

August 2013 Global Catastrophe Recap



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Executive Summary

- Billion-dollar flood losses recorded in China, Russia, Philippines, and Pakistan during August
- Four tropical systems leave damage and fatalities across eastern Asia
- Hail and damaging wind event in the Central U.S. causes more than USD600 million insured loss

Persistent rainfall caused flooding across much of China during the month of August, though the most substantial damage was confined to the country's northeast region. Heilongjiang Province was worst affected following the Heilongjiang River cresting at record levels. According to available data from the Ministry of Civil Affairs (MCA), nationwide totals during August showed that more than 260 people died from tropical or non-tropical flood events. At least 306,000 homes and structures were damaged or destroyed, and the aggregate economic loss was at least CNY32 billion (USD5.3 billion).

Across the border from China's Heilongjiang Province, torrential rains led to the worst flooding in at least 120 years in Russia's Far East. The floods inundated five regions – primarily along the main Amur and Zeya rivers – with the Ministry of Emergency Situations reporting that a combined 6,964 homes and 3,762 summer cottages were damaged or destroyed. More than 627,000 hectares (1.55 million acres) of agricultural land was also submerged. Total economic losses were estimated by the government at RUB30 billion (USD1.0 billion).

Exceptional rains (enhanced by the passage of Typhoon Trami) also fell across the Philippines. Twenty-seven people were killed following massive flooding on Luzon Island. At the peak of the event, 60% of metro Manila was under water. A government official estimated overall damages at PHP97.3 billion (USD2.2 billion).

In Pakistan, monsoon rains caused significant flooding that affected more than 5,739 villages nationwide. At least 234 people were killed, 79,208 homes were damaged or destroyed, and 1.4 million acres (567,000 hectares) of crops were submerged. The government estimated economic agricultural losses alone at PKR200 billion (USD2.0 billion).

Additional flood events were recorded in Afghanistan, Niger, Sudan, Mali, Laos, Cambodia, India, and the U.S.

Super Typhoon Utor made separate landfalls in the Philippines and China. The Philippines Luzon Island incurred damage to 21,153 homes in addition to agricultural and infrastructure economic losses topping PHP1.4 billion (USD33 million). In China, Utor's remnants prompted days of torrential rains in Guangdong, Guangxi, Hainan, and Hunan provinces. Eighty-six people were killed as economic losses topped CNY16 billion (USD2.6 billion).

Other economic losses from Western Pacific Basin tropical systems during August included: Typhoon Trami in China and Taiwan (USD406 million); Tropical Storm Kong-rey in the Philippines, Taiwan, and Japan (USD25 million); and Tropical Storm Jebi in China and Vietnam (USD21 million).

A severe weather event affected the Midwest and the Plains in the United States early in August, killing at least two people. The states of Minnesota and Wisconsin were the hardest-hit, where up to baseball-sized hail and straight-line winds gusting beyond 80 mph (130 kph) were recorded. Total economic losses were estimated at USD1.25 billion, with insured losses in excess of USD725 million.

A series of earthquakes rattled New Zealand's upper South Island and lower North Island, causing varying levels of damage to buildings and infrastructure. No serious injuries or fatalities were recorded. The main USGS-registered magnitude-6.5 tremor struck near the town of Seddon. The New Zealand Earthquake Commission received 5,903 claims, and overall losses were not expected to be significant.

The Rim Fire became the fourth-largest wildfire in California's history. At least 111 structures were destroyed (including 11 homes) in Tuolumne County. Total costs and losses attributed to the fire were at least USD175 million.

A week of extreme winter weather left 15 people dead in Bolivia, Peru and Paraguay.

United States

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
8/1	Severe Weather	Rockies, Plains	0	Thousands+	50+ million
8/2-8/3	Severe Weather	Rockies	0	30,000+	400+ million
8/5-8/7	Severe Weather	Midwest, Plains	2	85,000+	1.25+ billion
8/5-8/12	Flooding	Plains, Tennessee Valley	3	5,000+	25+ million
8/22	Severe Weather	Colorado	0	15,000+	250+ million
8/17-9/20	Wildfire	California	0	111+	175+ million
8/30-8/31	Severe Weather	Plains, Midwest	0	20,000+	170+ million

Powerful thunderstorms swept across parts of the Rockies and Plains on the 1st, causing damage in several states. The most significant impacts were felt in Montana, where a wind gust of 104 mph (167 kph) was recorded in Beaverhead County. Up to golf ball-sized hail was noted elsewhere in the state. Beyond property damage, agriculture was heavily affected (especially wheat, barley and potato crops) with losses expected to approach USD50 million.

Vigorous thunderstorm activity occurred on the 2nd and 3rd across parts of the Rockies, with the most significant storms recorded in parts of Colorado, Wyoming and Montana. At least eight tornadoes touched down (six alone in Colorado), though most of the damage was due to softball-sized hail and flooding in northeastern Colorado. Thousands of homes, businesses, schools, and vehicles were affected. Agriculture was severely damaged as well. Total economic losses were estimated at USD400 million, with insured losses in excess of USD225 million.

Widespread thunderstorms crossed the Midwest and the Plains between the 5th and 7th, killing at least two people. The states of Minnesota and Wisconsin were the hardest-hit, where up to baseball-sized hail and straight-line winds gusting beyond 80 mph (130 kph) were recorded as damage was significant in many areas. An EF-2 tornado also touched down in Waupaca County, WI. In the Plains, softball-sized hail pelted parts of western Kansas damaging residential/commercial property and agriculture. Total economic losses were estimated at USD1.25 billion, with insured losses in excess of USD725 million.

Excessive rainfall (more than 15 inches (381 millimeters) in isolated locations) prompted major flooding between the 5th and 12th throughout parts of five states. Three people were killed as persistent rains led to flash flooding and rivers to overflow their banks. More than 2,000 homes sustained flood damage in Missouri and Kansas alone due to inundated basements or backed-up sewers. Additional flood damage occurred in Tennessee, Arkansas and Oklahoma. Total economic losses were estimated by state governments at roughly USD25 million.

Strong thunderstorms struck central Colorado on the 22nd, spawning large hail and flooding. No serious injuries or fatalities were reported. The most significant damage occurred in the towns of Colorado Springs, Littleton, Castle Rock, and Highlands Ranch, where golf ball-sized hail pelted roofs and cars. Heavy rains also prompted flash flooding in parts of El Paso and Teller counties as homes, businesses and schools were inundated. Total economic losses were estimated at USD250 million, with insured losses in excess of USD150 million.

The Rim Fire became the third-largest fire in California's history during the month of August and early September, burning in Tuolumne County. Three people were injured after the fire was ignited on August 17 and burned 253,332 acres (102,300 hectares). Damage reports indicated that 111 structures were destroyed, including 11 residences, 97 outbuildings and 3 commercial buildings. Total costs and losses attributed to the fire were at least USD175 million.

Widespread severe thunderstorms tracked across parts of the Plains and Midwest on the 30th and 31st. The most significant damage was reported in the South Dakota communities of Rapid City and Sioux Falls, where baseball-sized hail damaged more than 10,000 vehicles alone. Additional damage occurred in North Dakota, Minnesota and Iowa. Total economic losses were estimated at USD170 million, with insured losses in excess of USD100 million.

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

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
8/21	Earthquake	Mexico	0	Hundreds+	Unknown
8/25-8/26	TS Fernand	Mexico	14	1,000+	Millions+
8/28-8/29	TS Juliette	Mexico	1	Unknown	Unknown

A moderate earthquake struck southern Mexico on the 21st, leading to only minor injuries. The magnitude-6.2 tremor was registered at 5:38 AM local time (12:38 UTC) with an epicenter 13 kilometers (8 miles) north-northwest of San Marcos, Mexico and caused buildings to sway in Mexico City and other nearby states. Damage was largely minimal, though some structural damage was reported to homes and buildings in the state of Guerrero.

Tropical Storm Fernand made landfall in southern Mexico's state of Veracruz on the 25th, killing at least 14 people. The most significant impacts occurred due to excessive rainfall in the hardest-hit states of Veracruz and Oaxaca. A state of emergency was declared in each region. The Civil Defense reported that more than 1,000 homes were damaged due to overflowing rivers and landslides. Agricultural and infrastructure damage was also prevalent.

Tropical Storm Juliette brought heavy rains to Mexico's Baja California on the 28th and 29th, killing at least one person. Damage was largely minimal, though flooding was widespread across low-lying areas near the coast.

South America

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
8/24-8/31	Winter Weather	Bolivia, Peru, Paraguay	15	Thousands+	Millions+

A week of heavy snowfall and frigid temperatures engulfed parts of Bolivia, Peru and Paraguay between the 24th and 31st, killing at least 15 people. The wintry weather was the worst in the last decade, and the coldest temperature in South America since 1946 was recorded in southern Bolivia (-25.7°C (-14.2°F)). Thousands of structures collapsed under the weight of heavy snow, and tens of thousands of cattle perished.

Europe

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
8/4-8/7	Severe Weather	Central/Western Europe	0	50,000+	500+ million
8/4-8/31	Flooding	Russia	0	11,500+	1.0+ billion

Powerful thunderstorms swept through parts of Central and Western Europe between the 4th and 7th, causing widespread damage and a state of emergency declaration in the Czech Republic. Severe hail damage was noted in multiple countries, including France, as residential and commercial properties were heavily affected. Damage to vehicles was widespread as well. Total economic losses were estimated at EUR375 million (USD500 million), with insured losses tallied at EUR200 million (USD275 million).

The worst flooding in 120 years affected Russia's Far East throughout the month of August into September, as multiple rivers (such as the Amur and Zeya) burst their banks and caused widespread damage. No serious injuries or fatalities were reported. Five regions were inundated by floodwaters with Amur Region, Khabarovsk Territory and the Jewish Autonomous Region sustaining the worst damage. A combined 6,964 homes, 3,762 summer cottages, 220 roads, and 62 bridges were damaged or destroyed. More than 627,000 hectares (1.55 million acres) of agricultural land was also submerged. Total economic losses were estimated at RUB30 billion (USD1.0 billion).

Africa

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
1/1-8/31	Drought	Namibia	0	Unknown	64+ million
7/15-8/19	Flooding	Niger	20	15,000+	Unknown
8/1-8/4	Flooding	Sudan	73	40,000+	7.0+ million
8/9	Flooding	Nigeria	1	1,000+	Unknown
8/28	Flooding	Mali	55	1,000+	Unknown

The worst drought in at least 30 years intensified across Namibia during the month of August, as the government maintained a national emergency. An exceptional period without rainfall, including some areas that went two consecutive years without a trace of rain, led to major agricultural damage. Officials allocated NAD655 million (USD64 million) to aid in drought response.

Weeks of heavy rainfall inundated parts of Niger between mid-July and the first half of August, leading to floods that left at least 20 people dead. The most significant damage was recorded in the Maradi and Agadez regions, where at least 15,000 homes were damaged or destroyed. Agricultural cropland was heavily impacted as well.

Heavy rains fell throughout much of Sudan between the 1st and 4th, spawning significant flooding. At least 73 people were killed and dozens of others were injured. Government officials reported that the states of Khartoum, River Nile, Blue Nile, North Darfur, South Darfur, Northern, and Red Sea were all affected, with Khartoum sustaining the worst impacts. A combined 40,000 homes were damaged or destroyed, and the floods decimated infrastructure as well. Overall economic impacts and relief costs were listed at SDG30 billion (USD7.0 million).

Heavy rains prompted flash flooding throughout parts of northern Nigeria on the 9th, killing at least one person. The hardest-hit areas came in the states of Kano and Jigawa, where a combined 13 government areas were inundated. More than 1,000 homes were destroyed.

Tremendous rainfall inundated Mali's capital city of Bamako on the 28th, spawning significant flash flooding. At least 55 people were killed after the Niger River burst its banks. The flash floods swept up cars and destroyed mud-brick homes, with the hardest-hit district listed as Taliko.

Asia

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
6/1-8/31	Flooding	Laos	20	20,000+	60+ million
7/1-8/31	Flooding	Nepal	138	10,000+	Unknown
8/1-8/9	Flooding	Philippines	11	Hundreds+	36+ million
8/2-8/4	TS Jebi	China, Vietnam	7	2,000+	21+ million
8/3-8/15	Flooding	Afghanistan	68	1,400+	Unknown
8/3-9/30	Flooding	Pakistan	234	79,208+	2.0+ billion
8/4-8/8	Flooding	China	18	20,000+	490+ million

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
8/5-11/30	Flooding	Cambodia	188	377,354+	1.0+ billion
8/9-9/5	Flooding	China	118	215,000+	5.0+ billion
8/10-8/14	Flooding	Afghanistan	31	500+	Unknown
8/12-8/15	STY Utor	China, Philippines	86	126,053+	2.6+ billion
8/14-9/4	Flooding	Yemen	43	10,000+	Unknown
8/18-8/21	Flooding	Philippines	27	Thousands+	2.2+ billion
8/19-8/21	Flooding	China	43	51,000+	457+ million
8/21-8/23	TY Trami	China, Taiwan	2	11,100+	406+ million
8/23-8/26	Flooding	Japan	2	1,861+	Millions+
8/22-8/27	Flooding	India	73	5,000+	Unknown
8/23-8/27	Flooding	China	12	9,000+	278+ million
8/27-8/31	TS Kong-rey	Philippines, Taiwan, Japan	4	1,000+	25+ million
8/31	Earthquake	China	3	107,600+	155+ million

Persistent rainfall, at times enhanced by the arrival of tropical cyclone remnants, brought widespread flooding across northern and central Laos during June and August. At least 20 people were killed due to flash flooding and several rivers overflowing their banks. The hardest-hit provinces included Oudomxay, Xayabouly, Bolikhamxay, Khammuan, Xiengkhuang, and Vientiane, where a combined 20,000 homes were damaged or destroyed. Severe agricultural and infrastructure damage was prevalent as well. Total economic losses were listed at LAK500 billion (USD60 million).

Torrential monsoon rains fell across Nepal during the months of July and August, killing at least 138 people and injuring 31 others. Nepal's Home Ministry reported that floodwaters and landslides affected 46 of the country's 75 districts. As many as 10,000 homes and other structures were damaged.

Several days of heavy rainfall affected the southern Philippines' Mindanao Island during the first week of August. According to the National Disaster Risk Reduction and Management Council (NDRRMC), at least 11 people were killed and 21 others were injured as rivers burst their banks and landslides occurred. Among the hardest-hit areas came in the city of Cotobato, where more than 100,000 people were displaced. The NDRRMC estimated economic damages to infrastructure and agriculture at PHP1.57 billion (USD36 million).

Tropical Storm Jebi made separate landfalls in China and Vietnam on the 2nd and 3rd. In China, Jebi brought periods of heavy rain and near hurricane-strength wind gusts across Hainan Island. Approximately 1,000 homes were damaged and economic losses were listed at CNY122 million (USD20 million). In Vietnam, more than 1,000 homes and other structures were damaged in multiple northern provinces. At least seven people were killed and 11 others were injured. Total economic losses were estimated at approximately VND20 billion (USD1.0 million).

Monsoonal rains fell across eastern Afghanistan between the 3rd and 15th, killing at least 68 people. Widespread damage was recorded in nine provinces – including Kabul.

Excessive monsoonal rains fell across parts of Pakistan throughout the months of August and September, leading to the deaths of at least 234 people. The country's National Disaster Management Authority (NDMA) indicated that a combined 79,208 homes were damaged or destroyed across the provinces of Pujab, Kyber Pakhtunkhwa, Balochistan, Gilgit-Baltistan, and Sindh. More than 7,841 villages were affected and 1.4 million acres (567,000 hectares) of cropland was submerged. Total economic losses to agriculture alone were listed by the government at PKR200 billion (USD2.0 billion).

Periods of heavy rainfall and strong thunderstorms swept across 11 provincial regions of China between the 4th and 8th, killing at least 18 people. According to the Ministry of Civil Affairs (MCA), nearly 20,000 homes were damaged by a combination of floodwaters and hail. Nearly 63,000 hectares (156,000 acres) of cropland were also damaged. Total economic losses were listed at CNY3.0 billion (USD490 million).

Monsoon rains and remnants of tropical cyclones prompted widespread flooding across 24 provinces in Cambodia between August and November, killing at least 168 people. Overflowing rivers led to severe property and agricultural damage in the provincial regions of Banteay Meanchey, Kompong Thom, Battambang, Kratie, Stung Treng, and Pursat. More than 377,000 homes, 533 schools, 291 temples, and 25 health centers were damaged. Also, 344,300 hectares (851,000 acres) of rice paddy were inundated and 4,100 kilometers (2,550 miles) of roadways washed away. Total economic losses were listed at KHR4.0 trillion (USD1.0 billion).

Flooding rains swept across central and eastern China, killing at least 118 people. Liaoning, Jilin and Heilongjiang provinces sustained their worst floods in decades in the floods which began on August 9 and stretched into September. Overflowing rivers, flash flooding and landslides combined to damage more than 215,000 homes and other structures and also significantly impacted infrastructure. Crop damage was extensive as well with more than 200,000 hectares (494,000 acres) affected. Total economic losses were listed at CNY30 billion (USD5.0 billion). The China Insurance Regulatory Commission (CIRC) reported that CNY2.46 billion (USD405 million) in claims had been filed, with CNY2.1 billion (USD345 million) from damage to crops alone.

Heavy rains struck near the Afghanistan capital of Kabul between the 10th and 14th, leading to flash flooding that left at least 31 people dead. The most major damage occurred in the districts of Chakardara, Jaghatu, Chak, Nurkh, Sayed Abad, and Paghman located just north and west of Kabul. Hundreds of structures (including homes, schools, and businesses) were damaged, though most were built of poor quality with mud, straw or mud brick.

Super Typhoon Utor made separate landfalls in the Philippines and China between the 12th and 15th, killing at least 86 people. Significant impacts were felt in the Philippines' Luzon Island, where the NDRRMC indicated damage in 16 provinces, with Aurora the hardest-hit. Eleven people were killed as heavy rain and very high wind gusts occurred. The NDRRMC indicated that 21,153 homes had been damaged or destroyed, with economic losses to agriculture and infrastructure listed at PHP1.4 billion (USD33 million). In China, Utor came ashore in Guangdong Province and quickly dissipated though its remnants prompted major flooding in Guangdong, Guangxi, Hainan, and Hunan, killing at least 70 people. According to the MCA, approximately 57,400 homes were damaged and total economic losses were CNY16 billion (USD2.6 billion).

Multiple weeks of heavy rains inundated much of Yemen during the second half of August into early September, triggering floods that killed at least 43 people. More than 21 districts from eight governorates were affected with more than 10,000 structures affected by the flash floods.

Exceptional rains fell across the Philippines between the 18th and 21st, killing at least 27 people and injuring 30 others. Massive flooding ensued, with some of the heaviest damage recorded in the greater Manila metropolitan region. Up to 600 millimeters (23.5 inches) of rain fell during one 24-hour stretch, as the monsoon pattern was enhanced by the passage of Typhoon Trami. According to the NDRRMC, 741 regions in 92 municipalities/cities were affected by floodwaters and, 60% of metro Manila was at one point under water. Nationwide, more than 3.1 million people in 18 provinces were affected as extensive damage occurred to residential, commercial and agricultural property. An official from the NDRRMC estimated overall damages at PHP97.3 billion (USD2.2 billion).

Heavy rains swept across northern China between the 19th and 21st, killing at least 43 people. Twenty-four of the fatalities occurred in Qinghai Province's Wulan County due to flash flooding, with most of the fatalities occurring at a construction site. In Inner Mongolia, 19 people were killed as floods damaged more than 51,000 homes and 50,000 hectares (124,000 acres) of cropland. Total economic losses listed at CNY2.8 billion (USD457 million).

Typhoon Trami made landfall in China on the 22nd after first skirting Taiwan. Two people were killed. Despite not sustaining a direct landfall, Taiwan was affected by torrential rains and hurricane-force wind gusts, with the Council of Agriculture listing crop damage at TWD350 million (USD12 million). In China, damage was widespread across Fujian Province and surrounding provinces as the MCA indicated that approximately 11,100 residences were affected. Total economic losses were estimated at CNY2.3 billion (USD394 million).

Monsoon rains brought renewed flooding to parts of central and northern India between the 22nd and 27th, killing at least 73 people. In Madhya Pradesh, at least 17 people were killed following the Narmada River bursting its banks and destroying thousands of homes in villages such as Bhopal, Hoshangabad, Seoni, Narsinghpur, and Jabalpur. The additional 56 fatalities occurred in Uttar Pradesh, where several large rivers and their tributaries (including the Ganges and Yamuna) swelled and affected more than 200 villages.

Torrential rainfall prompted widespread flooding and landslides in Japan between the 23rd and 26th, killing at least two people. More than 470 millimeters (18.50 inches) of rain fell in parts of Shimane Prefecture, with flood damage noted in 10 total prefectures. According to Japan's Cabinet Office, at least 1,861 homes and other structures were damaged by the floods which also washed away stretches of infrastructure.

Periods of heavy rainfall swept across several sections of China between the 23rd and 27th, killing at least 12 people. Eight provinces reported damage as the country continued to cope with extensive flooding prevalent during most of the summer. According to the MCA, more than 9,000 homes were damaged and more than 47,000 hectares (116,000 acres) of cropland were submerged. Total economic losses were estimated at CNY1.7 billion (USD278 million).

Tropical Storm Kong-rey affected the Philippines, Taiwan and Japan between the 27th and 31st, though never officially made landfall. At least four people were killed due to heavy rains prompted by the storm. Damage was largely minimal, though agricultural losses were notable in Taiwan. Total combined economic losses were estimated at USD25 million.

A magnitude-5.8 earthquake struck China's Yunnan province (near the border of Sichuan Province) on the 31st, killing at least three people and injuring 50 others. The tremor occurred at 8:04 AM local time (0:04 UTC) with an epicenter near the town of Benzilan, China. Damage was significant in several counties, with a combined 107,600 residences sustaining varying levels of damage. In addition to the shaking, landslides also severely impacted telecommunication and infrastructure. Total economic losses were listed at CNY950 million (USD155 million).

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

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
8/3	Severe Weather	Australia (South Australia)	0	100+	9.1+ million
8/16	Earthquake	New Zealand	0	5,903+	50+ million

A strong tornado touched down in the South Australia town of Kingston on the 3rd, though no serious injuries or fatalities were reported. The twister severely damaged 19 homes and impacted an additional 30. Two industrial properties were also hit. Total economic losses were estimated at AUD10 million (USD9.1 million).

A series of strong earthquakes rattled New Zealand's upper South Island and lower North Island on the 16th, causing varying levels of damage to buildings and infrastructure. No serious injuries or fatalities were recorded. The main USGS-registered magnitude-6.5 tremor struck at 2:31 PM local time (2:31 UTC) with an epicenter near the town of Seddon. The main tremor was followed by several aftershocks, including at least five with magnitudes greater than 5.0. The most notable damage occurred closest to the epicenter in Seddon and Marlborough, where some homes were structurally affected. Most damage was due to minor cracking or fallen indoor contents. Wellington was left largely unscathed. The New Zealand Earthquake Commission received 5,903 claims and payouts were listed at NZD15 million (USD12.2 million). Total economic losses were even higher.

APPENDIX

Updated 2013 Data: January – July

United States

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
1/8-1/10	Severe Weather	Southeast	0	500+	10+ million
1/11-1/17	Winter Weather	California	0	Unknown	28+ million
1/29-1/30	Severe Weather	Southeast, Midwest, Plains	3	25,000+	350+ million
2/8-2/9	Winter Weather	Northeast, Mid-Atlantic	15	10,000+	100+ million
2/9-2/11	Winter Weather	Midwest, Plains, Southeast	1	7,500+	100+ million
2/21-2/22	Winter Weather	Plains, Midwest, Southeast	2	Thousands+	Millions+
2/24-2/27	Winter Weather	Plains, Midwest, Northeast	3	100,000+	1.0+ billion
3/4-3/8	Winter Weather	Plains, Midwest, Northeast	5	Thousands+	50+ million
3/18-3/20	Severe Weather	Southeast, Northeast	2	225,000+	2.0+ billion
3/23-3/25	Winter Weather	Plains, Midwest, Northeast	0	Unknown	Unknown
3/29-3/31	Severe Weather	Plains, Southeast	0	35,000+	325+ million
4/1-4/2	Severe Weather	Texas	0	25,000+	250+ million
4/7-4/11	Severe Weather	Nationwide	3	125,000+	1.6+ billion
4/17-4/19	Severe Weather	Central and Eastern U.S.	3	75,000+	900+ million
4/17-4/30	Flooding	Midwest, Mississippi Valley	4	25,000+	200+ million
4/26-4/28	Severe Weather	Plains, MS Valley, Southeast	0	45,000+	350+ million
4/29	Severe Weather	Midwest	0	12,500+	125+ million
5/8-5/11	Severe Weather	Texas, Oklahoma, Kansas	0	30,000+	200+ million
5/15-5/17	Severe Weather	Plains, Southeast	6	25,000+	500+ million
5/18-5/22	Severe Weather	Plains, Midwest, Northeast	29	100,000+	4.5+ billion
5/19	Flooding	Georgia	0	Hundreds+	10+ million
5/23	Severe Weather	Texas	0	Thousands+	Millions+
5/25	Flooding	Texas	3	Thousands+	Millions+
5/26-6/2	Severe Weather	Plains, Midwest, Northeast	27	120,000+	2.0+ billion
5/30-6/8	Wildfire	California	0	58+	21.4+ million
6/6-6/8	TS Andrea	Florida, Eastern Seaboard	3	Hundreds+	Unknown
6/11-6/20	Wildfire	Colorado	2	4,000+	500+ million
6/12-6/13	Severe Weather	Midwest, Northeast, Mid-Atlantic	4	55,000+	500+ million
6/20-6/28	Severe Weather	Central and Eastern U.S.	2	75,000+	700+ million
6/28-7/10	Wildfire	Arizona	19	129+	Millions+
7/8-7/10	Severe Weather	Central and Eastern U.S.	1	20,000+	175 + million
7/19-7/20	Severe Weather	Plains, Midwest, Northeast	1	25,000+	215+ million
7/21-7/24	Severe Weather	Plains, Rockies, Midwest	0	20,000+	275+ million
7/27-7/28	Flooding	North Carolina, Pennsylvania	2	Hundreds+	25+ million

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

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
1/1-5/31	Drought	Panama	0	Unknown	200+ million
2/7-2/10	Winter Weather	Canada	3	Thousands+	4.0+ million
4/18	Severe Weather	Canada	0	Hundreds+	Unknown
4/15-5/10	Flooding	Canada	0	2,000+	Millions+
5/22	Flooding	Bahamas	0	1,000+	45+ million
5/28-5/30	HU Barbara	Mexico, Central America	4	5,000+	Unknown
6/19-6/24	Flooding	Canada	4	Thousands+	5.3+ billion
6/20-6/21	TS Barry	Mexico, El Salvador, Belize	3	2,000+	Unknown
7/5-7/9	HU Erick	Mexico	2	Hundreds+	Unknown
7/8	Severe Weather	Canada	0	25,000+	1.65+ billion
7/9-7/11	TS Chantal	Caribbean	1	Unknown	10+ million
7/19-7/20	Severe Weather	Canada	1	Hundreds+	Millions+
7/20-7/21	Severe Weather	Canada	0	Hundreds+	Millions+

South America

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
1/1-5/31	Drought	Brazil	0	Unknown	8.3+ billion
1/1-1/20	Flooding	Brazil	4	10,000+	Millions+
1/1-2/20	Flooding	Peru	31	12,000+	Unknown
1/24	Flooding	Ecuador	10	Dozens+	Unknown
1/28-2/15	Flooding	Bolivia	24	582+	2.5+ million
1/30	Earthquake	Chile	1	Hundreds+	Unknown
2/9	Earthquake	Colombia	0	4,050+	4.0+ million
2/21-2/22	Wildfire	Chile	0	100+	Unknown
3/15-3/18	Flooding	Colombia	0	11,200+	Unknown
3/17-3/18	Flooding	Brazil	30	1,000+	1.5+ million
4/2-4/4	Flooding	Argentina	86	105,000+	1.3+ billion
4/23	Flooding	Ecuador	14	Dozens+	Unknown
6/20-7/19	Flooding	Paraguay, Argentina, Brazil	0	13,000+	Unknown
7/16	Earthquake	Peru	0	691+	Millions+

Europe

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
1/17-1/22	Winter Weather	Western Europe	7	7,000+	715+ million
1/28	Flooding	Turkey	7	Unknown	Unknown
2/15	Meteor Explosion	Russia	0	108,000+	33+ million
2/22	Flooding	Greece	1	1,000+	Millions+
2/24-2/26	Flooding	Macedonia, Serbia	1	2,000+	Millions+
3/12-3/31	Winter Weather	West/Central/East Europe	30	150,000+	1.8+ billion

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
3/14	Severe Weather	Azores	3	500+	45+ million
4/23	Earthquake	Hungary	0	600+	Unknown
5/3	Severe Weather	Italy	0	5,000+	13.1+ million
5/11-5/14	Severe Weather	Turkey	3	1,000+	Unknown
5/12	Severe Weather	Armenia	0	12,800+	61+ million
5/22	Severe Weather	Russia	0	250+	3.2+ million
5/30-6/15	Flooding	Central Europe	23	100,000+	22+ billion
6/18-6/19	Severe Weather	France, Spain	3	Thousands+	655+ million
6/20-6/21	Severe Weather	Switzerland	0	25,000+	250+ million
7/19	Flooding	Georgia	0	3,800+	Unknown
7/27-7/28	Severe Weather	Germany	0	180,000+	3.0+ billion

Africa

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
1/10-2/28	Flooding	Southern Africa	175	125,000+	525+ million
1/10-3/31	Flooding	Namibia	0	12,000+	Unknown
1/27-2/2	CY Felleng	Madagascar, Seychelles	18	9,965+	10+ million
2/13	Flooding	Mauritius	0	1,500+	30+ million
2/20-2/23	CY Haruna	Madagascar	26	16,449+	25+ million
3/4	Severe Weather	Central African Republic	0	1,314+	Unknown
3/30	Flooding	Mauritius	11	Thousands+	Millions+
3/1-4/30	Flooding	Ghana	5	10,000+	Unknown
3/10-4/30	Flooding	Kenya	66	35,000+	36+ million
4/6-4/7	Flooding	Angola	9	1,000+	Unknown
4/10-4/30	Flooding	Ethiopia	0	5,256+	2.2+ million
5/1-5/5	Flooding	Uganda	10	5,000+	3.1+ million
6/1	Severe Weather	South Africa	3	547+	Unknown
7/17	Earthquake	Algeria	0	Thousands+	Unknown

Asia

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
1/1-1/20	Winter Weather	India, Bangladesh, Nepal	329	Unknown	Unknown
1/1-8/31	Drought	China	0	Unknown	10+ billion
1/3-1/9	Winter Weather	China	0	7,500+	204+ million
1/6-1/9	Winter Weather	Middle East	11	5,000+	345+ million
1/11	Flooding	China	46	63+	48+ million
1/15-1/23	Flooding	Philippines	10	5,000+	2.8+ million
1/17-1/18	Winter Weather	India	0	Thousands+	185+ million
1/20-1/27	Flooding	Indonesia	41	100,274+	3.31+ billion
1/22	Earthquake	Indonesia	1	100+	Unknown
1/25-1/27	Flooding	Sri Lanka	1	2,164+	Unknown

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
1/27	Flooding	Indonesia	21	100+	Unknown
1/28	Earthquake	Kazakhstan, China	1	8,900+	29+ million
2/15-2/22	Flooding	Indonesia	17	11,608+	Millions+
2/18-2/20	TD Two	Philippines	5	5,000+	1.68+ million
2/18-2/21	Winter Weather	China	2	2,700+	124+ million
2/19-2/20	Earthquakes	China	0	3,271+	67+ million
2/26-2/28	Flooding	Indonesia	3	3,000+	Unknown
2/23-3/3	Winter Weather	Japan	9	384+	14.2+ million
3/3	Earthquake	China	0	85,542+	56+ million
3/9-3/13	Severe Weather	China	1	46,650+	161+ million
3/11	Earthquake	China	0	864+	Unknown
3/17-3/18	Flooding	China	0	7,000+	13+ million
3/18-3/20	Severe Weather	China	25	279,600+	259+ million
3/22	Severe Weather	Bangladesh	35	3,387+	Unknown
3/25	Flooding	Indonesia	13	10+	Unknown
3/26-4/2	Severe Weather	Vietnam	1	25,000+	14.4+ million
3/27	Earthquake	Taiwan	1	1,000+	1.0+ million
3/29-3/30	Severe Weather	China	3	5,000+	26+ million
3/29-3/30	Severe Weather	Bangladesh, India	11	5,004+	Unknown
4/6-4/9	Severe Weather	Japan	3	555+	Unknown
4/7-11	Flooding	Indonesia	11	22,830+	Unknown
4/9	Earthquake	Iran	41	3,100+	600+ million
4/13	Earthquake	Japan	0	2,802+	Unknown
4/16	Earthquake	Iran, Pakistan	36	3,500+	Unknown
4/17	Earthquake	China	0	16,109+	38+ million
4/17-4/19	Severe Weather	China	2	57,100+	309+ million
4/20	Earthquake	China	196	620,000+	14+ billion
4/20-5/15	Flooding	Maldives	0	1,000+	Unknown
4/22	Flooding	China	11	Unknown	Unknown
4/23-4/24	Flooding	Afghanistan	20	2,100+	Unknown
4/24	Earthquake	Afghanistan	18	2,000+	Unknown
4/25	Earthquake	China	1	29,000+	47+ million
4/28-5/1	Severe Weather	China	12	43,400+	154+ million
5/1	Earthquake	India	2	12,000+	4.6+ million
5/6-5/10	Flooding	China	19	51,000+	293+ million
5/13-5/16	CY Mahasen	Bangladesh, Myanmar, India	52	150,000+	200+ million
5/14-5/16	Flooding	China	55	60,000+	935+ million
5/19-5/23	Flooding	China	12	20,000+	445+ million
5/24-5/27	Flooding	China	12	40,000+	333+ million
6/1	Earthquake	Taiwan	4	500+	1.1+ million
6/1-6/3	Earthquake	Philippines	0	500+	Unknown
6/5-6/8	Flooding	China	15	5,000+	277+ million
6/8-6/10	Severe Weather	Sri Lanka	58	4,295+	Millions+

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
6/14-6/18	Flooding	India, Nepal	6,500	25,000+	1.1+ billion
6/14-6/21	Flooding	China	11	56,100+	555+ million
6/21-6/23	TS Bebinca	China, Vietnam	0	1,000+	45+ million
6/23-6/25	Severe Weather	China	11	10,000+	118+ million
6/29-7/3	Flooding	China	55	125,000+	1.4+ billion
6/29-7/2	TY Rumbia	China, Philippines	7	4,500+	178+ million
7/1-7/31	Flooding	North Korea	33	6,000+	Unknown
7/2	Earthquake	Indonesia	39	20,333+	134+ million
7/7-7/17	Flooding	China	125	375,000+	4.5+ billion
7/9-7/10	Flooding	India	174	Thousands+	Millions+
7/13-7/15	STY Soulik	China, Taiwan	9	10,000+	460+ million
7/16-7/18	TS Cimaron	China, Philippines	1	10,000+	253+ million
7/21-7/25	Flooding	China	36	143,700+	1.4+ billion
7/22	Earthquake	China	95	80,000+	3.25+ billion
7/25-7/28	Flooding	Myanmar, Thailand	13	20,000+	97+ million
7/25-8/1	Flooding	China	10	25,000+	571+ million
7/28	Flooding	Japan	2	2,178+	Millions+
7/28-7/30	Flooding	Vietnam	5	1,000+	6.5+ million
7/28-7/30	Flooding	Indonesia	12	1,628+	Unknown

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

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
1/1-5/10	Drought	New Zealand	0	Unknown	1.6+ billion
1/1-1/17	Wildfires	Australia (TAS, NSW, VIC)	1	3,500+	175+ million
1/21-1/30	Flooding	Australia (QLD, NSW)	6	87,843+	2.5+ billion
2/6	Earthquake	Solomon Islands	13	1,066+	Millions+
2/22-2/24	Severe Weather	Australia (NSW, QLD)	1	6,000+	16+ million
2/25-2/27	CY Rusty	Australia (WA)	0	Unknown	Unknown
3/21	Severe Weather	Australia (VIC, NSW)	0	1,198+	21+ million
4/20-4/21	Flooding	New Zealand	0	1,500+	39+ million
6/18-6/21	Winter Weather	New Zealand	0	9,500+	40+ million
7/21	Earthquake	New Zealand	0	4,612+	50+ 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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