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Global Catastrophe Recap

March 2018

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Executive Summary

- Winter storms & severe weather affect the United States; combined economic toll near USD3 billion
- Bushfires, flooding & TC Marcus prompt three insurance catastrophe declarations in Australia
- Worst drought in decades leads to expected USD4 billion agricultural loss in Argentina & Uruguay

A series of winter storms in the United States – four of which would become Nor'easters and track along the Mid-Atlantic and Northeast coastlines – led to extensive travel delays and widespread damage across more than a dozen states during the month of March. At least 10 people were killed. The combination of heavy snowfall, freezing rain, heavy rain, high winds, and coastal flooding led to notable damage in the hardest-hit states of Massachusetts, New York, New Jersey, Pennsylvania, Virginia, and Maryland. More than 1.5 million power outages were reported during the events.

The period also saw the first severe weather outbreak of 2018 in the U.S., which included the first EF3 tornado touchdown in the country in 306 days. This was the longest such EF3+ tornado drought in the country since NOAA began keeping records in the 1950s.

Total combined economic damage from the winter storms and severe weather was expected to approach USD3 billion. Public and private insurers were expected to cover roughly two-thirds of the cost.

The Insurance Council of Australia declared three separate catastrophes during the month: Regional flooding in Queensland, a series of bushfires in New South Wales and Victoria, and Tropical Cyclone Marcus's landfall and impact in the Northern Territory. A combined 4,200 claims had already been filed from the three events and payouts were expected to minimally exceed USD61 million. Overall economic losses were even higher.

The worst drought in at least 30 years continued to affect a broad section of Argentina during March, as the agricultural sector realized the scope of damage to summer crops. The hardest-hit areas included the states of Buenos Aires, La Pampa, Cordoba, and Santiago del Estero. Total economic losses were estimated at USD3.4 billion, or equal to a 0.5 percent reduction of GDP. Similar impacts were recorded in Uruguay, where local agriculture officials anticipated economic losses exceeding USD500 million.

Papua New Guinea continued to be hit by a series of strong aftershocks after the earthquake of February 26. Two of the strongest aftershocks – registered at M6.0 and M6.7 – claimed 11 and 25 lives, respectively. The government cited that more than 10,000 homes were damaged. Total economic damage was estimated at PGK600 million (USD190 million) though this total was likely to increase.

A relatively weak tropical storm named Eliakim impacted portions of Madagascar from March 16-18, spawning regional flooding and numerous landslides. According to local authorities, 21 people lost their lives and more than 17,000 homes and other structures were damaged or destroyed.

Two successive extratropical cyclones impacted the Iberian Peninsula from March 9-14, bringing strong winds and abundant precipitation to several Portuguese and Spanish regions. No serious injuries or fatalities were reported. The two storms were named "Felix" and "Gisele" by local meteorological agencies. Total economic losses were estimated to reach into the tens of millions (USD).

Additional severe weather and flooding events were noted in parts of the United States, Brazil, Turkey, Rwanda, Kenya, South Africa, Lesotho, and China.

United States

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
03/01-03/03	Winter Weather	Northeast	9	225,000+	2.0+ billion
03/07-03/08	Winter Weather	Northeast	1	50,000+	500+ million
03/12-03/15	Winter Weather	Northeast	0	Thousands	Millions
03/18-03/21	Severe Weather	Plains, Southeast, Northeast	0	Thousands	100s of Millions
03/21-03/22	Flooding	California	0	Hundreds	Millions

A powerful Nor'easter spawned hurricane-force wind gusts, heavy snowfall, torrential rain, and coastal flooding to much of the U.S. East Coast from March 1-3. At least nine people were killed. States of emergency were declared in Massachusetts, New York, Virginia, and Maryland as the storm caused widespread wind and storm surge damage. Extensive power outages were reported to more than 2.4 million customers across the Northeast and Mid-Atlantic States as winds gusting beyond 70 mph (110 kph) occurred. Total economic losses, including net loss business interruption, were estimated around USD2.0 billion. Public and private insurers anticipated payouts exceeding USD1.4 billion.

Another coastal winter storm impacted the U.S. East Coast on March 7 and 8, bringing heavy snowfall to Connecticut, Massachusetts, and Maine. More than 1 million people lost power, particularly in Massachusetts, New Jersey, New York and Connecticut. At least 3,000 flights were cancelled and many major highways and interstates were temporarily closed due to hazardous conditions. A train derailed near Wilmington, Massachusetts, but no injuries were reported from this incident. Total economic losses were estimated around USD500 million. Public and private insurers estimated payouts around USD300 million.

A strong coastal winter storm impacted the Northeast from March 12-15 after first sweeping across the Midwest. More than two feet of snowfall fell in the hardest-hit areas of Vermont, Massachusetts, Maine, New Hampshire, Rhode Island, and Connecticut. Winds gusting in excess of 50 mph (80 kph) in some areas made travel extremely hazardous and led to more than 250,000 power outages. The inclement weather led to thousands of flight delays or cancellations. Total economic and insured losses were expected well into the millions (USD).

The first notable outbreak of severe weather in 2018 impacted the United States from March 18-20, as large hail and damaging straight-line winds impacted central and southern sections of the country. No fatalities were reported, though widespread damage was cited in the hardest-hit areas of Texas, Florida, Alabama, Georgia, and Tennessee. Most damage reports were due to shattered windows, dented roofs, and downed trees. Following the convective storm component, a coastal Nor'easter brought heavy snow to the Mid-Atlantic and Northeast – leading to widespread transit and business disruption. Total economic losses were expected to reach into the hundreds of millions (USD).

Heavy rainfall led to flooding and mudslides in California from March 21-22. No fatalities were reported, though the prospect of several inches of rain falling in areas with burn scars following significant wildfires in 2017 led to mandatory evacuations in Santa Barbara County. Damage was not as extensive as initially feared, though there were numerous instances of flooded structures and vehicles. Mudslides left some damage to local infrastructure. Total economic damage was estimated in the low millions (USD).

Remainder of North America (Non-US)

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)

No major natural disasters occurred in this region during the month of March.

South America

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/01-03/31	Drought	Uruguay	N/A	N/A	500+ million
01/01-03/31	Drought	Argentina	N/A	N/A	3.4+ billion
03/20-03/21	Flooding	Brazil	3	Thousands	43+ million

A severe lack of summer rainfall has led to the worst drought conditions in Uruguay since 2008/09. The government declared an agricultural emergency for the departments of Tacuarembó, Salto, Durazno, and the areas of Artigas, Paysandú, Rivera, and Río Negro. Local industry officials anticipated economic losses exceeding USD500 million.

The worst drought in at least 30 years continued to affect a broad section of Argentina during March, as the agricultural sector realized the scope of damage to summer crops. The hardest-hit areas included the states of Buenos Aires, La Pampa, Cordoba, and Santiago del Estero. Agricultural industry groups indicated that soybean was the worst-affected crop. Total economic losses were estimated at USD3.4 billion, or equal to a 0.5 percent reduction of GDP.

Torrential rains impacted São Paulo, Brazil on March 20-21, killing at least three people. Floods swept through several neighborhoods and caused many homes to be inundated. Additional damage included collapsed walls, uprooted trees, and downed power lines. The government cited initial damage to exceed BRL140 million (USD43 million).

Europe

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
03/09-03/14	WS Felix & Gisele	Portugal, Spain	0	Hundreds	10s of Millions
03/28	Flooding	Russia	2	1224	Unknown

Two successive extratropical cyclones impacted the Iberian Peninsula from March 9-14, bringing strong winds and abundant precipitation to several Portuguese and Spanish regions. No serious injuries or fatalities were reported. The two storms were named “Felix” and “Gisele” by local meteorological agencies. Total economic losses were estimated to reach into the tens of millions (USD).

Melting snow caused flooding in Russia on March 28, damaging more than 1,224 houses and resulted in the death of two people in the Altai Krai region.

Middle East

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
03/07	Earthquake	Iran	0	5,500+	Millions
03/24	Severe Weather	Turkey	0	Thousands	Millions

A magnitude-5.4 earthquake struck southeastern Iran on March 7, leaving at least nine people injured. The most significant damage resulted from cracking in buildings across Kerman province. Local officials cited at least 5,500 structures damaged and thousands of power outages.

Widespread wind-related damage occurred across Turkey on March 24 as a windstorm passed through the region. The most affected region was Eastern Anatolia, notably in Erzurum Province after numerous structures were damaged. The storms also impacted the province of Kastamonu in Northern Turkey, where the municipalities of Seydiler, Ağlı and Daday were hit the most. Strong winds blew roofs off buildings, downed trees and caused power outages. Total economic damage was estimated to reach well into the millions (USD).

Africa

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
02/22-03/07	Flooding	Angola, Malawi, Rwanda	8	6,500+	Millions
03/14-03/20	Flooding	Kenya	15	1,000+	Millions
03/17-03/18	Cyclone Eliakim	Madagascar	21	17,228+	Millions
03/22-03/23	Flooding	South Africa, Lesotho	7	Thousands	Millions

Episodes of torrential rainfall caused multiple separate flooding events in Sub-Saharan Africa in late February and early March, causing multiple fatalities and affecting thousands of people, notably in Rwanda, Angola and Malawi. Among the most affected regions in Angola were the provinces of Luanda, Cuando Cubango and Cuanza Norte. At least eight people lost their lives. More than 5,000 homes were affected in Rwanda.

Rounds of heavy rainfall impacted parts of Kenya from March 14-20, spawning floods that led to at least 15 casualties. Several rivers burst their banks damaging adjacent roads and property, including the Ngong and Athi Rivers. The floods cut off sections of Nairobi and also a bridge on the Nairobi-Mombasa Highway. The recovery cost of the damage is expected to be millions of dollars (USD).

A relatively weak tropical storm named Eliakim impacted portions of Madagascar from March 16-18, spawning regional flooding and numerous landslides. According to local authorities, 21 people lost their lives and more than 50,000 were affected. More than 17,000 homes and other structures were damaged or destroyed. Total economic losses were estimated to reach the millions (USD).

Severe thunderstorms impacted eastern portions of South Africa and Lesotho on March 22-23, bringing significant rainfall accumulations and localized flash flooding. Multiple rivers burst their banks across the region. Seven people died in the enclaved country of Lesotho. In South Africa, the worst situation was in Gauteng Province, where the highest 24-hour rainfall totals were observed; 145 millimeters (5.7 inches) were recorded in Pretoria. Total economic damage was expected to reach the millions (USD).

Asia

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
03/03	Severe Weather	China	14	59,000+	147+ million
03/10	Wildfire	India	17	N/A	N/A
03/15-03/18	Severe Weather	China	5	2,000+	50+ million
03/22-03/26	Flooding	Indonesia	3	1,092+	Unknown
03/29	Severe Weather	China	0	200+	30+ million

Rounds of severe thunderstorms and heavy rainfall affected seven Chinese provinces on March 3. At least 14 people were killed and many others were injured. The strongest impacts were felt in provinces of Jiangxi, Zhejiang, and Anhui, where the Ministry of Civil Affairs (MCA) cited more than 59,000 homes damaged or destroyed. Heavy damage to agriculture and crops was also reported. Combined economic damage was listed at CNY930 million (USD147 million).

A forest fire left at least 17 people dead in India's Tamil Nadu state. The casualties occurred after dozens of trekkers were trapped in the Kurangani Hills.

Multiple rounds of severe thunderstorms and heavy rain impacted several sections of China from March 15-18, leading to the deaths of at least five people. The hardest-hit areas came in the provinces of Hunan, Guizhou, Hubei, Jiangxi, Shandong, and Shaanxi. The MCA reported that at least 2,000 homes and other structures were damaged or destroyed. Thousands of hectares (acres) of cropland were also lost. Total economic damage was listed at CNY310 million (USD50 million).

Heavy rainfall caused flooding and landslides in Indonesia between March 22-26 resulting in the death of three people. More than 1,000 buildings were damaged and nearly 12,000 people were affected.

Thunderstorm and hail affected parts of Guizhou Province in China on March 29 damaging more than 200 houses and 5,400 hectares (13344 acres) of crop land. The direct economic loss was reported to be CNY190 million (USD30 million).

Oceania (Australia, New Zealand, South Pacific Islands)

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
03/03	Cyclone Hola	Vanuatu, N. Caledonia, NZ	3	Unknown	Unknown
03/05-03/08	Earthquake	Papua New Guinea	36+	Unknown	190+ million
03/09-03/11	Flooding	Australia	0	750+	25+ million
03/17-03/19	Wildfire	Australia	0	340+	50+ million
03/17	Cyclone Marcus	Australia	0	3,100+	20+ million

Papua New Guinea continued to be hit by a series of strong aftershocks after the earthquake of February 26. Two of the strongest aftershocks – measured at M6.0 and M6.7 – claimed 11 and 25 lives, respectively. The government cited that more than 10,000 homes were damaged, including some villages which were destroyed. An estimated 544,000 people were affected by the tremors. Total economic damage was estimated at PGK600 million (USD190 million) though this total was likely to increase as the full scope of the disaster is realized.

Regional flooding impacted parts of Northern Queensland in Australia from March 9 to 11. The floods were caused by the passage of a tropical low that left more than 200 homes inundated in Ingham, Halifax and Innisfail. The Insurance Council of Australia (ICA) declared a catastrophe and cited an initial payout of AUD14.8 million (USD11.4 million) from at least 750 filed claims. Total economic losses were even higher.

A series of bushfires were ignited in parts of Australia's New South Wales (NSW) and Victoria from March 17-19, causing widespread damage. Nearly 130 structures were damaged or destroyed in the community of Tathra, NSW and a further 60 structures in Victoria. The fires burned more than 40,000 hectares (98,842 acres) of land and killed several hundred livestock. The ICA declared the event a catastrophe. Insured loss data included at least AUD36 million (USD28 million) in claims payouts from the NSW fires and an additional AUD12 million (USD9.3 million) from the Victoria fires. Total economic losses were even higher.

Tropical Cyclone Marcus made landfall near Darwin, Australia on March 17 and became one of the strongest storms to strike the region in decades. The system, which came ashore as a tropical storm, brought periods of heavy rainfall and gusty winds to the Northern Territory before later rapidly intensifying over the open waters of the Indian Ocean and reaching Category 5 intensity. The ICA declared a catastrophe and since received more than 3,100 claims with anticipated payouts of AUD15.5 million (USD11.9 million). Total economic losses were even higher.

Appendix

Updated 2018 Data: January-February

United States

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/03-01/05	Winter Weather	Eastern & Central U.S.	22	60,000+	1.1+ billion
01/08-01/09	Flooding	California	21	6,500+	750+ million
01/14-01/17	Winter Weather	Plains, Midwest, Northeast, Southeast	16	Thousands	Millions
01/21-01/24	Winter Weather	Plains, Midwest	10	Hundreds	Millions
02/03-02/07	Winter Weather	Plains, Midwest, Northeast	7	Thousands	50+ million
02/07-02/10	Winter Weather	Plains, Midwest, Northeast	5	Thousands	50+ million
02/19-02/22	Flooding	Plains, Midwest, Southeast	10	25,000+	400+ million
02/23-02/27	Severe Weather	Plains, Midwest, Southeast	5	15,000+	175+ million

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

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/11-0/14	Flooding	Canada	0	Hundreds+	Millions
02/16	Earthquake	Mexico	0	18,000+	Millions
02/19-02/22	Flooding	Canada	0	Thousands	10s of Millions

South America

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/14	Earthquake	Peru	2	2,541+	Millions
01/29-02/08	Flooding	Bolivia, Argentina	7	Thousands	138+ million
02/09	Severe Weather	Argentina	0	Thousands	Millions
02/15-02/21	Flooding	Brazil	4	Thousands	10s of Millions

Europe

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/01-01/04	WS Eleanor & Carmen	Western & Central Europe	7	200,000+	1.25+ billion
01/06-01/07	Severe Weather	Spain	0	Hundreds	60+ million
01/08	Earthquake	Netherlands	0	3,000+	Millions
01/18	WS Friederike	Western & Central Europe	13	Thousands	2.0+ billion
01/20-02/01	Flooding	France	0	Thousands	100s of Millions+
02/23-03/02	Winter Weather	Western, Central & Eastern EU	88+	Thousands	100s of Millions+

Middle East

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/19-01/20	Winter Weather	Lebanon	15	N/A	Negligible
02/16-02/18	Flooding	Turkey, Iran, Iraq, Lebanon	3	Hundreds	Millions

Africa

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/03-01/07	Flooding	Democratic Republic of Congo	51	465	Millions
01/12-01/13	CY Ava	Madagascar	73	4,800+	Millions
01/15-01/18	CY Berguitta	Mauritius, La Reunion	0	Thousands	10s of Millions
01/16-01/22	Flooding	Mozambique	11	15,000+	5.1+ million
02/07-02/09	Flooding	Malawi	1	2,000+	Unknown

Asia

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/01-01/07	Winter Weather	India, Nepal	94	N/A	Negligible
01/02-01/05	Winter Weather	China	21	3,500+	854+ million
01/13-01/17	Flooding	Philippines	11	1,900+	Millions
01/21-01/25	Winter Weather	Japan, China	5	Unknown	Millions
01/23	Earthquake	Indonesia	0	9,291+	Millions
01/24-01/29	Winter Weather	China	2	2,500+	1.1+ billion
02/03-02/12	Flooding	Malaysia	0	Hundreds	Millions
02/05-02/06	Flooding	Indonesia	4	7,228+	Millions
02/06	Earthquake	Taiwan	17	Thousands	100+ million
02/12-02/14	TS Sanba	Philippines	0	2,000+	<10 million
02/21-02/23	Flooding	Indonesia	20	20,000+	Millions

Oceania (Australia, New Zealand, South Pacific Islands)

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/04-01/07	Flooding	New Zealand	0	3,600+	50+ million
01/31-02/02	Flooding (Fehi)	New Zealand	0	Thousands	50+ million
02/09-02/20	CY Gita	Tonga, Fiji, Samoa, New Zealand	1	10,000+	225+ million
02/26	Earthquake	Papua New Guinea	160	Thousands	190+ million

Additional Report Details

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 obtained from various public media sources, including news websites, publications from insurance companies, financial institution press releases and official government agencies. Economic loss totals include any available insured loss estimates, which can be found in the corresponding event text. Specific events may include modeled loss estimates determined from utilizing Impact Forecasting's suite of catastrophe model products.

Contact Information

Adam Podlaha
Head of Impact Forecasting
Aon Benfield Analytics
Impact Forecasting
+44.20.7522.3820
adam.podlaha@aonbenfield.com

Steve Bowen
Director (Meteorologist)
Aon Benfield Analytics
Impact Forecasting
+1.312.381.5883
steven.bowen@aonbenfield.com

Michal Lörinc
Catastrophe Analyst
Aon Benfield Analytics
Impact Forecasting
+420.234.618.222
michal.lorinc@aonbenfield.com

Anwesha Bhattacharya
Senior Analyst
Aon Benfield Analytics
Impact Forecasting
+ 91.80.6621.8575
anwesha.bhattacharya@aonbenfield.com

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