



# Global Catastrophe Recap

February 2017

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## Executive Summary

- Prolific US severe weather outbreaks lead to expected billion-dollar payout for insurance industry
- Active pattern of storms brings severe flooding to California
- Windstorm Thomas becomes the costliest European Windstorm of the current season

No fewer than five outbreaks of severe weather impacted portions of the United States during February. The most prolific event occurred during the end of February and into the first days of March as nearly 60 confirmed tornadoes touched down in the Midwest, Southeast, and Mid-Atlantic. One of the tornadoes was the year's first EF4 with 180 mph (290 kph) winds. Three others were rated EF3. Among the hardest-hit states were Illinois, Missouri, Indiana, Arkansas, Kentucky, and Tennessee as up to softball-sized hail and damaging straight-line winds also caused substantial impacts to homes, businesses, vehicles, and other structures. Total economic and insured losses from the singular event were minimally estimated well into the hundreds of millions of dollars (USD); very likely to be even higher.

Elsewhere, a series of powerful thunderstorms tracked through portions of New South Wales, Australia, including the Greater Sydney Metro Area; leading to widespread damage and disruption. The Insurance Council of Australia and local insurers reported that 48,000 claims had been minimally lodged with payouts of at least AUD330 million (USD250 million). Economic losses were even higher.

An active stretch for California brought renewed storm systems via a series of atmospheric rivers brought significant precipitation to much of the state during the month. The most notable of these events prompted the evacuation of 200,000 residents as Lake Oroville reached full capacity and threatened to breach its dam. Subsequent storm systems brought additional rainfall that led to flooding across the state. At least eight people were killed and total damage costs were expected well into the hundreds of millions.

Other major flood events occurred in Peru, Chile, Zimbabwe, Indonesia, and Australia.

Windstorm Thomas became the costliest European Windstorm of the year, thus far, when it struck Western & Central Europe. The storm claimed three lives. Preliminary insured loss estimates indicated insured losses separately topping EUR100 million (USD105 million) in both the UK and Germany. Also in the month, three successive windstorms (Kurt, Leiv, and Marcel) impacted portions of Spain and France.

Two winter weather outbreaks in the United States during the first part of the month caused widespread disruption for parts of the Mid-Atlantic and Northeast. Elsewhere, winter storms in Afghanistan and Pakistan triggered avalanches that claimed more than 200 lives.

Cyclone Dineo made landfall in Mozambique claiming at least seven lives and injuring 101 others. More than 105,000 homes and 2,000 other buildings were damaged or destroyed while flooding devastated the local agricultural industry. Economic losses were listed at MZN1.2 billion (USD17 million).

An outbreak of wildfires in Australia's New South Wales was sparked amid record-breaking heatwave conditions. More than 100 homes and other structures were damaged or destroyed. The Insurance Council of Australia reported that insured losses minimally reached AUD20 million (USD15 million).

A magnitude-6.5 earthquake struck the southern Philippines killing eight people and injuring hundreds more. Thousands of homes were damaged or destroyed as economic losses were listed at PHP720 million (USD14 million). A further PHP2.0 billion (USD40 million) was made available for repairs.

## United States

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
02/07-02/08	Severe Weather	Southeast	1	10,000+	175+ million
02/08-02/09	Winter Weather	Mid-Atlantic, Northeast	1	Unknown	Millions+
02/12-02/14	Flooding	California	0	N/A	200+ million
02/12-02/14	Winter Weather	Upper Mid-Atlantic, Northeast	1	Thousands	Millions+
02/14	Severe Weather	Texas	0	Hundreds	Millions+
02/16-02/18	Flooding	California	7	25,000+	400+ million
02/19-02/21	Flooding	California	1	Thousands	100+ million
02/19-02/20	Severe Weather	Texas	0	10,000+	100+ million
02/24-02/25	Severe Weather	Northeast, Mid-Atlantic	0	Thousands	Millions+
02/27-03/02	Severe Weather	Midwest, Southeast, Mid-Atlantic	4	Thousands	100s of Millions+

An intense outbreak of severe weather swept across the US Southeast on February 7 and into February 8, causing extensive damage in parts of Louisiana, Mississippi, and Alabama. One person was killed, and dozens of others were injured. The most catastrophic damage came as a result of unexpectedly violent tornadoes that struck the greater New Orleans metro region, including an EF3 in Orleans parish. A state of emergency was declared in Louisiana. Total economic losses were estimated around USD175 million; while insurers cited claims payouts in excess of USD125 million.

The first major winter storm of the season for the East Coast brought heavy snowfall and gusty winds on February 8-9 spawning major travel delays. One storm-related fatality was reported. The fast-moving storm system led to thousands of flight cancellations as several parts of coastal New York, New Jersey, New Hampshire, Connecticut, Rhode Island, Massachusetts and Maine minimally recorded up to 12.0 inches of snowfall. Total economic and insured losses were in the millions of dollars (USD).

Nearly 200,000 people were evacuated in northern California on February 12 after the Lake Oroville reservoir reached full capacity and damaged the dam's infrastructure. The high water level was caused by tremendous rainfall from a series of recent storms. This resulted in the first use of the auxiliary spillway in the reservoir's history. The cost to repair the spillways were listed at up to USD200 million.

A strong winter storm brought up to three feet of snow to portions of northern New England from February 12-14, bringing widespread disruption to the region. At least one person was killed as the result of a falling tree branch and several others were injured. Most incurred damage resulted from impacts to the electrical grid and business interruption. Total economic and insured losses were in the millions (USD).

Multiple tornadoes touched down in the greater Houston, Texas metropolitan region on February 14. Damage was widespread in some areas, which also included localized flash flooding. At least seven people were injured. Total economic and insured losses were estimated in the millions of dollars (USD).

The state of California was inundated by multiple powerful storm systems from February 16-18 and February 19-21, leading to considerable flood and wind damage. At least eight people were killed and several others were injured. The train of Pacific storm systems was highlighted by a series of low pressure areas associated with multiple atmospheric river pulses which brought additional rainfall to both northern, central and southern sections of California. Most damage resulted from flooding, landslides, and high winds. Total combined economic losses were likely to exceed USD500 million; while insured losses were expected to be at least USD250 million.

Severe thunderstorms swept through portions of central Texas on February 19 into the early hours of February 20, leaving at least seven people injured. At least nine tornado touchdowns were confirmed in the San Antonio and Austin metro areas, including two simultaneous EF2 twisters that damaged hundreds of homes in Williamson County. Straight-line winds and hail also led to additional damage. The Insurance Council of Texas cited that more than 10,000 claims were likely to be filed, with payouts topping USD100 million. Overall economic losses will be even higher.

Rare winter-time severe weather swept across parts of the Mid-Atlantic and Northeast on February 24-25, including spawning at least four tornadoes in Massachusetts, Pennsylvania and Maryland. This included the first February tornado ever recorded in Massachusetts since records began in 1950. Several people were injured and severe tornado damage was noted in multiple communities. Additional damage due to straight-line winds and large hail were also noted in portions of New Jersey, New York, Pennsylvania, and Virginia. Total economic and insured losses were likely to reach well into the millions of dollars (USD).

A major multi-day outbreak of severe weather left considerable tornado, large hail, and straight-line wind damage across the Eastern US from February 27 to March 2. At least four people were killed and dozens of others were left injured. Among the hardest-hit states included Illinois, Missouri, Indiana, Arkansas, Kentucky, and Tennessee as waves of powerful thunderstorms struck the Midwest, Southeast, and Mid-Atlantic. Nearly 60 confirmed tornadoes touched down, including the year's first EF4. Total economic and insured losses were minimally estimated well into the hundreds of millions of dollars (USD); very likely to be higher.

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

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
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There were no significant natural disaster events in the remainder of North America during February.

## South America

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/14-02/03	Flooding	Peru	15	91,200+	100+ million
02/24-02/26	Flooding	Chile	6	Hundreds	Millions

Weeks of heavy rainfall led to major flooding and landslides across Peru from mid-January through early February. Almost 376,600 people were affected across the country as at least 15 people died and almost 91,200 homes were damaged or destroyed. A state of emergency was declared in the departments of Arequipa, Hauncavelica, Ica, and Lima.

Floodwaters inundated vast swathes of northern and central Chile following heavy rainfall from February 24-26. At least six people were killed and 28 others were listed as missing throughout Antofagasta, Coquimbo, Valparaíso, Santiago (Metropolitan), and (Libertador General Bernardo) O'Higgins regions. Dozens of homes were damaged or destroyed. Additionally as many as six million people were without drinking water as landslides around Santiago contaminated the Río Maipo. Total economic damage was expected to reach well into the millions of dollars (USD).

## Europe

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
02/03-02/06	EU Windstorms	Spain, France	2	Thousands	Millions+
02/23-02/24	WS Thomas	Western & Central Europe	3	Thousands	100s of Millions

Three successive windstorms, named Kurt, Leiv and Marcel by the Free University of Berlin, impacted portions of Spain and France from February 3–6. As the core pressure of all three of the storms failed to fall below 985 millibars, they were not powerful enough to cause major losses. However, gusty winds up to 150 kph (93 mph) caused power lines and trees to fall on top of properties across the impacted regions. At least two people died as a result of the storms' passage.

Windstorm Thomas, also known locally in Ireland and the United Kingdom as Doris, became the costliest windstorm of the current season as it struck from February 22-24. The storm, which impacted portions of Western & Central Europe, generated gusty winds of more than 150 kph (90 mph) and caused massive transport disruptions across the British Isles, Benelux, and western Germany. Heavy rain and snow was also reported. At least three people were killed and several others were injured. Total economic and insured losses were expected to reach into the hundreds of millions (USD). Preliminary insured loss estimates indicated insured losses separately topping EUR100 million (USD105 million) in both the UK and Germany.

## Middle East

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
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There were no significant natural disaster events in the Middle East during February.

## Africa

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/01-03/01	Flooding	Zimbabwe	246	2,000+	100+ million
02/15-02/16	CY Dineo	Mozambique	7	107,204+	17+ million

The government of Zimbabwe declared a state of disaster on March 1 as flooding during the current raining season – which began in October 2016 – continued to worsen in February. At least 246 people died and 128 others were injured due to flooding or landslides. More than 2,000 homes, schools and other facilities were damaged or destroyed. Also, 70 dams were breached as the country's infrastructure was heavily affected. The government cited an economic cost of USD100 million.

Cyclone Dineo made landfall in Mozambique on February 15 lashing several coastal communities with torrential rainfall, strong winds, and high waves. At least seven people were killed and 101 others were injured. Damage was heaviest in the districts of Massinga, Morrumbene, Maxixe, and Inhambane City, where more than 105,000 homes were damaged or destroyed. More than 2,000 others buildings were damaged as well. The storm further inundated nearly 30,000 hectares (74,000) acres of crop land. Total economic losses were listed at MZN1.2 billion (USD17 million).

## Asia

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
02/01-02/05	Winter Weather	Afghanistan, Pakistan	159	325+	Unknown
02/09-02/12	Flooding	Indonesia	12	18,000+	Millions+
02/10	Earthquake	Philippines	8	7,200+	40+ million
02/17-02/19	Winter Weather	Afghanistan, Pakistan	58	N/A	N/A

A series of avalanches in Pakistan and Afghanistan from February 1-5 claimed at least 159 lives and buried two villages. The majority of the fatalities were reported in Afghanistan's Nuristan where 64 people were killed and one village was buried. Officials reported that almost 300 homes were destroyed or heavily damaged throughout the country. Significant damages to agriculture were also reported.

Deadly flooding and landslides were reported from several islands in Indonesia as "wet season" rains lashed southern and central portions of the archipelago from February 9-12. Torrential downpours were reported in parts of Java, Bali, Lombok, and Sumbawa. At least 12 people were killed and roughly 50,500 were displaced. Approximately 18,000 homes were destroyed, more than two-thirds of which were in Sumbawa.

A magnitude-6.5 earthquake struck near the northern tip of the Philippines' Mindanao Island late on February 10. The temblor was registered at a shallow depth of 15.0 kilometers (9.3 miles), approximately 10 kilometers (six miles) south-southwest of Basilisa. (*NB. The Philippines Institute of Volcanology and Seismology reported that the earthquake was magnitude-6.7 and at a slightly shallower depth of 10 kilometers.*) At least eight people were killed and more than 200 others were injured as the tremor's effects were felt throughout Caraga region. Approximately 7,200 homes were damaged or destroyed as economic losses were minimally estimated at PHP720 million (USD14 million). The government made PHP2.0 billion (USD40 million) available in federal funds for repairs.

At least 58 people were killed and dozens more were injured as a severe winter storm swept through western portions of South Asia from February 17-19. Blizzard conditions engulfed several communities while heavy snowfall triggered avalanches and roof collapses. The majority of the casualties were reported in Afghanistan.

## Oceania (Australia, New Zealand, South Pacific Islands)

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
02/09-02/13	Wildfires	Australia	0	1,200+	10s of Millions
02/09-02/16	Flooding	Australia	2	Thousands	100s of Millions
02/17-02/19	Severe Weather	Australia	1	48,000+	350+ million

Record-breaking heatwave conditions gripped eastern Australia from February 9-13 as the mercury in portions of Queensland and New South Wales soared above 40 Celsius (104 Fahrenheit). In addition to the heat, strong winds picked across New South Wales on February 12 prompting an outbreak of wildfires. Two people were seriously injured. The heat helped fuel wildfires, which would damage or destroy at least 108 homes and other structures. The Insurance Council of Australia (ICA) declared a catastrophe for the wildfires as insured losses minimally reached AUD20 million (USD15 million). Economic losses were even higher.

Southern portions of Western Australia were inundated by heavy rainfall from February 9 through 16 that led to widespread flooding in several areas. Damaging floods were reported in parts of Eucla, Goldfields, Great Southern, South West, and Central Wheat Belt regions as several agricultural producers endured significant losses. At least two people were killed as the result of driving into floodwaters. A representative from the Australian Association of Agricultural Consultants estimated that economic damage would run into the hundreds of millions of dollars (AUD).

A series of powerful thunderstorms tracked through portions of New South Wales, Australia, from February 17-19 leading to widespread damage and disruption. The series of storms dropped large hail in several localities including the greater Sydney metro area. At least one person was killed and nine others were injured as the thunderstorms prompted torrential rain, powerful wind gusts, large hail, and numerous lightning strikes across Australia's most populous state. The ICA and local insurers reported that 48,000 claims had been lodged with estimated payouts of at least AUD330 million (USD250 million). Overall economic losses were even higher.



## Appendix

### Updated 2017 Data: January

#### United States

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/01-01/03	Severe Weather	Southeast, Plains	6	10,000+	250+ million
01/06-01/13	Winter Weather	Pacific Northwest, Southwest, Rockies	5	40,000+	700+ million
01/06-01/08	Winter Weather	Southeast, East Coast	5	Thousands	Millions
01/13-01/18	Winter Weather	Plains, Midwest	7	Thousands	Millions
01/17-01/19	Winter Weather	West, Rockies	4	Thousands	Millions
01/18-01/23	Severe Weather	Southeast, Plains, West, Northeast	21	100,000+	1.3+ billion
01/19-01/25	Winter Weather	West, Rockies, Plains, Midwest	5	Thousands	Millions

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

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/24-01/27	Winter Weather	Canada	2	Hundreds	10s of Millions

#### South America

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/01-02/01	Wildfire	Chile	11	2,500+	870+ million
01/14-02/01	Flooding	Peru	15	10,000+	Millions

#### Europe

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/02-01/13	Winter Weather	Central, Eastern, Southeastern Europe	76	Thousands	10s of millions
01/12-01/13	WS Dieter & Egon	France, Germany	0	Thousands	350+ million
01/18	Earthquake	Italy	30	Hundreds	TBD
01/20-01/24	Severe Weather	Spain, France, Italy	3	Hundreds	Millions

#### Middle East

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

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/05-01/12	Flooding	South Africa, Angola	7	5,000+	Millions

## Asia

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/01-01/31	Flooding	Thailand	96	585,000+	860+ million
01/01-01/23	Flooding	Malaysia	0	Thousands	132+ million
01/12-01/16	Flooding	Philippines	11	Hundreds	Unknown
01/16-01/31	Flooding	Philippines	11	1,000+	8.1+ million
01/20	Landslide	China	12	One	Unknown
01/22-01/24	Flooding	Pakistan	5	Hundreds	Unknown
01/24-01/25	Winter Weather	Afghanistan	31	N/A	Unknown
01/25-01/26	Winter Weather	India	11	N/A	Unknown
01/25-01/30	Flooding	Indonesia	1	2,000+	Millions
01/28	Earthquake	China	0	14,000+	55+ million

## Oceania (Australia, New Zealand, South Pacific Islands)

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/20-01/23	Flooding	French Polynesia	0	1,000+	Millions

## 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.

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