

# April 2011 Monthly Cat Recap – Impact Forecasting

*May 5, 2011*

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## Executive Summary

- Historic tornado outbreak in the United States caps extremely active month of severe weather
- Flood events inundate areas around the globe
- Strong aftershocks continue to rattle Japan in wake of March's massive earthquake event

At least five separate severe weather outbreaks occurred across central and eastern sections of the United States throughout the month of April, including a historic tornado outbreak that left more than 350 people dead. The first outbreak of the month (April 3-5) caused major damage across parts of the Mississippi Valley, the Southeast, the Ohio Valley and the Mid-Atlantic States. The Storm Prediction Center recorded a one-day record of 1,476 storm reports during the event. More than 250,000 insurance claims were filed with losses exceeding USD1.25 billion. The second outbreak (April 8-11) swept across parts of the Midwest, Plains and the Southeast. More than 300,000 insurance claims were filed with losses exceeding USD1.35 billion. A third outbreak (April 14-16) saw a multi-day tornado outbreak cause substantial damage in the Plains, Southeast and Midwest. North Carolina was particularly affected with at least 24 fatalities recorded. The fourth outbreak (April 19-21) brought severe weather and flooding to parts of the Plains, Mississippi Valley, Midwest, Ohio Valley and the Southeast. The last wave (April 22-28) was the most devastating, after a series of severe weather outbreaks brought major damage throughout the eastern two-thirds of the country. A historic tornado outbreak (including a 24-hour record of 178 confirmed tornado touchdowns) brought catastrophic damage to parts of Alabama and Mississippi, where EF-5 tornadoes were confirmed in each state. Early reports from state government insurance agencies noted that combined insured losses were already in excess of USD1.3 billion.

In other severe weather news this month, severe thunderstorms caused damage throughout several neighborhoods in the city of Rio, Brazil. The Brazilian government allocated BRL400 million (USD255 million) for recovery efforts.

A series of hailstorms in China led to the deaths of at least 21 people and 155 others sustaining injuries. The Ministry of Civil affairs reported that more than 3,200 homes were severely damaged and that total economic losses were CNY171 million (USD26.2 million).

A strong storm system affected parts of Norway and Iceland during the month. High winds and heavy rains led to hundreds of homes and businesses sustaining damage in each country. Norwegian insurance companies noted that a large number of claims had been filed.

Dozens of wildfires broke out across the state of Texas in the U.S., which led to the deaths of at least two firefighters. The Texas Forest Service reported that the fires charred more than 1.5 million acres (607,000 hectares) of land and destroyed at least 310 homes, businesses and churches. The Insurance Council of Texas listed insured losses in excess of USD150 million. Additional damage to fencing, pipelines and other farm assets were listed at USD33 million.

Flooding led to damage throughout the Red, Mississippi and Ohio River Valleys in the U.S. A record setting winter snowpack combining with spring precipitation prompted the floods in each region. High water levels also flowed northward from the Red River Valley into southern sections of Canada. Manitoba provincial officials reported that flood damages were listed at CAD70 million (USD73.2 million).

Elsewhere, flood events were recorded in Kazakhstan, Indonesia and the Philippines during the month.

## United States

Event Date	Event Name Or Type <sup>1</sup>	Event Location	# of Deaths <sup>2</sup>	# of Structures/ Claims <sup>2,3</sup>	Damage Estimates <sup>2,4</sup> (USD)
4/3-4/5	Severe Weather	Midwest, Southeast, Plains	9+	250,000+	2+ billion
4/8-4/11	Severe Weather	Midwest, Southeast, Plains	0	300,000+	2.25+ billion
4/8-4/14	Flooding	Red River Valley	3+	Hundreds+	Millions+
4/9-4/30	Wildfires	Texas	2+	310+	183+ million
4/14-4/16	Severe Weather	Plains, Southeast, Midwest	47+	25,000+	Millions+
4/19-4/21	Severe Weather	Plains, Southeast, Midwest	0	25,000+	Millions+
4/22-4/28	Severe Weather	Southeast, Plains, Midwest	354+	50,000+	1.5+ billion

A powerful spring storm system affected the eastern U.S. between the 3<sup>rd</sup> and 5<sup>th</sup>, which led to at least nine fatalities. On the 3<sup>rd</sup>, squall lines caused widespread damage across parts of Kansas, Missouri, Iowa and Wisconsin. Most of the damage was hail-induced with hail stones ranging from nickel to baseball-size. By the 4<sup>th</sup> into early on the 5<sup>th</sup>, the system began to traverse through the Mississippi Valley, the Southeast, the Ohio Valley and the Mid-Atlantic States. The Storm Prediction Center recorded 1,476 storm reports, which set a one-day record dating to 2000. Georgia was particularly affected, where at least seven fatalities occurred. Additional tornadoes led to structural damage in Kentucky, Louisiana, Tennessee and Mississippi. Later on the 5<sup>th</sup>, parts of North Carolina, Virginia and Florida sustained additional damage from the storms. Total economic losses were listed at approximately USD2 billion, while various insurers received more than 250,000 claims with payouts in excess of USD1.25 billion.

Another storm system brought widespread severe weather across parts of the Midwest, Plains and the Southeast between the 8<sup>th</sup> and the 11<sup>th</sup>. In Oklahoma and Kansas, strong supercell thunderstorms triggered golf ball and baseball-sized hail. Additional damage was reported in seven other states as tornadoes, large hail and straight-line winds were recorded on the 8<sup>th</sup> and 9<sup>th</sup>. In Iowa, at least 28 tornado touchdowns were reported. Also on the 9<sup>th</sup> and 10<sup>th</sup>, a cluster of thunderstorms crossed the Tennessee Valley into the Southeast. The Carolinas were particularly affected, where golf ball to tennis ball-sized hail pummeled homes, businesses and vehicles. On the 10<sup>th</sup> and 11<sup>th</sup>, the focus shifted back into the Great Lakes. In Wisconsin, several tornadoes touched down, including an EF-3 that struck Lincoln County. Later on the 10<sup>th</sup> and the 11<sup>th</sup>, severe weather brought significant hail damage across the Mississippi Valley and the southern Plains. Total economic losses were listed at approximately USD2.25 billion, while various insurers received more than 300,000 claims with payouts in excess of USD1.35 billion.

The Red River Valley saw flooding after rain events caused excessive water run-off into rivers and streams in North Dakota and Minnesota. Besides the Red River, other rivers and streams draining into the basin saw water levels above flood stage (including the Sheyenne, Maple and Des Lacs rivers). The Red River officially crested in Fargo on the 9<sup>th</sup> at 38.75 feet (11.81 meters), which was the fourth highest ever recorded in Fargo. Structural damage was minimal in the cities of Fargo, Moorhead, Casselton and Harwood. Most damage came to the transportation infrastructure after dozens of roads covering at least 60 miles (95 kilometers) were submerged and severely eroded.

The combination of very dry air and gusty winds led to dozens of wildfires breaking out across Texas between the 9<sup>th</sup> and the 30<sup>th</sup>, killing at least two firefighters. The Texas Forest Service reported that the fires charred more than 1.5 million acres (607,000 hectares) of land and at least 310 homes, businesses and churches. The Insurance Council of Texas listed insured losses in excess of USD150 million. Additional damage to fencing, pipelines and other farm assets were listed at USD33 million.

A deadly multi-day tornado outbreak affected central and eastern sections of the country between the 14<sup>th</sup> and 16<sup>th</sup>. At least 47 people were killed (24 in North Carolina alone) as hundreds of tornado touchdowns were recorded with thousands of other reports of large hail and damaging winds. The system initially impacted parts of Oklahoma, Kansas and Arkansas on the 14<sup>th</sup>, with major damage reported in each state. On the 15<sup>th</sup>, the severe weather shifted into the Southeast (particularly Mississippi and Alabama) and the Midwest where in excess of 100 tornadoes touched down. Softball-sized hail and straight-line winds were also recorded. By the 16<sup>th</sup>, violent supercell thunderstorms developed in advance of a main squall line across the Carolinas into the Mid-Atlantic. In North Carolina, dozens of tornadoes touched down and caused significant damage throughout the state. Total economic losses were expected to exceed USD500 million. Various insurers have already received thousands of claims and payouts will likely enter the hundreds of millions of dollars (USD).

Another powerful storm system spawned additional widespread severe weather across parts of the Plains, Mississippi Valley, Midwest, Ohio Valley and the Southeast between the 19<sup>th</sup> and 21<sup>st</sup>. No injuries or fatalities were reported. On the 19<sup>th</sup>, damage was recorded from northern Texas northeastward into Ohio as storms occurred in association with a dangerous squall line. On the 20<sup>th</sup>, the hardest hit areas included parts of Arkansas, Mississippi, Alabama and Georgia. In the days that followed, flash flood watches and warnings were issued throughout the Midwest and the Southeast as recent heavy rains caused several rivers to swell to flood stage.

An active weather pattern spawned a series of powerful storm systems across the central and eastern U.S. between the 22<sup>nd</sup> and the 28<sup>th</sup>, including a historic tornado event on the 27<sup>th</sup>. At least a combined 354 people died and over 2,000 others were injured during the events. The first wave notably spawned tornadic activity in the St. Louis, Missouri metropolitan area. The most destructive tornado was an EF-4 that caused extensive damage to thousands of homes and the international airport. By the 25<sup>th</sup> and 26<sup>th</sup>, fresh rounds of severe weather affected the southern Plains, Mississippi Valley, Midwest and New England. Flood threats also were enhanced throughout the Mississippi, Ohio and Red river valleys during this time. A historic wave of severe weather developed on the 26<sup>th</sup> and the 27<sup>th</sup> while affecting an area from the southern Plains to the Northeast. At least 339 people (250 in Alabama) were killed after hundreds of tornadoes touched down over a 48-hour stretch. Parts of Alabama, Mississippi and Tennessee were decimated by the outbreak. The National Weather Service determined that two EF-5 tornadoes touched down (one in Hackleburg, Alabama and one in Smithville, Mississippi) during the event in addition to at least 11 other high end EF-4 twisters. The NWS also reported that an estimated 312 tornadoes touched down on the 27<sup>th</sup>, setting an all-time 24-hour record. The city of Tuscaloosa, Alabama was devastated by an EF-4 tornado with winds of 190 mph (305 kph). Alabama's Department of Insurance reported that total insured losses from the tornadoes in the state would exceed USD1 billion. Other state insurance agencies have recorded at least a combined 50,000 claims with losses in excess of USD200 million.

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

Event Date	Event Name Or Type <sup>1</sup>	Event Location	# of Deaths <sup>2</sup>	# of Structures/ Claims <sup>2,3</sup>	Damage Estimates <sup>2,4</sup> (USD)
4/7	Earthquake	Mexico	0	Unknown	Unknown
4/14-4/30	Flooding	Canada	2+	2,500+	73.2+ million

A magnitude-6.5 earthquake shook a wide section of southern Mexico on the 7<sup>th</sup>. The tremor struck at 8:11 AM local time (13:11 UTC) with an epicenter near Las Choapas in the state of Veracruz and was felt as far away as Mexico City. Only minor cracks were reported to local schools and homes near the epicenter primarily due to its deep depth of 167.4 kilometers (104 miles). All refineries and the regional nuclear power plant were all unaffected.

Flooding from the Red River and its tributaries caused at least 500 homes in southern Canada to sustain damage between the 14<sup>th</sup> and the 30<sup>th</sup>. At least 30 communities in the provinces of Alberta, Manitoba and Saskatchewan declared states of emergency as water levels rose above flood stage. Thousands of residents in several small communities to the north and south of Winnipeg, Manitoba were forced to evacuate their homes due to rising water along the Red, Lee, Fisher, Souris and Marsh rivers. In Manitoba alone, damage to hundreds of homes and roads was at least CAD70 million (USD73.2 million).

## South America

Event Date	Event Name Or Type <sup>1</sup>	Event Location	# of Deaths <sup>2</sup>	# of Structures/ Claims <sup>2,3</sup>	Damage Estimates <sup>2,4</sup> (USD)
1/1-4/30	Landslide	Colombia	85+	100,000+	Millions+
4/3-21	Flooding	Peru	9+	5,500+	Unknown
4/25-4/26	Severe Weather	Brazil	1+	5,000+	255+ million

Much of Colombia experienced a well above normal rainy season, which extended through the month of April. According to government officials, at least 85 people died in flooding and landslides. A series of landslides in the departments of Calda, Antioquia and Nariño left at least 25 people dead in mid-April. Widespread damage to tens of thousands of homes was recorded, in addition to the transportation and agricultural infrastructures being severely impacted.

Several weeks of torrential rains led to flooding and landslides throughout Peru. In the southern city of Cusco, a large landslide struck on the 3<sup>rd</sup> that left at least nine people dead. The landslide occurred after the rains caused soils on Ayahuyco Hill to loosen, which triggered the collapse which fell on the Villa Maria region of the city. Floods damaged nearly 5,500 homes across the country.

Severe weather on the 25<sup>th</sup> and 26<sup>th</sup> occurred over the city of Rio, Brazil, killing at least one person and injuring dozens of others. Flooding was widespread throughout the city, with the neighborhoods of Maracana and Praca de Bandeira sustaining the brunt of the damage. Reports indicated that the floods and landslides caused significant damage to homes, businesses and the transportation infrastructure. The Brazilian government released BRL400 million (USD255 million) for relief and recovery efforts.

## Europe

Event Date	Event Name Or Type <sup>1</sup>	Event Location	# of Deaths <sup>2</sup>	# of Structures/ Claims <sup>2,3</sup>	Damage Estimates <sup>2,4</sup> (USD)
4/8-4/10	Severe Weather	Iceland, Norway	0	500+	Unknown

A storm system brought heavy rain, snow and very gusty winds across parts of Scandinavia between the 8<sup>th</sup> and the 10<sup>th</sup>. In Norway, high winds tore the roofs off of homes and other structures (including a high school in Drammen and a fire station in Buskerud County). Norwegian insurance companies noted that a large number of claims had been filed. In Iceland, emergency rescue officials responded to more than 400 damage reports – primarily due to blown off roofs and downed trees. At the Keflavik International Airport, a large hole was ripped at the Icelandair hangar which forced passengers to remain on their aircraft. Several main roads were forced to close due to the excessive wind and precipitation.

## Africa

Event Date	Event Name Or Type <sup>1</sup>	Event Location	# of Deaths <sup>2</sup>	# of Structures/ Claims <sup>2,3</sup>	Damage Estimates <sup>2,4</sup> (USD)
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No major natural disaster events occurred in Africa during the month of April.

## Asia

Event Date	Event Name Or Type <sup>1</sup>	Event Location	# of Deaths <sup>2</sup>	# of Structures/ Claims <sup>2,3</sup>	Damage Estimates <sup>2,4</sup> (USD)
4/4	Severe Weather	Bangladesh	17+	500+	Unknown
4/7	Earthquake	Japan	4+	Hundreds+	Unknown
4/9-4/15	Flooding	Kazakhstan	2+	9,000+	5.97+ million
4/10	Earthquake	Japan	3+	Dozens+	Unknown
4/11	Earthquake	China	0	5,900+	6.1+ million
4/17	Flooding	Indonesia	10+	Dozens+	Unknown
4/17-4/18	Severe Weather	China	0	3,200+	26.2+ million
4/22	Flooding	Philippines	14+	50+	Unknown
4/28-4/30	Sandstorm	China	0	21,000+	Unknown

A deadly tornado tore through northern towns in Bangladesh on the 4<sup>th</sup>, killing at least 17 people and injuring more than 150 others. The districts of Jamalpur, Thakurgaon, Sherpur, Mymensingh, Gaibandha, Joypurhat and Bogra were the most affected areas where hundreds of homes were destroyed, along with wide swaths of crops, trees and electrical poles.

A strong earthquake struck just offshore the northeastern Japan coastline on the 7<sup>th</sup>, briefly triggering a tsunami warning. The tremor, which was an aftershock to the magnitude-9.0 earthquake which occurred on March 11<sup>th</sup>, was registered as a magnitude-7.1 that struck at 11:32 PM local time (14:32 UTC) with an epicenter 66 kilometers (41 miles) east of Sendai, Japan. According to Japanese government officials, at least four fatalities and 141 injuries were blamed on the aftershock. Additional damage was reported to hundreds of structures and at least 24 fires burned in Iwate and Miyagi prefectures.

Days of heavy rain between the 9<sup>th</sup> and the 15<sup>th</sup> combined with melting snow to spawn widespread flooding across western Kazakhstan. At least two people died and more than 9,000 private homes and commercial buildings were damaged. According to government officials, at least 300 kilometers (186 miles) of roads and thousands of hectares (acres) of crops were also destroyed along with additional damage to dams, bridges, power lines, telephone lines and gas pipelines. Total economic damages were listed at KZT870 million (USD5.97 million).

A magnitude-6.6 shock struck at 5:16 PM local time (8:16 UTC) on the 10<sup>th</sup> with an epicenter 36 kilometers (22 miles) west of Iwaki, Japan. The tremor left at least three people dead and 10 others injured. According to Japanese officials, damage to homes and some structures occurred though it was primarily due to landslides triggered by the jolt.

A magnitude-5.1 temblor struck China's Sichuan Province at 5:02 PM local time (9:02 UTC) on the 11<sup>th</sup> with an epicenter in Luhuo County. No injuries or fatalities were reported. In terms of damage, more than 5,900 homes were severely damaged across 18 separate townships in the county. Total economic losses were listed at CNY40 million (USD6.1 million).

At least 10 people were killed and seven others were injured on the 17<sup>th</sup> in Indonesia's East Java province after heavy rains prompted a large landslide. An 80-meter (260-foot) cliff in Malang district collapsed as a group of people were searching for firewood.

A series of severe thunderstorms spawned large hail throughout southwestern China on 17<sup>th</sup> and 18<sup>th</sup>, killing at least 21 people and injuring 155 others. The provinces of Guangdong, Guizhou and Hainan were primarily affected, with the Ministry of Civil Affairs noting that more than 3,200 homes and thousands of hectares (acres) of farmland were damaged or destroyed by the hailstones. Total economic losses were listed at CNY171 million (USD26.2 million).

In the Philippines, at least 14 people were killed after a landslide struck a small mining area in Compostela province on the 22<sup>nd</sup>. Heavy rains in the days leading up to the slide caused soils to loosen in the region. Dozens of homes were also destroyed in the event.

Sandstorms swept across ten Chinese provinces between the 28<sup>th</sup> and the 30<sup>th</sup>, damaging or destroying at least 21,000 homes. Local government officials reported that the sandstorms also damaged thousands of hectares (acres) of crops.

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

Event Date	Event Name Or Type <sup>1</sup>	Event Location	# of Deaths <sup>2</sup>	# of Structures/ Claims <sup>2,3</sup>	Damage Estimates <sup>2,4</sup> (USD)
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No major disaster events occurred in Oceania during the month of April.

## APPENDIX

### Updated Jan. 2011 – Mar. 2011 Data

#### United States

Event Date	Event Name Or Type <sup>1</sup>	Event Location	# of Deaths <sup>2</sup>	# of Structures/Claims <sup>2,3</sup>	Damage Estimates <sup>2,4</sup> (USD)
12/31-1/1	Severe Weather	Midwest, Southeast	8+	10,000+	Millions+
1/7-1/12	Winter Weather	Midwest, Southeast, Northeast	11+	Thousands+	Millions+
1/17-1/24	Winter Weather	Plains, Midwest, Northeast, Tennessee Valley	10+	Thousands+	Millions+
1/24-1/26	Winter Weather	Southeast, Northeast, Mid-Atlantic	0	Thousands+	Millions+
1/31-2/2	Winter Weather	Midwest, Southeast, Northeast	36+	100,000+	1+ billion
2/2-2/6	Winter Weather	Plains, Southeast, Southwest	4+	45,000+	650+ million
2/20-2/21	Winter Weather	Midwest, Ohio Valley, Northeast	1+	4,000+	Millions+
2/24-2/25	Winter Weather	Midwest, Southeast, Northeast	4+	20,000+	225+ million
2/27-3/4	Wildfires	Texas	1+	241+	14.5+ million
2/27-2/28	Severe Weather	Southeast, Midwest, Mid-Atlantic	4+	45,000+	250+ million
3/5-3/7	Winter Weather	Southeast, Midwest, Northeast	1+	Thousands+	Millions+
3/7-3/9	Wildfires	New Mexico	0	60+	Unknown
3/8-3/11	Winter Weather	Southeast, Midwest, Northeast	4+	20,000+	200+ million
3/11	Tsunami	West Coast, Hawaii	1+	Hundreds+	88.4+ million
3/12-3/13	Wildfires	Oklahoma, Texas	0	67+	3+ million
3/20-3/23	Severe Weather	West, Southeast, Northeast	3+	Thousands+	27+ million
3/26-3/28	Severe Weather	Southeast	0	25,000+	225+ million
3/29-3/31	Severe Weather	Southeast	0	37,500+	350+ million

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

Event Date	Event Name Or Type <sup>1</sup>	Event Location	# of Deaths <sup>2</sup>	# of Structures/Claims <sup>2,3</sup>	Damage Estimates <sup>2,4</sup> (USD)
1/10-1/13	Winter Weather	Canada	0	Hundreds+	Unknown
1/11-1/15	Winter Weather	Mexico	16+	Unknown	Unknown
1/27-1/28	Winter Weather	Canada	0	Hundreds+	Unknown
2/1-2/2	Winter Weather	Canada	0	Dozens+	Unknown
2/15-2/16	Winter Weather	Canada	0	Dozens+	Unknown
3/7	Winter Weather	Canada	0	Hundreds+	20.6+ million

## South America

Event Date	Event Name Or Type <sup>1</sup>	Event Location	# of Deaths <sup>2</sup>	# of Structures/Claims <sup>2,3</sup>	Damage Estimates <sup>2,4</sup> (USD)
12/25-1/6	Flooding	Brazil	35+	30,000+	Unknown
1/1-3/5	Flooding	Bolivia	52+	25,000+	20+ million
1/10-1/14	Flooding	Brazil	902+	21,500+	1.2+ billion
1/20-1/31	Flooding	Brazil	6+	21,000+	Unknown
2/27	Landslides	Bolivia	0	400+	Unknown
3/10-3/14	Flooding	Brazil	10+	25,000+	Millions+
3/11	Tsunami	Chile, Peru	0	500+	Unknown

## Europe

Event Date	Event Name Or Type <sup>1</sup>	Event Location	# of Deaths <sup>2</sup>	# of Structures/Claims <sup>2,3</sup>	Damage Estimates <sup>2,4</sup> (USD)
1/9-1/14	Flooding	Germany, Poland, Czech Republic	5+	Thousands+	Millions+
1/29	Earthquake	Hungary	0	8,481+	5+ million
2/1-2/28	Winter Weather	Poland	29+	Unknown	Unknown

## Africa

Event Date	Event Name Or Type <sup>1</sup>	Event Location	# of Deaths <sup>2</sup>	# of Structures/Claims <sup>2,3</sup>	Damage Estimates <sup>2,4</sup> (USD)
1/1-1/31	Flooding	South Africa, Mozambique	136+	38,000+	495+ million
2/14-2/16	CY Bingiza	Madagascar, Mozambique	22+	35,729+	Unknown
3/27-3/31	Flooding	Namibia	62+	30,000+	15+ million

## Asia

Event Date	Event Name Or Type <sup>1</sup>	Event Location	# of Deaths <sup>2</sup>	# of Structures/Claims <sup>2,3</sup>	Damage Estimates <sup>2,4</sup> (USD)
1/1-1/31	Drought	China	0	Unknown	1+ billion
1/1-1/28	Flooding	Philippines	75+	5,729+	46.6+ million
1/1-1/24	Winter Weather	China	2+	150,000+	1.77+ billion
1/2-1/15	Flooding	Sri Lanka	43+	50,000+	500+ million
1/19	Earthquake	Pakistan	0	200+	Unknown
1/29-1/31	Flooding	Malaysia	5+	25,000+	Unknown
1/31-2/7	Flooding	Philippines	22+	2,598+	12.3+ million
2/1-2/10	Flooding	Sri Lanka	18+	27,497+	450+ million
2/1	Earthquake	China	0	678+	Unknown
2/3-2/17	Winter Weather	Afghanistan	25+	3,000+	Unknown

Event Date	Event Name Or Type <sup>1</sup>	Event Location	# of Deaths <sup>2</sup>	# of Structures/ Claims <sup>2,3</sup>	Damage Estimates <sup>2,4</sup> (USD)
2/11-2/13	Winter Weather	South Korea	0	1,000+	70+ million
3/10	Earthquake	China	26+	68,000+	16+ million
3/11	Earthquake	Japan	13,130+	223,000+	198- 309 billion
3/17-3/31	Flooding	Indonesia	13+	5,000+	Unknown
3/21-4/8	Flooding	Thailand	61+	609,679+	880+ million
3/24	Earthquake	Myanmar, Thailand	75+	3,194+	3.6+ million

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

Event Date	Event Name Or Type <sup>1</sup>	Event Location	# of Deaths <sup>2</sup>	# of Structures/ Claims <sup>2,3</sup>	Damage Estimates <sup>2,4</sup> (USD)
1/1-1/14	Flooding	Queensland	35+	49,400+	5.6+ billion
1/13-1/18	Flooding	Victoria	1+	6,609+	125+ million
1/23-1/24	Flooding	New Zealand	0	500+	11.4+ million
1/25-1/29	CY Wilma	Tonga, New Zealand	3+	1,000+	22+ million
2/3	STC Yasi	Australia	1+	59,990+	1.8+ billion
2/4-2/6	Severe Weather	Australia	0	38,984+	200+ million
2/5-2/6	Bushfire	Australia	0	410+	40+ million
2/16-2/22	STC Carlos	Australia	0	4,000+	15+ million
2/16-2/17	STC Dianne	Australia	0	Unknown	Unknown
2/22	Earthquake	New Zealand	172+	119,295+	7.5-11.3+ billion
2/28	Severe Weather	Australia	0	170+	1.02+ million
3/20-3/21	Flooding	New South Wales	1+	800+	3.7+ million

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

<sup>2</sup> As reported by public news media sources

<sup>3</sup> **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.

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

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Cat Alerts use publicly available data from the internet and other sources. Impact Forecasting® LLC summarizes this publicly available information for the convenience of those individuals who have contacted Impact Forecasting® LLC and expressed an interest in natural catastrophes of various types. To find out more about Impact Forecasting or to sign up for the Cat Reports, visit Impact Forecasting's webpage at [www.impactforecasting.com](http://www.impactforecasting.com).

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