up-to-date data available. An ongoing multi-year research effort to improve the database often results in differences between current and previously published estimates.

Charts below show nominal economic & insured losses (not adjusted for inflation) as reported in previous Impact Forecasting’s 1H reports (original value), along with estimates updated 6, 12 and 24 months after the release date, and the current value in the Catastrophe Insight’s Database.

EXHIBIT 13: Updates of 1H Nominal Economic Loss (USD bn)

A recent update to the database deals with significant events spanning from Q2 to Q3 - and previously bucketed as Q2- or Q3-only events, depending on when most of the damage occurred. These were split by loss quarter occurrence to more accurately represent 1H and 2H loss analysis. This includes seasonal floods and droughts in China, India, the U.S., and elsewhere. For example, the 2015 Yangtze River Basin flood from May to August with nominal losses of USD28 billion was previously marked as a Q3 event, but using available official damage statistics, Q2-only losses from this event were determined at USD6 billion. That is a main driver for why 1H 2016 notably increased (the annual total remains unchanged). These changes are reflected in the long-term analysis in Exhibit 1.

A significant increase of the 1H 2019 loss in the six months after the half-year report release was caused by several factors. Two historic flood events in the Mississippi, Missouri and Ohio River Basins in the U.S. were originally reported as USD5 and USD4 billion events, but with more comprehensive data, including full reporting on the extensive impact to the agricultural sector, the aggregated economic toll was pegged at USD20 billion.

Further notable additions are attributed to drought-related economic losses around the globe, which are typically reported later in the year and were not yet covered in early July. This included notable droughts in the United States, South America, Southern Africa, Spain, France, and elsewhere. Similar additions for drought are likely for 2020.

EXHIBIT 14: Updates of 1H Nominal Insured Loss (USD bn)
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 2020 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](http://catastropheinsight.aon.com)
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