

# Global Catastrophe Recap

November 2017



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# **Executive Summary**

- Typhoon Damrey becomes rare billion-dollar economic loss event in Vietnam
- Powerful earthquake leaves more than 540 dead in the Iran-Iraq border region
- Early November U.S. severe convective storms costs insurers USD200 million

Typhoon Damrey made landfall in southern Vietnam as a Category 2 strength storm packing winds of up to 170 kph (105 mph). It came ashore in the South Central Coast province of Khánh Hoà but brought torrential rainfall and subsequent widespread flooding to portions of ten provinces. At least 108 people were killed, 364 were injured, and 12 others were listed as missing as the storm destroyed more than 3,560 homes and caused damage to nearly 300,000 more. Impacts were also felt in portions of the Philippines and Cambodia. The Vietnamese government estimated total damage at VND22.1 trillion (USD1.0 billion); becoming a rare billion-dollar event in the country.

2017 marks the first time since 1993 in which Vietnam has had a season with a Category 2 (Damrey) and Category 3 (Doksuri) landfall.

Elsewhere, flooding rains from Cyclone Cempaka led to 11 fatalities in Indonesia.

A major magnitude-7.3 earthquake struck northeastern Iraq late on November 12, causing extensive damage and loss of life across western Iran and in northeastern Iraq. At least 543 people were killed and almost 10,000 people were injured. At least 40,000 structures collapsed, primarily in rural areas with poor construction. Damage in Iran alone was estimated at up to IRR26 trillion (USD740 million). Local insurers cited that roughly three percent of residents in the affected region have insurance.

South Korea endured its joint strongest earthquake on record when a moderate magnitude-5.4 tremor struck Gyeongsangbuk-do province on November 15. At least 57 people were injured. The tremor caused damage to more than 1,000 homes and infrastructure.

Separate tremors also struck Tibet and China, causing damage to a combined 12,000 structures.

Powerful thunderstorms left widespread damage across parts of the United States in the Midwest and Northeast. The greatest impacts resulted from tornado touchdowns, hail larger than the size of baseballs, and damaging straight-line winds. Some of the hardest-hit areas came in the states of Missouri, Indiana, Ohio and Pennsylvania. Total economic losses were estimated around USD275 million. Public and private insurers cited payouts nearing USD200 million.

A strong storm system in the Mediterranean Sea – with cyclonic flow allowing the system to be called a "Medicane" – spawned outbreaks of powerful thunderstorms in parts of Greece, Turkey and Italy. At least 17 fatalities were reported, along with considerable damage to homes, businesses and vehicles. The deadliest episode occurred in western Attika region of central Greece.

Seasonal flooding associated with the northeast monsoon led to flood damage in at least nine provinces in southern Thailand. At least five people were killed and 161,266 homes were inundated.

Additional flooding in November was recorded in Sri Lanka, Norway and India.

Mount Agung began erupting on Indonesia's Bali Island, leading to the cancellation of hundreds of flights and prompting massive evacuations due to plumes of ash.

### **United States**

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
11/05-11/06	Severe Weather	Midwest, Northeast	0	10,000+	275+ million
11/18	Severe Weather	Midwest, MS Valley, Mid-Atlantic	0	Thousands	10s of millions

Powerful thunderstorms left widespread damage across parts of the Midwest and Northeast on November 5-6. The greatest impacts resulted from tornado touchdowns, hail larger than the size of baseballs, and damaging straight-line winds. Some of the hardest-hit areas came in the states of Missouri, Indiana, Ohio and Pennsylvania. Total economic losses were estimated around USD275 million. Public and private insurers cited payouts nearing USD200 million.

Powerful thunderstorms triggered widespread wind damage and multiple tornadoes in the eastern half of the United States on November 18. Severe weather was reported from almost a dozen states as a cold front swept across the region generating high wind gusts and as many as ten twisters. At least six people were injured and thousands of customers were left without power as multiple trees and power lines were downed. Extensive damage to outbuildings, homes, and other structures was noted.

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

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
11/14-11/18	Flooding	Haiti	5	10,000+	Millions

Five people were killed as heavy rainfall triggered flooding in three departments of Haiti from November 14-18. The worst affected areas were in Sud, Nord-Ouest, and Nippes departments where multiple rivers overflowed and inundated at least 10,000 homes. Travel and transportation across the affected areas was severely disrupted due to damaged roads, washouts, and landslides.

### South America

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

There were no significant natural disaster events in South America during the month of November.

# Europe

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
11/11-11/19	Severe Weather	Greece, Italy, Turkey	22	1,500+	10s of millions
11/23	Windstorm Reinhard	Norway	0	Hundreds	Millions+

Deadly flash flooding impacted Central Greece in Mid-November, while further severe weather events were reported from elsewhere in the Mediterranean. The events were caused by a developing low pressure system that brought outbreaks of powerful thunderstorms in the period from November 11-19. The deadliest episode occurred in western Attika region of central Greece on November 15 when severe flash flooding killed 21 people, injured 37 more and caused considerable damage to homes, businesses and vehicles. Additional damage was reported from Turkey and Italy.

A deep low pressure area, named "Reinhard" by the Free University of Berlin, generated extreme gusts across northern parts of Norway, where it was locally named "Ylva", on November 23, after bringing significant rainfall accumulations to the southwest of the country. The storm caused notable wind damage, particularly in Nordland and Troms counties. Further damage was incurred on infrastructure in southern Norway due to landslides and rockfalls. Total economic losses were likely to reach into the millions (USD).

### Middle East

Date	Event	Location	Deaths	Claims	Loss (USD)
11/12	Earthquake	Iran, Iraq	543+	40,000+	740+ million

A major magnitude-7.3 earthquake struck northeastern Iraq late on November 12, causing extensive damage and loss of life across western Iran and in northeastern Iraq. At least 543 people were killed and nearly 10,000 people were injured, the majority of who were in Iran. The tremor was felt widely across the Middle East including in Iraq, Iran, Kuwait, Saudi Arabia, Syria, Lebanon, Turkey, and Armenia. At least 40,000 structures were reported to have collapsed, particularly in rural areas where homes are not generally constructed to withstand earthquakes. Substantial damage also occurred to roads, the electrical grid, utility supply structures, and telecommunications infrastructure. Damage in Iran alone was estimated at up to IRR26 trillion (USD740 million). Local insurers cited that roughly three percent of residents in the affected region have insurance.

### **Africa**

Data	Event	Location	Deaths	Structures/	Economic
Date		Location		Claims	Loss (USD)
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There were no significant natural disaster events in Africa during the month of November.

#### Asia

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
10/31-11/06	Flooding	India	14	Thousands	10s of millions
11/01-11/08	Typhoon Damrey	Vietnam, Philippines	114	300,000+	1.0+ billion
11/04-11/07	Flooding	Indonesia	0	3,368+	Millions
11/15	Earthquake	South Korea	0	1,000+	10s of millions
11/18	Earthquake	China	0	7,800+	10+ million
11/20-11/23	Flooding	Vietnam	8	8,289+	10+ million
11/21-12/02	Volcano	Indonesia	0	N/A	Millions
11/23	Earthquake	China	0	3,800+	6.1+ million
11/28-11/29	Cyclone Cempaka	Indonesia	11	4,000+	Millions
11/29-12/01	Flooding	Sri Lanka	16	32,125+	Millions
11/29-12/03	Flooding	Thailand	5	161,266+	Millions+

At least 14 people were killed as torrential rainfall lashed portions of India's Tamil Nadu state from October 31 – November 6. The worst affected areas were along the coast were rainfall totals were highest. The flooding caused damage to scores of homes and businesses and caused widespread disruption to travel and transportation. Vast swathes of agricultural land were also inundated.

Typhoon Damrey made landfall in southern Vietnam on November 4 as a Category 2 strength storm packing winds of up to 170 kph (105 mph). It came ashore in the South Central Coast province of Khánh Hoà but brought torrential rainfall and subsequent widespread flooding to portions of Khánh Hoà, Phú Yên, Bình Định, Đăk Lắk, Đăk Nông, Lâm Đồng, Quảng Nam, Quảng Trị, Thừa Thiên-Huế, and Đà Nẵng City. At least 108 people were killed, 364 were injured, and 12 others were listed as missing as the storm destroyed more than 3,560 homes and caused damage to nearly 300,000 more. Extensive damage was also noted to agriculture and infrastructure. Impacts due to Damrey's precursor storm were also felt in portions of the Philippines. Vietnam estimated total damage at VND22.1 trillion (USD1.0 billion).

Heavy rainfall across Indonesia's Aceh province from November 4-7 spawned widespread flood damage. Among the hardest-hit areas were Aceh Singkil District, Asahan Regency, Bandung Regency, Balangan Regency, Medan City, and Pelalawan Regency where floodwaters reached up to 1.5 meters (4.9 feet) deep. At least 3,368 homes were damaged or destroyed leaving thousands of residents homeless.

South Korea endured its joint strongest earthquake on record when a moderate magnitude-5.4 tremor struck Gyeongsangbuk-do province on November 15. There were no reports of any fatalities however at least 57 people were injured. The tremor caused damage to more than 1,000 homes near the port city of Pohang. Dozens of other buildings, including military and port facilities, and a high volume of vehicles also sustained damage. Damage to infrastructure included cracked roads and bridges.

A magnitude-6.4 earthquake struck eastern Tibet, in southwestern China, on November 18 which prompted damage to approximately 7,800 buildings. The majority of affected structures were homes, although damage was also reported to 25 schools, 24 office buildings, nine healthcare facilities, seven police stations, and several temples. Power outages were also noted while landslides led to some minor traffic disruption. Three people were injured.

Flooding in the central Vietnamese provinces of Quảng Trị, Thừa Thiên-Huế, Đà Nẵng, Quảng Nam, Quảng Ngai, and Bình Định from November 20-23 claimed at least eight lives and caused damage to approximately 8,300 homes. The worst affected province was Thừa Thiên-Huế which received almost 85 percent of its average monthly rainfall for the entire month of November in just four days. Extensive flooding was additionally noted in and around the city of Đà Nẵng.

A USGS registered magnitude-5.1 earthquake struck China's Chongqing province on November 23 at a shallow depth of 10.0 kilometers (6.2 miles). The tremor was registered 78 kilometers (48 miles) east-southeast of Fuling at 05:44PM CST (09:44 UTC). China's Ministry of Civil Affairs reported that more than 11,000 people were affected across Pengshui Miao Tujia County. Nearly 3,800 homes sustained damage while economic losses were estimated at CNY40 million (USD6.1 million).

The eruption of Mount Agung on Indonesia's Bali Island led to the cancellation of hundreds of flights affecting more than 120,000 passengers from November 25 through the early part of December. The latest eruptive phase began in mid-August and seismic activity increased through September leading to the evacuation of 140,000 residents at the end of the month. Eruptions began at the volcano once again on November 21 and became more intense on November 25-26. The intense eruptive phase was accompanied by an ash cloud that led to disruption to air traffic at several Indonesian airports including Bali's Ngurah Rai International Airport, the country's second largest airport, and the second evacuation of the residents within a 10.0-kilometer (6.2-mile) radius of the crater.

Cyclone Cempaka triggered heavy downpours for portions of Indonesia's Java Island on November 28-29 that led to flooding and landslides that claimed at least 11 lives. Nine of those killed were buried by a landslide in East Java's Pacitan Regency. The further two fatalities were as the result of flooding. At least 4.000 residents were evacuated as multiple rivers burst their banks and inundated thousands of homes.

Moisture associated with the development of Cyclone Ockhi led to widespread flooding across Sri Lanka during the end of the month. At least 16 people were left dead or missing, and 77 others were injured. The country's Disaster Management Center reported that more than 32,000 homes and other structures were damaged or destroyed. The hardest-hit districts were Kalutara, Galle, and Colombo.

Seasonal flooding associated with the northeast monsoon led to flood damage in at least nine provinces in southern Thailand from late November into early December. Five people were killed. Thailand's Department of Disaster Prevention and Mitigation cited that 161,266 homes were inundated across 101 districts in the provinces of Nakhon Si Thammarat, Narathiwat, Pattani, Phatthalung, Satun, Songkhla, Surat Thani, Trang, and Yala after multiple rivers overflowed their banks. Total economic losses were estimated to reach well into the millions (USD).

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

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

There were no significant natural disaster events in Oceania during the month of November.

# **Appendix**

# Updated 2017 Data: January – October

# **United States**

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/01-01/03	Severe Weather	Southeast, Plains	6	10,000+	250+ million
01/06-01/13	Winter Weather	Pacific Northwest, Southwest, Rockies	5	40,000+	700+ million
01/06-01/08	Winter Weather	Southeast, East Coast	5	Thousands	Millions
01/13-01/18	Winter Weather	Plains, Midwest	7	Thousands	Millions
01/17-01/19	Winter Weather	West, Rockies	4	Thousands	Millions
01/18-01/23	Severe Weather	Southeast, Plains, West, Northeast	21	100,000+	1.3+ billion
01/19-01/25	Winter Weather	West, Rockies, Plains, Midwest	5	Thousands	Millions
02/07-02/08	Severe Weather	Southeast	1	10,000+	175+ million
02/08-02/09	Winter Weather	Mid-Atlantic, Northeast	1	Unknown	Millions+
02/12-02/14	Flooding	California	0	N/A	200+ million
02/12-02/14	Winter Weather	Upper Mid-Atlantic, Northeast	1	Thousands	Millions+
02/14	Severe Weather	Texas	0	Hundreds	Millions+
02/16-02/18	Flooding	California	7	25,000+	800+ million
02/19-02/21	Flooding	California	1	10,000+	500+ million
02/19-02/20	Severe Weather	Texas	0	20,000+	225+ million
02/24-02/25	Severe Weather	Northeast, Mid-Atlantic	0	Thousands	Millions+
02/27-03/02	Severe Weather	Midwest, Southeast, Mid-Atlantic	4	175,000+	1.9+ billion
03/03-09/30	Drought	Rockies, Plains	N/A	N/A	2.5+ billion
03/06-03/10	Severe Weather	Midwest, Plains, Southeast	0	250,000+	2.1+ billion
03/07-03/09	Wildfires	Plains, Rockies, Florida	7	Hundreds	100+ million
03/13-03/15	Winter Weather	Plains, Midwest, Southeast, Northeast	11	Thousands	1.0+ billion
03/20-03/22	Severe Weather	Southeast, Midwest	1	75,000+	975+ million
03/26-03/28	Severe Weather	Plains, Southeast, Midwest	0	200,000+	2.75+ billion
03/28-03/31	Severe Weather	Plains, Southeast, Midwest, Mid-Atlantic	1	30,000+	325+ million
04/01-04/03	Severe Weather	Plains, Southeast	5	30,000+	350+ million
04/04-04/06	Severe Weather	Plains, Mississippi Valley, Southeast	0	90,000+	900+ million
04/07-04/08	Severe Weather	West	1	10,000+	125+ million
04/09-04/11	Severe Weather	Plains, Midwest	1	30,000+	325+ million
04/14-04/20	Severe Weather	Plains, Midwest	0	Thousands	100+ million
04/21-04/26	Severe Weather	Plains, Midwest, Southeast, Mid-Atlantic	1	70,000+	950+ million
04/25-04/27	Severe Weather	Plains, Midwest, Southeast	0	15,000+	125+ million
04/28-05/01	Severe Weather	Midwest, Plains, Southeast, MS Valley	20	100,000+	2.0+ billion
05/02-05/05	Severe Weather	Plains, Mississippi Valley, Southeast	0	20,000+	175+ million
05/08-05/11	Severe Weather	Rockies, Plains	0	250,000+	3.4+ billion
05/15-05/19	Severe Weather	Plains, Midwest, Rockies	3	70,000+	975+ million
05/20-05/24	Severe Weather	Plains, Midwest, MS Valley, Southeast	1	Thousands	Millions
05/25-05/29	Severe Weather	Plains, Midwest, Mid-Atlantic, Rockies	2	40,000+	500+ million

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
06/01-09/30	Wildfires	West	0	Hundreds	2.0+ billion
06/02-06/07	Flooding	Florida	0	Thousands	Millions
06/02-06/04	Severe Weather	Plains	0	15,000+	175+ million
06/11	Severe Weather	Midwest	0	110,000+	2.0+ billion
06/12-06/14	Severe Weather	Plains, Rockies	0	70,000+	1.0+ billion
06/15-06/19	Severe Weather	Plains, Midwest, Northeast	0	55,000+	525+ million
06/21-06/23	TS Cindy	Southwest	2	Hundreds	Millions
06/27-06/30	Severe Weather	Plains, Midwest, Northeast	0	90,000+	1.55+ billion
07/09-07/12	Severe Weather	Plains, Midwest, Ohio Valley	1	Thousands	170+ million
07/12-07/24	Flooding	Illinois	0	2,100+	Millions
07/15	Flooding	Arizona	10	N/A	N/A
07/19-07/20	Severe Weather	Midwest	0	Hundreds	Millions
07/21-07/23	Severe Weather	Plains, Midwest, Mid-Atlantic	4	40,000+	450+ million
07/31	TS Emily	Florida	0	Hundreds	≤10 million
08/01	Flooding	Southeast	0	1,000+	10s of millions
08/05-08/08	Severe Weather	Plains, Midwest, Southeast	0	15,000+	325+ million
08/10-08/11	Severe Weather	Plains, Midwest	0	Thousands	100+ million
08/16	Severe Weather	Plains, Midwest	0	Thousands	10s of millions
08/21-08/22	Severe Weather	Midwest, Ohio Valley, Northeast	1	Thousands	Millions+
08/25-09/02	Hurricane Harvey	Plains, Southeast	84	+000,000	90+ billion
09/10-09/12	Hurricane Irma	Southeast	80	1.0 million	30+ billion
9/26-9/28	Hurricane Maria	North Carolina	0	Unknown	Millions
10/07-10/09	Hurricane Nate	Southeast, Mid-Atlantic	0	20,000+	250+ million
10/08-10/30	Wildfires	California	43	30,000+	8.0+ billion
10/14-10/15	Severe Weather	Plains, Midwest, Northeast	0	17,500+	250+ million
10/23-10/24	Severe Weather	Midwest, Southeast, Mid-Atlantic	0	10,000+	140+ million
10/30	TS Philippe (remnants)	Mid-Atlantic, Northeast	0	Thousands	100+ million

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

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/24-01/27	Winter Weather	Canada	2	Hundreds	10s of Millions
03/08	Severe Weather	Canada	1	14,500+	145+ million
03/11	Winter Weather	Canada	0	5,000+	130+ million
04/15-05/10	Flooding	Canada	0	Thousands	Millions
04/20-04/23	Flooding	Jamaica, Haiti, Dominican Republic	2	Thousands	Millions
05/05-05/10	Flooding	Canada	2	Thousands	10s of millions
05/05-05/20	Flooding	Canada	2	5,200+	100s of millions
05/23-05/24	Severe Weather	Canada	0	8,000+	83+ million
06/01	TS Beatriz	Mexico	6	Hundreds	Millions
06/02	Severe Weather	Canada	0	7,000+	50+ million
06/10-06/11	Flooding	Honduras, Guatemala	4	Hundreds	10s of millions
07/07-09/27	Wildfire	Canada	0	1,800+	120+ million
07/12-07/13	Severe Weather	Canada	0	4,000+	42+ million
07/15-07/27	Wildfire	Canada	0	6,000+	105+ million
07/23	Severe Weather	Canada	0	10,000+	86+ million
07/27-07/29	Severe Weather	Canada	0	7,000+	70+ million
08/07-08/10	Hurricane Franklin	Mexico	0	2,000+	Millions
08/28-08/29	Flooding	Canada	0	6,700+	365+ million
09/01-09/02	TS Lidia	Mexico	20	Thousands	Millions
09/05-09/09	Hurricane Irma	Caribbean, Bahamas	44	50,000+	20+ billion
09/07 & 09/23	Earthquake	Mexico, Guatemala	98	50,000+	1.25+ billion
09/18-09/21	Hurricane Maria	Caribbean	98+	50,000+	10s of Billions
09/19	Earthquake	Mexico	370	50,000+	4.5+ billion
10/04-10/06	Hurricane Nate	Central America	44	10,000+	250+ million
10/16-10/18	Severe Weather	Canada	0	12,600+	126+ million
10/29-10/30	TS Philippe (remnants)	Canada	0	Thousands	10s of millions

### South America

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/01-02/01	Wildfire	Chile	11	2,500+	870+ million
01/01-04/01	Flooding	Peru	120	245,000+	3.1+ billion
02/24-02/26	Flooding	Chile	6	Hundreds	Millions
03/17-03/27	Flooding	Colombia	12	Hundreds	Millions+
04/01	Flooding	Colombia	420	2,500+	10s of millions
04/19	Landslide	Colombia	24	100+	Millions
05/26-05/29	Flooding	Brazil	14	Thousands	100+ million
05/24-06/19	Flooding	Uruguay, Argentina	0	Thousands	10s of millions
06/16-06/17	Flooding	Chile	4+	+008	100s of millions

# Europe

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/02-01/13	Winter Weather	Central, Eastern, Southeastern Europe	76	Thousands	10s of millions
01/12-01/13	WS Dieter & Egon	France, Germany	0	25,000+	450+ million
01/18	Earthquake	Italy	30	Hundreds	TBD
01/20-01/24	Severe Weather	Spain, France, Italy	3	Hundreds	Millions
02/03-02/06	EU Windstorms	Spain, France	2	Thousands	Millions+
02/23-02/24	WS Thomas	Western & Central Europe	3	Thousands	475+ million
03/06-03/07	WS Zeus	France	2	Thousands	550+ million
04/19-04/24	Winter Weather	Germany, Austria, Switzerland, Italy	0	Thousands	300+ million
05/29	Severe Weather	Russia	16	Thousands	Millions
06/12	Earthquake	Greece, Turkey	1	1,100+	10s of millions
06/17-06/18	Wildfire	Portugal	64	1,000+	565+ million
06/22-06/25	Severe Weather	Central & Southern Europe	4	Thousands	550+ million
05/01-07/31	Drought	Italy	N/A	N/A	2.3+ billion
07/08-07/08	Flooding	Switzerland	0	6,000+	120+ million
07/17-07/18	Wildfires	Balkans, Portugal, France, Italy	0	Hundreds	Millions
07/21	Earthquake	Greece, Turkey	2	Hundreds	100+ million
07/21-07/27	Severe Weather	Central & Southern Europe	0	Thousands	10s of millions
08/05-08/06	Flooding	Austria, Italy, Balkans	7	Thousands	100+ million
08/10-08/11	Severe Weather	Poland, Czech Republic, Slovakia	6	Thousands	587+ million
08/18-08/19	Severe Weather	Central Europe	5	Thousands	200+ million
09/09-09/10	Flooding	Italy	9	1,000+	250+ million
09/11	Flooding	Croatia	0	Hundreds	160+ million
09/12-09/13	WS Sebastian	UK, Netherlands, Germany	3	Hundreds	10s of millions
09/17	Severe Weather	Romania	8	7,000+	10s of millions
09/30-10/02	Flooding	Norway	0	2,300	100+ million
10/04-10/06	WS Xavier	Germany, Poland	9	2,000+	250+ million
10/15-10/16	Wildfire	Portugal, Spain	49	1,400+	500+ million
10/16-10/17	Ex-HU Ophelia	Ireland, United Kingdom	3	Hundreds	100+ million
10/29	WS Herwart	Central Europe	10	Thousands	100s of millions

# Middle East

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
04/14-04/15	Flooding	Iran	48	Hundreds	353+ million
05/13	Earthquake	Iran	3	Thousands	Millions
07/17-07/18	Flooding	Turkey	0	7,000+	200+ million
07/27	Severe Weather	Turkey	0	22,000+	650+ million
08/11	Flooding	Iran	51	Thousands	35+ million
08/30	Flooding	Yemen	18	Thousands	10+ million

# Africa

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/01-03/31	Drought	Somalia, Ethiopia, Kenya	100s	N/A	1.9+ billion
01/01-03/31	Flooding	Zimbabwe	271	Thousands	200+ million
01/01-06/01	Drought	South Africa	N/A	N/A	100+ million
01/05-01/12	Flooding	South Africa, Angola	7	5,000+	Millions
02/15-02/16	Cyclone Dineo	Mozambique	7	107,204+	17+ million
03/07	Cyclone Enawo	Madagascar	99	85,000+	20+ million
03/19	Severe Weather	Ghana	19	0	N/A
03/21-03/24	Flooding	Angola	11	5,300+	Millions
05/08-05/16	Flooding	Kenya, Tanzania	33	Thousands	194+ million
06/07-06/08	Severe Wx & Wildfires	South Africa	11	Thousands	500+ million
06/10-06/16	Flooding	Niger, Ivory Coast	27+	700+	10s of millions
07/08-07/09	Flooding	Nigeria	20	Hundreds	5.0+ million
07/10	Flooding	Niger	23	2,405	Millions
08/14	Landslide	Sierra Leone	~1,050	1,100+	Millions
08/16	Landslide	DR Congo	200+	50+	Negligible
09/19	Flooding	Democratic Republic of Congo	105	Hundreds	1.0+ million
09/26	Flooding	Uganda	25	Hundreds	1.0+ million
10/09-10/10	Severe Weather	South Africa	11	500+	200+ million

# Asia

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/01-01/31	Flooding	Thailand	96	585,000+	860+ million
01/01-01/23	Flooding	Malaysia	0	Thousands	132+ million
01/01-06/30	Drought	North Korea, South Korea	N/A	N/A	90+ million
01/12-01/16	Flooding	Philippines	11	Hundreds	Unknown
01/16-01/31	Flooding	Philippines	11	1,000+	8.1+ million
01/20	Landslide	China	12	One	Unknown
01/22-01/24	Flooding	Pakistan	5	Hundreds	Unknown
01/24-01/25	Winter Weather	Afghanistan	31	N/A	Unknown
01/25-01/26	Winter Weather	India	11	N/A	Unknown
01/25-01/30	Flooding	Indonesia	1	2,000+	Millions
01/28	Earthquake	China	0	14,000+	55+ million
02/01-02/05	Winter Weather	Afghanistan, Pakistan	159	325+	Unknown
02/09-02/12	Flooding	Indonesia	12	18,000+	Millions+
02/10	Earthquake	Philippines	8	7,200+	40+ million
02/17-02/19	Winter Weather	Afghanistan, Pakistan	58	N/A	N/A
01/01-05/01	Drought	Sri Lanka	N/A	N/A	10s of millions
03/01	Severe Weather	China	7	13,700+	28+ million
03/03	Flooding	Indonesia	8	3,482+	19+ million
03/14-03/29	Severe Weather	Thailand	3	6,000+	Millions
03/27	Earthquake	China	0	45,000+	50+ million
03/28-04/15	Flooding	Bangladesh	0	Thousands	352+ million
04/01	Landslide	Indonesia	28	23+	11+ million
04/04-04/09	Earthquake	Philippines	0	5,000+	Millions
04/08-04/10	Severe Weather	China	2	2,300+	36+ million
04/15	TD 02W	Philippines	10	170+	Millions
04/15-04/17	Severe Weather	China	0	3,800+	41+ million
04/20-04/22	Heatwave	India	10	N/A	N/A
04/22	Severe Weather	Pakistan	11	Hundreds	Unknown
04/29	Landslide	Kyrgyzstan	24	11+	Unknown
04/29	Flooding	Indonesia	10	71+	Unknown
05/01-08/31	Drought	China	N/A	N/A	2.5+ billion
05/01	Severe Weather	Bangladesh	12	Unknown	Unknown
05/07-05/20	Flooding	China	17	15,000+	225+ million
05/11	Earthquake	China	8	59,300+	294+ million
05/12-05/15	Flooding	Indonesia	7	5,000+	Millions
05/13-05/15	Severe Weather	China	1	5,000+	147+ million
05/20-05/24	Severe Weather	China	9	20,000+	294+ million
05/25-05/31	Flooding	Sri Lanka	~290	23,000+	197+ million
05/29-05/31	Cyclone Mora	Bangladesh, Myanmar	9	50,000+	100+ million
05/31-06/05	Flooding	China, Taiwan	4	10,100+	368+ million
06/01-06/03	Flooding	Indonesia	4	60,000+	10s of millions
06/05-06/07	Heatwave	India	28	N/A	Unknown
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Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
06/09-06/12	Flooding	China	11	11,500+	115+ million
06/10	Severe Weather	Pakistan	15	Hundreds	Millions
06/12-06/13	Flooding	China	1	1,500+	51+ million
06/12-06/13	Flooding	Bangladesh, India	169+	5,000+	10s of millions
06/15-06/21	Flooding	China	9	400+	93+ million
06/21-06/22	Severe Weather	China	2	400+	50+ million
06/23	Landslide	China	83	62+	Millions
06/30-07/04	Flooding	Pakistan	43	Hundreds	Unknown
06/22-07/05	Flooding	China	141	412,600	7.5+ billion
07/04-07/06	TS Nanmadol	Japan	37	2,600+	1.0+ billion
07/06	Earthquake	Philippines	3	3,758+	6.9+ million
07/06-07/11	Severe Weather	China	2	2,100+	67+ million
07/07-07/10	Flooding	Vietnam, Laos	19	Hundreds	1.0+ million
07/07-07/11	Flooding	China	22	18,900+	272+ million
07/08-07/12	Flooding	India, Pakistan, Bangladesh	53	115,000+	100s of millions
07/13-07/17	Flooding	China	20	58,100+	4.5+ billion
07/14-07/18	Flooding	China	0	3,200+	33+ million
07/14-07/18	Flooding	India	27	15,000+	450+ million
07/17	Flooding	Afghanistan	36	260+	Millions
07/17-07/18	TS Talas	China, Vietnam, Laos, Thailand	4	4,200+	44+ million
07/17-07/20	Flooding	China	11	3,200+	37+ million
07/18-07/25	Flooding	Thailand, Myanmar	23	12,500+	300+ million
07/19-07/21	Severe Weather	China	12	3,700+	48+ million
07/21-07/26	Flooding	India	53	Thousands	10s of millions
07/22-07/23	Flooding	South Korea	2	2,345+	51+ million
07/23	Earthquake	China	0	8,700+	8.0+ million
07/24-07/28	Severe Weather	China	13	6,500+	171+ million
07/25-07/28	TS Sonca	Vietnam, Laos, Cambodia, Thailand	12	4,176+	Millions
07/29-07/31	TY Nesat & TS Haitang	China, Taiwan, Philippines	1	10,000+	132+ million
08/02-08/03	Flooding	China	4	2,000	60+ million
08/02-08/05	Flooding	China	3	15,000+	327+ million
08/03	Flooding	Vietnam	40	Thousands	88+ million
08/06-08/09	Flooding	China	40	10,000+	315+ million
08/06-08/07	Flooding	Russia	0	2,200+	10s of millions
08/07-08/09	Typhoon Noru	Japan	2	Thousands	100s of Millions
08/08	Earthquake	China	25	72,500+	100s of Millions
08/08-08/09	Severe Weather	China	1	4,200+	17+ million
08/10-08/31	Flooding	Bangladesh	144+	717,600+	10s of millions
08/11-08/31	Flooding	Nepal	159+	235,400+	125+ million
08/11-08/31	Flooding	India	950+	Thousands	10s of millions
08/11-08/16	Flooding	China	18	12,600+	429+ million
08/12-08/13	Severe Weather	China	0	300+	54+ million
08/13	Landslide	India	46	20+	Negligible
08/17-08/20	Severe Weather	China	2	1,700+	46+ million
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Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
08/23-08/24	Typhoon Hato	Macau, Hong Kong, China	22	7,300+	3.5+ billion
08/25-08/28	Typhoon Pakhar	China	13	Thousands	56+ million
08/25-09/01	Flooding	China	0	4,700+	90+ million
08/29-08/30	Flooding	India	12	Thousands	500+ million
08/28	Flooding	China	35	Hundreds	2.5+ million
08/31	Flooding	Pakistan	25	Hundreds	1.0+ million
08/31-09/03	Severe Weather	China	2	Hundreds	93+ million
09/08-09/11	Flooding	China	19	5,800+	94+ million
09/12-09/15	Typhoon Doksuri	Philippines, China, Indochina	40	230,500+	500+ million
09/14-09/18	Typhoon Talim	Japan	5	7,230+	700+ million
09/16-09/17	Severe Weather	China	0	2,400+	1.0+ million
09/18-09/19	Flooding	China	1	2,400+	26+ million
09/24-09/30	Flooding	China	16	20,500+	361+ million
10/01-10/10	Flooding	China	23	28,800+	494+ million
10/09-10/12	Flooding	China	0	400+	77+ million
10/10-10/15	Flooding	Vietnam	98	18,000+	10s of millions
10/10-10/25	Flooding	Thailand	9	121,000+	Millions+
10/13-10/17	Typhoon Khanun	Philippines, China, Vietnam	1	Thousands	300+ million
10/18-10/23	Typhoon Lan	Japan, Philippines	17	10,000+	1.0+ billion
10/22	Avalanche	Mongolia	17	N/A	N/A
10/28-10/30	Typhoon Saola	Japan	0	Hundreds	10s of millions

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

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/20-01/23	Flooding	French Polynesia	0	1,000+	Millions
02/09-02/13	Wildfires	Australia	0	1,200+	10s of Millions
02/09-02/16	Flooding	Australia	2	Thousands	100s of Millions
02/17-02/19	Severe Weather	Australia	1	53,700+	525+ million
03/07-03/12	Flooding	New Zealand	0	7,800+	90+ million
03/28-04/05	Cyclone Debbie	Australia	14	72,767+	2.4+ billion
04/09-04/14	Cyclone Cook	Vanuatu, New Caledonia, New Zealand	1	Thousands	Millions
05/04-05/10	Cyclone Donna	South Pacific Islands, New Zealand	2	Hundreds	Millions
07/21-07/23	Winter Weather	New Zealand	0	Thousands	10s of millions
10/15-10/19	Flooding	Australia	7	Hundreds	10s of millions

#### Additional Report Details

TD = Tropical Depression, TS = Tropical Storm, HU = Hurricane, TY = Typhoon, STY = Super Typhoon, CY = Cyclone

Fatality estimates as reported by public news media sources and official government agencies.

Structures defined as any building – including barns, outbuildings, mobile homes, single or multiple family dwellings, and commercial facilities – that is damaged or destroyed by winds, earthquakes, hail, flood, tornadoes, hurricanes or any other natural-occurring phenomenon. Claims defined as the number of claims (which could be a combination of homeowners, commercial, auto and others) reported by various public and private insurance entities through press releases or various public media outlets.

Damage estimates are obtained from various public media sources, including news websites, publications from insurance companies, financial institution press releases and official government agencies. Damage estimates are obtained from various public media sources, including news websites, publications from insurance companies, financial institution press releases and official government agencies. Economic loss totals include any available insured loss estimates, which can be found in the corresponding event text. Specific events may include modeled loss estimates determined from utilizing Impact Forecasting's suite of catastrophe model products.

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