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## **Executive Summary**

- Flooding prompts catastrophic damage in Western and Central Europe; economic toll nears USD25 billion
- China's insurance industry facing costliest natural disaster on record following historic rainfall in Henan Province
- Severe weather, wildfires, and Tropical Storm Elsa drive multi-billion-dollar economic loss in the United States



#### 754 mm / 29.69 in

July 19-21 rainfall at Zhengzhou, China; higher 48-hour rainfall than the annual average of 640.8 mm / 25.23 in



#### 153.5 mm / 6.04 in

24-hour precipitation in Cologne, Germany on July 14, nearly twice the average monthly July rainfall



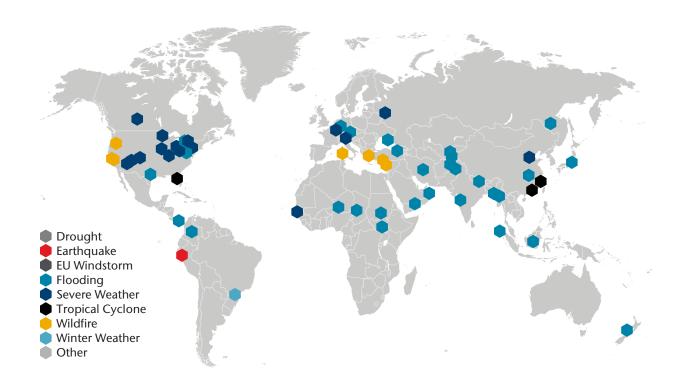
#### 2.98M acres / 1.21M ha

Wildfire acres burned in the United States thru July 31; higher YTD than in 2020 (2.05M acres / 0.83M ha)



### 12.8M acres / 5.18M ha

Extent burned by wildfires in Russia thru July 31; 69 percent recorded in the remote Republic of Sakha



### **United States**

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
07/03-07/31	Beckwourth Complex Fire	California	0	1,000+	Millions
07/06-07/09	Hurricane Elsa	Southeast, Mid-Atlantic, Northeast	1	75,000+	775+ million
07/06-07/07	Severe Weather	Midwest, Mid-Atlantic, Northeast	0	2,000+	35+ million
07/06-07/31	Bootleg Fire	Oregon	0	1,000+	100+ million
07/07-07/08	Flooding	Texas	0	2,500+	65+ million
07/08-07/10	Severe Weather	Plains, Midwest	1	72,500+	800+ million
07/09-07/11	Severe Weather	Southwest	0	45,000+	600+ million
07/12-07/13	Flooding	Mid-Atlantic, Northeast	0	5,000+	100+ million
07/13-08/11	Dixie Fire	California	0	2,000+	100s of millions
07/16-07/19	Severe Weather	Midwest, Mid-Atlantic, Southeast	0	7,500+	75+ million
07/16-07/21	Severe Weather	Southwest	8	2,000+	50+ million
07/22-07/28	Severe Weather	Southwest	9	10,000+	250+ million
07/24	Severe Weather	Midwest	0	Thousands	100+ million
07/26-07/27	Severe Weather	Midwest	0	Thousands	100s of millions
07/28-07/29	Severe Weather	Midwest, Mid-Atlantic, Northeast	0	Thousands	100s of millions

The Beckwourth Complex Fire in the Lassen and Plumas counties of California burned 105,670 acres (42,763 hectares) of land since being ignited by lightning on July 3. Notable damage occurred in the Town of Doyle on July 10. At least 148 structures were destroyed. Total economic losses were expected to top USD75 million.

A weakened Hurricane Elsa made landfall in a rural region of Taylor County, Florida as a tropical storm with 65 mph (100 kph) winds on July 7. Elsa generated widespread flash flooding and severe weather from July 7-9 while tracking through the Southeast and along the Mid-Atlantic and Northeast coastlines. Total economic losses in the United States were estimated at USD775 million. Roughly two-thirds of the costs were insured.

Severe thunderstorms affected parts of the Midwest and Northeast on July 6-7. The most damaging impacts were felt in the Northeast due to straight-line winds, including in the New York City Metropolitan Area. Total economic losses were anticipated to be in the tens of millions (USD).

The Bootleg Fire was ignited on July 6 in the Fremont-Winema National Forest of southern Oregon. Favorable fire conditions allowed the blaze to burn at least 413,765 acres (167,445 hectares) and become the 3<sup>rd</sup> largest fire in the state since 1900. The fire destroyed at least 408 structures including 161 single-family homes. Total economic damage was expected well exceed USD100 million.

Torrential rainfall prompted a Flash Flooding Emergency in Southern Texas on July 7-8, which included the City of Rockport and surrounding communities. Floodwaters entered numerous residences and businesses. Total economic losses were expected to reach into the tens of millions (USD).

Consecutive days of severe weather led to extensive damage across the Midwest from July 8-10. The worst damage was noted in lowa, where extensive property and agricultural damage occurred due to baseball-size or larger hailstones which struck the Des Moines region. In Nebraska, straight-line wind gusts nearing 80 mph (130 kph) were measured near Omaha. Total economic losses were estimated at USD800 million; most was covered by insurance.

Localized severe weather and heavy rainfall associated with the seasonal Southwest Monsoon impacted parts of Arizona and New Mexico from July 9-11. The primary hazards associated with the storms were blowing dust, flooding, strong winds, and isolated hail. Total economic losses were estimated at USD600 million with most of the wind and hail-related damage covered by insurance.

Flooding rains due to slow-moving thunderstorms occurred in the Mid-Atlantic and Northeast on July 12-13. A Flash Flooding Emergency was issued for densely populated regions of Bucks County, Pennsylvania and Burlington County, New Jersey on July 12. Economic losses were expected to top USD100 million, though most of the flood-related damage went uninsured.

The Dixie Fire was ignited on July 13 in Butte County, California before undergoing multiple rounds of explosive growth that extended into August. The fire, which as of this writing had burned at least 463,477 acres (187,562 hectares) of land, became the second-largest wildfire and the largest individual fire in California's modern record dating to 1932. At least 589 structures were destroyed (including 404 homes and businesses) and dozens more were damaged. Total economic losses were estimated minimally into the hundreds of millions (USD).

Severe weather evolved across the Ohio Valley, Mid-Atlantic, and Northeast on July 16-17. Impacts to trees, utility lines and structures were most notable in portions of Ohio, Pennsylvania, Maryland, Virginia, and New Jersey. Total economic losses were expected into the tens of millions (USD).

Persistent daily thunderstorms and heavy rainfall affected the Southwest and southern Rockies from July 16-21. Flooding was most impactful in Arizona and Colorado. At least eight people were killed in Colorado (3), New Mexico (3), Arizona (2). Total economic losses were estimated in the tens of millions (USD).

Active monsoonal rainfall and severe weather across the Intermountain West and Southwest led to flash flooding and convective storm damage from July 22-28. States of Emergencies were declared in some Utah and Nevada communities, while widespread flooding impacts were noted throughout Arizona. A weather-related traffic incident in Utah resulted in 8 fatalities. Total economic losses were expected into the hundreds of millions (USD).

Severe storms generated strong winds and tornadoes in Michigan on July 24. Storm damage from downed trees and power lines to property was widely reported. Additional damage was noted in northern Illinois and Indiana. Total economic losses were anticipated to exceed USD100 million, most of which will be insured.

Severe weather again affected the Upper Midwest on July 26-27. Hazards included large hail, strong straight-line winds, and several tornadoes. Baseball-size and larger hail generated significant impacts in localized regions of northern Minnesota and Wisconsin. Total economic losses were expected into the hundreds of millions (USD).

Significant severe weather unfolded across the Midwest, Mid-Atlantic, and Northeast on July 28-29. A powerful set of storm clusters initially caused notable wind, hail, and isolated tornado damage in Wisconsin, Illinois, Indiana, and Michigan on July 28. On July 29, severe weather in the Mid-Atlantic included a destructive tornado in densely populated regions of Bucks County, Pennsylvania. In total, at least 46 tornadoes were confirmed during the outbreak. Total economic loses were anticipated to reach into the hundreds of millions (USD).

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

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
07/01-07/09	Hurricane Elsa	Caribbean	3	Thousands	100+ million
07/02-07/03	Severe Weather	Canada	0	30,000+	266+ million
07/15	Severe Weather	Canada	0	2,300+	84+ million
07/16-07/17	Flooding	Canada	0	Thousands	10s of millions
07/22-07/24	Flooding	Central America	0	6,900+	Millions

Hurricane Elsa generated notable impacts in the Caribbean before making landfall in Cuba as a tropical storm on July 5, with 60 mph (95 kph) winds. Extensive losses to property and agriculture were sustained in the Lesser Antilles especially in Barbados, and extensive crop losses in St. Lucia. At least three deaths were cited in the Caribbean. Total economic losses in the Caribbean from Elsa were estimated at USD100 million.

Severe weather affected the Canadian Prairies on July 2-3, particularly southern Alberta. In Calgary, large hail resulted in numerous reports of broken windows, damaged siding, dented vehicles, and downed tree limbs. Flash flooding inundated eastern sections of the city. Total economic losses were estimated at USD266 million; most of which was covered by insurance.

Dangerous storms tracked across southern Ontario, Canada on July 15, including one thunderstorm that spawned an EF-2 tornado near Barrie. Multiple people were injured as the twister caused extensive damage to more than 100 homes and other structures. Several other tornadoes were also confirmed in Ontario during the outbreak. Total economic losses were estimated at USD84 million.

Notable flooding occurred in southern Ontario on July 16-17. Among the worst affected region was Windsor and the surrounding area. Total economic losses were expected to be in the tens of millions (USD).

Heavy rainfall resulted in flooding across parts of Central America from July 22-24. At least 6,900 homes and structures were damaged in Panama, notably in Bocas del Toro province. Flooding also ensued in Costa Rica, particularly the cantons of San Carlos, Upala, Guatuso, Sarapiquí, and Turrialba. Two fatalities were reported. Additional flooding occurred in the Rio San Juan department of Nicaragua.

### South America

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
07/01-07/31	Flooding	Colombia	6	5,878+	Millions
07/19-07/31	Winter Weather	Brazil	N/A	Unknown	Millions
07/30	Earthquake	Peru	0	Hundreds	Millions

Much of Colombia recorded heavy rainfall and subsequent flooding throughout the month of July. The hardest-hit departments included Norte de Santander, Putumayo, Antioquia, Arauca, Meta, Caquetá, Cundinamarca, Atlántico, and Santander. At least six deaths and 27 injuries were reported, and more than 5,800 homes were damaged. A vast area of agricultural land was also inundated. Total economic losses were expected into the millions (USD).

Intrusions of unseasonably cold Antarctic air generated widespread frost damage to crops across central and southern Brazil throughout the second half of July – particularly to coffee and sugar cane. The states of Rio Grande do Sol, Santa Catarina, Parana, Mato Grosso do Sul, São Paulo, Rio de Janeiro, Minas Gerais, and Goiás were most affected. Total direct economic losses were anticipated to be significant and well into the millions (USD).

A magnitude-6.2 earthquake struck near the north Pacific cost of Peru on July 30. The tremor left at least 721 people injured, per the National Institute of Civil Defense. Notable damage was incurred to hundreds of homes and structures, in addition to infrastructure. Shaking was also felt across the border in Ecuador.

### Europe

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
07/03-07/05	Wildfire	Cyprus	4	50+	Millions
07/04-07/07	Flooding	Russia, Georgia, Ukraine	11	1,150+	10s of millions
07/08-07/09	Severe Weather	Italy, Central Europe	2	Hundreds	10s of millions
07/12-07/18	Flooding	Western & Central Europe	240	100,000+	25+ billion
07/17-07/19	Flooding	Central Europe	0	Thousands	150+ million
07/23-07/28	Severe Weather	Western & Central Europe	3	Thousands	250+ million
07/23-07/25	Wildfire	Italy	0	Hundreds	10s of millions
07/28-08/02	Severe Weather	Italy, France, Austria, Russia	3	Hundreds	10s of millions
07/28-08/11	Wildfire	Greece	2	Hundreds	10s of millions

Cyprus recorded one of its worst wildfires on record on July 3-5, as the blaze near Limassol burned at least 4,000 hectares (9,900 acres) of land. Four people were killed, and dozens of structures were affected.

A period of heavy rain and severe weather in the wider region of the northern Black Sea resulted in notable damage in southern parts of European Russia and parts of Ukraine and Georgia on July 4-7. At least 10 people were killed in Russia, mainly due to flooding in Tuapse and Sochi regions in Krasnodar Krai.

Severe thunderstorms and torrential rainfall left notable damage across Central Europe on July 8-9. The hardest-hit countries were Italy, Switzerland, Czech Republic, Poland, and Hungary. Hailstones with a diameter of 10 centimeters (3.9 inches) were recorded in northern Italy. Further damage due to strong winds and flooding rainfall caused damage to infrastructure and vehicles. Economic losses were expected in the tens of millions (EUR).

Extreme precipitation in mid-July resulted in the costliest European flooding event on record, and deadliest in nearly three decades. Catastrophic damage occurred in Western Germany, predominantly in Nordrhein-Westfalen and Rheinland-Pfalz federal states, with the official death toll listed at 197. The worst affected area was the Ahr River Valley, where majority of fatalities occurred. Belgium recorded the deadliest and costliest flooding event in its history, with 42 confirmed fatalities and severe damage in Liege Province. Further extensive damage was noted in neighboring Netherlands, Luxembourg, and France. Total economic losses were expected to approach USD25 billion, though this is a preliminary estimate and is likely to evolve. As much as USD20 billion in direct damage was anticipated in Germany alone, while country's insurers expected losses of EUR4.5 to 5.5 billion (USD5.3 to 6.5 billion). This would mark the costliest individual natural disaster for the German industry on record. At least another EUR1 billion (USD1.2 billion) in insured losses was expected in other affected territories. Overall, the event is likely to rank as the costliest weather event and second-costliest natural disaster event in Europe (only behind the Irpinia Earthquake of 1980) in the past 40 years, on an inflation-adjusted basis.

Further flooding occurred on July 17-19 in Central Europe, as additional precipitation fell on already saturated regions due to frontal systems associated with low names Christoph. Impacts were reported in Austria, the Czech Republic, Poland, Slovakia, Slovenia, Hungary, and Germany (Sachsen). Total economic losses were minimally estimated at EUR125 million (USD150 million).

A stretch of severe weather with strong thunderstorms and heavy rainfall, largely associated with a low-pressure system named Dirk, affected multiple Western and Central European countries from July 23-28. At least three people were killed. Among the hardest-hit areas were Namur Province in Belgium, where flash flooding impacted at least 11 municipalities along the Meuse River. Large hail, heavy rainfall, and strong winds caused notable losses in Germany, Italy, Austria, and elsewhere. Notable urban flooding occurred in London on July 25.

A significant wildfire burned at least 20,000 hectares (49,500 acres) on the Italian island of Sardinia on July 23-25. The event resulted in notable losses and suppression costs. More than 1,000 people were evacuated.

An outbreak of severe weather in late July and early August generated notable damage in several European countries. Particularly severe hail damage was noted in northern Italy. Three people were killed by a tornado in Tver oblast of Western Russia on August 2.

Following record summer heat, major and historic wildfires were ignited in several Mediterranean countries beginning on July 28 and extending into August. Two people were killed in Greece, and dozens of others were injured. Dozens, if not hundreds, of homes and other structures were destroyed. Total damage costs were expected well into the tens of millions (USD).

### Middle East

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
07/14-07/21	Flooding	Iran	10	Hundreds	Unknown
07/15-07/16	Flooding	Oman	7	Hundreds	80+ million
07/16-07/22	Flooding	Yemen	14	Unknown	Unknown
07/21	Flooding	Turkey	3	1,500+	23+ million
07/28-08/05	Wildfire	Turkey, Lebanon	9	2,700+	232+ million

Flooding and severe weather impacts were reported from 15 provinces of Iran in mid-July by the local Red Crescent organization. At least 10 people were left dead or missing.

Thunderstorm-driven flooding rains Thunderstorms with heavy rainfall hit parts of Oman on July 15-16, causing flooding, damage to infrastructure and traffic disruption. The most affected areas were Sur in Ash Sharqiyah South Governorate, Falaj Al Qabail in North Al Batinah Governorate, and Sohar in Al Batinah North Governorate. Corporate relief donations topped USD12.5 million alone as damage costs were anticipated to be significant.

At least 14 people died in Yemen due to flooding triggered by heavy rainfall from July 16-22. The most affected provinces were Al-Mahrah, Hadramawt, Shabwa, Abeen, and Jouf in the south and east of Yemen.

Torrential rains caused severe flooding in the province of Rize and Artvin in northeastern Turkey on July 21. At least 1,500 structures were inundated, and dozens more collapsed. Preliminary economic losses were estimated at TRY200 million (USD23 million).

Following record summer heat, major and historic wildfires were ignited in several Mediterranean countries beginning on July 28 and extending into August. In addition to two fatalities in Greece, nine others died in Turkey (8) and Lebanon (1). Nearly 600 people were injured. The most significant fire burned near Manavgat in Antalya Province, Turkey. Further notable fires occurred in Mersin, Muğla, Osmaniye and Adana provinces and elsewhere. Economic losses in Antalya and Muğla were preliminarily estimated at TRY2 billion (USD232 million). Insurers faced at least 1,000 claims.

### Africa

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/04-31/07	Flooding	South Sudan	7	Hundreds	Unknown
06/15-07-31	Flooding	Niger	35	2,500+	Unknown
06/26-07/31	Flooding	Chad	5	4,500+	Unknown
07/02-07/08	Severe Weather	Gambia	10	1,000+	Unknown
07/20-07/24	Flooding	Sudan	0	1,600+	Unknown

Seasonal flooding in South Sudan resulted in at least seven fatalities and homes flooded. According to the Red Cross reports, more than 90,000 people were affected by flooding during this year's rainy season in South Sudan.

Significant flooding in Niger killed at least 35 people since the beginning of the rainy season in mid-June. The situation worsened during the last week of July. According to local media, more than 26,500 people were displaced. The most affected regions were Maradi, Agadez and Niamey.

Seasonal flooding in Chad continued throughout July as more than 20,000 people were affected. At least five people were killed and 231 were injured, while more than 4,500 homes were destroyed. Among the worst affected regions were Tandjilé, Mandoul, Ennedi-Ouest, Batha, and the capital city of N'Djamena.

Severe winds affected parts of Gambia in early July, including the capital, Banjul. Authorities reported 10 fatalities and more than 100 injuries due to the event.

Flooding affected parts of Sudan from July 20-24. The most affected states were South Darfur, Gedaref, White Nile, North Kordofan, Northern, and River Nile. Floodwaters destroyed at least 1,600 homes in South Darfur.

### Asia

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
06/01-08/11	Flooding	India	534	41,500+	1.6+ billion
06/01-08/11	Flooding	China	325	900,000+	25+ billion
06/01-08/11	Flooding	Nepal	111	1,000+	2.5+ million
06/24-07/31	Flooding	Russia	0	2,900+	108+ million
07/01-07/05	Flooding	Japan	22	2,565+	100+ million
07/01-07/30	Flooding	Pakistan	104	1,000+	Millions
07/05-07/07	Flooding	Indonesia	0	2,000+	Unknown
07/10-07/11	Severe Weather	China	0	Thousands	50+ million
07/12	Flooding	Kyrgyzstan & Uzbekistan	15	Unknown	Unknown
07/13-07/22	Flooding	Indonesia	0	13,000+	Millions
07/18-07/21	Typhoon Cempaka	China, Vietnam	3	Hundreds	Millions
07/19	Flooding	Tajikistan	12	150+	Unknown
07/20-07/28	Typhoon In-fa	China, Philippines, Japan, Taiwan	5	50,000+	1.1+ billion
07/21-07/27	Flooding	Myanmar	0	Thousands	Unknown
07/27-07/28	Flooding	Bangladesh	21	3,200+	Unknown
07/28-07/29	Flooding	Afghanistan	150	300+	Unknown

Seasonal monsoon flooding and associated convective storms continued in India throughout July, including a particularly intense spell from July 22-28. Hundreds of people were killed in July as the seasonal death toll rose to 534. Thousands of villages were inundated by torrential rainfall and subsequent flooding and landslides, including the hardest-hit areas in Maharashtra state. Many regions lost access to electricity and drinking water; while more than 41,000 homes were damaged. The economic loss total increased to at least USD1.6 billion; most of which is uninsured.

Historic rainfall prompted catastrophic flash flooding across China's Henan Province from July 16-22, leaving at least 302 people dead and many others injured. The flooding generated extensive damage to property, agriculture, and infrastructure across the region. Significant impacts were incurred in the Zhengzhou metro on July 20 as all-time rainfall records were broken. Additional flooding and dam failures resulted in fatalities and damage in nearby Hubei Province and the Inner Mongolia Autonomous Region. The total economic cost of flooding in July was estimated at nearly USD25 billion. The flood damage in Zhengzhou was anticipated to result in up to USD1.7 billion insured losses, which would be the highest natural disaster payout for the Chinese insurance industry on record.

Renewed rounds of monsoonal heavy rain triggered flooding and landslides in parts of Nepal from June 30 to July 8. At least 31 people were killed, and 39 others were injured. Among the notably affected districts were Sarlahi, Tanahu, Udayapur, Rautahat, and Solukhumbu. The total seasonal death toll rose to at least 111 since June 1.

Flooding continued in Russia's Far East federal district into July, with notable impacts recorded in Transbaikal and Amur regions. Approximately 2,900 residential structures were inundated, and total year-to-date losses exceeded RUB7.9 billion (USD108 million).

Excessive seasonal rainfall generated multiple instances of flooding and landslides across portions of eastern Japan during the first days of July. The rainfall aided in triggering a large and deadly landslide which swept through portions of Atami City in the Shizuoka Prefecture on July 3. The landslide resulted in at least 22 deaths. Total economic losses were anticipated to exceed USD100 million.

Heavy monsoonal rainfall affected multiple regions of Pakistan throughout the month of July, notably the Khyber Pakhtunkhwa province. Hundreds of homes were swept away by flash-flooding, and at least 104 fatalities were confirmed. Total economic losses were estimated into the millions (USD).

Heavy rainfall triggered flooding and landslides in parts of Aceh Yaya Regency of Indonesia from July 5-7. Among the worst affected were subdistricts Teunom, Panga, Darul Hikmah, Setia Bakti, Krueng Sabee, Sampoiniet, and Jaya. The National Board for Disaster Management (BNPB) noted at least 2,000 flooded homes.

A severe weather event affected parts of eastern China on July 10-11, with the greatest impact in areas of Shenxian in the province of Shandong. As per local media, at least 10 tornadoes were reported in the province of Shandong, of which at least three reached EF-3 intensity. Thousands of homes along with numerous other structures were either damaged or destroyed. Total economic losses were estimated well into the tens of millions (USD).

Heavy rains resulted in floods and mudslides in the border region of Kyrgyzstan and Uzbekistan on July 12. At least 15 people were killed. Multiple roads and bridges were destroyed.

Notable flooding occurred in parts of Indonesia from July 13-22. Among the worst affected regions were Western and Central Kalimantan. Approximately 13,000 homes were damaged or destroyed.

Typhoon Cempaka made landfall in China's Guangdong Province on July 20 as a Category 1-equivalent typhoon. One person was killed in Hong Kong, and damage was widespread throughout Guangdong and neighboring Guangxi. Two people died in Vietnam. Total economic losses were estimated to reach well into the millions (USD).

Deadly flooding and landslides affected northwestern districts of Tajikistan on July 19. Disaster management officials noted that at least 12 people were killed in mudslides in the Panjakent district. Additional damage was recorded in Ayni, Mastchoh and Devashtich districts.

Typhoon In-fa made two landfalls along the east China coast in the Zhejiang Province on July 25 and 26. Impacts in China included rough seas, incessant rainfall, and damaging winds. Transportation, including shipping, air, and mass transit across Zhejiang Province and Shanghai was notably impacted. Impacts from In-fa extended into portions of Japan, Taiwan, and enhanced monsoon rainfall in the Philippines. Total economic losses were listed at USD1.1 billion in China.

Heavy monsoon rainfall from July 21-26 resulted in flooding in Myanmar. The most notable precipitation totals were recorded in Rakhine, Bago, Ayeyarwady, Kayin, Mon and Tanitharyi. The country's Department of Disaster Management cited that more than 170,000 people were displaced and many thousands of homes were damaged.

Heavy rainfall in Bangladesh on July 27-28 resulted in significant flooding and landslides which impacted refugee camps in the Cox's Bazar District. Nearly 21,000 refugees were affected and at least 3,200 shelters were damaged or destroyed. Additional floodwaters left damage to agricultural land. At least 21 people were killed.

Severe flash floods affected Nuristan province in northeastern Afghanistan on July 28-29. At least 300 homes were damaged or destroyed, which led to 150 fatalities. Floodwaters damaged roads and telecommunications systems.

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

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
07/15-07/18	Flooding	New Zealand	0	Hundreds	Millions

New Zealand's South Island was affected by severe floods following heavy rainfall from July 15-18. The heavy rains prompted high river levels, flooding, fallen trees, and several landslides. Hundreds of people were evacuated from the worst-affected areas in the Marlborough and Buller districts. Total economic losses were estimated in the tens of millions (USD).

# Appendix: Updated 2021 Data

## United States

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/01-12/31	Drought	Nationwide	N/A	N/A	1.0+ billion
01/11-01/13	Severe Weather	Northwest	2	40,000+	675+ million
01/17-01/20	Severe Weather	California	0	24,000+	350+ million
01/24-01/27	Severe Weather	Plains, Midwest, South	1	6,000+	120+ million
01/24-01/29	Flooding	West	2	75,000+	1.75+ billion
01/30-02/03	Winter Weather	Midwest, Northeast	4	10,000+	100+ million
02/08-02/12	Winter Weather	Plains, Southeast, Mid-Atlantic	9	10,000+	75+ million
02/12-02/20	Winter Weather	Western, Central, Eastern U.S.	215	690,000+	22+ billion
02/25-02/26	Severe Weather	Texas	0	20,000+	210+ million
02/25-03/01	Flooding	Plains, Southeast, Mid-Atlantic	1	10,000+	150+ million
03/08-03/10	Flooding	Hawaii	0	Thousands	50+ million
03/09-03/11	Severe Weather	Plains, Midwest	0	5,000+	75+ million
03/12-03/15	Winter Weather	Plains, Rockies	0	Thousands	75+ million
03/16-03/18	Severe Weather	Plains, Southeast	0	50,000+	500+ million
03/22-03/23	Severe Weather	Plains	0	30,000+	315+ million
03/24-03/26	Severe Weather	Plains, Southeast, Midwest, Northeast	6	125,000+	1.6+ billion
03/27-03/29	Severe Weather	Tennessee Valley, Mid-Atlantic	8	95,000+	1.7+ billion
04/06-04/08	Severe Weather	Plains, Midwest, Southeast	0	55,000+	880+ million
04/09-04/11	Severe Weather	Plains, Southeast	3	75,000+	900+ million
04/12-04/14	Severe Weather	Plains, Southeast	13	25,000+	215+ million
04/15-04/16	Severe Weather	Texas	0	127,500+	1.3+ billion
04/18-04/18	Severe Weather	Southeast	0	2,500+	25+ million
04/21-04/22	Severe Weather	Northeast	0	5,000+	75+ million
04/23-04/25	Severe Weather	Plains, Southeast	1	35,000+	390+ million
04/27-05/02	Severe Weather	Plains, Southeast, Mid-Atlantic	0	210,000+	2.6+ billion
05/03-05/05	Severe Weather	Plains, Southeast, Mid-Atlantic	4	105,000+	1.15+ billion
05/06-05/11	Severe Weather	Plains, Southeast	1	40,000+	350+ million
05/14-05/19	Severe Weather	Plains, Southeast	5	80,000+	1.5+ billion
05/22-05/27	Severe Weather	Plains, Midwest	0	40,000+	400+ million
05/25-05/26	Severe Weather	Mid-Atlantic, Northeast	0	12,500+	160+ million
05/29-05/31	Severe Weather	Rockies, Plains	1	20,000+	205+ million
06/02-07/04	Telegraph Fire	Arizona	0	Hundreds	Millions
06/03-06/04	Severe Weather	Mid-Atlantic, Northeast	0	7,500+	50+ million
06/07-06/10	Severe Weather	Plains, Rockies	0	10,000+	50+ million
06/07-06/10	Flooding	Plains, Southeast	0	20,000+	950+ million
06/11-06/14	Severe Weather	Plains, Midwest, Mid-Atlantic, Northeast	1	40,000+	325+ million
06/17-06/21	Severe Weather	Plains, Midwest, Mid-Atlantic, Northeast	1	100,000+	1.35+ billion
06/18-06/21	Tropical Storm Claudette	Southeast	14	32,500+	350+ million
06/24-07/01	Severe Weather	Plains, Midwest, Mid-Atlantic, Northeast	2	100,000+	1.65+ billion
06/26-06/30	Heatwave	Northwest	229+	Unknown	Unknown

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

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/01-12/31	Drought	Mexico	N/A	N/A	2+ billion
01/01-12/31	Drought	Canada	N/A	N/A	2.5+ billion
01/12-01/14	Severe Weather	Canada	0	7,600+	130+ million
01/19-01/20	Severe Weather	Canada	0	3,200+	45+ million
02/12-02/20	Winter Weather	Mexico	20	Unknown	1+ billion
03/26-03/29	Severe Weather	Canada	0	4,100+	150+ million
04/03-04/12	Flooding	Haiti	7	2,676+	Unknown
04/09-04/30	Volcano	St. Vincent	0	Unknown	325+ million
05/16-05/18	Severe Weather	Mexico	0	2,000+	50+ million
06/08	Severe Weather	Canada	0	2,000+	25+ million
06/11	Severe Weather	Canada	0	1,500+	20+ million
06/12-06/14	Flooding	Panama	1	1,000+	Millions
06/18-06/20	<b>Tropical Storm Dolores</b>	Mexico	3	1,000+	50+ million
06/21-06/22	Severe Weather	Canada	1	1,500+	25+ million
06/27-06/30	Hurricane Enrique	Mexico	2	1,000+	50+ million
06/27-06/30	Heatwave	Canada	800+	Unknown	Unknown
06/29-06/30	Severe Weather	Canada	0	2,000+	25+ million
06/30-07/02	Lytton Creek Wildfire	Canada	2	350+	170+ million

## South America

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/01-12/31	Drought	Brazil	N/A	N/A	1.5+ billion
01/01-12/31	Drought	Paraguay	N/A	N/A	100+ million
01/01-12/31	Drought	Argentina	N/A	N/A	100+ million
01/01-01/03	Severe Weather	Brazil	2	3,200+	19+ million
01/04	Severe Weather	Bolivia	4	Thousands	Millions
01/01-01/09	Flooding	Guyana	0	2,800+	Millions
01/16-01/20	Flooding	Bolivia	1	2,000+	Millions
01/18	Earthquake	Argentina	0	33,000+	250+ million
01/21-01/24	Severe Weather	Brazil	2	5,000+	25+ million
01/26-01/29	Severe Weather	Brazil	0	33,000+	11+ million
01/29-02/01	Severe Weather	Chile	0	Hundreds	175+ million
01/31-02/01	Flooding	Paraguay	10	Thousands	Millions
02/10-02/22	Flooding	Brazil	0	35,900+	36+ million
02/12-02/20	Flooding	Peru	1	4,000+	25+ million
02/19-02/21	Severe Weather	Brazil	6	7,300+	26+ million
03/01-06/15	Flooding	Colombia	71+	17,300+	10s of millions
03/08-03/11	Severe Weather	Brazil	0	Hundreds	632+ million
03/09-03/10	Wildfire	Argentina	2	502+	Millions
03/15-03/19	Severe Weather	Brazil	0	Hundreds	388+ million
03/20-03/31	Flooding	Peru	1	3,000+	Millions
03/31	Severe Weather	Brazil	0	3,500+	49+ million
04/19-04/22	Flooding	Brazil	0	3,000+	Millions

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
04/20-06/05	Flooding	Brazil	0	4,600+	40+ million
05/11-06/30	Flooding	Guyana	0	49,000+	Millions
06/08-06/09	Flooding	Brazil	0	2,200+	4.0+ million
06/16	Flooding	Brazil	0	Thousands	82+ million

## Europe

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/06-01/12	Flooding	Southeastern Europe	0	2,500+	10s of millions
01/08-01/12	Storm Filomena	Spain	4	159,000+	1.9+ billion
01/13-03/31	Winter Weather	Switzerland, Austria	17	Hundreds	60+ million
01/20-01/21	Windstorm Christoph	Western Europe	0	Thousands	455+ million
01/21-01/22	Windstorm Hortense	France, Spain	0	Thousands	90+ million
01/23-01/31	Earthquake	Spain	0	9,200+	35+ million
02/01-02/10	Flooding	France	0	Thousands	10s of millions
02/01-02/15	Winter Weather	Western, Central & Northern Europe	N/A	Unknown	100s of millions
02/15-02/17	Winter Weather	Greece	0	2,027+	30+ million
03/03	Earthquake	Greece	0	900+	10s of millions
03/10-03/11	Windstorm Klaus	Western & Central Europe	0	Thousands	100s of millions
03/13	Windstorm Luis	Western & Central Europe	0	Thousands	100s of millions
03/18-03/23	Winter Weather	Spain	0	NA	80+ million
04/05-04/08	Winter Weather	Western & Central Europe	NA	NA	5.6+ billion
04/13-04/18	Winter Weather	Spain	0	NA	40+ million
05/01-05/02	Windstorm Daniel	Austria	0	Thousands	Millions
05/04-05/05	Windstorm Eugen	Western Europe	0	Thousands	10s of millions
05/11-05/17	Flooding	Central Europe	1	2,300+	40+ million
05/29-06/14	Severe Weather	Spain, Portugal	0	Thousands	10s of millions
06/04-06/09	Severe Weather	Western and Central Europe	2	Thousands	10s of million
06/17-06/18	Flooding	Ukraine	1	400+	170+ million
06/17-06/25	Severe Weather	Western and Central Europe	7	975,000+	4.8+ billion
06/28-06/30	Severe Weather	Central Europe	1	300,000+	2.3+ billion

## Middle East

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
02/01-02/02	Flooding	Turkey	0	3,000+	70+ million
02/17	Earthquake	Iran	2	5,800+	10s of millions
04/15-05/05	Flooding	Yemen	13	3,700	10+ million
05/01-05/05	Flooding	Iran	11	Hundreds	Millions

## Africa

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/19-01/21	Cyclone Eloise	Southern Africa	25	35,000+	10s of millions
02/01-02/14	Flooding	South Africa	31	Hundreds	75+ million
02/06-02/07	Flooding	Morocco	28	Hundreds	Millions
03/06-03/07	Flooding	Algeria	10	Hundreds	Millions
03/15-03/16	Flooding	DRC, Angola	11	550+	Unknown
02/01-05/31	Flooding	Burundi	0	2,000+	Unknown
04/18-04/20	Wildfire	South Africa	0	11	10s of millions
04/19	Flooding	Angola	24	2,350+	Millions
04/23-04/25	Cyclone Jobo	East Africa	22	6,000+	Millions
04/07-05/31	Flooding	Kenya	9	4,500+	Millions
05/01-05/31	Flooding	Somalia	25	Thousands	Unknown
05/01-05/31	Flooding	Ethiopia	16	Hundreds	Unknown
05/22-05/23	Volcano	Democratic Republic of the Congo	32	Hundreds	Millions

## Asia

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
12/31-01/05	Flooding	Indonesia	3	2,500+	Unknown
01/01-12/31	Drought	China	N/A	N/A	400+ million
01/01-01/04	Severe Weather	Philippines	9	550+	10s of millions
01/06-01/08	Winter Weather	China	0	Hundreds	191+ million
01/07-01/12	Winter Weather	Japan	23	69,630+	2.0+ billion
01/08-01/12	Winter Weather	Taiwan	18	N/A	Unknown
01/08-01/24	Severe Weather	Philippines	3	3,500+	Millions
01/09-01/15	Flooding	Indonesia	21	46,000+	78+ million
01/14	Earthquake	Indonesia	108	7,100+	92+ million
01/14-01/17	Winter Weather	China	0	Hundreds	115+ million
02/07-02/08	Flooding	India	205	Thousands	210+ million
02/13	Earthquake	Japan	1	221,994+	7.5+ billion
02/14	Flooding	Indonesia	19	Dozens	Negligible
02/15-02/19	Winter Weather	Japan	0	Hundreds	10s of millions
02/19-02/23	Flooding	Indonesia	14	8,600+	Millions
02/20-02/24	Tropical Storm Dujuan	Philippines	5	2,300+	10+ million
02/22-02/25	Winter Weather	China	1	Unknown	76+ million
02/23-02/26	Flooding	Indonesia	1	9,200+	Millions
03/12-03/16	Sandstorm	Mongolia, China	21	Hundreds	10s of millions
03/20	Earthquake	Japan	0	26,480+	550+ million
03/25-03/31	Severe Weather	Indonesia	0	14,000+	Millions
04/03-04/05	Cyclone Seroja	Indonesia, Timor-Leste	275	75,000+	400+ million
04/10	Earthquake	Indonesia	10	1,350+	Millions
04/17-04/21	Typhoon Surigae	Philippines	9	3,500+	10+ million
04/23	Other	India	18	N/A	Negligible
04/30	Severe Weather	China	11	6,000+	Millions
05/01-05/31	Flooding	China	4	3,000+	750+ million

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
05/02-05/05	Flooding	Afghanistan	116	2,600+	Millions
05/13-05/15	Severe Weather	China	14	11,700+	96+ million
05/14-05/19	Cyclone Tauktae	India, Sri Lanka, Maldives	198	141,600+	1.5+ billion
05/21	Earthquake	China	3	19,000+	49+ million
05/22	Earthquake	China	0	8,200+	21+ million
05/22	Severe Weather	China	21	N/A	N/A
05/25-05/29	Cyclone Yaas	India	19	325,000+	3.0+ billion
05/25-05/27	Flooding	Indonesia	0	8,900+	Millions
05/27-05/29	Flooding	Indonesia	0	4,100+	Millions
05/31	Severe Weather	Pakistan	12	Dozens	Negligible
06/01-06/03	TS Choi-wan	Philippines, Taiwan	11	4,200+	11+ million
06/03-06/08	Flooding	Sri Lanka	22	2,352+	Millions
06/04-06/07	Severe Weather	Bangladesh	30	Hundreds	Unknown
06/10	Earthquake	China	0	2,700+	Millions
06/12-06/15	TS Koguma	Vietnam, Laos	1	5,500+	13+ million
06/15-06/21	Flooding	Nepal, Bhutan	50	Hundreds	Unknown
06/25	Severe Weather	China	8	5,000+	Millions

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

Date	Event	Location	Deaths	Structures/ Claims	Economic Loss (USD)
01/03-01/07	Cyclone Imogen	Australia	0	Hundreds	10s of millions
01/30-01/31	Cyclone Ana	Fiji	1	Thousands	Millions
02/01-02/05	Wildfire	Australia	0	1,070+	120+ million
02/03-02/08	Flooding	Australia	0	Hundreds	10s of Millions
02/25-03/07	Cyclone Niran	Australia, New Caledonia	0	Thousands	250+ million
03/10-03/24	Flooding	Australia	2	53,000+	2.1+ billion
04/11-04/12	Cyclone Seroja	Australia	1	8,149+	530+ million
05/29-06/01	Flooding	New Zealand	0	3,550+	50+ million
06/09-06/12	Severe Weather	Australia	2	25,000+	330+ million
06/19	Severe Weather	New Zealand	1	301+	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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