

# Global Catastrophe Recap

October 2020

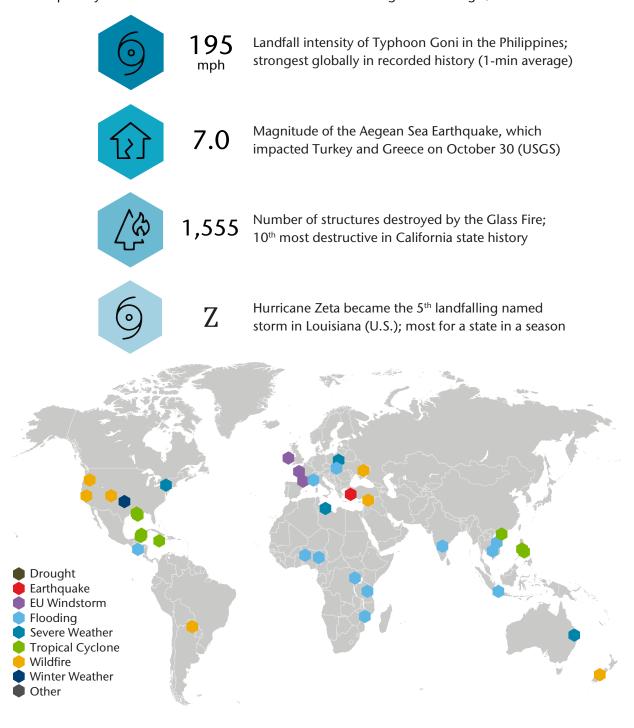


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# Executive Summary

- U.S. sets record for most seasonal named storm landfalls (11); financial toll adds additional billions
- Impact of devastating flash flooding in France and Italy initially estimated in excess of USD3 billion
- Tropical cyclones and extended monsoon season rains bring more damage / casualties to Asia



#### **United States**

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
08/13-10/29	Cameron Peak Fire	Colorado	0	Hundreds+	Millions
08/16-10/05	Beachie Creek Fire	Oregon	4	12,000+	1.6+ billion
08/18-10/05	North Complex Fire	California	15	4,000+	450+ million
09/04-10/05	Creek Fire	California	0	3,000+	600+ million
09/06-10/06	Bobcat Fire	California	0	3,500+	175+ million
09/07-10/03	Holiday Farm Fire	Oregon	1	4,500+	550+ million
09/08-10/03	Riverside Fire	Oregon	0	3,000+	160+ million
09/08-10/05	Slater Fire	California, Oregon	2	1,000+	90+ million
09/27-10/05	Glass Fire	California	0	8,000+	3.75+ billion
10/07-10/08	Severe Weather	Northeast	0	23,000+	235+ million
10/07-10/11	Hurricane Delta	Plains, Southeast	4	150,000+	4+ billion
10/14-10/29	East Troublesome Fire	Colorado	2	Hundreds+	Millions
10/17-10/29	Calwood Fire	Colorado	0	Hundreds+	Millions
10/24-10/30	Hurricane Zeta	Southeast	6	100,000+	3.2+ billion
10/25-10/28	Winter Weather	West, Plains	0	20,000+	125+ million

Continued highly favorable fire weather conditions prevailed across the Western United States throughout much of October. This subsequently led to more major fires, with the greatest impacts observed in California, Oregon, and Colorado. In California, the Glass Fire destroyed 1,555 structures while damaging an additional 280. Statewide, no less than 4.1 million acres (1.66 million hectares) have burned in 2020, resulting in 31 fatalities, and destroying at least 10,488 structures. In Colorado, three of the top four largest fires on the state's modern record have occurred since July 31. Seasonal direct economic costs from the fires across California, Colorado, and Oregon were estimated to exceed USD13 billion. Insurers were facing payouts beyond USD8 billion. Both estimates are subject to change.

A severe thunderstorm cluster progressed across the Northeast on October 7-8, with the greatest impacts occurring in portions of east central New York and southern New England. The primary hazard was damaging straight-line winds. Gusts approaching and exceeding 60 to 70 mph (96 to 112 kph) were measured. The storms damaged and toppled numerous trees and powerlines across the region. Total economic losses were estimated at USD235 million; most of which was covered by insurance.

After impacting the northeast coast of the Yucatán Peninsula (Mexico), Hurricane Delta made its U.S. landfall on October 9 along the southwestern Louisiana coast as a Category 2 hurricane with maximum sustained winds of 100 mph (160 kph). Delta brought significant storm surge, incessant rainfall, and hurricane-force wind gusts to eastern Texas and southwestern Louisiana. Despite becoming ashore in a sparsely populated region of Louisiana, the large footprint of Delta knocked out to power to at least 850,000 customers along the Gulf Coast. Rainfall totals in central Louisiana exceeded 17 inches (430 millimeters) in spots. Delta's remnants would later produce heavy rainfall, flash flooding, and tornadoes across Georgia, the Carolinas, and the Mid-Atlantic from October 10-12. Total economic losses were anticipated to approach USD4 billion, with roughly half covered by public and private insurers.

After impacting the Yucatán Peninsula (Mexico), Hurricane Zeta rapidly intensified in the Gulf of Mexico before making landfall along the southeastern Louisiana coast on October 28 as a high-end Category 2 storm, with maximum estimated wind speeds of 110 mph (175 kph). Zeta brought storm surge, and hurricane-force wind gusts to coastal regions of Louisiana, Mississippi, and Alabama. Extensive inland damage occurred as the cyclone rapidly traversed the southern Appalachians and Mid-Atlantic, while retaining tropical storm status. Zeta became the record 11th named storm to impact the mainland United States during the 2020 Atlantic Hurricane season. No less than 2.6 million customers across the southern United States were without power as the hurricane passed, while at least six fatalities were reported. Total economic and insured losses were each anticipated to well surpass USD1 billion.

A rare early season winter storm paralyzed portions of the Western United States and Plains on October 25-28. Regions of central Oklahoma - including Oklahoma City, and northern and central Texas were most affected as maximum ice accretions approached and exceeded one inch. The ice storm left at least 455,000 customers without power, while extensive tree damage and significant transportation impacts ensued. Total economic and insured losses were expected to surpass USD125 million.

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

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
10/02-10/06	Tropical Storm Gamma	Mexico	7	Thousands	100+ million
10/07-10/11	Hurricane Delta	Mexico	2	15,000+	100s of Millions
10/24-10/30	Hurricane Zeta	Jamaica, Mexico	2	Thousands	10s of Millions
10/29	Flooding	El Salvador	10	125+	Unknown

Tropical Storm Gamma intensified in the warm waters of the Caribbean prior to making landfall along the northeastern coast of Mexico's Yucatán Peninsula, near Tulum, on October 3 with maximum sustained winds of 70 mph (110 kph). The tropical storm, along with an associated frontal boundary produced several days of heavy rainfall across southeastern Mexico between October 1-6, with the greatest impacts occurring in the Mexican States of Quintana Roo, Yucatán, Chiapas, Campeche, and Tabasco. Total economic losses were estimated to exceed USD100 million.

Hurricane Delta became the ninth hurricane of the 2020 Atlantic season, and the third to reach Category 4 status on the Saffir-Simpson Hurricane Wind Scale. Delta rapidly intensified at a historic rate in the Caribbean, reaching a peak intensity of 145 mph (230 kph) before weakening prior to reaching the Yucatán Peninsula of Mexico. Delta made landfall along the northeastern coast of the Yucatán Peninsula near Puerto Morelos on October 7 as a Category 2 storm, with maximum sustained winds of 110 mph (175 kph). The hurricane brought damaging winds and heavy rains to portions of Quintana Roo, Yucatán, and Campeche. Impacts were less severe than initially feared; however total economic losses were expected to reach into the hundreds of millions (USD).

Heavy rain associated with the pre-cursor to Zeta produced localized flash flooding and landslides across Jamaica, resulting in notable infrastructure damage and 2 fatalities on October 24-25. Strengthening prior to landfall, Hurricane Zeta came ashore in Quintana Roo (Mexico) on October 26 as a Category 1 storm with estimated maximum wind speeds of 80 mph (130 kph). Zeta brought hurricane force wind gusts and locally heavy rainfall to portions of Quintana Roo and Yucatán. Total economic losses were expected in the tens of millions (USD).

A debris flow on the slopes of El Picacho mountain hit Nejapa area in El Salvador on October 29. Authorities confirmed 10 fatalities; more than 125 homes were buried or sustained damage.

## South America

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
08/01-10/31	Wildfire	Argentina, Bolivia, Brazil, Paraguay	N/A	Unknown	100s of millions

Thousands of wildfires were ignited due to deteriorating drought conditions and extended heat in portions of Argentina, Bolivia, Brazil, and Paraguay throughout October. The fires ravaged large expanses of the Gran Chaco forest, the Brazilian and Bolivian Amazon forest, and the Pantanal wetlands. In Paraguay, at least 300,000 hectares (741,000 acres) have been affected. In Bolivia, no less than 2.3 million hectares (5.68 million acres) of forests and grasslands have burned in 2020 to date.

## Europe

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
09/30-10/08	Wildfire	Ukraine	11	Hundreds	10s of millions
10/01-10/02	Windstorm Alex	France	0	Thousands	10s of millions
10/02-10/04	Flooding	France, Italy	16	Thousands	3.2+ billion
10/03-10/05	Severe Weather	Poland, Czech Republic, Austria	2	Hundreds	Millions
10/12-10/14	Flooding	Slovakia, Czech Republic, Poland, Germany	1	4,000+	25+ million
10/19-10/21	Windstorm Barbara	France, Spain, Portugal	1	Thousands	50+ million
10/30	Earthquake	Greece	2	350+	Millions
10/31-11/01	Windstorm Aiden	Ireland, United Kingdom	0	Hundreds	Millions

Large wildfires spread in the Luhansk region in eastern Ukraine after September 30, until being completely extinguished on October 8. The fires engulfed more than 20,000 hectares (49,000 acres) of woodland and grassland. At least 11 people were killed, 19 injured, and 150 evacuated. The worst situation was along the current demarcation line in Stanychno-Luhansk, Novoaidar, and Severodonetsk districts.

Windstorm Alex impacted northwestern France with strong gusts in the night of October 1-2. The highest gust recorded during the storm was observed on the exposed Belle-Île island and reached 186 kph (116 mph), setting a new historical record for the station. Wind-related impacts of Windstorm Alex were relatively minor and spatially limited to northwestern departments, particularly the coastal areas of Morbihan in Bretagne and Loire-Atlantique in Pays-de-la-Loire.

Devastating floods occurred in Alpes-Maritimes of Southeastern France and Piemonte in Northwestern Italy after the passage of storm Alex, triggered by extremely intense precipitation during a phenomenon known as a Mediterranean episode. At least 16 people were killed, and authorities initially estimated total economic losses at approximately EUR2.7 billion (USD3.2 billion). A large part of these losses were due to significant damage to regional infrastructure. Insurers expected notable payouts in the hundreds of millions EUR.

An outbreak of severe weather affected parts of Poland (particularly Mazovia region), Czech Republic and Austria on October 3-5. Impacts were largely minor and were mostly associated with strong winds. There were at least 70,000 power outages and hundreds of structures damaged.

Several days of heavy rain resulted in notable flooding in Slovakia, Czech Republic and Poland on October 12-14. Among the worst-affected regions were Eastern Slovakia, northern Moravia in the Czech Republic, and Opole and Silesia regions in Poland. Local insurers faced several thousands of claims worth several millions EUR. Additional wind-related impacts from the same low-pressure system were also in northern Poland and northeastern Germany.

Parts of Western Europe were affected by Windstorm Barbara on October 19-21. The most significant impacts were felt in southwestern France, additional flood- and wind- related damage occurred in Portugal and Spain. Total economic losses were expected to reach into the tens of millions EUR.

A powerful offshore magnitude-7.0 earthquake in the eastern Aegean Sea resulted in notable damage on the Greek island of Samos. Two people were killed and at least 300 residential buildings were heavily damaged. However, a majority of damage from the event occurred in Izmir province of Turkey.

Parts of Ireland and the United Kingdom were affected by a deep low-pressure system, which generated strong gusts and heavy rains on October 31 and November 1. The storm was named "Aiden". Material damage was generally minor. Impact on the insurance sector across the UK and Ireland was expected to be relatively insignificant and reach into the millions EUR.

#### Middle East

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
09/01-10/15	Wildfire	Syria	3	Hundreds	Unknown
10/30	Earthquake	Turkey	115	19,500+	400+ million

From September 1 to October 15, abnormally hot and dry weather conditions along with heatwaves have ignited several wildfires in the Syrian provinces of Latakia, Tartus, and Homs. The fires in Syria have burned approximately 30,000 hectares (85,000 acres) combined agricultural land and forest area. Hundreds of homes and other structures were either damaged or destroyed.

Strong, magnitude-7.0 earthquake struck the eastern Aegean Sea on October 30, causing notable damage in Izmir Province of Turkey and Samos Island of Greece. There were at least 115 fatalities, 1,034 injuries and thousands of buildings with various degrees of structural damage in Turkey. At least 15,000 insurance claims were filed within the Turkish Natural Catastrophe Insurance Pool, several thousands more with private insurers.

#### **Africa**

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
06/24-10/31	Flooding	Nigeria	155	75,000+	100+ million
09/01-10/13	Flooding	Togo	11	4,000+	Unknown
10/01-10/02	Flooding	Democratic Republic of Congo	15	Unknown	Unknown
10/01-10/31	Flooding	Mozambique	22	2,900+	Unknown
10/13-10/15	Flooding	Tanzania	12	Hundreds	Unknown
10/27	Severe Weather	Libya	0	Hundreds	Millions

Heavy seasonal flooding in Nigeria continued into early October. Since the start of the rainy season in summer, 155 people lost their lives and more than 75,000 structures were damaged or destroyed. During October alone, more than 50 people were killed as heavy flooding occurred in Jigawa, Kebbi, Kwara, Sokoto and Zamfara states.

Seasonal floods affected parts of Togo in September and early October - Savanes and Kara regions in northern part of the country were hit hard. At least 11 people were killed and 4,000 homes were damaged or destroyed.

Heavy rains on October 1-2 caused notable regional flooding in North Kivu Province of the Democratic Republic of the Congo, claiming at least 15 lives. The worst affected was the town of Sake, located west of Goma on Lake Kiwu. There was a notable material damage, but the full extent was not determined by local authorities.

Heavy seasonal rains in Mozambique have resulted in flooding in parts of the country since October 1. Among the worst affected provinces were Niassa, Nampula, Zambézia, Manica, and Tete. According to media reports, there were at least 22 fatalities and 2,900 homes were either damaged or destroyed, mostly in Nampula.

At least 12 people were killed in an urban flash flooding that affected Dar es Salaam, the largest city of Tanzania due to heavy rains on October 13-15, as Msimbazi River overflowed its banks. Among the worst affected districts were Ilala and Kinondoni. The event resulted in notable disruption in several areas, including the central business district.

Extremely large and damaging hailstones accompanied by strong winds were associated with a severe line of thunderstorms which traversed portions of northwestern Libya, including Tripoli, on October 27. The storms resulted in extensive impacts to property, vehicles, and vegetation in addition to notable damage at the Port of Tripoli. Total economic and insured losses were expected to be in the millions (USD).

#### Asia

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
10/01-10/26	Flooding	India	142	30,000+	4+ billion
10/04-10-25	Flooding	Vietnam	154	383,791+	670+ million
10/01-10/23	Flooding	Cambodia	43	162,000+	100+ million
10/13	Tropical Storm Nangka	China	2	Hundreds	14+ million
10/23	Typhoon Saudel	Philippines, China	0	Hundreds	15+ million
10/21-10/31	Flooding	Indonesia	13	2,000+	Unknown
10/25-10/28	Typhoon Molave	Philippines, Vietnam	83	310,000+	600+ million

Since the beginning of October, heavy seasonal rainfall due to extended monsoon season combined with multiple low-pressure systems affected Indian states of Andhra Pradesh, Telangana, Karnataka, and Maharashtra. At least 142 people were killed and approximately 1 million hectares (2.5 million acres) of cropland was affected nationwide. In addition, more than 30,000 combined houses endured damage in the states of Karnataka and Andhra Pradesh. Elsewhere in India, tens of thousands of houses and other structures were either damaged or destroyed. The total combined economic losses were estimated at USD4 billion.

Unabated seasonal rains aggravated by tropical storms Linfa, Nangka, and Saudel prompted catastrophic flash floods and landslides in central parts of Vietnam from October 4 through 23. No fewer than 154 people were left dead or missing, per the Vietnam Disaster Management Agency. In addition to more than 383,000 homes and structures being damaged or destroyed, large swaths of cropland and public infrastructure were left inundated. Total economic losses were estimated at VND15.5 trillion (USD670 million).

Seasonal rains in the month of October exacerbated by the remnants of multiple cyclonic storms impacted 20 of the 25 Cambodia's provinces; among the worst affected were Pursat, Battambang, Banteay Meanchey, Pailin and Phnom Penh. At least 43 people were killed and approximately 162,000 houses and other buildings were damaged to varying degrees. In addition, roughly 370,000 hectares (915,000 acres) of agricultural land were left inundated. The total combined economic losses were anticipated to exceed USD100 million.

Tropical Storms Nangka made landfall near the Qionghai City of Hainan province in China on October 13, causing 10,000 evacuations and minor damaged in its wake. Economic losses in China were estimated at CNY94 million (USD14 million). Later on, Nangka also affected the ongoing flood situation in Vietnam.

Typhoon Saudel brought damaging winds and heavy rainfall to Central Luzon and Cagayan Valley in the Philippines and Hainan in China on October 20-23. Impact was relatively minor, with total economic losses estimated at several million USD in the Philippines and CNY60 million (USD9 million) in China.

Seasonal rains prompted flash floods and landslides Indonesian provinces of West Java, West Sumatra, and Central Kalimantan on October 21-31. At least 13 people were killed in rain-related incidents and approximately 2,000 combined houses and other buildings were damaged to varying degrees, according to the Indonesian National Board for Disaster Management.

Typhoon Molave made five distinct landfalls in the central Philippines, before later striking just south of Da Nang, Vietnam on October 28. The storm brought hurricane-force winds and torrential rains in the Philippines and Vietnam, causing at least 83 storm-related fatalities. More than 310,000 homes were damaged in Vietnam (221,291) and the Philippines (90,000), local infrastructure, and cropland were reported. The economic cost in Vietnam alone was listed at VND12.54 trillion (USD540 million).

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

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
10/04-10/10	Wildfire	New Zealand	0	Hundreds	10s of millions
10/31	Severe Weather	Australia	0	26,000+	290+ million

Wildfires ignited on the South Island of New Zealand on October 4-10, affecting roughly 5,600 hectares (14,000 acres) of land in Canterbury Region. Notably, the Lake Ōhau fire, which became one of the biggest ever wildfires in New Zealand, burned approximately 5,000 hectares (12,000 acres) forest area in Ōhau village in South Island. Approximately 50 structures were burnt down; insurers faced payouts in the tens of millions NZD.

Severe storm with hailstones measuring up to 14 centimeters (5.5 inches) in diameter impacted the greater Brisbane metro region in Australia on October 31. The Insurance Council of Australia (ICAUS) declared a catastrophe and noted 26,000 claims worth AUD300 million (USD219 million) as of November 9.

# Appendix

# Updated 2020 Data: January-September

## **United States**

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/01-12/31	Drought	Nationwide	N/A	N/A	1.0+ billion
01/10-01/12	Severe Weather	Central & Eastern U.S.	12	115,000+	1.28+ billion
02/03-02/08	Severe Weather	Central & Eastern U.S.	5	135,000+	1.5+ billion
02/08-02/10	Severe Weather	West	0	15,000+	140+ million
02/10-02/17	Flooding	Southeast	0	Thousands	175+ million
02/25-02/27	Winter Weather	Midwest, Northeast	1	Thousands	75+ million
03/02-03/05	Severe Weather	Midwest, Southeast	25	55,000+	2.4+ billion
03/11-03/13	Severe Weather	Midwest, Southeast	0	Thousands	75+ million
03/17-03/20	Severe Weather	Plains, Midwest, Southeast, Northeast	0	30,000+	290+ million
03/18	Earthquake	Utah	0	Thousands	10s of millions
03/20	Flooding	Midwest	8	30,000+	290+ million
03/24-03/25	Severe Weather	Southeast	0	Thousands	90+ million
03/27-03/30	Severe Weather	Plains, Midwest, Southeast, Northeast	0	165,000+	2.9+ billion
03/31	Severe Weather	Southeast	0	10,000+	125+ million
03/31	Earthquake	Idaho	0	2,000+	20+ million
04/06-04/09	Severe Weather	Midwest, Plains, Southeast, Mid-Atlantic	0	270,000+	3.0+ billion
04/10-04/14	Severe Weather	Midwest, Plains, Southeast, Mid-Atlantic	38	270,000+	3.45+ billion
04/18-04/20	Severe Weather	Midwest, Plains, Southeast	3	70,000+	800+ million
04/21-04/24	Severe Weather	Plains, Southeast, Mid-Atlantic	7	125,000+	1.45+ billion
04/24-04/26	Severe Weather	Midwest, Plains, Southeast, Mid-Atlantic	0	65,000+	850+ million
04/27-04/30	Severe Weather	Midwest, Plains, Southeast	0	112,500+	1.05+ billion
05/02-05/03	Severe Weather	Plains, Midwest, Southeast	2	68,000+	850+ million
05/04-05/05	Severe Weather	Plains, Midwest, Southeast	0	120,000+	1.5+ billion
05/05-05/20	Wildfire	Florida	0	500+	50+ million
05/07-05/08	Severe Weather	Plains, Southeast	0	17,000+	150+ million
05/13-05/15	Severe Weather	Plains, Midwest, Northeast	0	55,000+	530+ million
05/15	Earthquake	Nevada	0	Unknown	10+ million
05/16-05/21	Severe Weather & Floods	Plains, Midwest, Southeast	1	110,000+	2.1+ billion
05/20-05/24	Severe Weather	Rockies, Plains, Midwest	2	150,000+	1.8+ billion
05/24-05/27	Tropical Storm Bertha	Southeast, Mid-Atlantic	0	15,000+	200+ million
05/25-05/26	Severe Weather	Plains, Midwest, Southeast	0	15,000+	135+ million
05/27-05/28	Severe Weather	Texas	0	115,000+	1.45+ billion
05/30-05/31	Severe Weather	Northwest	0	Hundreds	10s of millions
06/02-06/04	Severe Weather	Plains, Midwest, Northeast	3	55,000+	800+ million
06/02-06/10	Tropical Storm Cristobal	Southeast	1	20,000+	325+ million
06/04	Severe Weather	South Dakota	0	27,500+	515+ million
06/05-06/11	Severe Weather	West, Rockies, Plains, Midwest	0	77,500+	800+ million
06/19-06/22	Severe Weather	Plains, Midwest, Southeast	0	35,000+	255+ million
06/26-06/27	Severe Weather	Plains, Midwest	0	10,000+	65+ million

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
07/02-07/10	Severe Weather	Rockies, Plains, Midwest	1	Thousands	150+ million
07/05-07/07	Severe Weather	Mid-Atlantic	1	17,500+	215+ million
07/10-07/12	Tropical Storm Fay	Northeast, Mid-Atlantic	6	15,000+	350+ million
07/10-07/12	Severe Weather	Rockies, Plains, Southeast, Midwest	0	97,500+	1.2+ billion
07/17-07/19	Severe Weather	Plains, Midwest, Northeast	0	14,000+	150+ million
07/20-07/23	Severe Weather	Plains, Midwest, Mid-Atlantic	0	7,500+	100+ million
07/25-07/27	Hurricane Hanna	Texas	0	45,000+	775+ million
07/26-07/26	Hurricane Douglas	Hawaii	0	Unknown	Negligible
07/30-08/05	Hurricane Isaias	Southeast, Mid-Atlantic, Northeast	15	340,000+	5+ billion
08/05	Severe Weather	Colorado	0	22,000+	260+ million
08/08-08/12	Severe Weather	Rockies, Plains, Midwest, Mid-Atlantic	4	500,000+	10+ billion
08/09	Earthquake	North Carolina	0	Hundreds	25+ million
08/13-08/17	Severe Weather	Plains, Midwest	0	40,000+	400+ million
08/16-09/16	SCU Complex Fire	California	0	2,000+	175+ million
08/17-09/16	LNU Complex Fire	California	5	11,000+	1.6+ billion
08/17-09/22	CZU Complex Fire	California	1	12,000+	3.5+ billion
08/18-09/04	Carmel Fire	California	0	1,000+	100+ million
08/18	Severe Weather	Florida	0	2,000+	50+ million
08/21-08/25	Hurricane Marco	Florida, Southeast	0	Hundreds	Millions
08/21-08/29	Hurricane Laura	Plains, Southeast, Mid-Atlantic	33	400,000+	14+ billion
08/26-08/28	Severe Weather	Plains, Mid-Atlantic, Northeast	0	25,000+	205+ million
08/29-08/30	Severe Weather	Plains	0	10,000+	100+ million
09/05-09/06	Severe Weather	Midwest	0	14,000+	165+ million
09/06-09/14	Babb Fire	Washington	0	2,000+	150+ million
09/07-09/09	Severe Weather	West	1	35,000+	375+ million
09/07-09/16	Almeda Drive Fire	Oregon	3	5,500+	750+ million
09/08-09/23	Echo Mountain Fire	Oregon	0	1,500+	150+ million
09/10-09/10	Flooding	Mid-Atlantic	0	2,000+	40+ million
09/14-09/18	Hurricane Sally	Southeast	8	225,000+	5+ billion
09/20-09/23	Tropical Storm Beta	Plains, Southeast	1	20,000+	400+ million

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

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/07-01/11	Earthquake	Puerto Rico	1	20,000+	1.45+ billion
01/11-01/12	Flooding	Canada	0	6,200+	180+ million
01/14-01/18	Winter Weather	Canada	0	Thousands	10s of millions
01/14-01/20	Winter Weather	Canada	0	Thousands	10s of millions
01/17-01/18	Winter Weather	Canada	0	Thousands	10s of millions
01/28	Earthquake	Cayman Islands, Jamaica, Cuba	0	2,250+	Millions
01/31-02/01	Flooding	Canada	0	2,000+	10s of millions
02/06-02/08	Winter Weather	Canada	0	2,000+	10s of millions
02/26-02/28	Winter Weather	Canada	1	Thousands	75+ million
02/28-02/29	Severe Weather	Honduras	3	Hundreds	Millions
04/13	Flooding	Canada	0	1,500+	25+ million
04/23-05/03	Flooding	Canada	0	1,500+	35+ million

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
04/26-04/30	Flooding	Canada	1	4,000+	885+ million
05/02	Earthquake	Puerto Rico	0	3,000+	150+ million
05/09	Severe Weather	Mexico	2	100+	Millions
05/31	Tropical Storm Amanda	El Salvador, Guatemala, Honduras	33+	3,400+	200+ million
06/02-06/08	Tropical Storm Cristobal	Mexico, Guatemala, El Salvador	1	10,000+	340+ million
06/13-06/14	Severe Weather	Canada	0	65,000+	1.4+ billion
06/23	Earthquake	Mexico	10	Thousands	75+ million
06/28-06/29	Severe Weather	Canada	0	2,000+	55+ million
07/08	Severe Weather	Canada	0	Thousands	10s of millions+
07/12	Severe Weather	Canada	0	Hundreds	25+ million
07/16	Severe Weather	Canada	0	1,000+	25+ million
07/19	Severe Weather	Canada	0	1,000+	30+ million
07/22-07/24	Severe Weather	Canada	0	12,500+	190+ million
07/25-07/27	Hurricane Hanna	Mexico	5	Thousands	100+ million
07/30-08/05	Hurricane Isaias	Caribbean, Canada	3	Thousands	225+ million
08/02-08/03	Severe Weather	Canada	0	5,000+	57+ million
08/19-08/20	Hurricane Genevieve	Mexico	2	Hundreds	50+ million
08/21-08/25	Hurricane Marco	Mexico, Costa Rica	1	Thousands	10s of millions
08/21-08/29	Hurricane Laura	Caribbean	35	Thousands	100+ million
09/02-09/04	Hurricane Nana	Central America	0	Thousands	20+ million
09/14-09/16	Hurricane Paulette	Bermuda	0	10,000+	50+ million
09/23-09/24	Hurricane Teddy	Canada	0	2,500+	35+ million

## South America

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/17-01/29	Flooding	Brazil	70	Thousands	300+ million
02/08-02/29	Flooding	Bolivia	17	1,000+	10s of millions
02/09-02/10	Flooding	Brazil	4	4,000+	50+ million
02/11-02/19	Flooding	Argentina	1	1,000+	10s of millions
02/17-02/25	Flooding	Peru	4	2,400+	10s of millions
02/25-02/27	Flooding	Colombia	8	750+	Millions
03/01-03/03	Flooding	Brazil	70	Thousands	10s of millions
06/30	Severe Weather	Brazil	10	Thousands	100+ million
07/01-07/15	Flooding	Brazil	0	1,000+	10s of millions
07/01-07/15	Flooding	Colombia	11	6,000+	Millions
08/14-08/15	Severe Weather	Brazil	1	5,000+	16+ million

## Europe

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/13	Windstorm Brendan	Ireland, United Kingdom	1	Thousands	10s of millions
01/19-01/23	Flooding	Spain	14	11,600+	300+ million
02/03-02/04	Windstorm Petra	Central Europe	3	12,500+	180+ million
02/09-02/10	Windstorm Ciara	Western & Central Europe	14	1.1+ million	2.6+ billion
02/15-02/16	Windstorm Dennis	Western & Northern Europe	6	Thousands	700+ million

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
02/23-02/24	Windstorm Yulia	Central Europe	0	Thousands	100+ million
02/27	Windstorm Bianca	Western & Central Europe	0	Thousands	10s of millions
02/29	Windstorm Jorge	Western Europe	0	Thousands	10s of millions
03/01	Windstorm Leon	France	0	Hundreds	Millions
03/02	Windstorm Karine	France, Spain	0	Hundreds	Millions
03/03	Windstorm Myriam	France, Spain	0	Thousands	10s of millions
03/12	Windstorm Laura	Denmark, Sweden, Germany, Poland	0	Thousands	10s of millions
03/22	Earthquake	Croatia	1	26,197+	1.1+ billion
03/23-04/02	Winter Weather	Central & Southern Europe	0	N/A	500+ million
04/01	Flooding	Spain	0	2,000+	15+ million
04/04-04/06	Flooding	Greece	0	Hundreds	Millions
04/15	Winter Weather	Austria	0	N/A	30+ million
04/17	Severe Weather	France	0	500+	Millions
05/09-05/11	Severe Weather	Western & Central Europe	0	Hundreds	10s of millions
05/29-05/30	Severe Weather	Ukraine & Belarus	0	Hundreds	Millions
06/07	Flooding	Central Europe	2	Thousands	10s of millions
06/10-06/26	Flooding	Romania	3	3,100+	85+ million
06/11	Flooding	France	0	Hundreds	Millions
06/13-06/15	Severe Weather	Central Europe	1	20,000+	10s of millions
06/22-06/29	Flooding	Ukraine, Central Europe	4	22,000+	345+ million
06/22-06/23	Flooding	Serbia, Bosnia & Herzegovina	0	1,800+	43+ million
06/26-06/29	Severe Weather	Central Europe	0	Thousands	60+ million
07/06	Wildfire	Ukraine	5	100+	144+ million
07/14	Severe Weather	Spain	0	Thousands	35+ million
07/14-07/15	Severe Weather	Russia	0	1,500+	Millions
07/15	Flooding	Italy	2	500+	Millions
07/28-07/29	Severe Weather	Central Europe	0	Thousands	80+ million
08/04-08/05	Severe Weather	Central Europe	0	Thousands	100+ million
08/08-08/09	Flooding	Greece	8	3,000+	Millions
08/09-08/12	Severe Weather	Central Europe	0	Hundreds	Millions
08/11	Severe Weather	Spain	0	Thousands	Millions
08/19-08/20	Windstorm Ellen	Ireland, United Kingdom	0	Hundreds	Millions
08/22-08/23	Severe Weather	Italy, Austria	0	Hundreds	Millions
08/25-08/26	Windstorm Francis	Western & Central Europe	0	Hundreds	Millions
08/29-08/30	Severe Weather	Italy, Central Europe	4	Thousands	100+ million
09/15-09/20	Storm lanos	Greece	4	Thousands	200+ million
09/18-09/19	Subtropical Storm Alpha	Portugal, Spain	1	Hundreds	Millions
09/19	Flooding	France	0	1,000+	30+ million
09/25-09/27	Severe Weather	Italy	0	Thousands	10s of millions
09/26-09/27	Windstorm Odette	Belgium	0	Hundreds	Millions

## Middle East

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/04-01/09	Flooding	Israel	7	45,000+	580+ million
01/09-01/20	Flooding	Iran	4	20,000+	808+ million
01/24	Earthquake	Turkey	41	23,000+	80+ million
02/04-02/05	Winter Weather	Turkey	41	Unknown	Unknown
02/23	Earthquake	Turkey, Iran	14	6,000+	Millions
02/24-04/30	Flooding	Iran	23	10,000+	1.2+ billion*
03/12-03/13	Flooding	Egypt	40	Thousands	76+ million
03/18	Flooding	Iraq	8	1,000+	Millions
03/25	Flooding	Yemen	2	2,000+	10+ million
04/15-04/30	Flooding	Yemen	14	Hundreds	Unknown
05/27-05/31	Flooding	Oman	3	Hundreds	Millions
06/03-06/04	Flooding	Yemen	16	Hundreds	Unknown
06/14	Earthquake	Turkey	1	2,200+	Millions
06/21-06/23	Flooding	Turkey	7	Hundreds	Millions
07/22-07/25	Flooding	Yemen	17	100+	Unknown
08/02-08/07	Flooding	Yemen	174	Hundreds	Millions
08/22-08/23	Flooding	Turkey	15	690+	25+ million
09/29	Severe Weather	Turkey	0	Hundreds	Millions

<sup>\*</sup>Free market conversion rate; Unofficial local exchange (USD325 million)

## Africa

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/01-01/31	Flooding	Madagascar, Mozambique	60	25,800+	Millions
01/28-02/03	Flooding	Tanzania	40	3,000+	Millions
01/28-02/13	Flooding	Burundi	3	5,000+	Millions
01/01-03/31	Flooding	Rwanda	60	Thousands	Millions
01/01-03/31	Flooding	Rwanda	60	1,000+	Millions
03/10-03/17	Flooding	Tanzania	0	3,500+	Unknown
03/13-03/17	Cyclone Herold	Madagascar	4	1,000+	Unknown
03/14-03/18	Flooding	Democratic Republic of the Congo	0	5,000+	Millions
03/16-03/22	Severe Weather	Burundi	2	1,000+	Millions
03/17-03/22	Flooding	Zambia	0	2,200+	Unknown
03/24-05/31	Flooding	Kenya	237	15,000+	Millions
04/13-04/19	Flooding	Burundi	0	6,000+	Millions
04/16-04/17	Flooding	Democratic Republic of the Congo	52	18,500+	Millions
04/17-04/25	Flooding	Rwanda	16	750+	Unknown
04/18	Flooding	Angola	24	2,000+	Millions
04/20-04/21	Flooding	Djibouti	8	Thousands	Millions
04/20-04/28	Flooding	Somalia	13	Hundreds	Unknown
05/01-05/07	Flooding	Rwanda	73	Hundreds	Unknown
05/09	Flooding	Ethiopia	12	Unknown	Negligible
05/28	Flooding	Ethiopia	10	Unknown	Negligible
06/15-07/20	Flooding	Somalia	4	Thousands	Unknown

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
06/18	Flooding	Ivory Coast	17+	12+	Unknown
07/01-09/3	Flooding	Niger	51	32,000+	Millions
07/01-08/31	Flooding	South Sudan	NA	Thousands	Millions
07/20-09/30	Flooding	Ethiopia	NA	Thousands	Millions
07/31-09/30	Flooding	Sudan	120	172,000+	250+ million
08/01-08/31	Flooding	Mali	0	2,000+	Unknown
08/01-08/31	Flooding	Chad	10	2,500+	Millions
08/01-08/31	Flooding	Kenya	0	1,000+	Unknown
08/25-08/31	Flooding	Uganda	8	Thousands	Unknown
09/01-09/15	Flooding	Mauritania	7	Hundreds	Unknown
09/05	Flooding	Senegal	6	Thousands	18+ million

## Asia

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/01-08/31	Drought	China	N/A	N/A	2.4+ billion
01/04-01/07	Winter Weather	China	0	5,000+	70+ million
01/05-01/09	Severe Weather	China	0	2,500+	35+ million
01/11-01/14	Winter Weather	Afghanistan, Pakistan, India	157	Thousands	Millions
01/12-01/15	Volcano	Philippines	0	3,813+	67+ million
01/19	Earthquake	China	1	8,000+	25+ million
01/23-01/28	Flooding	Indonesia	10	15,000+	Millions
01/23-01/26	Winter Weather	China	0	1,000+	239+ million
02/07-02/12	Flooding	Indonesia	0	4,000+	Millions
02/12-02/15	Severe Weather	China	1	Hundreds	16+ million
02/13-02/16	Winter Weather	China	0	Hundreds	30+ million
02/16-02/20	Flooding	Indonesia	6	20,000+	Millions
02/21-02/25	Flooding	Indonesia	10	35,000+	10s of millions
03/02-03/05	Severe Weather	Vietnam	3	7,187+	1.5+ million
03/04-03/13	Flooding	Pakistan	44	1,000+	Unknown
03/04-03/06	Flooding	Indonesia	2	8,000+	7.2+ million
03/13	Flooding	East Timor	3	2,000+	20+ million
03/20-03/21	Flooding	Indonesia	0	10,000+	Millions
03/21-03/25	Severe Weather	Vietnam	1	5,430+	4.1+ million
03/25-03/31	Flooding	Afghanistan	35	3,000+	Unknown
03/30	Flooding	China	8	Unknown	Millions
03/30-03/31	Flooding	Indonesia	1	11,900+	Millions
03/30-03/31	Wildfire	China	19	N/A	Negligible
04/01	Earthquake	China	1	3,400+	25+ million
04/01-04/30	Flooding	China	0	5,000+	285+ million
04/01-04/30	Severe Weather	China	0	10,000+	250+ million
04/04-04/05	Flooding	Indonesia	3	Hundreds	Unknown
04/09-04/16	Flooding	Indonesia	0	7,500+	Unknown
04/10-04/12	Flooding	Vietnam	0	716+	1.7+ million
04/13-04/14	Severe Weather	China	0	2,000+	15+ million
04/17-04/19	Severe Weather	China	0	7,500+	65+ million

				Structures/	Economic Loss
Date	Event	Location	Deaths	Claims	(USD)
04/19-04/22	Winter Weather	China	0	Unknown	475+ million
04/20-04/28	Flooding	Indonesia	3	2,500+	Millions
04/21-04/22	Severe Weather	China	0	Thousands	72+ million
04/22-04/27	Flooding	Vietnam	3	6,000+	Millions
04/27	Severe Weather	Uzbekistan, Turkmenistan	1	5,000+	Millions
04/29-05/09	Severe Weather	Thailand	2	10,100+	Millions
04/30	Flooding	Indonesia	0	22,000+	Millions
04/30-05/05	Flooding	Indonesia	3	25,000+	Millions
05/02-05/05	Flooding	Afghanistan	4	1,100+	Unknown
05/02-05/05	Flooding	China	0	Unknown	92+ million
05/03-05/05	Winter Weather	China	0	Unknown	70+ million
05/05-05/08	Flooding	Indonesia	7	916+	Unknown
05/07-05/10	Severe Weather	Vietnam	1	8,720+	Millions
05/10	Severe Weather	India	29	Unknown	Millions
05/14-05/15	Typhoon Vongfong	Philippines	0	20,000+	50+ million
05/15-05/19	Severe Weather	Vietnam	3	2,000+	Unknown
05/15-05/22	Cyclone Amphan	India, Bangladesh, Sri Lanka	118+	1.2+ million	13+ billion
05/15-05/31	Severe Weather	China	4	Unknown	71+ million
05/18-05/25	Flooding	Indonesia	0	4,000+	Millions
05/18	Earthquake	China	4	1,100+	17+ million
05/19-05/22	Flooding	China	7	Unknown	128+ million
05/25-05/26	Severe Weather	Russia	6	Thousands 1.3+ million	Millions 500+ million
06/01-08/31	Flooding	Bangladesh China	257 278	1.4+ million	32+ billion
06/01-09/30	Flooding	India			6+ billion
06/01-09/30 06/01-09/30	Flooding		1,925 402	260,000+ 15,000+	10s of Millions
06/01-09/30	Flooding Tropical Strom Nisarga	Nepal India	6	500,000+	660+ million
06/10-06/14	Tropical Storm Nuri	China, Philippines	0	Thousands	Unknown
06/10-06/14	Flooding	Indonesia	1	4,850+	2.1+ million
06/24-06/25	Severe Weather	India	127	Thousands	10s of millions
06/27-07/01	Flooding	Malaysia	0	Unknown	6.8+ million
07/01-08/14	Flooding	South Korea	42	14,100+	420+ million
07/01-09/30	Flooding	Pakistan	410	310,000+	1.5+ billion
07/02-07/04	Flooding	Mongolia	8	2,500+	1.7+ million
07/03-07/10	Flooding	Japan	82	20,000+	5.0+ billion
07/03-07/30	Flooding	Indonesia	109	21,600+	Millions
07/18-07/21	Flooding	Vietnam	5	3,000+	22+ million
07/19-07/30	Flooding	Myanmar	0	4,000+	Unknown
07/31-08/01	Flooding	Afghanistan	14	Hundreds	Unknown
08/01-08/03	Tropical Storm Sinlaku	Vietnam, Thailand	6	12,000+	Millions
08/03-08/04	Typhoon Hagupit	China, Taiwan	1	Thousands	1.5+ billion
08/04-08/10	Flooding	North Korea	22	17,000+	Millions
08/10-08/11	Tropical Storm Jangmi	South Korea, Japan	0	Thousands	Millions
08/11-08/12	Typhoon Mekkhala	China	0	Thousands	161+ million
08/18	Earthquake	Philippines	1	1,000+	Negligible
08/18-08/19	Tropical Strom Higos	China, Vietnam, Thailand	11	4,000+	142+ millions
08/21-08/24	Flooding	Vietnam, Thailand	9	5,000+	Millions

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
08/22-08/27	Typhoon Bavi	North Korea, South Korea, China	0	Hundreds	Millions
08/24-08/27	Flooding	Afghanistan	190	2,000+	Unknown
09/01-09/22	Flooding	Sri Lanka	6	1,000+	Unknown
09/03-09/04	Typhoon Maysak	Korean Peninsula, China	32	11,200+	100+ million
09/06-09/08	Typhoon Haishen	Japan, Korean Peninsula	4	10,000+	100+ million
09/11-09/30	Flooding	Indonesia	20	6,100+	Millions
09/17-09/21	Tropical Storm Noul	Vietnam, Laos, Cambodia, Thailand	18	25,000+	50+ million

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

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
11/08-01/17	Heatwave/Bushfire	Australia	34	23,362+	Billions
01/18-01/20	Severe Weather	Australia	0	129,201+	1.6+ billion
02/01-02/08	Flooding	New Zealand	0	1,100+	25+ million
02/07-02/11	Severe Weather	Australia	0	100,384+	1.0+ billion
02/25	Severe Weather	Australia	0	2,000+	Millions
03/21-03/24	Flooding	Papua New Guinea	12	1,000+	Unknown
04/04-04/07	Flooding	Papua New Guinea	0	1,000+	Millions
04/05-04/11	Cyclone Harold	Solomon Islands, Vanuatu, Fiji, Tonga	30	10,000+	100s of millions
04/10	Flooding	Papua New Guinea	10	Unknown	Negligible
04/19	Severe Weather	Australia	0	25,000+	600+ million
5/25	Severe Weather	Australia	0	Hundreds	Millions
06/26-06/27	Severe Weather	New Zealand	0	Hundreds	Millions
07/17-07/18	Flooding	New Zealand	0	Thousands	Millions
08/05-08/08	Severe Weather	Australia	0	2,000	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 determined based on various public media sources, including news websites, publications from insurance companies, financial institution press releases, and official government agencies. Economic loss totals are separate from any available insured loss estimates. An insured loss is the portion of the economic loss covered by public or private insurance entities. In rare instances, specific events may include modeled loss estimates determined from utilizing Impact Forecasting's suite of catastrophe model products.

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