

March 2014 Global Catastrophe Recap



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Executive Summary

- Severe drought conditions in Brazil lead to more than USD4.0 billion in lost agriculture
- Northern Hemisphere winter season ends with more snow and ice damage across multiple continents
- Major flood and mudslide events recorded in the United States, South America, South Africa and New Zealand

For the second consecutive year, severe drought conditions continue to plague parts of Brazil. The drought in the country's southeast grew in intensity during March, as officials called the impacts in some regions as the worst in at least 50 years. The most significant damage has been sustained to the agricultural sector, with agribusiness analysts reporting that crop losses will be at least BRL10 billion (USD4.3 billion). Roughly 10% of Brazilian farm land is covered by insurance.

Another major drought worsened in Pakistan's Sindh Province, where nearly 20,000 square kilometers (7,722 square miles) of land were decimated in the Tharparkar desert. At least 212 people have died. The most major impacts were recorded in the Mithi, Chachro, Dahli, Diplo, Islam Kot, and Nagar Parkar regions, where a significant loss of livestock and agriculture occurred. The government allocated PKR1.8 billion (USD18 million) for relief and recovery.

A state of emergency was also declared for six parishes in Haiti after farmers lost a second consecutive harvest crop.

Additional winter weather led to damage and fatalities across the United States as multiple storm systems crossed the country during the month. One particular winter storm affected parts of the Carolinas and Virginia, while spawning significant snow, sleet and freezing rain accumulations. Isolated flooding was also reported. Total economic damages were estimated around USD100 million, with insurers paying claims in excess of USD50 million.

For the entire U.S. winter of 2013/14, the latest economic damage tally stood at USD5.7 billion. Of that total, at least USD2.6 billion was covered by insurance.

Elsewhere, notable winter weather events were registered in Canada, China and India in March.

A massive mudslide struck in the community of Oso, Washington, killing at least 41 people. The nearly mile-wide (1.2-kilometer) swath of mud and debris destroyed nearly 50 homes and other structures as mud and debris up to 20 feet (6.1 meters) decimated the region. Total economic damages were listed at USD10 million.

Persistent rainfall, which began in mid-February, continued through March across parts of South America, as multiple rivers burst their banks and caused flooding in parts of Brazil, Bolivia and Peru. The rains were most pronounced in the Brazilian states of Rondonia (near the border of Bolivia) and Acre (near the border of Peru), where a combined 29,500 families were left homeless. Total economic losses in the region were estimated in excess of USD200 million.

Significant floods also occurred in South Africa (32 killed; economic damage listed at ZAR900 million (USD85 million)) and New Zealand (100-year rainfall event in the Canterbury region).

Three separate stretches of severe weather affected central, eastern and southern sections of China. Combined data from the Ministry of Civil Affairs (MCA) indicated that 26 people were killed, 100,000 homes were damaged or destroyed, and total economic damages were CNY1.32 billion (USD374 million).

Severe weather prompted significant damage in the U.S. states of Missouri, Texas, Louisiana, Arkansas, and Florida after up to softball-sized hail and winds gusting in excess of 80 mph (130 kph) occurred.

Cyclone Hellen became one of the strongest tropical cyclones ever recorded in the northern Mozambique Channel before weakening and making landfall in Madagascar. At least 17 people were left dead.

Cyclone Lusi tracked through Vanuatu, bringing flooding rains and hurricane-force winds. At least 12 people were left dead or missing as heavy damage occurred in Penama and Shefa provinces.

United States

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
2/28-3/4	Winter Weather	Nationwide	12	Thousands+	Millions+
3/1-3/31	Flooding	Montana, Wyoming	0	Hundreds+	10+ million
3/6-3/7	Winter Weather	Southeast, Mid-Atlantic	0	12,500+	100+ million
3/22	Mudslide	Washington	41	50+	10+ million
3/27-3/29	Severe Weather	Midwest, Plains, Southeast	0	100,000+	800+ million
3/28	Earthquake	California	0	Hundreds+	25+ million

Winter weather affected much of the United States this week, including a main storm system which brought heavy rain, snow, sleet, freezing rain, and ice from California to the Mid-Atlantic States. At least 12 people were killed. In Southern California, the heaviest rains since 2011 prompted flash flooding and mudslides. Elsewhere, snow and ice-related impacts were recorded throughout the Plains, Midwest, Tennessee Valley, and the Mid-Atlantic. Most of the damage was traffic-related, though residential and commercial properties reported burst pipes and downed tree branches. Total economic damages were estimated in the millions of dollars (USD).

The combination of warming temperatures, rainfall, ice jams, and the rapid melting of an above normal snowpack led to flooding across rural areas of Montana and Wyoming during the month of March. A statewide flood emergency was declared in Montana. Hundreds of homes sustained water inundation, particularly areas along the Musselshell, Yellowstone and Big Horn rivers. Similar floods were noted in Wyoming. Total economic damages to property and infrastructure were preliminarily listed at USD10 million.

A winter storm affected parts of the Southeast and Mid-Atlantic on the 6th and 7th, bringing significant snow, sleet and freezing rain accumulations for western sections of the Carolinas and Virginia. The event prompted a state of emergency declaration in North Carolina. Heavy snow, ice and high winds led to widespread damage to residential and commercial properties due to fallen trees and power lines. Isolated flooding was also reported. Total economic damages were estimated around USD100 million, with insurers paying claims in excess of USD50 million.

A massive mudslide struck in the community of Oso, Washington on the 22nd, killing at least 41 people. The nearly mile-wide (1.2-kilometer) swath of mud and debris occurred along a hillside above the North Fork of the Stillaguamish River in Snohomish County. The slide destroyed roughly 50 homes and other structures as mud and debris up to 20 feet (6.1 meters) decimated the region. Total economic damages were listed at USD10 million (USD7 million in structural damage and USD3 million in content loss).

Severe weather associated with an advancing frontal boundary affected parts of the Midwest, Plains and Southeast between the 27th and 29th. The most significant damage was caused by up to softball-sized hail and winds gusting in excess of 80 mph (130 kph) across sections of Missouri, Texas, Louisiana, Arkansas, and Florida. Total economic losses were estimated at USD800 million, with insured losses in excess of USD550 million.

A magnitude-5.1 earthquake rattled the greater Los Angeles, California metropolitan area on the 28th, though no serious injuries or fatalities were reported. The tremor caused widespread damage to infrastructure, homes and public buildings though no major structural damage occurred. Total economic damages were listed at USD25 million.

Remainder of North America (Canada, Mexico, Central America, Caribbean Islands, Bermuda)

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
1/1-3/31	Drought	Haiti	0	Unknown	Millions+
3/26	Winter Weather	Canada	0	Thousands+	Millions+

Drought conditions worsened in Haiti during March, after initially beginning at the end of 2013. A state of emergency was declared for six parishes as the extended drought led to farmers losing two consecutive harvest seasons.

A powerful winter storm brought up to 50 centimeters (19.7 inches) of snow and winds gusting beyond 100 mph (150 kph) to portions of the Canadian Maritimes on the 26th. No serious injuries or fatalities were reported. The storm led to business, school and government office closures in New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland and Labrador, while a combined 20,000 power outages were recorded. Most flights were cancelled in the region, and up to 1,000 kilometers (620 miles) of local roadways were temporarily closed.

South America

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
1/1-4/30	Drought	Brazil	0	Unknown	4.3+ billion
2/15-3/31	Flooding	Brazil, Bolivia, Peru	0	29,500+	200+ million

Severe drought conditions worsened in southeastern Brazil during March, as officials began calling it the worst drought in some areas in 50 years. For the second consecutive year, the agricultural sector sustained extensive damage. Agribusiness analysts in the country reported that crop losses will be at least BRL10 billion (USD4.3 billion). Roughly 10% of Brazilian farm land is covered by insurance.

Persistent rainfall, which began in mid-February, continued through March across parts of South America, as multiple rivers burst their banks and caused flooding in parts of Brazil, Bolivia and Peru. The rains were most pronounced in the Brazilian states of Rondonia (near the border of Bolivia) and Acre (near the border of Peru), where a combined 29,500 families were left homeless, particularly along the Madeira and Mamore rivers. Total economic losses in the region were estimated in excess of USD200 million.

Europe

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
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No major natural disaster events occurred in Europe during the month of March.

Africa

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
3/2-3/20	Flooding	South Africa	32	Thousands+	85+ million
3/29-4/1	CY Hellen	Madagascar, Comoros	17	2,000+	Millions+

Multiple weeks of heavy rainfall and thunderstorms caused widespread flooding many parts of South Africa during March, killing at least 32 people. Five of the country's nine provinces were affected, including the North West, Limpopo, Mpumalanga, Gauteng, and KwaZulu-Natal regions. The torrential rainfall caused considerable damage to residential property after several rivers overflowed their banks. Infrastructure and agriculture was heavily affected as well. Property and infrastructure damage estimates were listed at nearly ZAR900 million (USD85 million).

Cyclone Hellen became one of the strongest tropical cyclones ever recorded in the northern Mozambique Channel before weakening and making landfall in Madagascar on March 31. The one-time 240 kph (150 mph) Category 4 storm left at least 17 people dead in Madagascar, Comoros and Mozambique as high winds, flooding rains and a storm surge occurred. More than 2,000 homes and other structures were damaged or destroyed.

Asia

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
1/1-4/30	Drought	Pakistan	180	Unknown	18+ million
3/10-3/12	Winter Weather	India	17	1,922+	Unknown
3/12-3/14	Winter Weather	China	0	2,000+	50+ million
3/19-3/20	Severe Weather	China	1	5,000+	118+ million
3/23-3/27	Severe Weather	China	0	15,000+	95+ million
3/27-4/4	Severe Weather	China	27	80,000+	161+ million

Severe drought conditions were recorded in Pakistan's Sindh Province throughout the first several months of 2014, where nearly 20,000 square kilometers (7,722 square miles) of land were decimated by a lack of water in the Tharparkar desert. At least 180 people died. The most major impacts were recorded in the Mithi, Chachro, Dahli, Diplo, Islam Kot, and Nagar Parkar regions, where a significant loss of livestock and agriculture occurred. The government allocated PKR1.8 billion (USD18 million) for relief and recovery.

Heavy snowfall fell across the Himalayan region of Kashmir between the 10th and 12th, killing at least 17 people. More than 1,922 homes were damaged or destroyed after as much as 75 centimeters (30 inches) of snow fell in India's Jammu and Kashmir regions.

Wintry weather affected multiple sections of China between the 12th and 14th, leading to widespread residential and agricultural damage. Parts of Sichuan, Xinjiang and Henan sustained the most serious impacts. More than 2,000 homes were damaged, though the Ministry of Civil Affairs (MCA) indicated that most of the economic loss was attributed to affected agriculture. Total economic damages were listed at CNY500 million (USD80 million).

Strong thunderstorms swept across six provincial regions of China on the 19th and 20th, spawning high winds, hail and a dust storm. One person was killed. The inclement weather damaged nearly 5,000 homes and destroyed vast areas of cropland in Sichuan, Guizhou, Yunnan, Gansu, Zhejiang, and Chongqing. Total economic losses were listed at CNY728 million (USD118 million).

Showers and thunderstorms swept across parts of China's Guizhou, Yunnan, Fujian, Jiangxi, and Hunan provinces between the 23rd and 27th, bringing hail and damaging winds to several areas. No injuries or serious fatalities were

reported. According to the MCA, more than 15,000 homes and 10,000 hectares (24,700 acres) of crops were damaged by hail. Total economic losses were listed at CNY590 million (USD95 million).

An active weather pattern brought multiple rounds of heavy rain and severe thunderstorms across southern China between March 27 and April 4, killing at least 27 people. The stretch prompted a high volume of reports of large hail, winds gusting in excess of 100 kph (65 mph) and flash flooding in seven provincial regions (Fujian, Jiangxi, Hunan, Guangdong, Guangxi, Chongqing, and Guizhou). In Hong Kong, golf ball-sized hail caused damage in the heart of the city. The MCA indicated that 80,000 homes and more than 67,000 hectares (166,000 acres) of agricultural land had been damaged or destroyed. Total economic losses were estimated at roughly CNY1.0 billion (USD161 million).

Oceania (Australia, New Zealand and the South Pacific Islands)

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
3/4-3/5	Flooding	New Zealand	0	1,000+	30+ million
3/9-3/12	CY Lusi	Vanuatu	12	Hundreds+	Millions+

Flooding occurred across parts of New Zealand's Canterbury region on the 4th and 5th following what local officials described as a 100-year rainfall event. No serious injuries or fatalities were reported. Among the most significantly affected areas came in the greater Christchurch metropolitan area after more than 160 millimeters (6.30 inches) of rain fell in a 24-hour period. Many areas still recovering from major earthquakes in 2010 and 2011, including Lyttlelton, sustained damage during the event. The Insurance Council of New Zealand reported that more than 1,000 insurance claims were filed, with losses listed at NZD22 million (USD18.5 million).

Tropical Cyclone Lusi tracked through Vanuatu in the South Pacific between the 9th and 12th, bringing flooding rains and hurricane-force winds. At least 12 people were left dead or missing. At least 38 homes were completely destroyed in Penama and Shefa provinces, with a number of other structures affected as well. Heavy agricultural and infrastructure damage was also recorded.

APPENDIX

Updated 2014 Data: January – February

United States

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
1/1-1/5	Winter Weather	Midwest, Ohio Valley, Northeast	16	10,000+	200+ million
1/5-1/8	Winter Weather	Midwest, Northeast, Southeast	21	150,000+	3.0+ billion
1/11	Severe Weather	Southeast	2	5,000+	50+ million
1/20-1/22	Winter Weather	Central and Eastern U.S.	4	Thousands+	100+ million
1/26-1/29	Winter Weather	Southeast, Midwest, Mid-Atlantic	13	Thousands+	250+ million
2/3-2/6	Winter Weather	Midwest, Plains, Northeast	9	30,000+	250+ million
2/11-2/14	Winter Weather	Southeast, Northeast	25	50,000+	900+ million
2/20-2/21	Severe Weather	Midwest, Southeast, Mid-Atlantic	1	20,000+	175+ million

Remainder of North America (Canada, Mexico, Caribbean, Bermuda)

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
1/13	Earthquake	Puerto Rico	0	Hundreds+	Unknown

South America

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
1/1-2/28	Flooding	Bolivia	64	25,000+	100+ million
1/12	Flooding	Brazil	24	500+	Unknown

Europe

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
12/23-3/1	Flooding	United Kingdom	0	17,500+	1.5+ billion
1/2-1/3	WS Anne	United Kingdom, France	0	Thousands+	100+ million
1/5-1/7	WS Christina	UK, France, Scandinavia	3	Thousands+	500+ million
1/26-1/30	Winter Weather	Central/Western Europe	4	5,000+	Millions+
1/26-2/3	Earthquakes	Greece	0	1,000+	Millions+
2/1-2/8	WS Nadja & Petra	Western/Central Europe	1	Thousands+	410+ million
2/11-2/13	WS Tini	Western Europe	1	Thousands+	800+ million
2/14-2/15	WS Ulla	Western Europe	5	Thousands+	100+ million

Africa

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
1/21	Flooding	Tanzania	1	4,086+	Millions+

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
1/20-2/10	Flooding	Zimbabwe	0	6,393+	20+ million
2/9-2/10	Flooding	Burundi	77	3,790+	Millions+

Asia

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
1/1-2/1	Volcano	Indonesia	32	Unknown	83+ million
1/2	Earthquake	Iran	1	Thousands+	Millions+
1/11-1/20	Flooding	Philippines	79	3,500+	13+ million
1/12-1/15	Winter Weather	China	0	Unknown	89+ million
1/14-1/17	Flooding	Indonesia	20	10,844+	153+ million
1/14-1/21	Flooding	Indonesia	12	38,762+	430+ million
1/15-1/31	Winter Weather	Thailand	63	Unknown	Unknown
1/17-1/20	Winter Weather	India	25	Unknown	Unknown
1/17-1/22	Winter Weather	China	0	Unknown	79+ million
1/19-1/22	Flooding	Indonesia	13	4,000+	515+ million
1/24-1/28	Flooding	Indonesia	26	100+	173+ million
1/31-2/1	TD Kajiki	Philippines	6	427+	3.2+ million
2/1-2/7	Winter Weather	Afghanistan, Kyrgyzstan	46	Hundreds+	Unknown
2/4-2/5	Winter Weather	China	0	10,000+	115+ million
2/7-2/14	Winter Weather	China	10	20,000+	675+ million
2/8-2/16	Winter Weather	Japan	37	5,000+	2.0+ billion
2/12	Earthquake	China	0	90,000+	350+ million
2/13-2/20	Flooding	Malaysia	2	5,000+	25+ million
2/14	Volcano	Indonesia	7	12,447+	103+ million
2/17	Winter Weather	South Korea	10	Unknown	11+ million
2/17-2/21	Winter Weather	China	0	5,000+	140+ million
2/22	Flooding	Indonesia	11	2,000+	Millions+

Oceania (Australia, New Zealand and the South Pacific Islands)

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
1/10-1/12	CY Ian	Tonga	1	1,130+	48+ million
1/12-1/19	Wildfires	Australia (WA, VIC, SA)	2	350+	25+ million
1/20	Earthquake	New Zealand	0	4,004+	Millions+
1/30-1/31	CY Dylan	Australia (QLD)	0	Unknown	Unknown
2/25-2/28	Flooding	Fiji	0	Hundreds+	2.1+ 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 insurance companies 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.

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