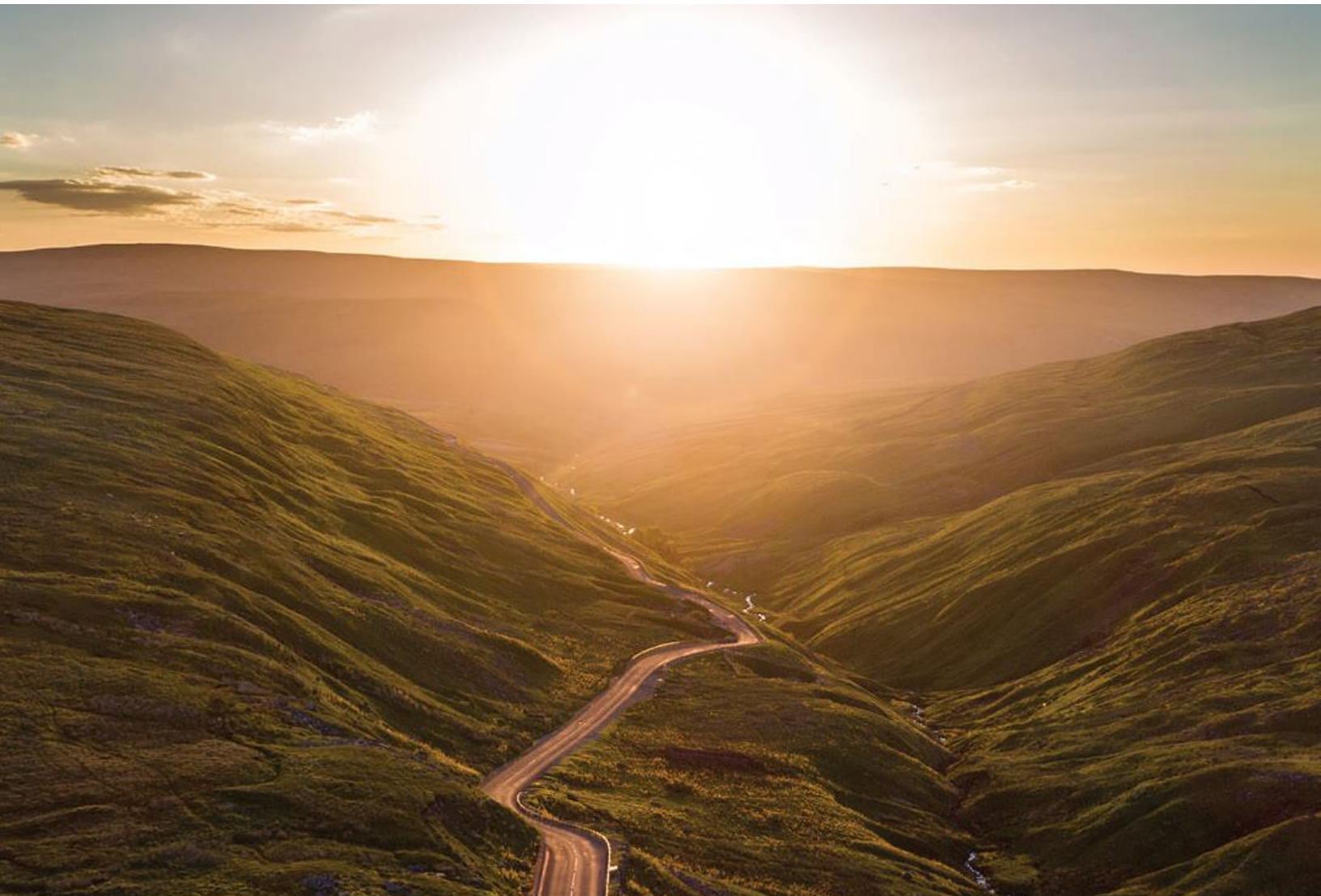
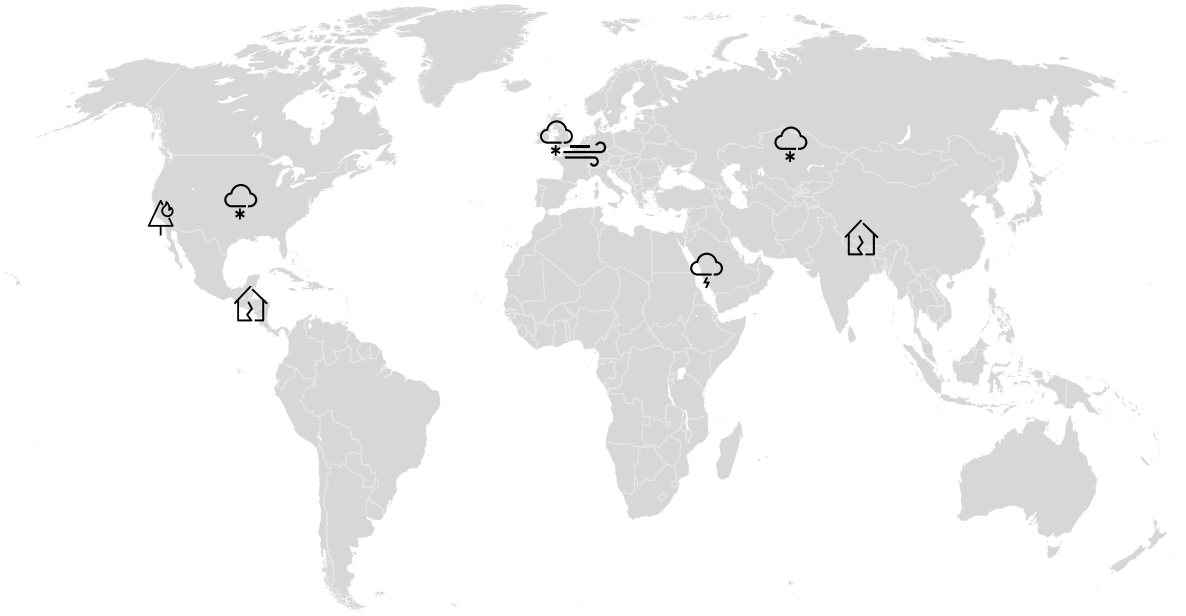
Weekly Cat Report

January 10, 2025



Executive Summary



Event	Affected Region(s)	Fatalities	Economic Loss ($)	Page
Wildfire	United States	10	Billions	3
Winter Weather & SCS	United States	10	100s of millions	8
Earthquake	China, Nepal	126	100s of millions	10
WS Floriane & Flooding	Western & Northern Europe	1	100s of millions	12
Earthquake	El Salvador	0	Millions	14
Severe Convective Storm	Saudi Arabia	0	Negligible	14
Winter Weather	Kazakhstan	0	Millions	14

Please note that any financial loss estimate is preliminary and subject to change. These estimates are provided as an initial view of the potential financial impact from a recently completed or ongoing event based on early available assessments. Significant adjustments may inevitably occur. All losses in US dollars ($) unless noted otherwise.

Along with this report, we continue to welcome users to access current and historical natural catastrophe data and event analysis on Impact Forecasting's Catastrophe Insight website: http://catastropheinsight.aon.com

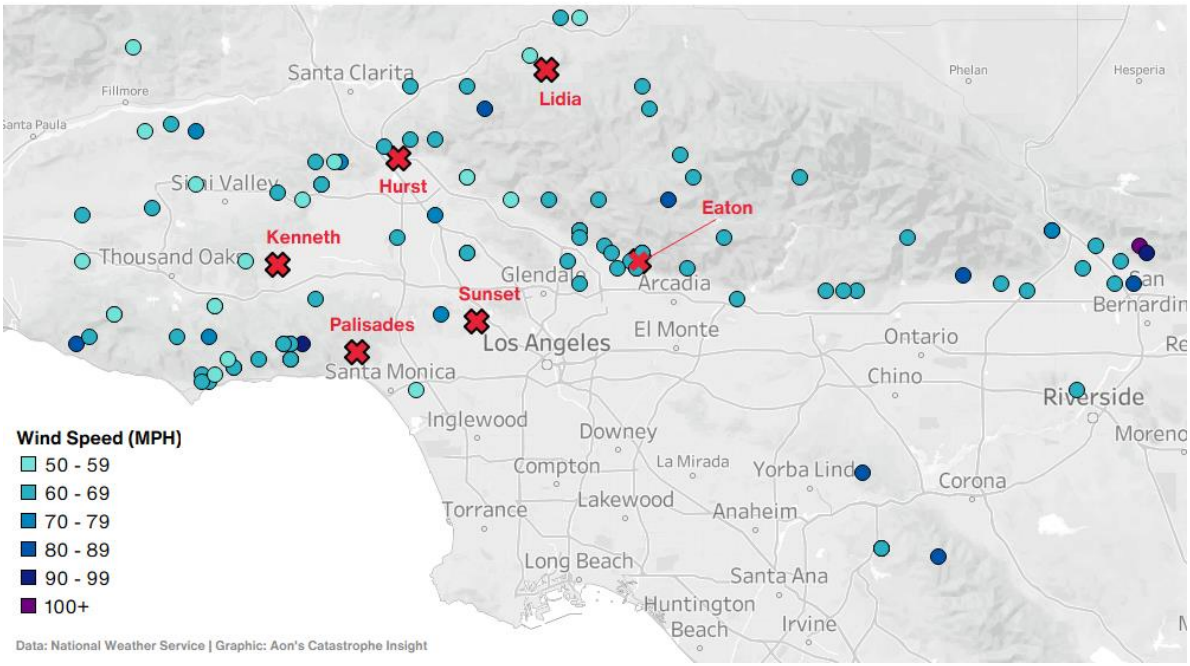
United States: Wildfire

Overview

This week, parts of southern California were devastated by a powerful windstorm and subsequent destructive wildfires. Widespread gusts exceeding 60 mph, along with dry conditions, helped spread at least six fires across Los Angeles County. The largest blaze, the Palisades Fire, caused catastrophic damage in the affluent Pacific Palisades community, burning down thousands of structures. More catastrophic damage was seen across Altadena and Pasadena due to the Eaton Fire. As of 01:00 am local time on January 10, at least 10 people were killed and approximately 10,000 structures are estimated to be damaged or destroyed. Tens of thousands were evacuated, nearly 2 million residents suffered power outages, and total economic and insured losses will almost certainly reach into the billions USD, possibly higher, with pending further damage assessments. The event will most likely end up as one of the costliest wildfires in California history.

Meteorological Recap

Southern California Wind Measurements (January 7-8, 2024)



From January 6-9, a slow-moving upper-level trough over the western United States helped produce a powerful, multi-day wind event over much of southern California. The positioning of this trough and subsequent surface high-pressure system drove intense and consistent offshore winds, creating a phenomenon commonly referred to as a **Santa Ana Wind Event**. As a result, much of southern California experienced wind gusts exceeding 60 mph (95 kph), especially Los Angeles, San Bernardino, Riverside, Orange, and San Diego counties.

Additionally, this same area is currently experiencing a prolonged period of **below-average rainfall**. Since June 2024, downtown Los Angeles and much of the surrounding area have recorded less than 1 inch (25 mm) of rain, according to the National Weather Service (NWS). This has pushed most of the Los Angeles and San Diego metro area into a severe drought stage, as currently indicated by the U.S. Drought Monitor. The combination of dried-out soils and vegetation, along with intense winds, created ideal wildfire conditions for much of southern California, prompting the NWS to issue red flag warnings.

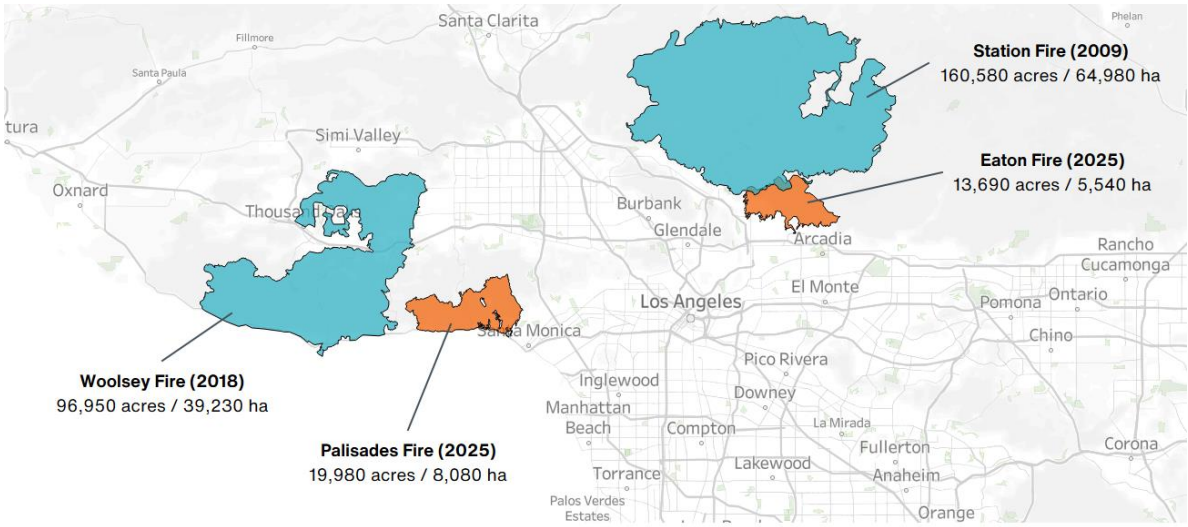
Beginning on January 7, a number of brushfires ignited across Los Angeles County. The first blaze, the **Palisades Fire**, started in the Pacific Palisades neighborhood of Los Angeles proper. Intense wind gusts allowed the fire to explode in size across the Santa Monica Mountain Range to nearly 20,000 acres (8,100 hectares) within just two days. By late January 9, the Palisades Fire had spread to Topanga and the eastern portions of Malibu, and was only 6% contained, according to Cal Fire.

Another brushfire, the **Eaton Fire**, also began on January 7 within the southern portion of the San Gabriel Mountain range just northeast of downtown Los Angeles. Embers from this blaze quickly spread to the surrounding areas, including the nearby communities of Altadena and Pasadena. As of late January 9, the Eaton Fire has consumed 13,700 acres (5,500 hectares) of land and was 0% contained.



Three other, smaller fires are also currently burning across Los Angeles County. The **Hurst, Lidia, and Kenneth fires** are each less than 1,000 acres (400 hectares) in size, and officials have made progress on containing portions of the Hurst and Lidia fires. A number of other brushfires, including the Sunset and Woodley fires, briefly appeared and were quickly contained by firefighters.

Historical Comparison



Data: LACoFD & NIFC

The Santa Monica Mountains, the area around the Palisades Fire, has experienced numerous brushfires in the past. Very recently in December 2024, the Franklin Fire burned over 4,000 acres (1,600 hectares) around Malibu and damaged roughly 50 structures. A more infamous example is the Woolsey Fire from November 2018. Compared to the Palisades fire, the Woolsey fire burned significantly more land and impacted more of the central and western portions of the Santa Monica Mountains. This incident destroyed over 1,600 structures, resulting in nearly $7 billion in damages (2024 USD).

Similarly, many brushfires have burned across the San Gabriel Mountains in recent memory. One prominent example is the Station Fire, which ignited in August 2009 near the current site of the Eaton Fire. However, the Station Fire consumed over 160,000 acres (64,700 hectares) of land, which is over 10x larger than the current extent of the Eaton Fire. Furthermore, the Station Fire still remains as the largest wildfire incident ever in Los Angeles County history.

The windstorm which fuelled this week's brushfires is not without precedent either. Back in late November 2011, another similar wind event impacted the San Gabriel Valley. While no wildfires ignited, the quick burst of strong winds seen in November 2011 similarly produced widespread gusts exceeding 60 mph (95 kph), resulting in over 350,000 customers losing power, some for over a week.

Event Details

The damage resulting from the Palisades and Eaton fires has been catastrophic for Los Angeles County. Significant portions of the Pacific Palisades, Topanga, and Malibu communities have been burned down by the Palisades Fire. According to preliminary estimates from local officials, at least 5,300 structures have been destroyed in these communities. Similarly, the Eaton Fire has caused immense destruction

across Altadena and adjacent portions of Pasadena. The latest preliminary figures include between 4,000-5,000 structures damaged or destroyed as a result of the Eaton Fire.

As of January 10, at least 10 people have been killed, with the death toll likely to climb in the coming days. Mandatory evacuation orders have been issued for at least 180,000 people across several communities. The severity of the multiple brushfires has put a large strain on the Los Angeles city and county fire departments as nearly 4,000 emergency calls are being submitted daily. Additionally, fire suppression efforts were greatly hindered, particularly on January 7-8, due to intense winds. As a result, a major disaster declaration was issued by the federal government, and additional fire personnel from outside of Los Angeles County were deployed to combat the ongoing fires.

According to PowerOutage.us, as many as 1.9 million customers lost power during the windstorm and wildfire event, some due to planned public safety power shutoffs. At one point on January 8, over half of all customers in Ventra County and over a quarter of all customers in Los Angeles and San Bernardino counties lost power. Additionally, alerts for significant water contamination were issued for areas supplied by the Pasadena Water and Power Water System, primarily due to the Eaton Fire. Residents around Topanga and Malibu were also issued boil water notices as a result of the Palisades Fire.

The NWS has extended the duration of their red flag and high wind warnings for much of Los Angeles and Ventura counties through late January 10 due to continued high wind speeds. Given the potential for additional wildfire spread, any further fire developments in southern California will be covered in the next Weekly Cat Report.



Palisades Fire in Los Angeles County, California
Source: LA County FD Lifeguard Division (left), CA Highway Patrol West Valley (right)

Financial Loss

Total economic and insured losses between all fires in the past week are virtually certain to reach into the billions USD, as the estimated number of damaged or destroyed structures currently stands at

10,000 and relatively high-value properties can be typically found in the area. Majority of the loss was expected to come from residential property.

With firefighting operation still ongoing, damage assessments in the coming weeks will reveal the full scale of destruction and the loss figures will continue to evolve over months to come. Regardless, the aggregate impacts seen in LA County will likely make this event one of, if not the, costliest wildfire event in U.S. history.

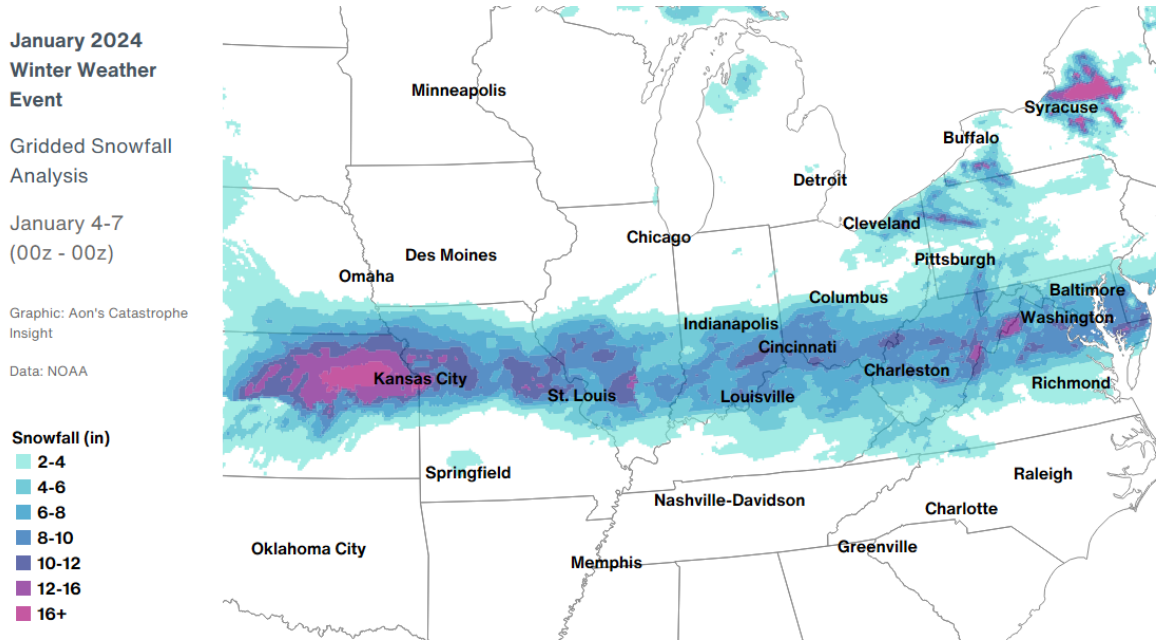
Date	Event Name	State	Economic Loss (2024 $ bn)
Nov 2018	Camp Fire	California	12.5
Oct 2017	Tubbs Fire	California	11.1
Nov 2018	Woolsey Fire	California	5.3
Aug 2023	Lahaina/Maui Fires	Hawaii	4.4
Oct 1991	Oakland (Tunnel) Fire	California	3.9

United States: Winter Weather & SCS

Overview

A major winter storm affected a large area spanning from the central Great Plains to the Mid-Atlantic region on January 4-6. Historic snowfall was seen across parts of Kansas and Missouri, while several other states recorded a mix of heavy snow and ice. Several large cities were heavily impacted, including Kansas City, Louisville, Richmond, and Washington DC. At least 10 people were killed and dozens more were injured, primarily due to a large volume of vehicle accidents. Total economic and insured losses may reach into the hundreds of millions USD.

Meteorological Recap



A major winter storm affected a large area spanning from the central Great Plains to the Mid-Atlantic region on January 4-6. Historic snowfall was seen across parts of Kansas and Missouri, while several other states recorded a mix of heavy snow and ice. Several large cities were heavily impacted, including Kansas City, Louisville, Richmond, and Washington DC. At least 10 people were killed and dozens more were injured, primarily due to a large volume of vehicle accidents. Total economic and insured losses may reach into the hundreds of millions USD.

The storm's heaviest snowfall in decades was recorded in some locations. Kansas City experienced 11 inches (280 mm) of snow on January 5 alone, marking the heaviest snowstorm for the city in over 30 years and the 4th heaviest on record. Topeka, Kansas recorded over 14 inches (355 mm) of snow on January 5, which was their 3rd largest single-day snow total on record. Locations in at least 6 states—Kansas, Missouri, Illinois, Indiana, Maryland, and Delaware—measured over 1 foot (305 mm) of snow.

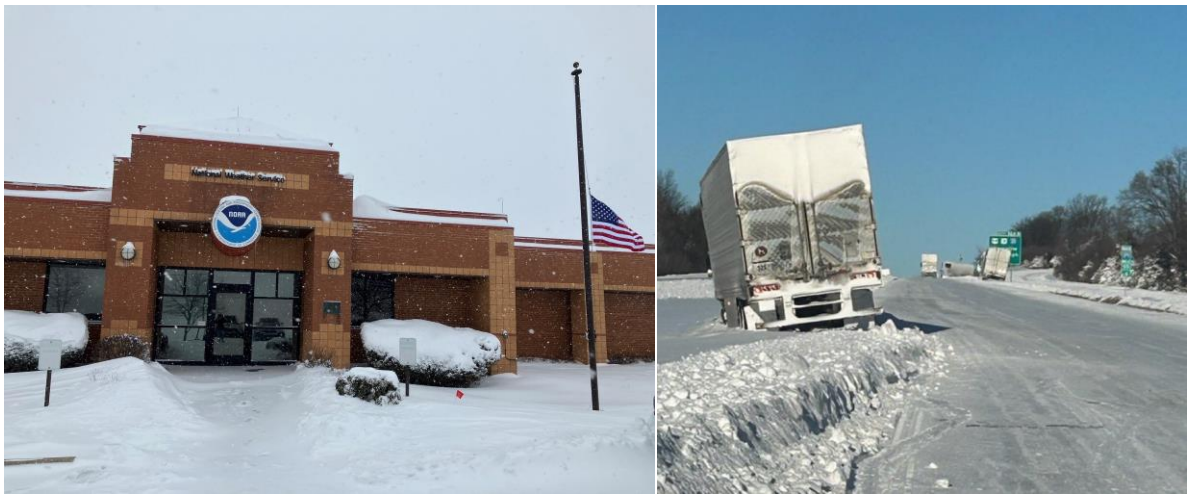
In addition to the snowfall, a massive ice storm affected the region, causing widespread disruptions. Louisiana, Arkansas, and Mississippi experienced localized severe weather, including an EF-2 tornado in Louisiana's Union Parish. Following the winter storm, an outbreak of cold air impacted most of the central and eastern U.S., including many southern states, further complicating the situation. The Northeast U.S. also experienced a lake-effect snow event. Another winter storm is set to impact the southern Great Plains and Southeast U.S. on January 9-10, with the largest impacts expected across Texas, Oklahoma, and Arkansas.

Location	Snow Total (in /mm)
Chapman, KS	20.5 / 520
Topeka, KS	17.0 / 432
Saint Joseph, MO	13.0 / 330
Waldorf, MD	12.4 / 315
Palmyra, IN	12.0 / 305
Georgetown, DE	12.0 / 305
Kansas City, MO	10.0 / 254

Event Details

The recent winter storm caused significant disruptions across several states, resulting in at least 10 fatalities and hundreds of vehicle accidents. Virginia alone reported over 200 accidents. Power outages affected around 350,000 residents, and states of emergency were declared in six states, including Missouri, Arkansas, and New Jersey. Washington, D.C. also declared a snow emergency.

In Missouri, the state highway patrol reported over 3,100 calls for help, nearly 1,800 stranded motorists, and over 430 accidents, leading to 38 injuries. Major cities like Louisville, Richmond, and Washington, D.C. experienced significant impacts from the storm.



Heavy snowfall across Ohio (left) and Missouri (right)
Source: NWS Wilmington, OH (left), Missouri State Highway Patrol (right)

Financial Loss

Widespread impacts of the winter storm resulted in notable disruptions and property damage. The event has a potential to result in economic and insured losses in the hundreds of millions USD.

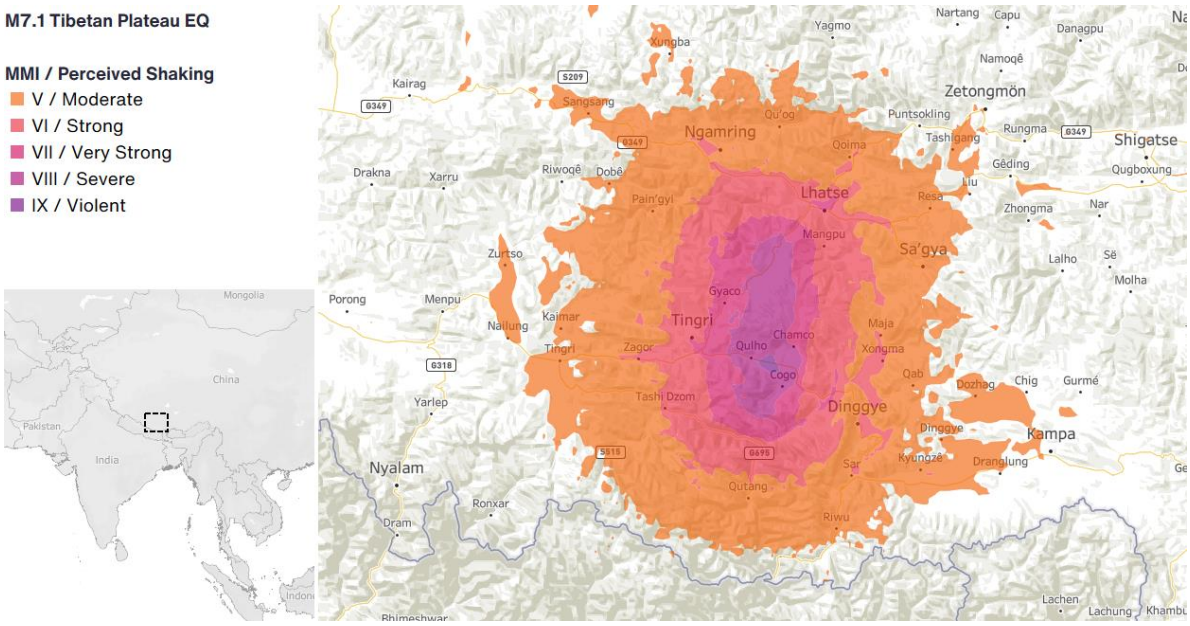
China, Nepal: Earthquake

Overview

A magnitude-7.1 earthquake jolted southwestern China and Nepal on January 7. As of this writing, at least 126 fatalities have been confirmed with another 350 individuals injured as a result of the quake. Significant structural damages were also reported across the affected region, leading to potential economic losses estimated in the hundreds of millions USD, possibly higher.

Seismological Recap

On January 7, a magnitude-7.1 earthquake occurred in the Tibetan Plateau, southwestern China, as the result of normal faulting at shallow depths (10 km / 6.2 miles) north of the boundary between Eurasia and Indian plates, according to the USGS. The China Earthquake Networks Center reported a magnitude of 6.8 for this event.



The region near the India-Eurasia plate boundary has experienced significant earthquakes historically. In the last century, there have been 10 earthquakes of magnitude 6 or greater within 250 km (155 miles) of this recent event. Notable examples include the April 2015 sequence with a M7.8 main shock and a M7.3 aftershock, which caused thousands of fatalities and widespread damage.

Event Details

As of January 10, at least 126 people have died while another 337 were injured in the **Tibet Autonomous Region** of southwestern China, and another 13 people were injured in **Nepal**. These figures are likely to increase as rescue operations continue. The number of trapped and missing people remains unclear.

The most extensive property and infrastructural damage was concentrated across the China's counties of **Tingri**, **Lhatse** and **Sa'gya**. Total count of affected structures is uncertain. The latest media reports claim about 3,600 structures collapsed, along with thousands more damaged.

Modified Mercalli Intensity (MMI)	Perceived Shaking	Exposed Population
IV	Light	131,000,000
V	Moderate	147,000
VI	Strong	61,000
VII	Very Strong	28,000
VIII	**Severe**	**7,000**
IX	**Violent**	**3,000**

Financial Loss

The USGS PAGER methodology estimates a 53 percent probability that economic losses will reach billions USD, but it is too early to determine the exact losses since damage assessments are still ongoing and number of damaged structures is not clearly specified at this moment.

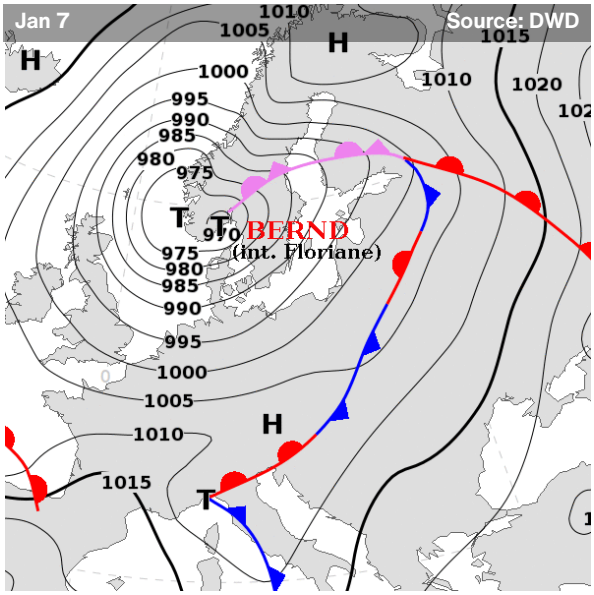
Western & Northern Europe: Windstorm Floriane

Overview

An active weather pattern involving successive low-pressure systems has continued to affect parts of Western and Northern Europe since the beginning of the new year. Recently, Windstorm Floriane caused moderate impacts, including strong winds that resulted in material damage, particularly in Germany and France. Heavy rains led to renewed flooding in parts of the United Kingdom, while wintry conditions disrupted traffic across the entire region. Total economic losses are anticipated to reach hundreds of millions EUR.

Meteorological Recap

Windstorm **Floriane**, internationally named by Météo-France, but initially named **Bernd** by FU Berlin, brought severe weather conditions, primarily strong winds, heavy rainfall and snowfall to parts of Western and Northern Europe between January 5 and 7. Orange warnings due to snow and ice were in effect in parts of Ireland and the Central United Kingdom. National meteorological agencies issued yellow wind and snow warnings also in France, Germany, Belgium, the Netherlands, Denmark and elsewhere.



Heavy rainfall generated by Floriane together with localized snowmelt increased the risk of flooding across the UK. As of January 6, there were more than 180 flood warnings and over 300 flood alerts in effect across England, UK.

Event Details

The storm and its associated hazards impacted the United Kingdom, Germany and France. In UK's Lincolnshire and Leicestershire, major incidents were declared as local fire brigades received hundreds of calls regarding flooding, leading to the rescue of dozens of individuals. One flood-related fatality was reported in the UK.

In Ireland, tens of thousands of homes and businesses experienced power outages due to the storm. Snow and freezing rain created hazardous travel conditions, with widespread road closures, delays to public transport, and widespread power outages across the region. Prague International Airport, Czech Republic, stopped operating due to ice accumulation on January 5.



Flood impacts in England - Meadow Mill (left) and Leicester (right)
Source: Stockport Council, Leicestershire Fire and Rescue Service

Financial Loss

Floriane (Bernd) resulted in moderate damage related to strong winds and flooding. Initial estimates suggest that total losses could potentially reach hundreds of millions EUR, with the majority of losses in Germany, France and the Benelux.

Natural Catastrophes: In Brief

Earthquake (El Salvador)

A magnitude-6.2 earthquake struck 51 km (32 mi) SSE of La Libertad city, El Salvador, on January 5. Approximately 147,000 people experienced strong shaking. While no immediate reports of damage or casualties were noted, USGS's PAGER estimates economic losses in the millions USD.

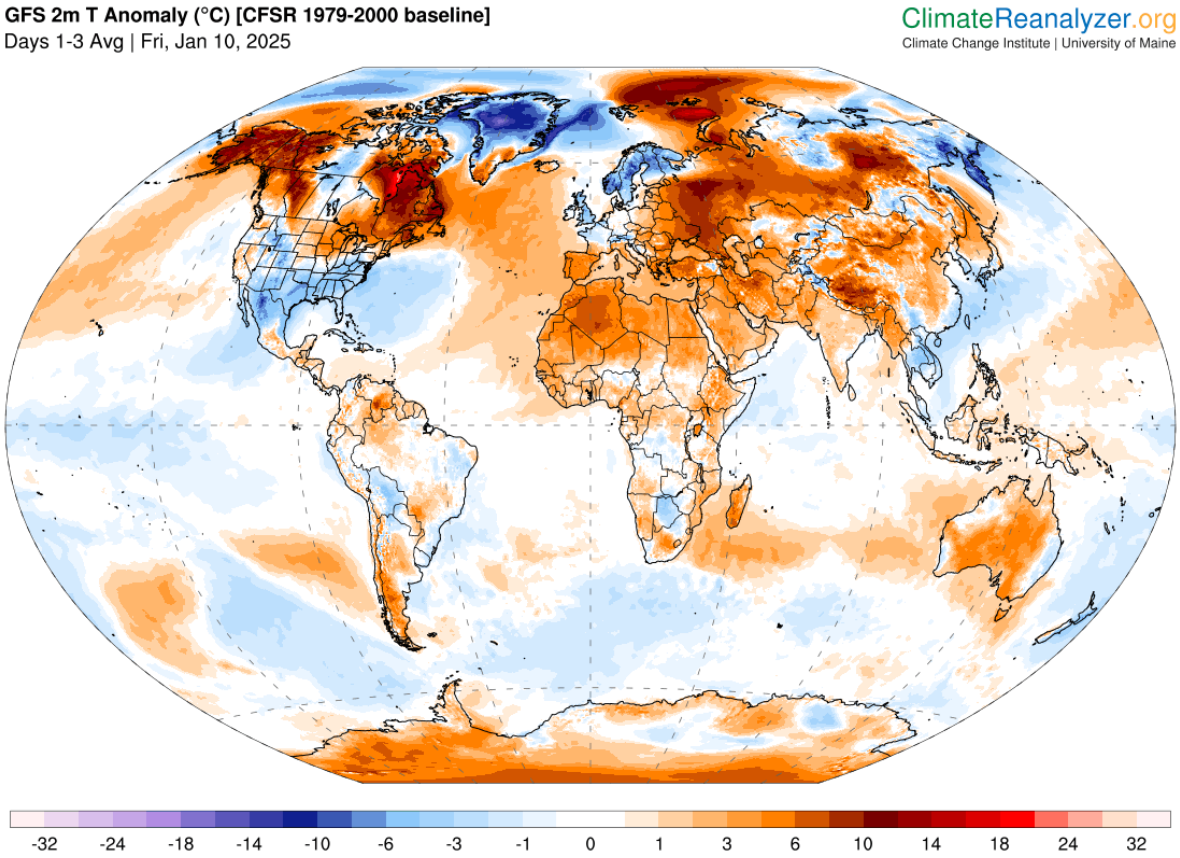
Severe Convective Storm (Saudi Arabia)

On January 6, several regions in southwestern Saudi Arabia experienced severe thunderstorms accompanied by heavy rainfall, large hail, strong wind gusts, tornadoes, and localized flash flooding. The regions most affected included Jeddah, Makkah, Riyadh, and Al-Baha. Pre-event warnings and safety instructions issued by local authorities played a significant role in mitigating the overall impacts of these storms.

Winter Weather (Kazakhstan)

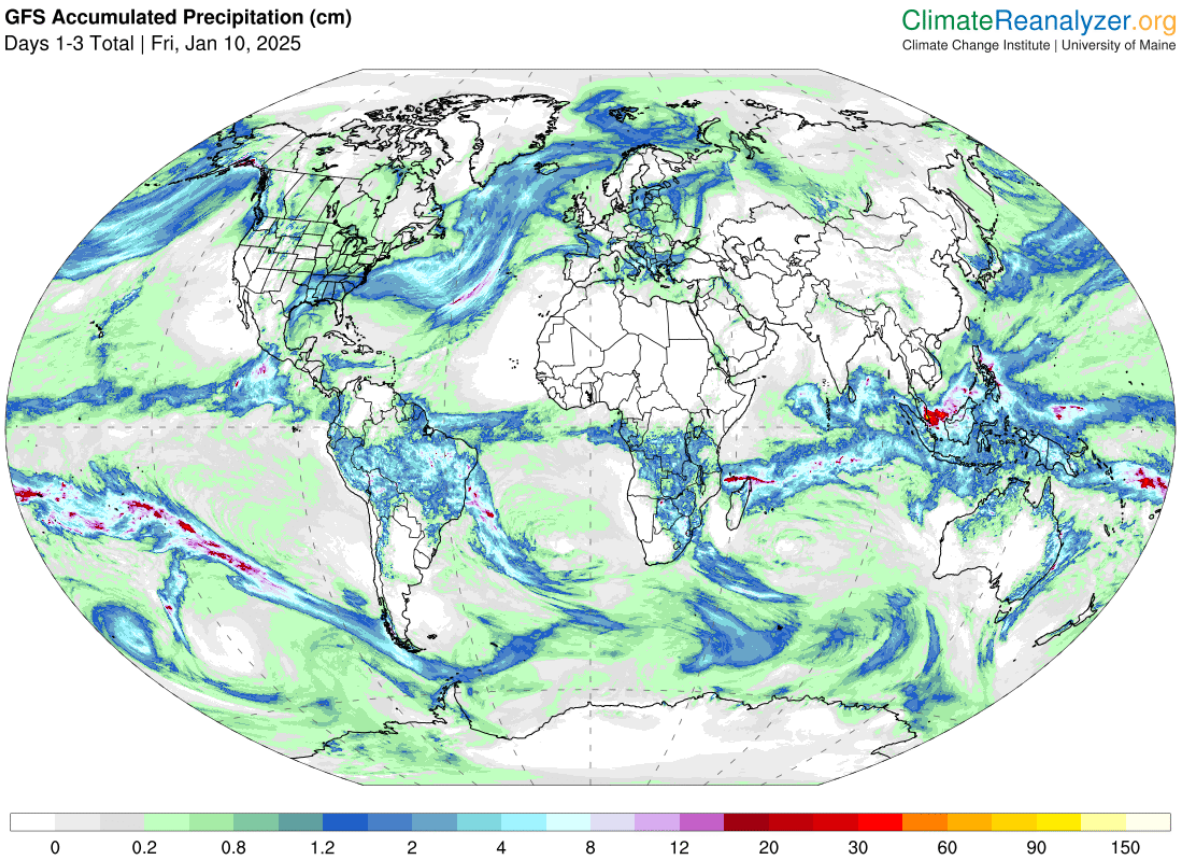
A snowstorm on January 3 caused a 100-car pileup on Kazakhstan’s Astana-Petropavlovsk National Highway, resulting in injuries to at least 12 individuals.

Global Temperature Anomaly Forecast



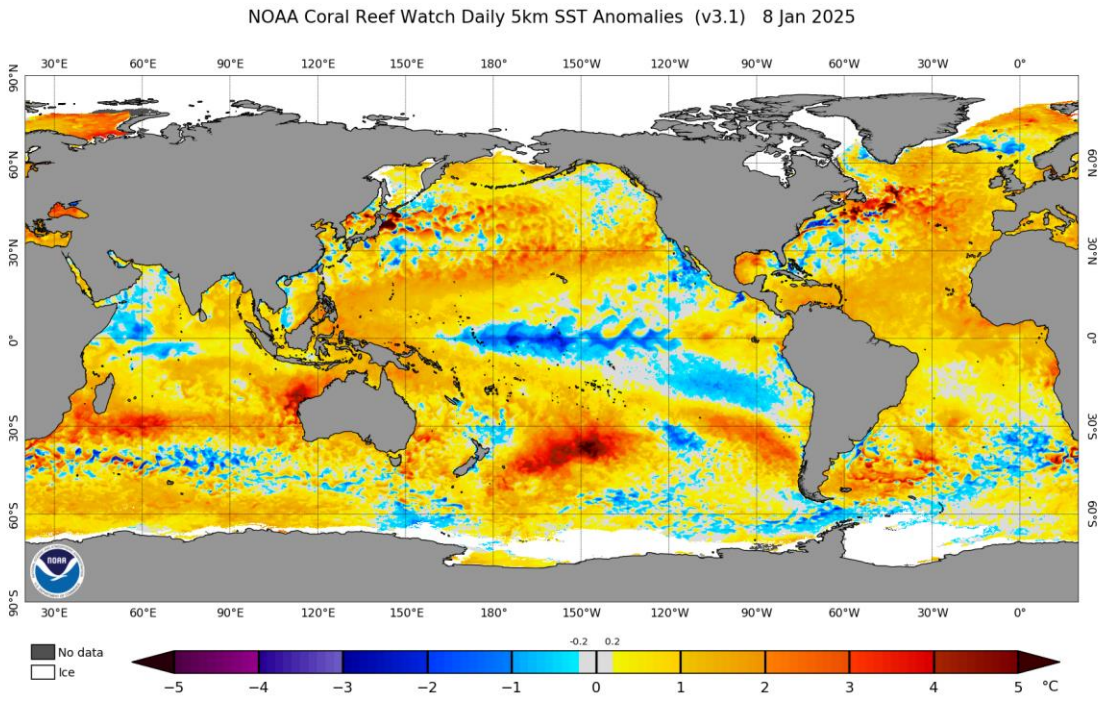
Source: Climate Reanalyzer, Climate Change Institute, University of Maine, USA

Global Precipitation Forecast

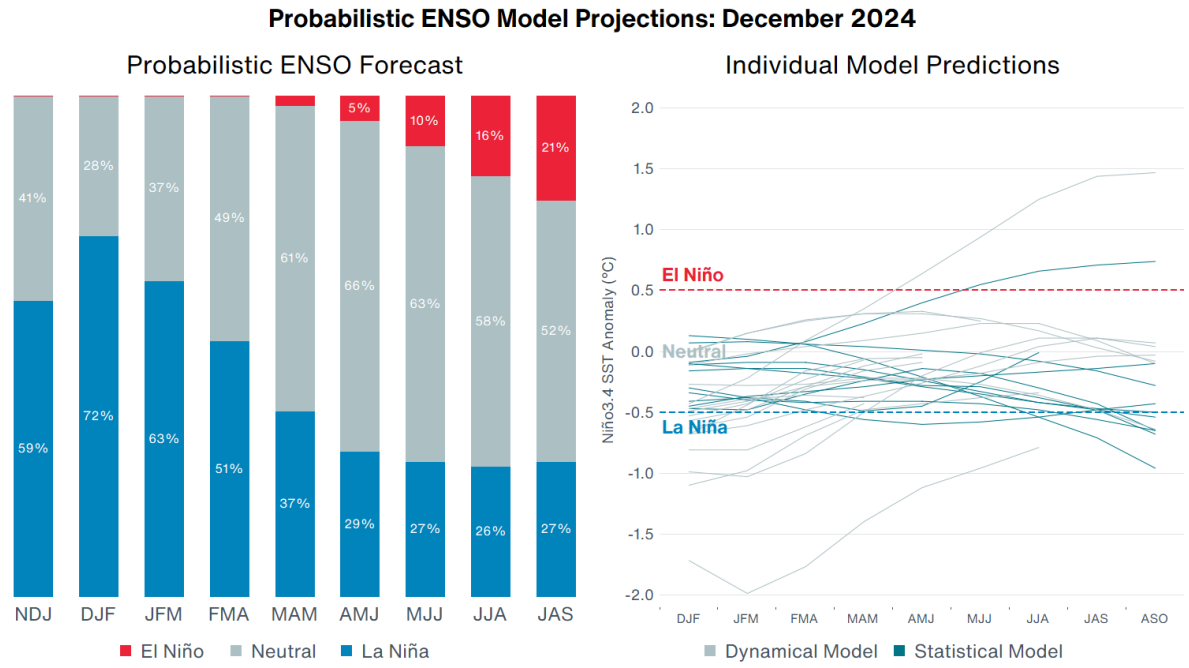


Source: Climate Reanalyzer, Climate Change Institute, University of Maine, USA

Weekly Sea Surface Temperature (SST) Maps (°C)



El Niño-Southern Oscillation (ENSO)



El Niño: *Warm phase of an ENSO cycle. Sea surface temperatures of +0.5°C occur across the east-central equatorial Pacific.*

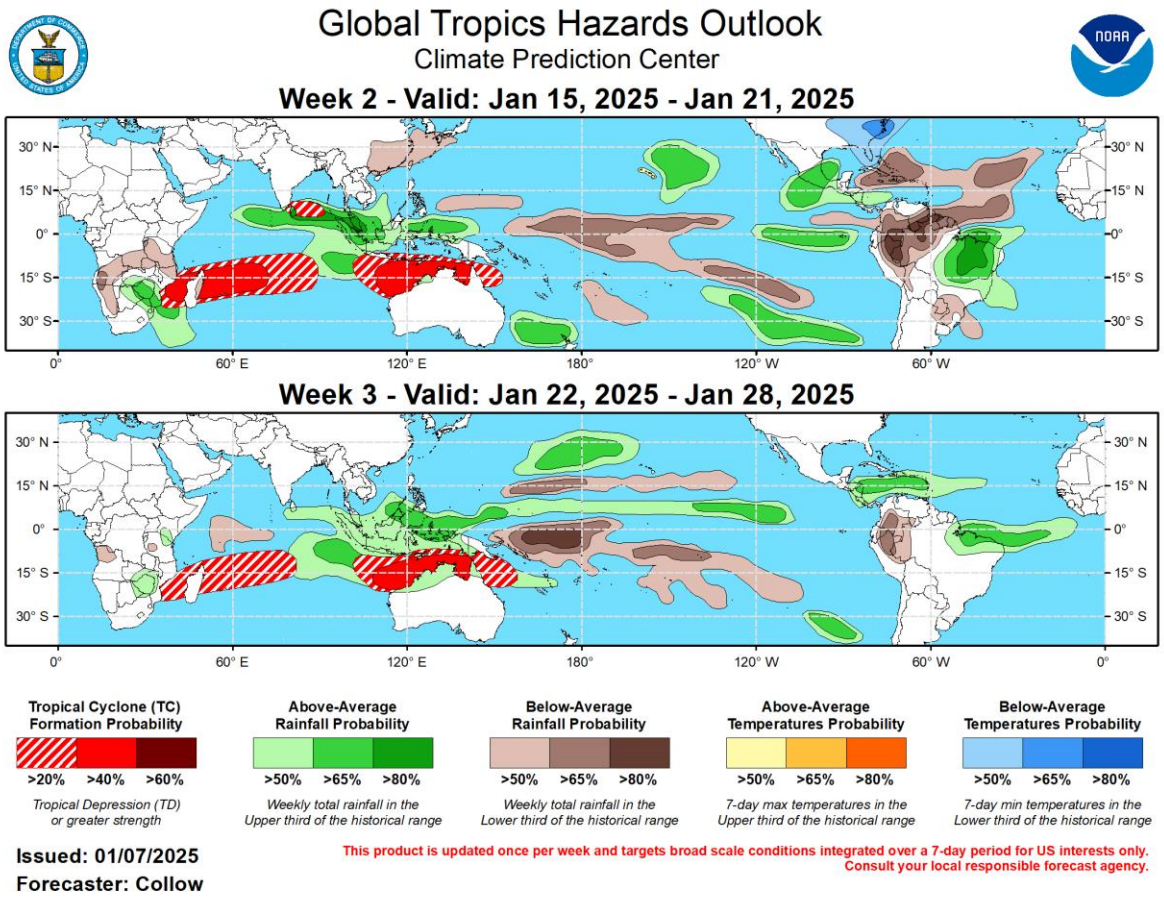
La Niña: *Cool phase of an ENSO cycle. Sea surface temperatures of -0.5°C occur across the east-central equatorial Pacific.*

Neutral: *A period when neither El Niño nor La Niña conditions are present.*

El Niño (La Niña) is a phenomenon in the equatorial Pacific Ocean characterized by a five consecutive 3-month running mean of sea surface temperature (SST) anomalies in the Niño 3.4 region that is above the threshold of +0.5°C (-0.5°C). This is known as the Oceanic Niño Index (ONI).

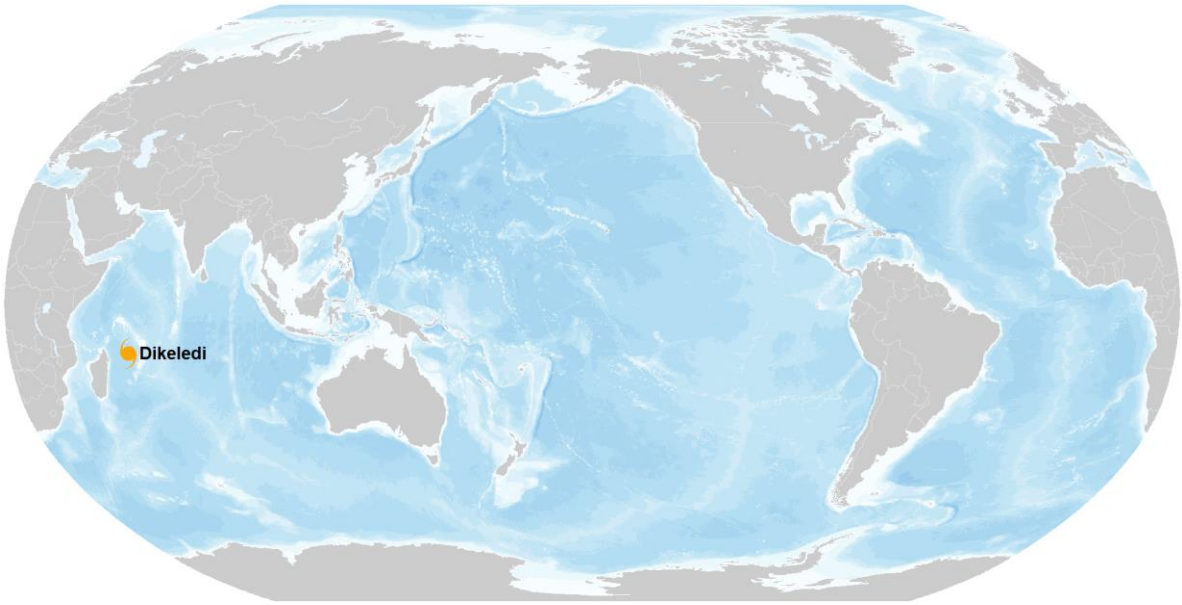
Source: NOAA, Columbia University | Graphic: Aon Catastrophe Insight

Global Tropics Outlook



Source: Climate Prediction Center (NOAA)

Current Tropical Cyclone Activity



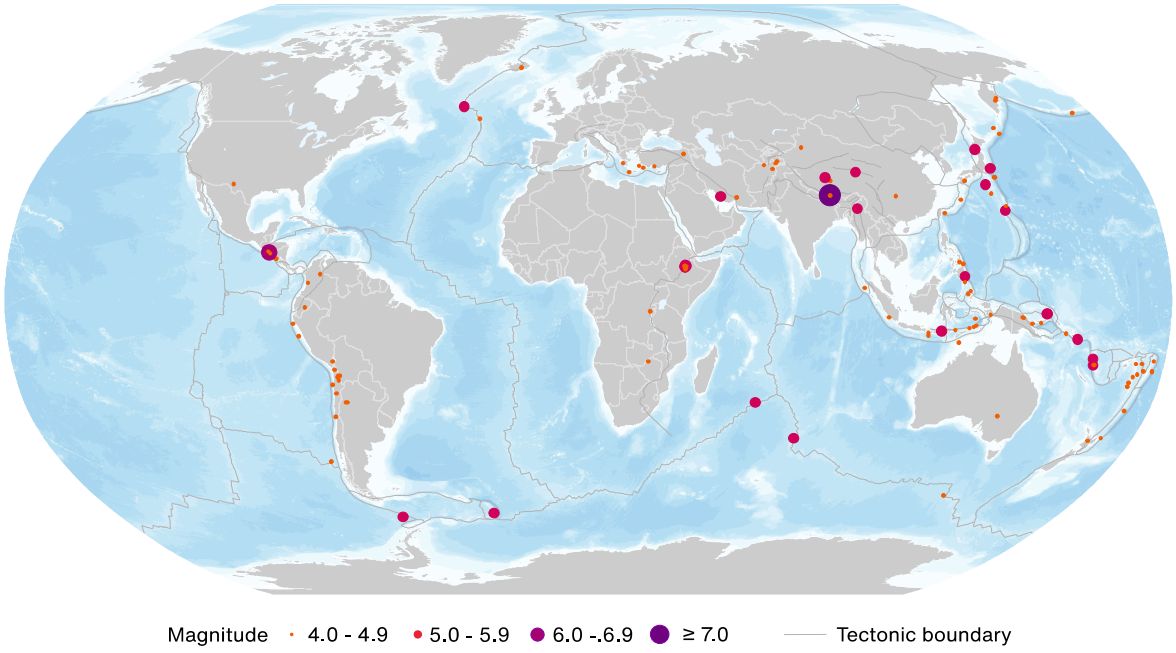
Tropical Depression Tropical Storm Category 1 Category 2 Category 3 Category 4 Category 5

Name	Location	Winds	Center
TS Dikeledi	13.5S, 57.1E	60	460 mi (740 km) N from Port Louis, Mauritius

* TD: Tropical Depression, TS: Tropical Storm, HU: Hurricane, TY: Typhoon, CY: Cyclone
** N: North, S: South, E: East, W: West, NW: Northwest, NE: Northeast, SE: Southeast, SW: Southwest

Source: National Hurricane Center, Joint Typhoon Warning Center, Central Pacific Hurricane Center (NOAA)

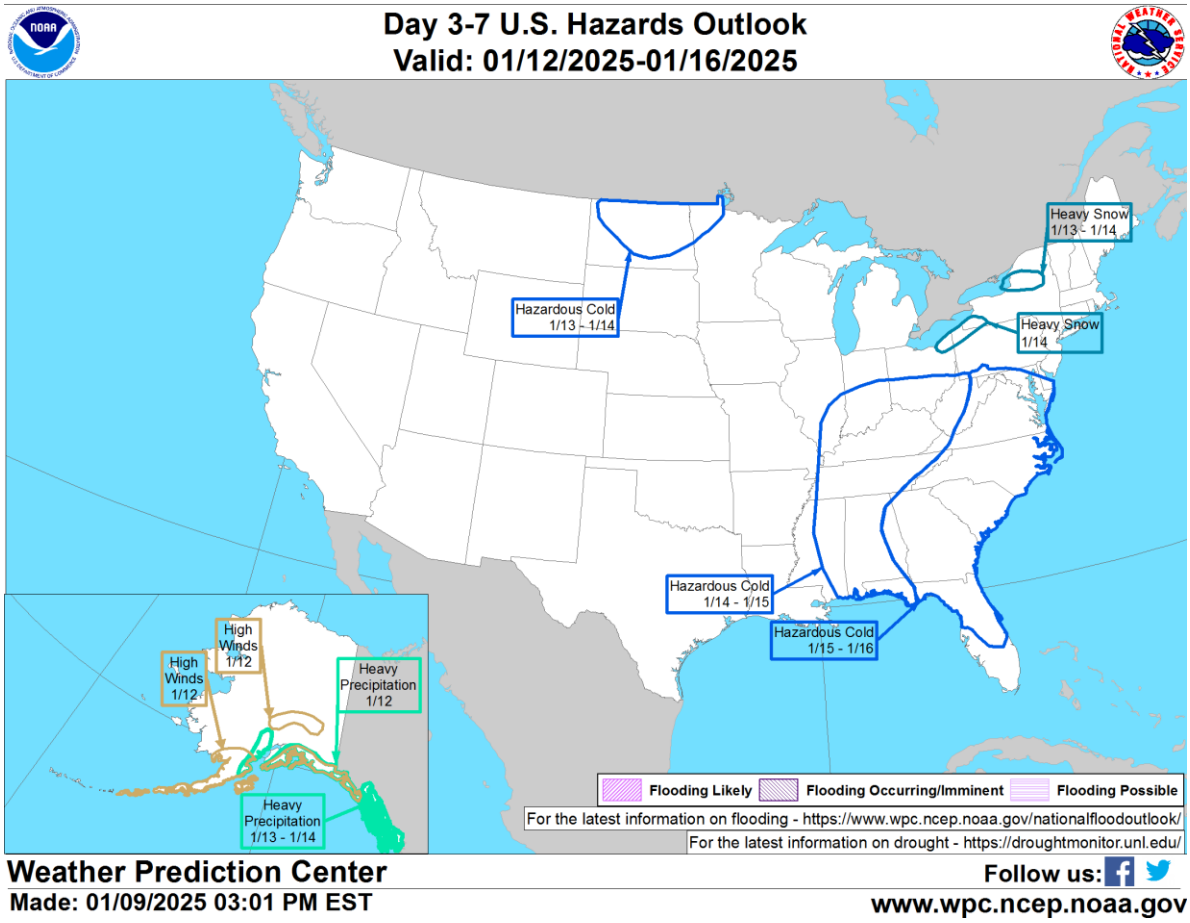
Global Earthquake Activity (≥M4.0): January 3-9



Date (UTC)	Location	Magnitude	Epicenter
1/5/2025	13.05N, 89.17W	6.2	50 km (31 mi) SSE of La Libertad, El Salvador
1/7/2025	28.64N, 87.36E	7.1	Tibetan Plateau

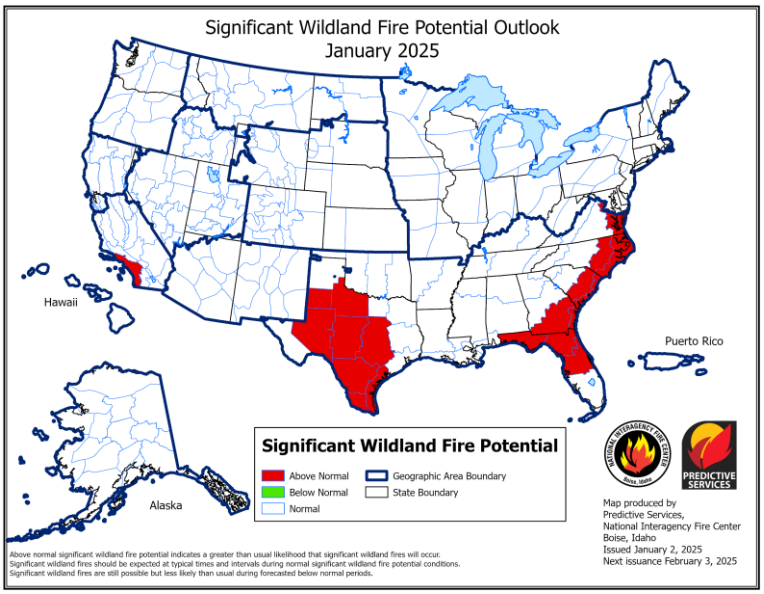
Source: United States Geological Survey

U.S. Hazard Outlook



Source: Climate Prediction Center (NOAA)

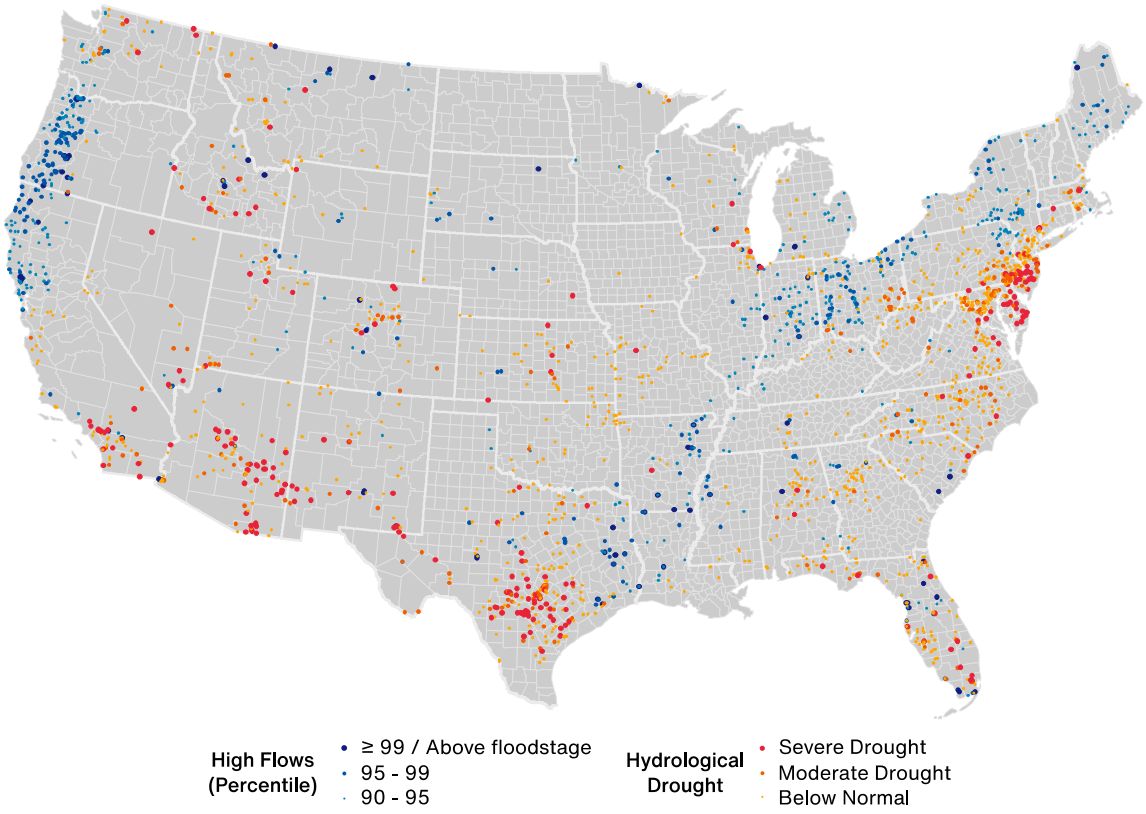
U.S. Wildfire: Significant Fire Risk Outlook & Activity





Source: NIFC

U.S. Current Riverine Flood Risk



A ≥99th percentile indicates that estimated streamflow is greater than the 99th percentile for all days of the year. This methodology also applies for the other two categories. A steam in a state of severe drought has 7-day average streamflow of less than or equal to the 5th percentile for this day of the year. Moderate drought indicates that estimated 7-day streamflow is between the 6th and 9th percentile for this day of the year and 'below normal' state is between 10th and 24th percentile.

Source: United States Geological Survey

Source Information

United States: Wildfire

City of Malibu
Cal Fire
National Weather Service (NWS)
U.S. Drought Monitor
Weather Prediction Center
National Interagency Fire Center (NIFC)
Los Angeles County Fire Department (LACoFD)
Los Angeles wildfires: At least 10 dead and whole neighborhoods destroyed as distraught residents flee, *CNN*
Fires in California decimate Los Angeles area, leave apocalyptic scenes: Live Updates, *CBS News*
More than 9,000 structures damaged or destroyed in Palisades and Eaton fires, officials estimate, *Los Angeles Times*

United States: Winter Weather & SCS

National Weather Service (NWS)
Weather Prediction Center (WPC)
Winter Storm Blankets the East Coast, With Arctic Air on Its Heels, *The New York Times*
Water Outage in Richmond, Va., Is Expected to Last Until Friday, *The New York Times*

China, Nepal: Earthquake

USGS
China Earthquake Networks Center
Tibet earthquake kills at least 126 people and leaves many trapped, *AP News*

Western & Northern Europe: Windstorm Floriane & Flooding

Met Office
Météo-France
European Severe Weather Database (ESWD)

Natural Catastrophes: In Brief

USGS
The Watchers

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