

January 2010 Monthly Cat Recap – Impact Forecasting

Executive Summary

- Magnitude-7.0 earthquake in Haiti leaves at least 200,000 people dead
- Prolonged winter weather causes billions (USD) in damage across parts of the globe
- Flooding inundates parts of Africa, South America and Asia

January 2010 will long be remembered for one of history's most devastating natural disasters – the Haitian earthquake. The magnitude-7.0 event struck on January 12 and was followed by a massive global relief effort to assist the three million Haitians affected.

To date, it is estimated that the earthquake has claimed more than 200,000 lives, and while total economic losses amount to billions of US dollars, the insured loss figure is far smaller due to low insurance penetration in the region.

While Haiti grabbed world headlines for most of the month, other significant natural catastrophes occurred elsewhere.

On January 9, California suffered its own magnitude-6.5 earthquake off the northern coast, causing damage to 463 buildings with an estimated cost of USD43 million. In the Mexican state of Baja California, severe flooding was witnessed between January 18-22, which left three people dead and more than 800 homes damaged. Meanwhile, heavy rains in South America killed more than 150 people and damaged tens of thousands of homes in Brazil, Peru and Bolivia.

In Europe, a severe cold snap and extended winter weather affected several countries, claiming 276 lives – including 202 in Poland alone. In the UK, 29 people died during what was the longest cold period since 1981, and the economic loss was estimated at USD1.6 billion (GBP1 billion). Germany suffered nine deaths due to the cold weather, with an economic loss of around USD3 billion (EUR2 billion).

In parts of Africa and the Middle East, flash flooding was prevalent in January. In Kenya, around 30,000 homes were destroyed and at least 35 people killed during two consecutive weeks of heavy rains. In Egypt, 15 people were killed and nearly 2,000 buildings damaged due to severe floods.

During the month, Asia was struck by a range of natural catastrophes, with earthquakes affecting Tajikistan and the Solomon Islands, destroying more than 2,000 homes, while cold weather impacted China, South Korea and India, resulting in nearly 50 deaths.

Meanwhile, heavy rains impacted Pakistan, Indonesia, Israel, Jordan, and Australia – where more than 1,200 people were evacuated from their homes in New South Wales following a prolonged period of rain.

United States

Event Date	Event Name Or Type ¹	Event Location	# of Deaths ²	# of Structures/ Claims ^{2,3}	Damage Estimates ^{2,4} (USD)
1/2-1/13	Winter Weather	Southeast, Plains, Midwest, Northeast	25+	Unknown	1.2+ billion
1/9	Earthquake	Northern California	0	463+	43+ million
1/17-1/22	Severe Weather	California, Arizona, Pacific Northwest	10+	2,000+	3+ million
1/20-1/24	Severe Weather	Southeast, Tennessee Valley	1+	500+	Unknown
1/27-1/30	Winter Weather	Plains, Southeast, Mid-Atlantic	13+	1,000+	Unknown

Multiple winter storms between the 2nd and the 13th affected parts of the U.S. and Canada. The first storm system brought record amounts of snow to parts of New England and eastern Canada on the 2nd and 3rd. In Burlington, Vermont, a record 33 inches (84 centimeters) of snow fell over a 48-hour period, while over 15 inches (40 centimeters) of snow fell throughout Canada's Nova Scotia and Prince Edward Island. Behind the main front, temperatures plummeted throughout the Plains, Tennessee Valley and the Southeast in the U.S. By the 6th, a new storm system developed across the Plains and brought large amounts of new snow to the Northern Tier, Plains, Midwest and Great Lakes. Record cold temperatures settled in behind the front as winds gusting to 30 mph (50 kph) caused wind chills to drop to -52°F (-46°C) in North Dakota. Between the 8th and the 11th, the cold air sunk into the Southeast, and a state of emergency was declared in Florida as citrus farmers sought to protect their crops. Agriculturalists in Louisiana and Mississippi reported that economic losses from row crops exceeded USD800 million. In Florida, crop losses were in the hundreds of millions of dollars (USD). At least 25 fatalities occurred due to traffic accidents on icy roads and hypothermia.

An earthquake struck just off the northern California coastline on the 9th, causing widespread minor damage and knocking out electricity. The magnitude-6.5 quake struck at 4:27 PM local time approximately 23 miles (37 kilometers) west of Ferndale, California. At least 35 aftershocks ranging between magnitudes 2.7 and 4.4 rattled the same region in the hours and days after the main temblor. According to officials in Humboldt County, damages totaled USD43 million to 463 buildings, structures and roads, including 10 homes and one business that were destroyed. A spokesperson from Pacific Gas & Electric Company also said that over 36,000 power outages occurred immediately after the quake.

Multiple storm systems came ashore in California and spread into the Desert Southwest between the 17th and the 22nd, bringing much needed rain and snow to the drought-stricken region. At least 10 people were killed due to the inclement weather. A total of 1.3 million customers from Pacific Gas & Electric, Southern California Edison and San Diego Gas & Electric lost electricity as winds gusting between 70 and 93 mph (110 and 155 kph) led to downed power lines and tree branches. The storms also spawned at least six separate EF0 tornadoes that came ashore across parts of southern California. Widespread damage was reported due to flooding, landslides, mudslides and debris flows, and California authorities evacuated over 1,200 residents due to these conditions. As the areas of low pressure migrated eastward, heavy rains and snow covered the Desert Southwest, with flooding being reported in Arizona.

A series of winter storms crossed central sections of the United States between the 20th and the 24th. One system triggered an ice storm throughout the northern Plains and the Midwest as ice up to one-half-inch (1.3 centimeter) thick coated the region. At least one person was killed. Thousands of power outages were reported in Iowa and Illinois as the ice snapped power lines and tree branches. In the Southeast and the southern Plains, nearly 200 reports of tornadoes, large hail and damaging winds occurred. There were no reports of fatalities, though dozens of people were injured. At least 35 tornadoes touched down across parts of Texas, Louisiana, Florida, Alabama and Mississippi, causing widespread damage.

A winter storm developed on the 27th across the U.S. Desert Southwest before passing through the Tennessee Valley and the Mid-Atlantic States on the 30th. Multiple states of emergency were declared as heavy snow, freezing rain and ice covered the storm's path. At least 13 people were killed and over 500 more sustained injuries after hundreds of traffic accidents were reported. The weight of the ice and snow also snapped power lines and tree branches, leaving nearly one million customers without electricity across the Plains and the Southeast.

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)
1/2	Winter Weather	Canada	3+	Unknown	Unknown
1/12	Earthquake	Haiti	200,000+	350,000+	Billions+
1/18-1/22	Flooding	Mexico	3+	800+	Unknown

A massive magnitude-7.0 earthquake struck Haiti on Tuesday, January 12th. The earthquake and more than 50 aftershocks led to widespread catastrophic damage in the capital city of Port-au-Prince and in smaller towns surrounding the epicenter such as Jacmel, Carrefour, Léogâne, Petit-Goâve and Gressier. Fatality estimates from the United Nations, the International Red Cross and the Haitian government were 200,000, though authorities suggested that the final number may never be known. At least three million people, nearly one-third of Haiti's entire population, were affected by the earthquake. Total economic losses were estimated in the low digit single billions (USD), while insured losses were minimal due to limited amounts of insurance in Haiti.

Persistent areas of rain associated with multiple storm systems left at least three people dead and over 800 homes being flooded in Baja California between the 18th and the 22nd.

South America

Event Date	Event Name Or Type ¹	Event Location	# of Deaths ²	# of Structures/ Claims ^{2,3}	Damage Estimates ^{2,4} (USD)
1/1-1/7	Flooding	Brazil	100+	10,000+	145+ million
1/21-1/27	Flooding	Peru, Bolivia	30+	35,312+	200+ million

Heavy rains inundated southeastern sections of Brazil throughout the entire month of January, leaving over 100 people dead. In Rio de Janeiro state, the rains led to two mudslides in the town of Angra dos Reis that destroyed over 500 homes. Additional damage was reported throughout Sao Paulo state. According to local authorities, at least 10,000 homes were damaged or destroyed, leading to total economic losses of USD145 million (BRL250 million).

Six consecutive days of heavy rains triggered flash floods and landslides in parts of Peru and Bolivia between the 21st and the 27th, killing at least 30 people and injuring dozens more. In Cuzco, Aguas Calientes and Machu Picchu, at least 20 people were killed after drowning or being crushed by landslides. According to Peru's Civil Defense Service, at least 13,300 homes and nearly a dozen bridges were damaged or destroyed in the greater Cuzco region. The rains also led to vast areas of cropland being destroyed in Cuzco Province. Estimated crop losses and damage to infrastructure, homes and schools were listed at USD200 million (PEN584 million). In Bolivia, at least 10 people were killed and 22,000 homes were damaged or destroyed by the same system.

Europe

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	UK, Central Europe, Northern Europe	276+	1,100+	4.63+ billion
1/1-1/15	Flooding	Albania, Bosnia, Croatia	0	2,489+	8+ million

A prolonged weather pattern brought extreme cold and snow throughout parts of the UK, Norway, Denmark, Germany, France and Switzerland during nearly the entire month of January. In the UK, storms dumped around 19 inches (48 centimeters) of snow across the region. At least 29 people were killed in Britain from the longest cold period since 1981. Due to the weather, the Center for Economics and Business Research estimated that economic losses topped USD1.6 billion (GBP1 billion) in the UK alone. Elsewhere in Europe, the coldest temperatures since 1987 were recorded in Scandinavia. At Roros Airport in central Norway, a morning low of -42°F (-41°C) was recorded on the 6th. In northern Denmark, heavy snows stalled travel, while the bitter cold in Germany left at least nine people dead after morning lows dropped to -8°F (-22°C) in the eastern state of Saxony-Anhalt. Economic losses from the cold in Germany were estimated at nearly USD3 billion (EUR2 billion). In central Switzerland, at least seven people were killed after an avalanche occurred in the Swiss Alps. The cold was responsible for the deaths of at least 202 people in Poland, 11 in Romania, five in Bulgaria, four in Belgium, four in the Czech Republic, three in the Netherlands and two in Turkey.

Storm systems that brought extreme cold and winter weather to northern and central Europe between the 1st and the 15th also triggered flooding rains throughout Albania, Bosnia and Croatia. In northwest Albania, at least 2,489 homes sustained flood damage and along with nearly 10,500 acres (4,249 hectares) of farmland. At least USD540,000 (ALL52 million) was made available for aid. In Bosnia and central Croatia, widespread torrential rains and flooding has caused an artificial lake to overflow in Croatia's Kosiinj valley. Damage totals were estimated at USD7.4 million (BAM10 million).

Africa

Event Date	Event Name Or Type ¹	Event Location	# of Deaths ²	# of Structures/ Claims ^{2,3}	Damage Estimates ^{2,4} (USD)
1/1-1/15	Flooding	Kenya	35+	30,000+	57+ million
1/17-1/18	Flooding	Egypt	15+	1,856+	30.6+ million

Two consecutive weeks of heavy rains led to the drowning deaths of at least 35 people in Kenya during the beginning days of the year. According to Kenyan government officials, at least 70,000 people were affected by flash floods that inundated the Turkana East, Turkana South, Turkana Central, Laikipia West, Lower Subukia and Nyando regions of the country. Reports indicated that nearly 30,000 homes, schools, hospitals and bridges were destroyed and that 6,000 livestock died after multiple rivers, including the Nzoia and Ngare Narok, burst their banks. Vast tracts of crops were destroyed by the floodwaters and total damages to the agricultural and transportation infrastructures were estimated at USD57 million (KES4.5 billion).

Heavy rains flooded parts of the Middle East on the 17th and 18th. In Egypt, at least 15 people were killed in the Sinai Peninsula and in Aswan as severe thunderstorms and damaged at least 1,856 buildings and the electrical infrastructure. Total economic losses to infrastructure, crops and homes were estimated at USD30.6 million (EGP172 million).

Asia

Event Date	Event Name Or Type ¹	Event Location	# of Deaths ²	# of Structures/ Claims ^{2,3}	Damage Estimates ^{2,4} (USD)
1/2	Earthquake	Tajikistan	0	1,098+	1.5+ million
1/2-1/12	Winter Weather	China, South Korea, India	43+	100,000+	29+ million
1/3-1/9	Earthquake	Solomon Islands	0	1,000+	Unknown
1/4	Landslide	Pakistan	19+	332+	50,000+
1/9	Flooding	Indonesia	3+	5,713+	Unknown
1/17-1/18	Flooding	Israel, Jordan	2+	163+	Millions+
1/17-1/23	Winter Weather	China	20+	31,000+	94+ million
1/21	Flooding	Indonesia	8+	2,000+	Unknown
1/31	Earthquake	China	1+	4,910+	4.4+ million

A magnitude-5.3 earthquake occurred in Tajikistan on the 2nd about 50 miles (75 kilometers) north of Khorugh. At least 1,098 mostly mud dwellings were damaged or destroyed across 20 separate villages in the Pamir Mountains, with most damage coming in the Vanj district. According to the Emergency Services and Civil Defense Committee, at least USD1.5 million (TJS6.6 million) in economic damages occurred. No injuries or fatalities were reported.

Winter weather affected parts of China, South Korea and India between the 2nd and the 12th. In China, Beijing recorded its coldest morning low temperature in 40 years as temperatures dropped to 1°F (-17°C) on the 6th. Heavy snow fell across 12 provinces and autonomous regions, damaging or destroying at least 100,000 homes and killing four people. The damage totaled USD29 million (CNY200 million) in economic loss. In South Korea, record amounts of snow blanketed the country on the 3rd and 4th. According to the Korea Meteorological Administration, at least 10 inches (26 centimeters) of snow fell in Seoul, which led to the closure of 46 main roads. In India, at least 39 people died in the Nepal region after an extended cold period engulfed the country.

A series of earthquakes rattled the Solomon Islands in western sections of the Pacific Ocean between the 3rd and the 9th, including one tremor which triggered a moderate tsunami. At least 30 separate temblors struck the region, the strongest measuring 7.2 on the Richter Scale. Reports from the islands indicated that no injuries or fatalities occurred, though Solomon Island's National Disaster Management Office reported widespread property damage throughout two islands in Western Province (Rendova and Tetepare). Following the primary tremor, a tsunami impacted Rendova Island as a tidal wave of six to ten feet (two to three meters) washed through at least three separate villages. Official damage reports indicated that over 1,000 homes were damaged or destroyed on Rendova and Tetepare.

Heavy rains triggered a series of landslides in Pakistan on the 4th, killing at least 19 people. The landslides damaged or destroyed 332 homes in Hunza Valley of Gilgit Baltistan Province. Debris from the damaged homes eventually clogged the Hunza River and led to additional coastal flooding. Local agencies donated USD50,000 (PKR4.3 million) for relief efforts.

Heavy rains killed at least nine people in Indonesia on the 9th. The monsoonal rains triggered floods that left at least 5,713 homes damaged or destroyed in Pasuruan, East Java.

In Israel and Jordan, rains on the 17th and 18th flooded at least 163 homes in the Gaza Strip as two people drowned. According to regional officials, some parts of the Gaza Strip sustained floodwaters at upwards of 10 feet (three meters). Local farmers reported millions of dollars (USD) in damage to crops and equipment.

Heavy snow and extreme cold covered northwest sections of China between the 17th and the 23rd, primarily in Xinjiang Province and Mongolia. At least 20 people were killed and 1,304 others were injured, and over 128,891 homes were damaged or destroyed. According to Chinese meteorologists, at least three feet (90 centimeters) of snow fell in Xinjiang, while most of Mongolia received nearly 20 inches (50 centimeters) of snow. There were isolated reports of over six feet (two meters) of snow in Halahate and Zuhlagai. Additionally, overnight temperatures plummeted to -45°F (-43°C). Officials from the Regional Civil Affairs Department reported that economic losses and relief costs were USD94 million (CNY640 million).

Monsoonal rains led to the deaths of at least eight people in Indonesia on the 21st. The rains, which caused the Rante Limbong River to burst its banks in Sulawesi Province, damaged at least 2,000 homes throughout five separate villages. The flash floods cut off access to roads and shut down telecommunications.

A magnitude-5.0 earthquake struck China's Sichuan Province on the 31st, killing at least one person. The tremor damaged or destroyed 4,910 homes across eight separate townships in the province. Total economic losses were estimated at USD4.4 million (CNY30 million).

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)
1/1-1/15	Flooding	New South Wales, Queensland	2+	Unknown	3.2+ million
1/22	CY Magda	Western Australia	0	Unknown	Unknown
1/24-1/30	CY Olga	Queensland	0	Unknown	Unknown

Flooding occurred in parts of Australia between the 1st and the 15th, particularly in the Coonamble and Bourke districts in New South Wales after the Castlereagh and Darling rivers overflowed their banks. At least 1,200 residents in Coonamble were forced to evacuate their homes as water submerged main roads in the town, leaving dozens of properties and large areas of farmland isolated. According to the State Emergency Service, at least USD3.2 million (AUD3.5 million) in damage occurred to roads and approximately 300 rural farm properties. In southwest Queensland, damage was reported along the Thomson and Barcoo rivers from flooding as well.

Cyclone Magda came ashore at Collier Bay in Western Australia on the 22nd as a 70 mph (110 kph) storm. According to local officials, Magda caused some light infrastructure damage to buildings along the Kimberley coast, but the damages were minimal.

Cyclone Olga made two separate landfalls in Queensland, Australia. The first landfall occurred on the 24th near Cape Tribulation as a 40 mph (65 kph) system, while the second and final landfall occurred just west of Karumba on the 30th. Olga brought drenching rains to northern sections of the state, but did not cause any significant damage.

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

² As reported by public news media sources

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 and financial institution press releases. These estimates can include insured or economic losses.

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