

May 2012 Global Catastrophe Recap



Table of Contents

Executive Summary	2
United States	3
Remainder of North America (Canada, Mexico, Caribbean Islands, Bermuda)	4
South America	4
Europe	5
Africa	6
Asia	6
Oceania (Australia, New Zealand and the South Pacific Islands)	7
APPENDIX	8
Contact Information	12
About Impact Forecasting® LLC	12
About Aon Benfield	12

Executive Summary

- Earthquakes in Northern Italy leave at least 25 people dead and cause extensive damage
- Severe weather and flooding in China triggers more than USD3.1 billion in economic losses
- Tropical Storm Beryl makes landfall in Florida; minimal damage recorded

Two potent earthquakes and subsequent aftershocks struck Northern Italy's Emilia-Romagna region within a nine-day stretch, killing a combined 25 people, injuring more than 400 others and causing extensive damage. Both tremors (the first a magnitude-6.0; the second a magnitude-5.8) had an epicenter just to the north-northwest of the city of Bologna. Significant damage occurred in the provinces of Modena, Ferrara, Reggio Emilia, Rovigo and Mantua, with tremendous impacts felt at more than 100 culturally historic buildings that were several centuries old. Additional damage struck personal property, the agricultural industry, the biomedical industry and other economically significant businesses in the region. Initial combined economic losses were estimated at EUR5 billion (USD6.25 billion). Italian officials note that it remains too early to provide an insured loss estimate with any degree of confidence.

In severe weather and flooding news, China sustained flooding rains and strong thunderstorms throughout the month. One particular stretch of inclement weather impacted at least 22 provinces and killed at least 102 people. According to the Ministry of Civil Affairs (MCA), at least 143,000 homes were damaged or destroyed in addition to 949,400 hectares (2.34 million acres) of cropland. Total economic losses from the event were listed at CNY16.88 billion (USD2.68 billion).

Powerful thunderstorms ripped through eastern Japan, spawning multiple tornadoes and reports of damaging winds. At least three people were killed and 59 others were injured. The most notable tornado was an F-2 that struck the town of Tsukuba in Ibaraki Prefecture. Japan's Fire and Disaster Management Agency cited that storm damage impacted more than 1,845 buildings in six separate prefectures.

In the United States, two notable stretches of severe weather impacted central and eastern sections of the country. One notable stretch occurred early in the month, as widespread hail and wind damage impacted an area from the Dakotas to Maryland. Total economic losses were estimated at approximately USD275 million, while various insurers recorded more than 30,000 claims with payouts in excess of USD150 million. The second notable stretch at the end of the month caused upwards of USD400 million in insured losses in Oklahoma alone, according to the Southwestern Insurance Information Service.

Also in North America, excessive rainfall affected portions of the Canadian provinces of Ontario and Quebec. In Thunder Bay, at least 1,100 homes were damaged in addition to businesses and infrastructure. Flood damage was also recorded in Montreal, where personal property and infrastructure was widely affected. Environment Canada labeled the Montreal floods as having a 100-year return period.

Additional flood events were recorded in Nepal, Afghanistan, Indonesia, Nicaragua, Cuba, Georgia, Brazil and Venezuela.

Tropical Storm Beryl made landfall near Jacksonville Beach, Florida at peak intensity with 70 mph (110 kph) winds. However, the storm did not cause any significant damage, injuries or fatalities.

Wildfires burned in several states in the U.S. during the month, including the largest fire ever recorded in New Mexico. Nationwide, approximately 200 homes and structures were destroyed.

United States

Event Date	Event Name Or Type ¹	Event Location	# of Deaths ²	# of Structures/ Claims ^{2,3}	Damage Estimates ^{2,4} (USD)
5/2-5/6	Severe Weather	Midwest, Plains, Mid-Atlantic	0	30,000+	275+ million
5/13-6/7	Wildfire	West, Midwest	0	200+	30+ million
5/25-5/30	Severe Weather	Plains, Midwest, Northeast	0	Thousands+	700+ million
5/28	TS Beryl	Southeast	0	Unknown	Unknown

Strong thunderstorms in association with a meandering frontal boundary led to widespread damage in the Midwest, Plains, Ohio Valley and the Mid-Atlantic between the 2nd and the 6th. Storm reports from the Dakotas to Maryland confirmed isolated tornado touchdowns, hail (up to golf ball-sized), damaging winds and flooding. Hail was the primary cause of damage to homes, structures and vehicles. Total economic losses were estimated at approximately USD275 million, while various insurers recorded more than 30,000 claims with payouts in excess of USD150 million.

An extended period of very warm and dry conditions across portions of the U.S. led to wildfires in six states between the middle of May and early June. At least 200 structures were damaged or destroyed, and total combined economic costs to fight the fires were listed at nearly USD30 million. The most damaging fire was recorded in Michigan's Luce County, where the Duck Lake Fire destroyed at least 115 structures. In New Mexico, the Whitewater-Baldy Complex Fire became the largest in state history after charring more than 255,000 acres (103,000 hectares) of land. The fire destroyed at least 12 cabins and 7 outbuildings. Additional fires were recorded in parts of Arizona, Nevada, California and Colorado.

Rounds of severe weather impacted a wide swath of the central and eastern United States between the 25th and the 30th. The inclement weather was in association with a slow-moving frontal boundary that was draped at one point from the Northeast back into the southern Plains. While tornadic activity was generally limited, hail and damaging wind impacts were felt extensively in many areas. The Storm Prediction Center (SPC) recorded more than 1,515 local storm reports during the period. The most notable wind and hail damage occurred in Oklahoma, Texas, Kansas and the Northeast. According to a preliminary report from the Southwestern Insurance Information Service, insured losses in Oklahoma alone were estimated at USD400 million.

Tropical Storm Beryl made landfall in the southeastern United States early on the 28th, Monday morning, bringing heavy rains and periods of gusty winds for consecutive days. No injuries or fatalities were recorded. The storm made landfall near Jacksonville Beach, Florida at approximately 12:10 AM Monday morning (4:10 UTC) at peak intensity with 70 mph (110 kph) winds. Beryl did not cause any significant damage in Florida or the rest of the Southeast.

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

Event Date	Event Name Or Type ¹	Event Location	# of Deaths ²	# of Structures/Claims ^{2,3}	Damage Estimates ^{2,4} (USD)
5/15-5/31	Flooding	Nicaragua	9+	5,900+	Unknown
5/24-5/27	Flooding	Cuba	2+	1,200+	Unknown
5/25-5/29	Flooding	Canada	0	Thousands+	Millions+

Two weeks of excessive rainfall across portions of Nicaragua prompted flash floods and river flooding, killing at least nine people. Local officials reported that the fatalities occurred in northern provinces and also the capital of Managua. Nicaragua's Civil Defense agency noted that more than 5,900 homes were damaged or destroyed due to overflowing rivers.

Consecutive days of heavy rainfall between the 24th and the 27th led to widespread flooding across Cuba's Sancti Spiritus province. At least two people were killed after more than 580 millimeters (22.8 inches) of rainfall fell – the highest total in nearly eight decades. At least 1,200 homes were damaged in addition to nearly 3,500 hectares (8,650 acres) of cropland.

Multiple days of heavy rain fell across central and eastern Canada between the 25th and the 29th, prompting widespread flooding in several areas. Initially, floods impacted parts of Thunder Bay, Ontario, where at least 1,100 homes were damaged (primarily basements) in addition to businesses and infrastructure. Two days later heavy rainfall affected Montreal, Quebec. Flooding swept across home basements, highways, businesses, subway stations and infrastructure, while also overwhelming the city's sewer system. Environment Canada labeled the Montreal floods as having a 100-year return period.

South America

Event Date	Event Name Or Type ¹	Event Location	# of Deaths ²	# of Structures/Claims ^{2,3}	Damage Estimates ^{2,4} (USD)
5/1-5/20	Flooding	Brazil	0	75,000+	226+ million
5/8-5/11	Flooding	Venezuela	0	2,200+	93+ million

Heavy rainfall throughout the month of May in Brazil's Amazonas state led to significant flooding along the Black River. At the height of the event, 83% of counties were declared in a state of emergency as floodwaters partially submerged homes, businesses and vehicles. In total, more than 75,000 homes were affected. Brazilian officials allocated BRL450 million (USD226 million) for relief and recovery.

Heavy rainfall, which fell between the 8th and the 11th, led to flooding in multiple sections of Venezuela. Government officials noted that more than 2,200 homes were damaged in the states of Bolívar, Sucre and Táchira. Total economic impacts from the flooding were listed at VEF400 million (USD93 million).

Europe

Event Date	Event Name Or Type ¹	Event Location	# of Deaths ²	# of Structures/ Claims ^{2,3}	Damage Estimates ^{2,4} (USD)
5/7	Earthquake	Azerbaijan	0	3,124+	Unknown
5/12	Flooding	Georgia	5+	5,000+	4.9+ million
5/18	Earthquake	Azerbaijan	0	7,000+	Unknown
5/20	Earthquake	Italy	7+	Thousands+	6.25+ billion
5/29	Earthquake	Italy	18+	Thousands+	

A magnitude-5.6 earthquake struck Azerbaijan on the 7th, causing widespread damage across southwestern sections of the country. Local officials noted that at least 3,124 homes and public buildings were damaged or destroyed in the areas of Zaqatala and Gakh.

Torrential rainfall on the 12th fell across eastern and western sections of Georgia, prompting flooding and mudslides. At least five people were killed. The hardest-hit region came in the Ortachala neighborhood within the capital city of Tbilisi. More than 3,200 homes were flooded in addition to vehicles, a prison, Guala Square and a building formerly occupied by the Interior Ministry. Additional flood damage was recorded in several western villages. Total economic losses were listed at GEL8 million (USD4.9 million).

A magnitude-4.8 earthquake rattled southwestern Azerbaijan on the 18th. More than 7,000 homes and other buildings were damaged or destroyed in the areas of Zaqatala and Gakh.

A magnitude-6.0 earthquake struck northern Italy on the 20th, killing at least seven people, injuring more than 50 others and causing extensive damage in some areas. According to the United States Geological Survey (USGS), the main tremor occurred at 4:03 AM local time (2:03 UTC) with an epicenter 36 kilometers (22 miles) north-northwest of Bologna, Italy at a depth of 5.1 kilometers (3.2 miles). The earthquake caused significant damage to agriculture, business, personal property and the cultural heritage of the Emilia-Romagna region. Some of the hardest-hit towns included San Felice Sul Panaro, Ferrara, Finale Emilia, Sant'Agostino di Ferrara, Ponte Rodoni do Bondeno and Tecopress di Dosso sustaining the worst effects.

A magnitude-5.8 earthquake struck northern Italy's Emilia-Romagna region on the 29th, killing at least 18 people, injuring more than 350 others and causing additional widespread damage. The (USGS) stated that the main earthquake occurred at approximately 9:00 AM (7:00 UTC) with an epicenter 40 kilometers (24 miles) north-northwest of Bologna, Italy at a depth of 9.6 kilometers (6 miles). The hardest-hit areas came closest to the epicenter in the province of Modena. The towns of Cavezzo, Mirandola and Medolla were particularly affected, where many historical buildings, factories and homes that were weakened during the May 20th tremor fully collapsed. Locations in the provinces of Ferrara, Reggio Emilia, Rovigo and Mantua also saw fresh rounds of damage. Early total combined economic loss estimates from the May 20th and May 29th events were listed at EUR5 billion (USD6.25 billion). This includes damage to agriculture, the biomedical industry, business production and personal property. At this point, officials note that it remains too early to provide an insured loss estimate with any degree of confidence.

Africa

Event Date	Event Name Or Type ¹	Event Location	# of Deaths ²	# of Structures/ Claims ^{2,3}	Damage Estimates ^{2,4} (USD)
4/24-5/15	Flooding	Kenya	50+	50,000+	130+ million

Widespread flooding occurred throughout Kenya between April 24th and May 15th, which left at least 50 people dead. Government officials reported that extensive damage had occurred to property (up to 50,000 homes), infrastructure and agriculture after several rivers burst their banks. Total economic damage to infrastructure alone was listed at KES11 billion (USD130 million).

Asia

Event Date	Event Name Or Type ¹	Event Location	# of Deaths ²	# of Structures/ Claims ^{2,3}	Damage Estimates ^{2,4} (USD)
4/28-5/15	Severe Weather	China	102+	143,000+	2.68+ billion
5/5	Flooding	Nepal	60+	1,000+	Unknown
5/6	Severe Weather	Japan	3+	1,845+	Millions+
5/6-5/11	Flooding	Afghanistan	47+	1,000+	Unknown
5/9	Flooding	Indonesia	5+	200+	Unknown
5/19	Flooding	Afghanistan	19+	Unknown	Unknown
5/20-5/24	Flooding	China	16+	19,300+	378+ million
5/27-5/30	Flooding	China	7+	16,000+	119+ million

Flooding rains and strong thunderstorms affected at least 22 Chinese provinces between April 28th and May 15th, killing at least 102 people. Gansu, Hunan and Jiangxi provinces were most affected, where flooding, landslides and damaging hail led to significant impacts. According to the Ministry of Civil Affairs (MCA), at least 143,000 homes were damaged or destroyed in addition to 949,400 hectares (2.34 million acres) of cropland. Total economic losses were listed at CNY16.88 billion (USD2.68 billion).

Flash floods swept through the western Nepal district of Kaski on the 5th, killing at least 60 people. The floods were triggered after the Seti River burst its banks and sent a torrent of water, mud and debris into the popular resort town of Pokhara. A large number of homes were destroyed, plus two temples and a community building. The local water supply system was also partially damaged.

Powerful thunderstorms ripped through eastern Japan on the 6th, spawning multiple tornadoes and other reports of damaging winds. At least three people were killed and 59 others were injured. The most notable tornado was an F-2 that struck the town of Tsukuba in Ibaraki Prefecture, which damaged or destroyed 827 homes and other structures. Japan's Fire and Disaster Management Agency cited that tornado and wind damage had impacted more than 1,845 buildings in six separate prefectures.

Heavy rains in the mountainous terrain of northern Afghanistan prompted separate flooding events between the 6th and the 11th. The first event occurred in Sari Pul Province, where at least 30 people were killed and more than 200 homes were destroyed in Dhy Marda village. Additional damage occurred in Sang Charak district. The second flash flood event swept through Takhar Province, killing at least 17 people. Several villages in Ishkamish district were washed away after floodwaters burst through a dam.

Heavy rainfall on the 9th led to floods carrying volcanic debris in eastern Indonesia. At least five people were killed and 20 others were injured. According to local officials, the rains prompted two rivers to burst their banks and devastate 11 villages in North Maluku Province’s Ternate City. Nearly 200 homes were washed away, in addition to at least two main bridges that connect to the region.

Torrential rains in northern Afghanistan’s Saripul Province on the 19th led to widespread flooding in the provincial capital of Saripul City. At least 19 people were killed after floods swept away dozens of homes.

Flooding swept across parts of six southwestern Chinese provinces between the 20th and the 24th, killing at least 16 people. According to the MCA, a combined 19,300 homes were damaged or destroyed in addition to tens of thousands of hectares (acres) of crops and also swaths of infrastructure. Total economic losses were listed at CNY2.4 billion (USD378 million).

Periods of heavy rainfall impacted at least seven Chinese provinces between the 27th and the 30th, killing seven people and injuring dozens more. The rains prompted flash flooding, river flooding and landslides. According to the MCA, a combined 16,000 homes were damaged or destroyed in addition to more than 500,000 hectares (1.24 million acres) of cropland being submerged. Total economic losses were listed at CNY756 million (USD119 million).

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

Event Date	Event Name Or Type ¹	Event Location	# of Deaths ²	# of Structures/ Claims ^{2,3}	Damage Estimates ^{2,4} (USD)
------------	---------------------------------	----------------	--------------------------	--	---------------------------------------

No major natural disaster events occurred in Oceania during the month of May.

APPENDIX

Updated Jan. – Apr. 2012 Data

United States

Event Date	Event Name Or Type ¹	Event Location	# of Deaths ²	# of Structures/Claims ^{2,3}	Damage Estimates ^{2,4} (USD)
1/8-1/12	Winter Weather	Plains, Southeast, Northeast	0	Thousands+	Millions+
1/12-1/13	Winter Weather	Midwest, Ohio Valley, Northeast	0	Thousands+	Millions+
1/16-1/17	Severe Weather	Midwest, Southeast, Northeast	0	Thousands+	25+ million
1/17-1/22	Winter Weather	Pacific Northwest	3+	1,000+	100+ million
1/19-1/21	Wildfires	Nevada	0	29+	9.1+ million
1/22-1/23	Severe Weather	Southeast, Plains	3+	10,000+	175+ million
2/17-2/18	Severe Weather	Plains, Southeast	0	Hundreds+	Unknown
2/20	Severe Weather	Plains	1+	Thousands+	Millions+
2/22	Severe Weather	Southeast	1+	250+	1.6+ million
2/24	Severe Weather	Southeast, Mid-Atlantic	0	Hundreds+	Millions+
2/28-2/29	Severe Weather	Midwest, Plains, Southeast	14+	25,000+	500+ million
3/2-3/3	Severe Weather	Midwest, Southeast	41+	260,000+	3+ billion
3/4-3/9	Flooding	Hawaii	0	Hundreds+	37.5+ million
3/12	Flooding	Louisiana	0	1,500+	2+ million
3/14-3/15	Severe Weather	Great Lakes	0	20,000+	275+ million
3/18-3/25	Severe Weather	Plains, Midwest, Southeast	1+	37,500+	325+ million
3/26-4/2	Wildfire	Colorado	3+	25+	Unknown
3/29-3/31	Severe Weather	Plains, Midwest, Southeast	0	30,000+	350+ million
4/2-4/4	Severe Weather	Texas	0	105,000+	1+ billion
4/11	Severe Weather	California	0	Unknown	79+ million
4/13-4/15	Severe Weather	Plains, Midwest	6+	50,000+	950+ million
4/20	Severe Weather	Texas	0	15,000+	90+ million
4/28-4/29	Severe Weather	Midwest	1+	200,000+	1.5+ billion

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

Event Date	Event Name Or Type ¹	Event Location	# of Deaths ²	# of Structures/Claims ^{2,3}	Damage Estimates ^{2,4} (USD)
2/11-2/12	Flooding	Canada	0	200+	Unknown
3/20	Earthquake	Mexico	2+	44,000+	300+ million
4/23-4/25	Flooding	Hispaniola	10+	3,000+	Unknown
4/28-4/29	Winter Weather	Canada	0	Unknown	100+ million

South America

Event Date	Event Name Or Type ¹	Event Location	# of Deaths ²	# of Structures/Claims ^{2,3}	Damage Estimates ^{2,4} (USD)
12/24-1/6	Wildfires	Chile	7+	Hundreds+	200+ million
1/1-1/10	Flooding	Brazil	39+	25,000+	Millions+
1/1-3/25	Flooding	Ecuador	30+	4,000+	Unknown
1/30	Earthquake	Peru	0	858+	Unknown
2/8-2/9	Flooding	Peru	14+	11,000+	Unknown
2/10-2/29	Flooding	Brazil, Bolivia	1+	37,300+	10+ million
3/11-3/16	Flooding	Chile	0	6,500+	3.1+ million
3/24-3/31	Flooding	Colombia	5+	5,000+	Unknown
3/25	Earthquake	Chile	0	Hundreds+	100+ million
4/2-4/30	Flooding	Paraguay	0	13,654+	Unknown
4/4	Severe Weather	Argentina	18+	32,000+	10+ million
4/5-4/27	Flooding	Colombia, Peru	19+	25,000+	170+ million

Europe

Event Date	Event Name Or Type ¹	Event Location	# of Deaths ²	# of Structures/Claims ^{2,3}	Damage Estimates ^{2,4} (USD)
1/3-1/4	WS Ulli	UK, Scandinavia	2+	5,000+	306+ million
1/4-1/5	WS Andrea	UK, Northern Europe	0	Thousands+	350+ million
1/24-2/17	Winter Weather	Eastern/Central Europe	824+	Unknown	775+ million
2/7-2/8	Winter Weather	Ukraine	0	Unknown	2+ million
2/7-2/9	Flooding	Bulgaria, Greece	12+	Hundreds+	4.4+ million
3/26	Earthquake	Turkey	0	Hundreds+	Unknown
4/20	Wildfire	Russia	1+	65+	Unknown
4/22-4/27	Flooding	Russia	0	3,957+	17+ million

Africa

Event Date	Event Name Or Type ¹	Event Location	# of Deaths ²	# of Structures/Claims ^{2,3}	Damage Estimates ^{2,4} (USD)
1/16-1/17	Flooding	Mozambique, South Africa	10+	5,000+	Unknown
1/20-1/26	CY Funso	Mozambique, Malawi	40+	10,000+	100+ million
2/13	Severe Weather	Nigeria	15+	3,000+	1+ million
2/14	CY Giovanna	Madagascar	35+	50,000+	100+ million
2/26-3/7	CY Irina	Madagascar, Mozambique	84+	35,000+	Millions+
4/12	Flooding	Rwanda	5+	2,232+	Unknown
4/20-4/28	Flooding	Comoros	0	9,338+	3.8+ million
4/24-5/15	Flooding	Kenya	50+	50,000+	130+ million

Asia

Event Date	Event Name Or Type ¹	Event Location	# of Deaths ²	# of Structures/ Claims ^{2,3}	Damage Estimates ^{2,4} (USD)
1/1-1/31	Winter Weather	Japan	56+	Thousands+	Millions+
1/1-2/7	Winter Weather	China	0	10,000+	2.1+ million
1/5	Landslide	Philippines	42+	100+	Unknown
1/5	Severe Weather	Indonesia	0	500+	30+ million
1/8	Earthquake	China	0	9,000+	Unknown
1/16-1/17	Winter Weather	Afghanistan	46+	Unknown	Unknown
1/21	Earthquake	Indonesia	0	450+	1.3+ million
1/21-1/24	Winter Weather	China	0	1,000+	4.4+ million
1/25	Severe Weather	Indonesia	14+	2,000+	1+ million
2/6	Earthquake	Philippines	116+	53,000+	250+ million
2/7-2/9	Winter Weather	China	0	10,000+	20.2+ million
2/15-2/16	Winter Weather	China	0	1,000+	4+ million
2/18	Landslide	India	6+	Unknown	Unknown
2/19	Flooding	Philippines	0	5,000+	Unknown
2/22	Winter Weather	India	16+	Unknown	Unknown
2/25	Severe Weather	Indonesia	5+	100+	Unknown
3/4	Winter Weather	Afghanistan	50+	100+	Unknown
3/9	Earthquake	China	0	20,000+	82.7+ million
3/12	Winter Weather	Afghanistan	45+	50+	Unknown
3/15-3/18	Severe Weather	Thailand	0	200+	Unknown
3/16-3/20	Severe Weather	Indonesia	0	12,000+	Unknown
3/17	Flooding	China	0	578+	Unknown
3/20	Flooding	India	3+	15,862+	1+ million
3/27	Flooding	Philippines	11+	10,000+	2.1+ million
4/1	Severe Weather	Sri Lanka	0	1,200+	Unknown
4/1	TY Pakhar	Vietnam	2+	5,000+	Unknown
4/3-4/5	Severe Weather	Japan	4+	Hundreds+	Unknown
4/5	Severe Weather	China	0	20,000+	120+ million
4/11-4/18	Flooding	Saudi Arabia, Oman	18+	Thousands+	Millions+
4/20-4/25	Severe Weather	China	12+	25,400+	84+ million
4/20-4/25	Severe Weather	Vietnam	2+	4,780+	5+ million
4/22	Flooding	Afghanistan	16+	1,140+	Unknown
4/23-4/29	Flooding	Kyrgyzstan	0	2,500+	Unknown

Oceania (Australia, New Guinea, New Zealand, Micronesia, Guam, Northern Mariana Islands)

Event Date	Event Name Or Type ¹	Event Location	# of Deaths ²	# of Structures/ Claims ^{2,3}	Damage Estimates ^{2,4} (USD)
1/12	TC Heidi	Australia (Western Australia)	0	Unknown	Unknown
1/22-1/31	Flooding	Fiji	7+	Thousands+	17+ million
1/24	Landslide	Papua New Guinea	40+	Unknown	Unknown
1/24-2/15	Flooding	Australia (NSW, Queensland)	1+	6,408+	920+ million
2/24-3/16	Flooding	Australia (NSW, Victoria)	2+	8,914+	1.58+ billion
3/3	Severe Weather	New Zealand	0	1,250+	7.5+ million
3/17	CY Lua	Australia (WA)	0	Hundreds+	230+ million
3/20	Severe Weather	Australia (Queensland)	0	150+	21+ million
3/29-4/3	Flooding	Fiji	7+	15,000+	71.3+ million

¹ TD = Tropical Depression, TS = Tropical Storm, HU = Hurricane, TY = Typhoon, STY = Super Typhoon, CY = Cyclone

² As reported by public news media sources and official government agencies

³ **Structures** defined as any building – including barns, outbuildings, mobile homes, single or multiple family dwellings, and commercial facilities – that is damaged or destroyed by winds, earthquakes, hail, flood, tornadoes, hurricanes or any other natural-occurring phenomenon. **Claims** defined as the number of claims (which could be a combination of homeowners, commercial, auto and others) reported by various insurance companies through press releases or various public media outlets.

⁴ Damage estimates obtained from various public media sources, including news websites, publications from insurance companies, financial institution press releases and official government agencies. These estimates can include insured or economic losses.

Contact Information

Steve Jakubowski

President
Impact Forecasting LLC
+1 312 381 5890
steven.jakubowski@aonbenfield.com

Adam Podlaha

Head of International
Impact Forecasting LLC
+ 44 (0)20 7522 3820
adam.podlaha@aonbenfield.com

Adityam Krovvidi

Head of Asia Pacific
Impact Forecasting LLC
+ 65 6239 7651
adityam.krovvidi@aonbenfield.com

Steve Bowen

Sr. Scientist/Meteorologist
Impact Forecasting LLC
+1 312.381.5883
steven.bowen@aonbenfield.com



Scan here to access all editions of the Annual Global Climate and Catastrophe Report

About Impact Forecasting® LLC

Impact Forecasting® LLC is a catastrophe model development center of excellence within Aon Benfield whose seismologists, meteorologists, hydrologists, engineers, mathematicians, GIS experts, finance, risk management and insurance professionals analyze the financial implications of natural and man-made catastrophes around the world. Impact Forecasting's experts develop software tools and models that help clients understand underlying risks from hurricanes, tornadoes, earthquakes, floods, wildfires and terrorist attacks on property, casualty and crop insurers and reinsurers. Impact Forecasting is the only catastrophe model development firm integrated into a reinsurance intermediary. To find out more about Impact Forecasting® LLC, visit impactforecasting.com.

About Aon Benfield

Aon Benfield, a division of Aon plc (NYSE: AON), is the world's leading reinsurance intermediary and full-service capital advisor. We empower our clients to better understand, manage and transfer risk through innovative solutions and personalized access to all forms of global reinsurance capital across treaty, facultative and capital markets. As a trusted advocate, we deliver local reach to the world's markets, an unparalleled investment in innovative analytics, including catastrophe management, actuarial and rating agency advisory. Through our professionals' expertise and experience, we advise clients in making optimal capital choices that will empower results and improve operational effectiveness for their business. With more than 80 offices in 50 countries, our worldwide client base has access to the broadest portfolio of integrated capital solutions and services. To learn how Aon Benfield helps empower results, please visit aonbenfield.com.

Impact Forecasting

200 E. Randolph Street

Chicago, Illinois 60601

t +1.312.381.5300

f +1.312.381.0160

impactforecasting.com

Copyright © by Impact Forecasting® L.L.C. No claim to original government works. The text and graphics of this publication are provided for informational purposes only. While Impact Forecasting® LLC has tried to provide accurate and timely information, inadvertent technical inaccuracies and typographical errors may exist, and Impact Forecasting® LLC does not warrant that the information is accurate, complete or current. The data presented at this site is intended to convey only general information on current natural perils and must not be used to make life-or-death decisions or decisions relating to the protection of property, as the data may not be accurate. Please listen to official information sources for current storm information. This data has no official status and should not be used for emergency response decision-making under any circumstances.

Copyright © by Aon plc. All rights reserved. No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise. Impact Forecasting® is a wholly owned subsidiary of Aon plc.

AON BENFIELD