

Global Catastrophe Recap

April 2018



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Executive Summary

- Severe thunderstorms lead to USD2.3 billion in economic damage across the United States
- Late season cold spell spawns billion-dollar financial cost to crops in China
- Extensive flooding in Africa prompts damage and casualties in Kenya, Somalia, Tanzania & Rwanda

No fewer than five separate storm systems spawned severe thunderstorms across the United States in April, which led to extensive damage in central and eastern sections of the country. The most significant severe weather outbreak occurred impacted the Plains, Midwest, Southeast, Mid-Atlantic, and the Northeast during the second week of the month as nearly 70 tornadoes touched down and up to baseball-sized hail led to major impacts to residential and commercial property and vehicles. The same system also led to anomalous snowfall in the Upper Midwest and New England; while dry conditions behind the storm fueled major wildfires in the Plains, notably Oklahoma.

The total combined economic cost of the convective storm-related damage in the U.S. was estimated at roughly USD2.3 billion. Public and private insurers were poised to pay at least USD1.5 billion in claims.

Additional severe weather impacted Colombia, Germany, Belgium, France, India, China and Bangladesh.

Wintry weather continued to impact parts of the Northern Hemisphere as bouts of well below-average temperatures and snowfall were recorded in several countries. Extended cold and snow was particularly notable in China where nearly 623,900 hectares (1.54 million acres) of cropland was affected. Total economic losses were estimated at CNY9.38 billion (USD1.5 billion), primarily to the agricultural sector.

Canada incurred multiple bouts of winter weather – notably in the provinces of Ontario and Quebec. A mix of heavy snow, freezing rain, and high winds prompted extensive power outages and damage. Much of the damage was due to downed trees after collapsing under the weight of ice accumulation. Damage was cited in the metro areas of Toronto, Montreal, and Quebec City. Total combined economic losses were in excess of USD360 million, with insurers poised to cover more than half of that tally.

Persistent rainfall impacted numerous countries in Africa during April. Among the worst damage was noted in Kenya as floods persisted after beginning in March. At least 78 confirmed fatalities were reported after rivers overflowed their banks and inundated many communities. Extensive water damage was reported to homes, cropland, and infrastructure. Regional governments indicated that total economic damage would tally near KES35 billion (USD350 million), including KES20 billion (USD200 million) alone to infrastructure.

Further flooding and casualties were noted in the African nations of Somalia, Tanzania, Ethiopia, and Rwanda. More than 10,000 combined homes were damaged.

Torrential rainfall impacted the Hawaiian Islands on April 14-15, leading to widespread flood damage. The most prolific rain was recorded in the town of Hanalei on Kauai Island, where the National Weather Service unofficially reported that a 24-hour US rainfall record may have occurred. At least 532 homes were damaged or destroyed. The state government allocated at least USD125 million for flood repairs.

Two tropical cyclones impacted Fiji during the first week of April. Tropical Cyclones Josie and Keni each brought periods of heavy rain and hurricane-force winds to multiple islands. Combined damage to physical property, agriculture and infrastructure was estimated to exceed USD10 million.

United States

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
04/03-04/04	Severe Weather	Plains, Midwest, Southeast	1	40,000+	335+ million
04/06-04/07	Severe Weather	Texas, Louisiana, Mississippi	0	60,000+	610+ million
04/07	Severe Weather	Idaho	0	12,500+	125+ million
04/13-04/17	Severe Weather	Plains, Midwest, Southeast, Northeast	6	100,000+	925+ million
04/14-04/15	Flooding	Hawaii	0	1,000+	125+ million
04/17-04/18	Severe Weather	Rockies, Plains	0	20,000+	135+ million
04/22-04/23	Severe Weather	Southeast	0	Thousands	Millions

A potent spring storm system led to widespread severe weather across central and eastern sections of the United States on April 3-4. One person was killed, and several others were injured. The most significant damage was noted in an area from Mississippi to Ohio as dangerous lines of thunderstorms spawned no fewer than 22 tornadoes, damaging straight-line winds, and large hail. Torrential rainfall additionally led to flash flooding in some locations, while areas along the storm's northern edge in the Upper Midwest recorded several inches of snowfall. Total economic losses were estimated at USD335 million, with public and private insurer payouts of up to USD250 million.

Severe thunderstorms spawned large hail and damaging straight-line winds in parts of Texas, Louisiana, and Mississippi on April 6-7, causing significant damage in some locations. At least 16 confirmed tornadoes touched down as well in primarily rural areas. The greatest concentration of damage was noted in the greater Dallas – Fort Worth metro area in Texas, where up to baseball-sized hail pelted vehicles during rush hour traffic. Total economic losses were estimated around USD610 million, with public and private insurers citing claims payouts in excess of USD450 million.

Severe thunderstorms and wintry conditions led to widespread damage across sections of Idaho on April 7. The most extensive impacts were the result of up to golf ball-sized hail that struck the city of Idaho Falls. Synoptic winds gusting in excess of 50 mph (85 kph) additionally caused more damage. Total economic losses were listed at USD125 million.

A major springtime storm system swept across the Plains, Midwest, Southeast, Mid-Atlantic, and the Northeast, bringing periods of severe thunderstorms, flooding rains, and heavy snow from April 13-15. At least four people were killed and many others injured. The most significant damage resulted from nearly 70 tornado touchdowns, up to baseball-sized hail, and straight-line winds. Blizzard conditions and freezing rain also led to anomalous snowfall accumulations in the Upper Midwest and New England. Dry air and gusty winds behind the system additionally helped fuel significant wildfires across parts of Oklahoma, leaving two people dead and numerous structures destroyed. Total economic losses were estimated at up to USD925 million; with public and private insurer payouts of up to USD675 million.

Torrential rainfall fell across parts of the Hawaiian Islands on April 14-15 leading to widespread flood damage. The most prolific rain was recorded in the town of Hanalei on Kauai Island, where the National Weather Service (NWS) unofficially reported that a 24-hour US rainfall record may have occurred. A state of emergency was declared for Kauai given the severity of damage resulting from flash floods and mudslides. At least 532 homes were damaged or destroyed during the event, with even more businesses and other structures impacted. Severe damage also occurred to infrastructure. The state government allocated at least USD125 million for flood repairs.

The combination of thunderstorm-generated winds and synoptic winds due to a tightening pressure gradient led to damage in parts of Colorado and Kansas on April 17-18. Winds gusting beyond 80 mph (130 kph) were recorded as trees were uprooted, roofs were partially ripped, and falling debris hit homes and vehicles. Total economic losses were estimated around USD135 million. Insured losses were estimated in excess of USD100 million.

An advancing storm system spawned several tornadoes on April 22-23 across southeastern sections of the United States, leaving 10 people injured. The severe weather was most impactful in Alabama, Louisiana, and Florida. At least 11 tornadoes were confirmed, including seven alone in Alabama. Total damage from the event was expected to reach the millions of dollars (USD).

Remainder of North America (Non-US)

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
04/04-04/05	Winter Weather	Canada	0	15,000+	115+ million
04/14-04/17	Winter Weather	Canada	0	15,000+	250+ million

The northern edge of a winter storm affecting the United States also brought heavy snow, freezing rain, and high winds to Canada's Ontario and Quebec provinces on April 4-5. Some of the most notable damage was cited in the metro areas of Toronto, Montreal, Quebec City, Mississauga, and Barrie. Beyond physical damage, the event left more than 145,000 customers without electricity. Total economic losses were estimated around USD115 million, with the insurance industry paying out tens of millions (USD) in claims.

Wintry weather left considerable damage across southern sections of Canada's Ontario and Quebec provinces from April 14-17. Widespread damage was noted after a heavy glaze of ice weighted down trees and tree branches that snapped onto homes and vehicles. Provincial officials also noted that nearly 1,500 traffic accidents occurred as vehicles collided on icy roadways. Accumulating freezing rain led to more than 100,000 power outages. Total economic damage was expected to approach USD250 million, with the insurance industry paying in excess of USD125 million.

South America

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
03/12-04/17	Severe Weather	Colombia	14	Unknown	Millions

Weeks of heavy rain and strong thunderstorms from late March into April led to continued flooding and landslides in parts of Colombia. The worst affected regions included Norte de Santander, Cundinamarca, Chocó, Nariño, Tolima, Santander, Antioquia, Boyacá, and Valle del Cauca. At least 14 fatalities were reported as most casualties resulted from overflowing rivers.

Europe

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
03/25-04/05	Flooding	Greece, Turkey, Bulgaria	15	Thousands	Millions
04/29	Severe Weather	Germany, France, Belgium	0	Thousands	10s of Millions

The combination of heavy rainfall and snowmelt led to rising river levels across the southern Balkans from late March into early April. At least 15 migrants near the Turkey-Greece border were left missing after being swept away in the Evros (Maritsa) River. The most severe flood damage was cited in parts of Greece, Turkey, and Bulgaria as inundation swept through homes and vast areas of agricultural land. Total economic losses were anticipated to minimally reach into the tens of millions (USD).

Following one of the warmest months of April on record for parts of Europe, the end of the month featured an outbreak of severe weather that left widespread damage in Germany, France, and Belgium. The storms caused notable losses to agriculture and property. Large hail, several small tornadoes, straight-line winds, and heavy rainfall caused damage that was expected to into the reach tens of millions EUR.

Middle East

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
04/25-04/26	Flooding	Israel	11	Hundreds	Millions

At least 11 people were killed by flash floods in Israel on April 25-26. Nine hikers were killed in a flash flood in the Nahal Tsafit area, southwest of the Dead Sea in southern part of Israel, and two additional casualties occurred in the West Bank after being swept away by a flash flood. The episodes were caused by a short-lived, intense rainfall event that impacted several parts of the country. Jerusalem received 50 millimeters of rain, which is more than twice the average rainfall for the month of April.

Africa

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/01-05/01	Flooding	Rwanda	116	6,000+	Millions
03/14-04/30	Flooding	Kenya	78	Thousands	350+ million
04/01-04/30	Flooding	Somalia	5	Thousands	Millions
04/14-04/16	Flooding	Tanzania	15	Hundreds	Unknown
04/14-04/17	Flooding	Ethiopia	2	Thousands	Millions
04/24	Tropical Storm Fakir	Réunion	2	Hundreds	18+ million

Severe flooding continued in Kenya throughout the month of April, following weeks of heavy rains that began in March. At least 78 people were confirmed dead. The hardest-hit counties included Tana River, Garissa, Kisumu, Mandera, Samburu, Tarkana, Isiolo, and Wajir. More than 210,000 residents were left homeless or isolated, and vast areas of cropland and infrastructure was inundated. Regional governments indicated that total economic damage would tally near KES35 billion (USD350 million), including KES20 billion (USD200 million) alone to infrastructure.

Above average rainfall fell across parts of Somalia for much of April, leaving nearly 700,000 people affected by heavy flooding. At least five people were killed. Among the worst affected regions included Gedo, Bakool, Bay, Hiraan, and Horseed as flash flooding and overflowing rivers inundated vast areas of land. Local officials indicated significant damage to agriculture and infrastructure.

Torrential rainfall led to extensive flooding in Dar es Salam, Tanzania from April 14-16, killing at least 15 people. Other parts of Tanzania – such as Morogoro, Zanzibar, Lindi and Mtwara – also received heavy rain that spawned floods. Dozens of homes were swept away, though the worst damage occurred to the agricultural sector and infrastructure.

Severe flooding during the second half of April led to at least two casualties and extensive damage in Ethiopia. Government officials reported that more than 165,000 people were affected by high water levels. Homes, crops, and sections of infrastructure were washed away.

A period of heavy rainfall between April 23-24 caused floods and landslides in various parts of Rwanda. According to the local Ministry of Disaster Management (MIDIMAR), at least eight casualties occurred in the Gasabo district in Kigali, seven in the Rulindo district of Northern Province, and three in the Gatsibo district of Eastern Province. Since January, at least 116 people have died across the nation from persistent flooding and severe storms; causing damage to more than 5,200 homes.

Tropical Storm Fakir impacted Reunion Island on April 24, as the cyclone season neared the end in southwestern Indian Ocean. Bringing abundant rainfall and strong winds, Fakir caused localized flash flooding and landslides, which killed two people in Etang-Salé. The total financial impact was preliminarily estimated at EUR15 million (USD18 million). Almost half of the economic loss was sustained by the agricultural sector. At least EUR4.5 million (USD5.4 million) will be needed to restore the road network.

Asia

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
04/02-04/18	Winter Weather	China	0	Thousands	1.5+ billion
04/11	Severe Weather	India	42	Thousands	100+ million
04/17	Severe Weather	India	18	4,446+	100+ million
04/19-04/25	Severe Weather	China	1	2,200+	91+ million
04/29-04/30	Severe Weather	Bangladesh	33	Unknown	Unknown

An extended spell of wintry weather engulfed much of China from April 2-18. The period brought well below normal temperatures, accumulating snow, gusty winds, and heavy rain to the hardest-hit provincial areas of Shanxi, Shaanxi, Beijing, Shandong, Hebei, Anhui, Gansu, and Ningxia. No casualties were reported. The Ministry of Civil Affairs (MCA) reported that the majority of the damage occurred to the agricultural sector, where nearly 668,300 hectares (1.65 million acres) of crops were affected. Total economic losses were estimated at CNY9.38 billion (USD1.5 billion).

A severe thunderstorm affected the northwestern states of Uttar Pradesh and Rajasthan in India on April 11. The multi-hour storm spawned gusty winds, torrential rainfall and dust storms. The event resulted in 42 deaths in the region with at least 200 injuries. Beyond physical damage to homes and other structures, the storm downed more than 5,000 electricity poles and destroyed two minarets of the Taj Mahal in Agra. Widespread damage was also recorded to local crops. Total economic damage to structures, agriculture, and infrastructure was estimated in excess of USD100 million.

Two powerful thunderstorms struck the city of Kolkata, India on April 17. The storms left at least 18 people dead and more than 50 others injured. Straight-line winds uprooted several trees and took down at least two transmission towers. Several electrical poles were damaged resulting in several fires across the city, and the storms damaged or destroyed in excess of 4,400 homes. Total economic damage to structures, agriculture, and infrastructure was estimated in excess of USD100 million.

Thunderstorms and hail associated with intense convective rainfall affected the Chinese provinces of Hubei, Chongqing, Sichuan, Guizhou, Yunnan, Hebei, Henan, and Shandong from April 19-25. Flooding and strong winds damaged or destroyed at least 2,200 houses, resulting in one casualty. Widespread impacts to crops and other portions of the agricultural sector were also noted. The direct economic loss was estimated at CNY579 million (USD91 million).

Pre-monsoon thunderstorms brought heavy rain in various districts of Bangladesh during April 29-30. At least 33 casualties were reported due to lightning strikes during the period; bringing the total to 70 since March.

Oceania (Australia, New Zealand, South Pacific Islands)

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
03/31	CY Josie	Fiji	6	Unknown	10+ million
04/10	CY Keni	Fiji	0	804+	10+ million

Two tropical cyclones impacted Fiji during the first week of April. Tropical Cyclone Josie first brought heavy rain as it passed the island of Viti Levu on March 31 into April 1. The western part of Viti Levu, including the tourist town of Nadi, was the worst hit. The city experienced severe flooding and wind gusts of up to 100 kph (60 mph). The storm left the towns of Ba and Tavua without power and resulted in over 60 road closures across Fiji. At least six people were killed. Tropical Cyclone Keni passed Fiji on April 10 and brought wind gusts of up to 195 kph (120 mph). The worst affected region of the island of Kadavu in the eastern region. The combined economic cost to infrastructure, agriculture, and residential/commercial property from both storms was in excess of FJD20 million (USD10 million).

Appendix

Updated 2018 Data: January-March

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+	850+ 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
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	75,000+	900+ million
03/21-03/22	Flooding	California	0	Hundreds	Millions

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	75+ million

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
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

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

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
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	30,000+	500+ million
02/23-03/02	Winter Weather	Western, Central & Eastern EU	88+	Thousands	100s of Millions+
03/09-03/14	WS Felix & Gisele	Portugal, Spain	0	Hundreds	10s of Millions
03/28	Flooding	Russia	2	1224	Unknown

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
03/07	Earthquake	Iran	0	5,500+	Millions
03/24	Severe Weather	Turkey	0	Thousands	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
02/22-03/07	Flooding	Angola, Malawi, Rwanda	8	6,500+	Millions
03/14-04/30	Flooding	Kenya	78+	Thousands	350+ million
03/17-03/18	CY Eliakim	Madagascar	21	17,228+	Millions
03/22-03/23	Flooding	South Africa, Lesotho	7	Thousands	Millions

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
03/03	Severe Weather	China	14	59,000+	147+ million

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

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
02/18-02/20	TS Kelvin	Australia	0	4,000+	25+ million
02/26	Earthquake	Papua New Guinea	160	Thousands	190+ million
03/03	CY 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	2,000+	40+ million
03/17-03/19	Wildfire	Australia	0	1,000+	80+ million
03/17	CY Marcus	Australia	0	6,400+	75+ million
03/24-03/27	CY Nora	Australia	0	2,000+	25+ 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

Michal Lörinc

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

Steve Bowen

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

Anwesha Bhattacharya

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

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