

# **Weekly Cat Report**

January 26, 2024



## Executive Summary



Event	Affected Region(s)	Fatalities	Economic Loss (\$)	Page
<b>Windstorms Isha &amp; Jocelyn</b>	Europe	5	100s of millions	3
<b>WW, SCS, Flooding (Update)</b>	United States	92+	100s of millions	6
<b>Earthquake</b>	China, Kazakhstan	3	100s of millions	9
<b>SCS, Flooding &amp; Landslides</b>	Philippines	16	Millions	11
<b>Landslide</b>	China	39+	Unknown	11
<b>Tropical Storm Kirrily</b>	Australia	0	Unknown	11
<b>Flooding</b>	Syria	0	Negligible	11
<b>Volcanic Eruption</b>	Indonesia	0	Negligible	11
<b>Severe Convective Storm</b>	Mozambique	7	Negligible	11

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.

On January 23, we released the 2024 Climate and Catastrophe Insight report. Discover more at: <https://www.aon.com/en/insights/reports/climate-and-catastrophe-report>

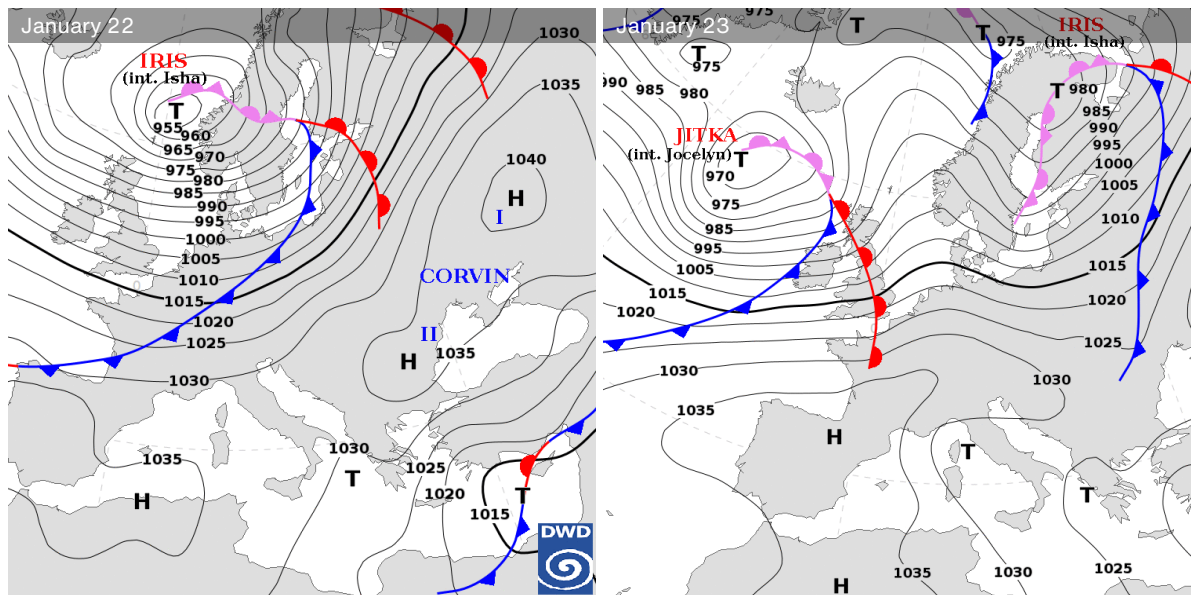
## Europe: Windstorms Isha & Jocelyn

### Overview

Two successive lows, Isha and Jocelyn, brought damaging winds in some parts of Western, Northern, and Central Europe between January 21 and 24. The United Kingdom and Ireland felt the hardest impact of the storms. Severe weather left several people dead and injured and caused total aggregated economic and insured losses in the hundreds of millions of EUR.

### Meteorological Recap

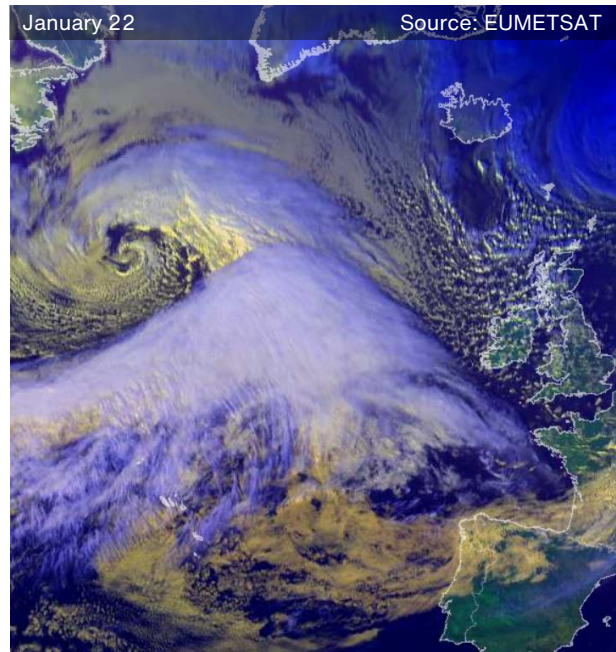
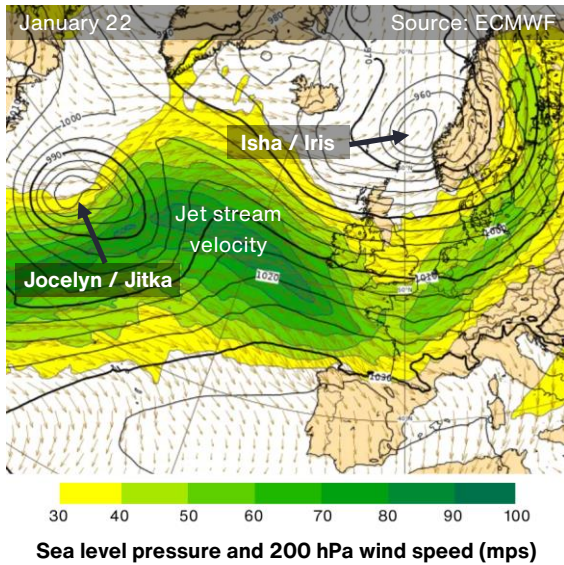
A cyclonic pattern has been renewed over Europe, bringing intense winds and localized heavy rainfall associated with successive low-pressure systems.



### Windstorm Isha / Iris on January 21-22

The first notable storm system was originally named **Isha** by the UK's Met Office on January 19. An alternative name given for this low by FU Berlin was Iris. Isha approached Western Europe during the night between January 21 and 22, bringing damaging winds, particularly across the United Kingdom and Ireland (see the table with the highest wind gusts reported by the UK's Met Office). Red wind warnings were issued for north-western Ireland, including the counties of Galway, Mayo, and Donegal, and north-eastern Scotland. Orange wind warnings were in effect for almost the entire UK and in parts of the Netherlands.

Location	Wind Gust (mph/kph)
Brizlee Wood	99 / 159
Capel Curig	90 / 145
Needles Old Battery	86 / 138
Shap	82 / 132
Prestwick Gannet	81 / 130



### *Windstorm Jocelyn / Jitka on January 23-24*

The storm succession was powered by a strong jet stream in the upper parts of the atmosphere. This favorable environment helped in the development of another low. The system was named **Jocelyn** by the UK's Met Office, FU Berlin named this storm Jitka. The storm hit Western Europe on January 23-24, generating intense winds, and affecting similar areas that were battered by windstorm Isha. Although wind intensities produced by storm Jocelyn reached lower values compared to Isha (see Table on the right), orange or yellow wind warnings were issued for most of Ireland, Northern Ireland, and Scotland.

Location	Wind Gust (mph/kph)
Capel Curig	97 / 156
Aberdaron	79 / 127
Shap	77 / 124
Needles Old Battery	74 / 119
South Uist Range	74 / 119

Source: Met Office

Wind warnings were also issued by national meteorological services in Germany, Poland, Denmark, Sweden, and the Baltics.

### **Event Details**

More than 630,000 customers experienced power outages due to the storms – about 400,000 across the UK and more than 230,000 in Ireland. The storms downed trees and resulted in notable traffic disruptions in both countries. More than 150 flights were canceled or delayed.

Widespread traffic disruptions and power outages were reported also in northwestern France, the Netherlands, Germany, and elsewhere.

At least four people died in multiple accidents related to storm Isha - three in Ireland and one in the UK. One more person died in the UK due to storm Jocelyn, while several others suffered injuries.

## **Financial Loss**

The impacts generated by both storms were moderate. Isha and Jocelyn resulted in lower aggregate damages compared to initial model projections. However, total economic and insured losses from the events are likely to reach into the hundreds of millions of EUR. After substantial wind-related losses caused by the storms Ciarán and Zoltan, this will be another notable event for European insurers in a relatively active season.

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## United States: Winter Weather, SCS, Flooding (Update)

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### Overview

For three straight weeks, most of the United States has been impacted by several, powerful winter storms. Notably, this past week featured more lake-effect snow, another cold air outbreak, and significant flooding in the southern U.S. and California. Since the beginning of the month, around 92 people have died due to this prolonged stretch of dangerous weather. Aggregated economic and insured losses will likely reach into the hundreds of millions USD, possibly higher.

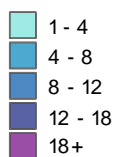
### Meteorological Recap

January 18-22

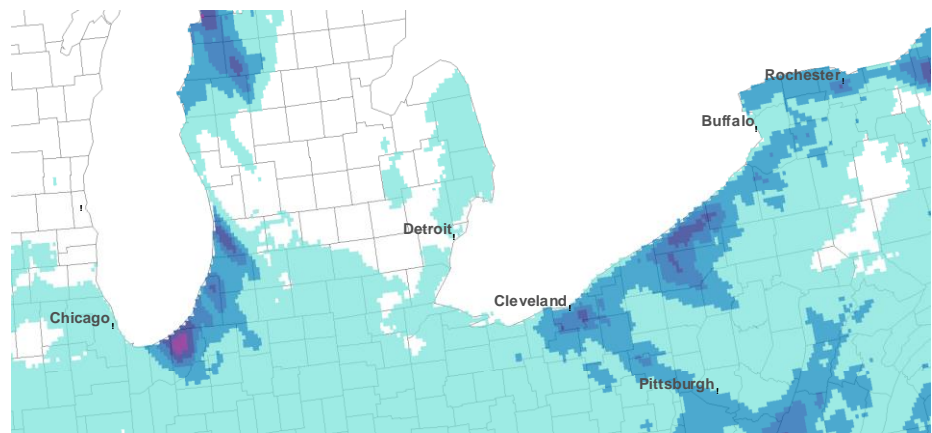
Following the severe ice storm in northwest Oregon (see previous Weekly Cat Report), more snow and ice were seen across the Great Plains, Midwest, and Mid-Atlantic on January 18-20. Notably, another round of heavy lake-effect snow occurred over the Great Lakes, especially across Michigan, Indiana, and New York. Notably, the counties of LaPorte (IN), St. Joseph (IN), and Berrien (MI) saw heavy localized snow totals exceeding 1 foot (300 mm). In fact, LaPorte County set a new 1-day snow total record on January 19 with 21.9 inches (55.6 cm), beating the previous record of 19.5 inches (49.4 cm) set in 1978.

#### 48-hour Snowfall Total (inches)

January 18-20



Data: NOAA

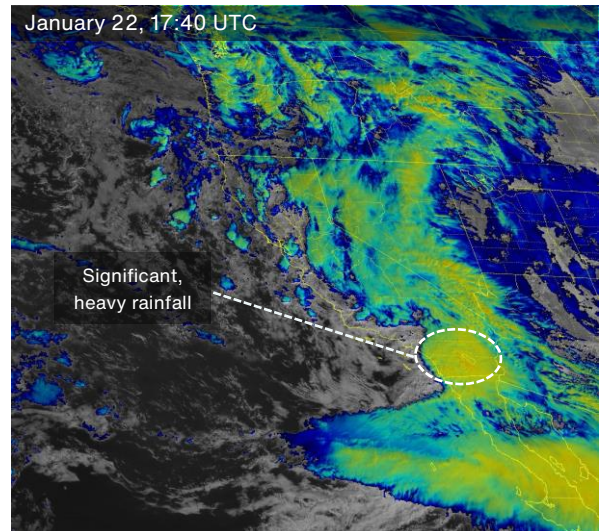


Additionally, another cold air outbreak impacted most of the Central and Eastern U.S. on January 19-22. While the previous outbreak featured colder temperatures over a longer period of time, subfreezing temperatures (32°F / 0°C) still reached as far south as Southern Texas and Northern Florida.

### Western U.S.

Multiple frontal systems moving over the Western U.S. created a prolonged period of heavy precipitation on January 20-23. Oregon was once again hit with more freezing rain and ice, while higher elevations in Washington, Oregon, and California received heavy snowfall.

Most notably, much of California experienced a period of extreme rainfall, especially San Diego and Ventura Counties. On January 22, these counties in Southern California saw as much as 4 inches (100 mm) of rain in just a few hours, which local officials consider to be a “1-in-1000-year flooding event.” San Diego International Airport measured 2.73 inches (69.3 mm) of rain on January 22, which became their wettest January day on record going back to 1851. Astonishingly, this meant the city received more than a month’s worth of rainfall in less than 1 day. This unprecedented event in Southern California caused widespread, significant flooding impacts, especially within the San Diego metro area.



### *Central and Eastern U.S.*

More ice and snow fell over the Central and Eastern U.S. on January 21-23. Moisture advection from the Gulf of Mexico along with multiple waves of low pressure generated mixed wintry precipitation across the Great Plains, Great Lakes, and Mid-Atlantic. Several large cities experienced freezing rain and ice impacts, including Oklahoma City, St. Louis, Des Moines, Chicago, Milwaukee, and Detroit.

Further south, this same weather pattern generated multiple waves of heavy precipitation in the Southern U.S. on January 21-24. While heavy rain continues to fall over this region as of this writing, rainfall totals exceeding 6 inches (150 mm) are widespread across Texas, Arkansas, Mississippi, Louisiana, and Alabama.



**Lake-effect snow in LaPorte, IN (left) and flooding in San Diego, CA (right)**  
Source: NWS Northern Indiana (left), San Diego Police Department (right)

## Event Details

Around 92 people have died due to the continuous winter storms devastating the U.S. since the beginning of January. The death toll estimate is according to multiple reports citing CBS News, along with reports from several state and county officials. The list of deaths by state, both confirmed and under investigation, is seen in the table on the right.

The most notable damage from this past week came from Southern California as a state of emergency was declared for San Diego and Ventura Counties. While water levels have recently receded, the flooding damage was catastrophic, especially in San Diego. Hundreds of homes, businesses, and vehicles were devastated as hundreds of people were rescued. Many roads in Southern California were also damaged by flood waters and landslides.

In the Southern U.S., more flooding damage was seen particularly in Texas, Louisiana, and Mississippi. Boil water notices were issued for more than 600,000 people across the Memphis, Tennessee metro area as many water mains and pipes burst due to cold temperatures, snow, and ice. And in northwest Indiana, numerous vehicle crashes led to highway closures and delays due to heavy lake-effect snow.

State	Death Toll
Tennessee	36
Oregon	16
Mississippi	12
Kentucky	5
Pennsylvania	5
Washington	5
Illinois	4
Wisconsin	4
New York	3
Louisiana	2

## Financial Loss

As of January 24, more than 1,000 people have filled out a flood damage survey issued by San Diego County officials. This, along with the growing list of aggregated winter storm impacts across the U.S., will likely push total economic and insured losses into the hundreds of millions USD, possibly higher.



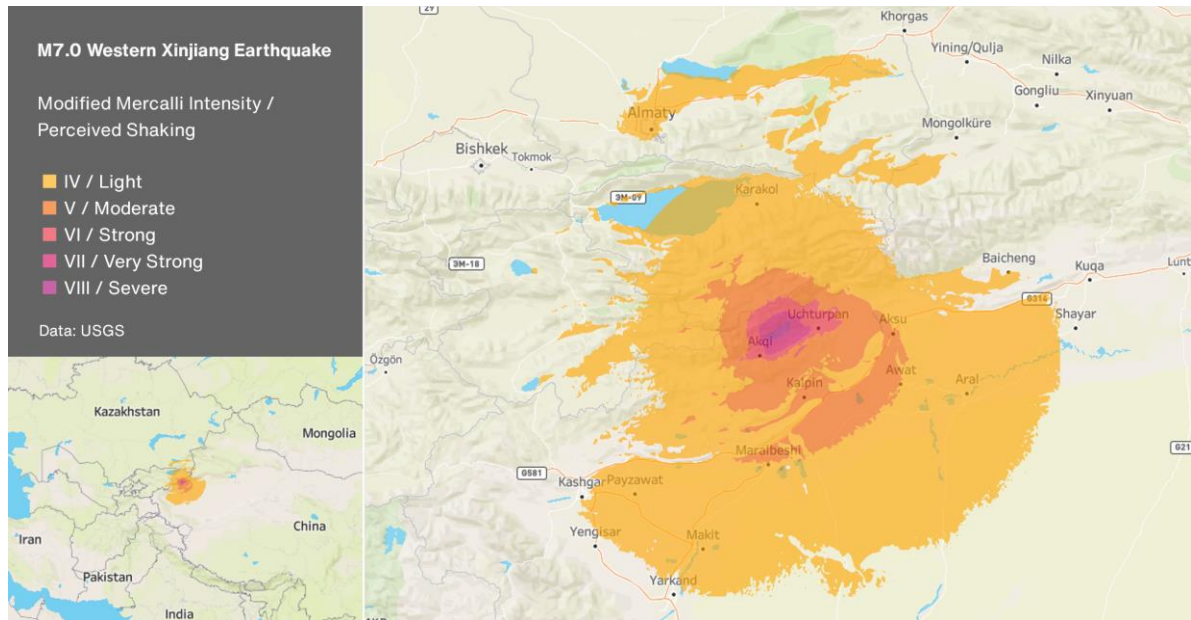
## China, Kazakhstan: Earthquake

### Overview

A strong, magnitude-7.0 earthquake with an epicenter in the Xinjiang Region, near China's border with Kyrgyzstan, occurred on January 22. As of this writing, three people were killed in China, and dozens of others were injured, most of them in Kazakhstan. However, relief operations and damage assessments are ongoing, and losses are expected to increase.

### Seismological Recap

At 6:09 PM UTC on January 22, a shallow earthquake at a depth of 13 km (8.1 miles) jolted the western Xinjiang Region in China. The epicenter was located in the westernmost part of China, near China's border with Kyrgyzstan. A maximum magnitude of 7.0 and a maximum intensity of 8 on the Modified Mercalli Intensity Scale (MMI) was reported by USGS. China's measurements reported a magnitude of 7.1. The main shock was followed by a series of more than 1,100 aftershocks, some of which had a magnitude above 5.5.



According to the USGS, the January 22 earthquake was located in the fold and thrust belt of the Tien Shan mountains and occurred as the result of oblique reverse and strike-slip faulting at shallow depth. This region is tectonically controlled largely by the collision of India into Asia. This is a seismically active region, though earthquakes of this size occur infrequently. There were just three M6.5+ earthquakes in the preceding 100 years within 250 km (155 miles) of the January 22 event. In January 1911, the M8.0 Kemin earthquake occurred nearly 250 km (155 miles) from the recent event, claiming more than 450 fatalities, hundreds of injured people, and over 1,000 damaged buildings.

## **Event Details**

Kizilsu Kyrgyz Autonomous Prefecture of **China** was among the worst affected by the earthquake. Media and local authorities reported at least three deaths and several injuries in Akqi County, along with notable structural damage to more than 850 houses across the entire prefecture. Additional structural and infrastructural losses were incurred in Uqturpan County. More than 12,000 people were forced to leave their homes across the Xinjiang Region.

In **Kazakhstan**, at least 67 people were injured due to the earthquake, most of them in Almaty city. About 2 million people in the country's largest city were exposed to moderate shaking (intensity V on the MMI scale), according to the USGS.

## **Financial Loss**

As damage assessments are ongoing across the affected region, it is still too early to determine the total financial and human loss from the earthquake. USGS initially put a red alert for economic losses using the PAGER methodology, with a high potential (84 percent likelihood) of economic losses reaching at least into the hundreds of millions of USD. The event will not likely generate significant insured losses.

## Natural Catastrophes: In Brief

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### **SCS, Flooding & Landslides (Philippines)**

Heavy rainfall associated with a shear line has triggered flooding and landslides across Mindanao Island in the southern Philippines, since January 14. The worst impacts have been observed in Davao and Caraga regions, where more than 830,000 people have been affected, according to the local disaster authority (NDRRMC). As of January 25, at least 16 people were killed, and 5 others were injured. Floods and landslides caused notable infrastructural and agricultural losses, along with property damage to about 620 houses.

### **Landslide (China)**

A massive landslide occurred in the north-eastern Yunnan Province in southern China on January 22, claiming at least 39 lives and damaging 18 houses. In total, the landslide buried 47 people. Rescue operations are ongoing as the other 5 people remain missing. Almost 1,000 people from nearby villages were evacuated.

### **Tropical Storm Kirrily (Australia)**

On January 25, storm Kirrily made landfall between Townsville and Ingham in Australia's Queensland as a high-end tropical storm (based on the Saffir-Simpson scale) with maximum sustained winds of 70 mph (113 kph). According to the Australian Tropical Cyclone Intensity Scale, Kirrily was classified as a Category 3 storm upon landfall. The storm resulted in widespread power outages to more than 40,000 homes and businesses across the affected area.

### **Flooding (Syria)**

Thousands of displaced Syrians, mostly survivors from the February 2023 earthquake, have been affected by severe floods near the city of Idlib in north-western Syria. A week-long torrential rain resulted in widespread flooding that damaged hundreds of refugee camps, further deepening a humanitarian crisis in the region.

### **Volcanic Eruption (Indonesia)**

On January 21 around 06:55 UTC, Mount Merapi in Central Java in Indonesia erupted, producing a large pyroclastic flow and massive ash cloud. This extremely active volcano has erupted multiple times in recent years, including in 2023. Several nearby villages were blanketed with ash, which forced thousands of people to evacuate. While damage assessments are ongoing, no fatalities or injuries have been reported as of this writing.

### **Severe Convective Storm (Mozambique)**

Thunderstorms accompanied by heavy rainfall and frequent lightning affected the Sofala Province in central Mozambique on January 23, leaving at least 7 people dead and damaging 10 houses.

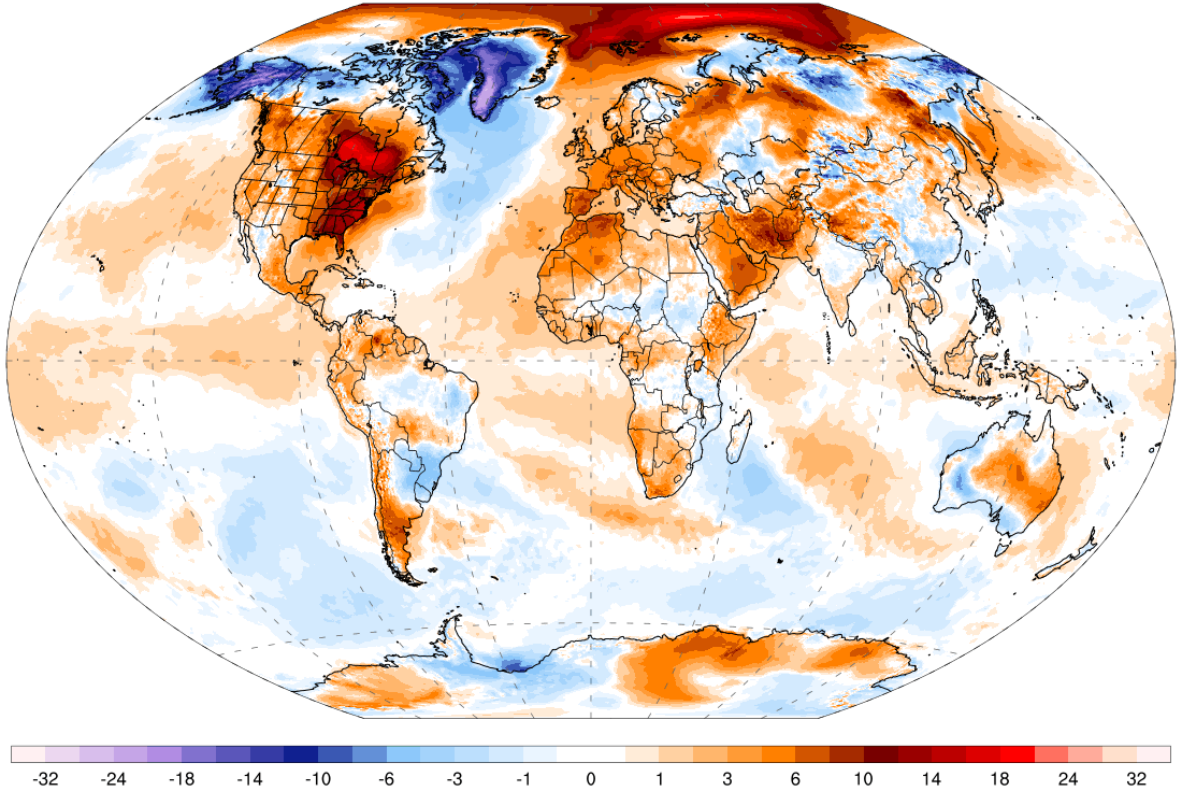
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## Global Temperature Anomaly Forecast

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GFS 2m T Anomaly (°C) [CFSR 1979-2000 baseline]  
Days 1-3 Avg | Thu, Jan 25, 2024

ClimateReanalyzer.org  
Climate Change Institute | University of Maine

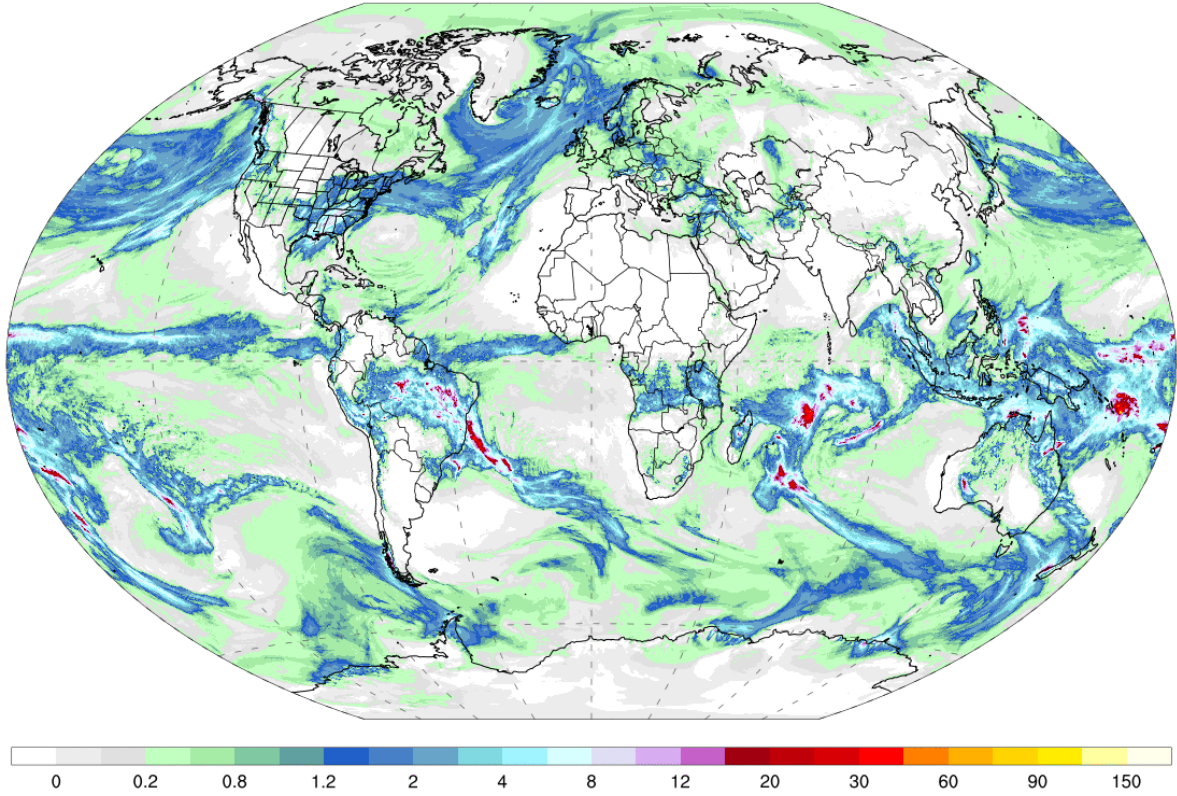


Source: Climate Reanalyzer, Climate Change Institute, University of Maine, USA

# Global Precipitation Forecast

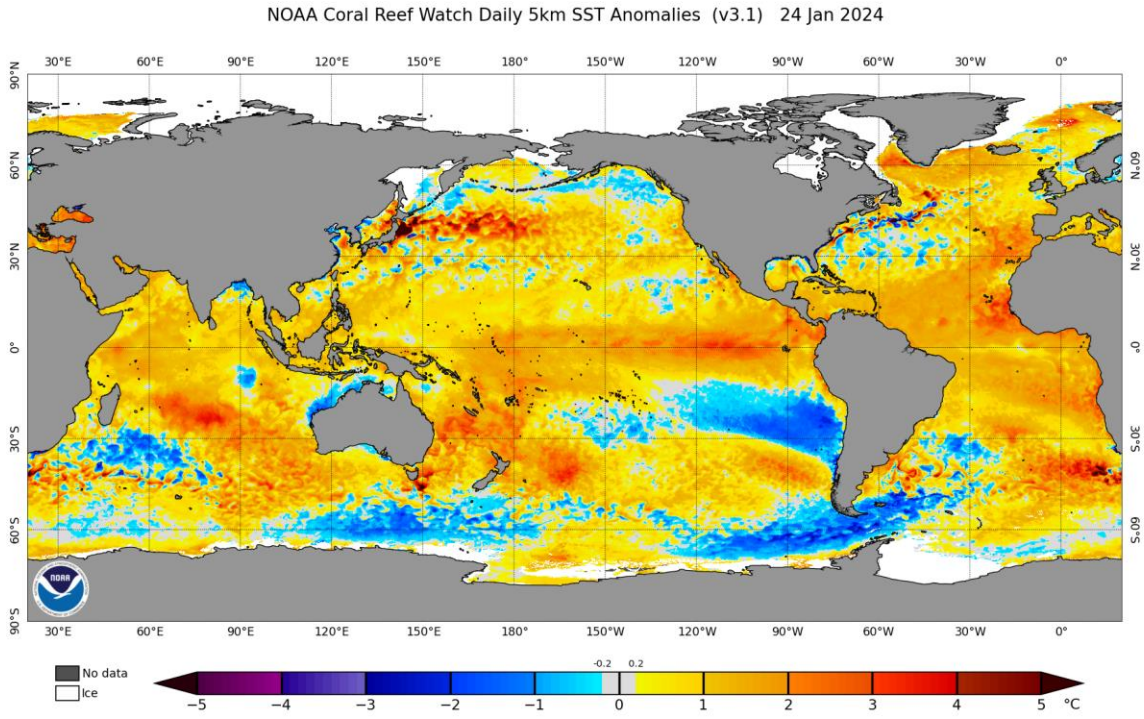
GFS Accumulated Precipitation (cm)  
Days 1-3 Total | Thu, Jan 25, 2024

ClimateReanalyzer.org  
Climate Change Institute | University of Maine

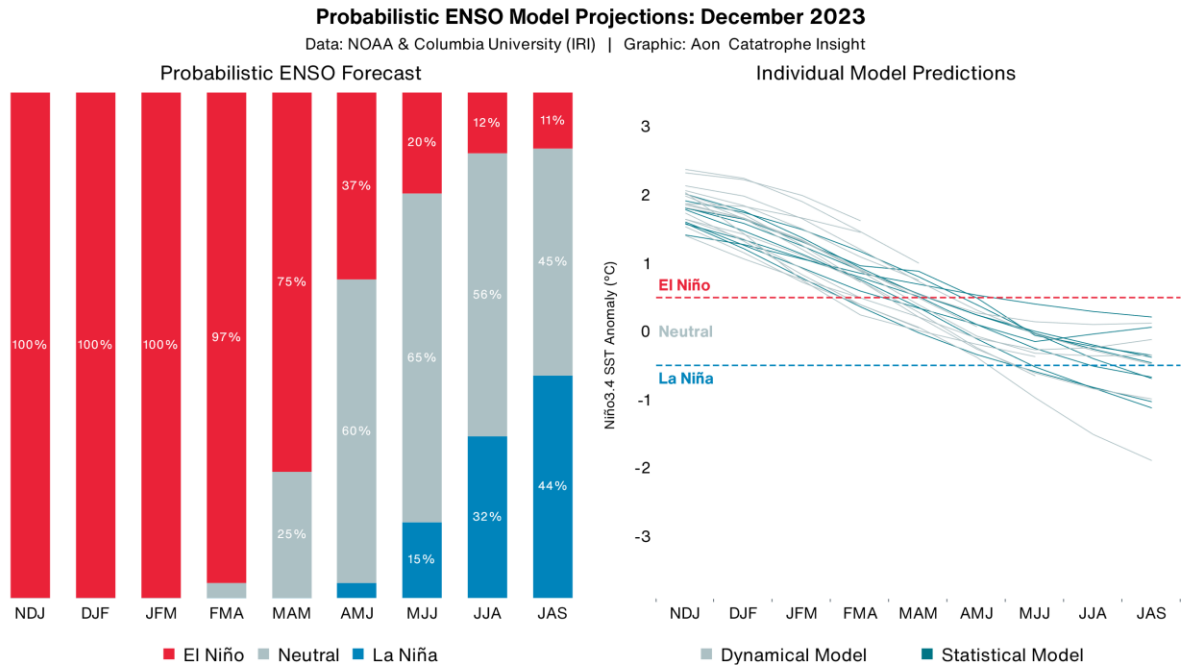


Source: Climate Reanalyzer, Climate Change Institute, University of Maine, USA

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



## El Niño-Southern Oscillation (ENSO)



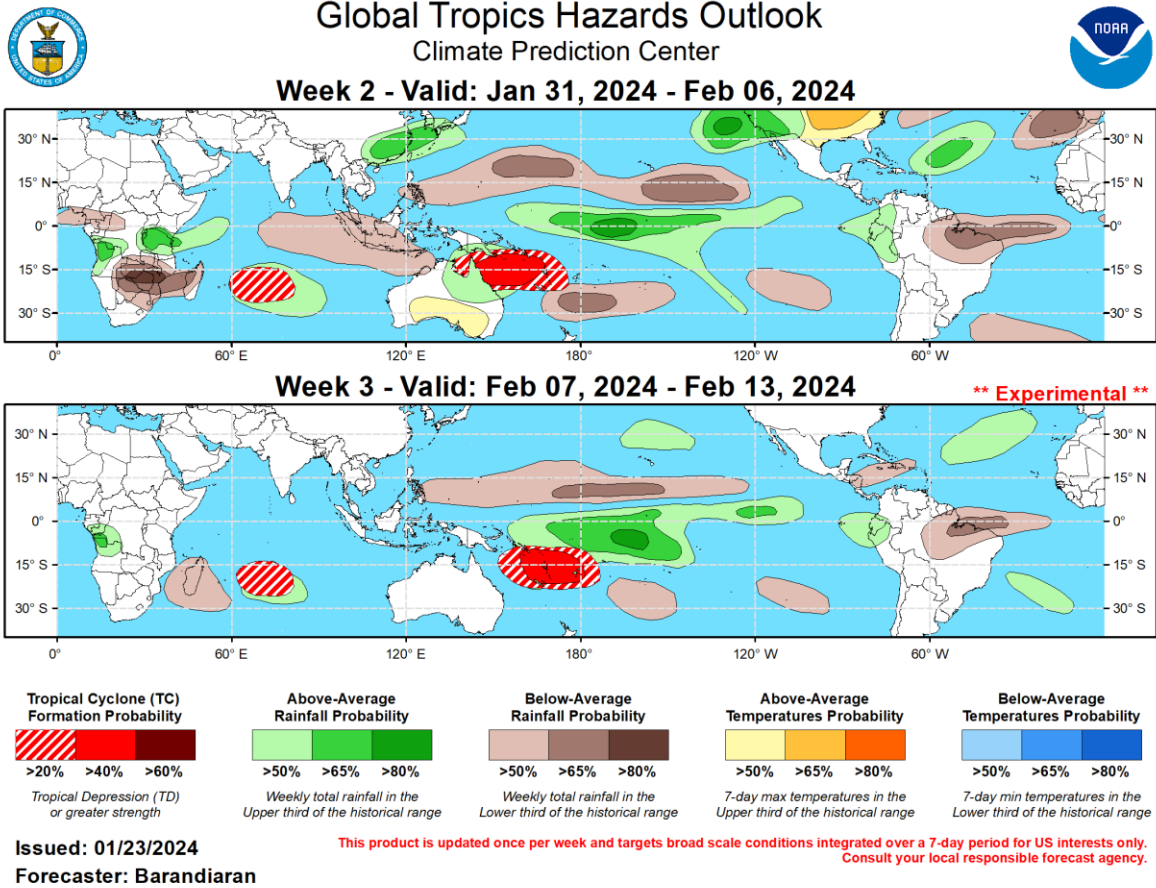
**El Niño:** Warm phase of an ENSO cycle. Sea surface temperatures of +0.5°C occur across the east-central equatorial Pacific.

**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).

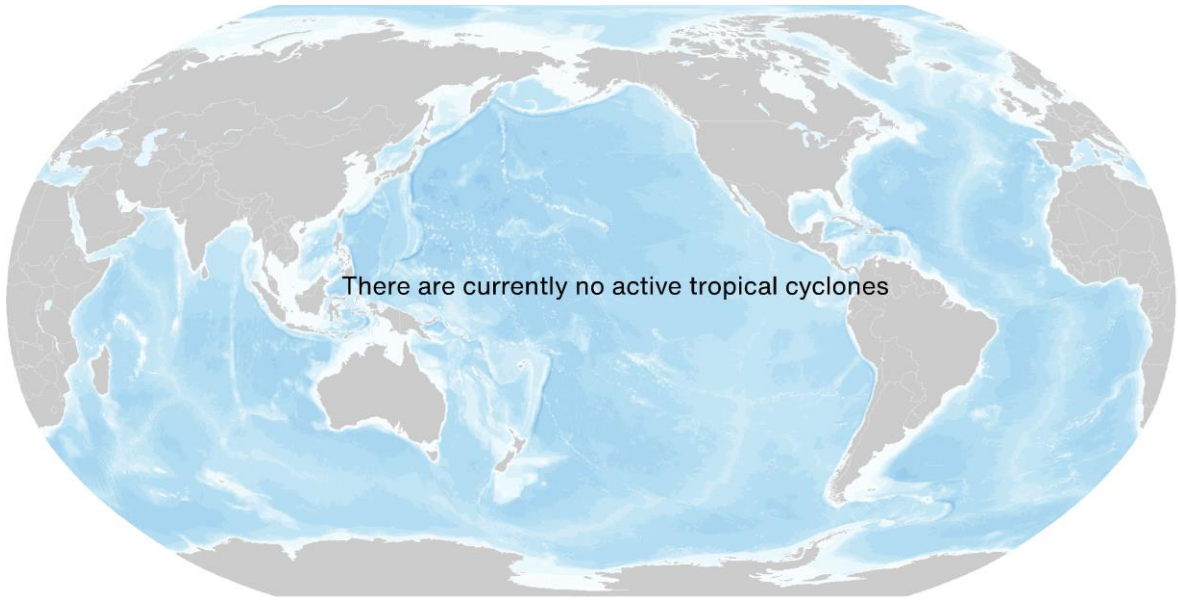
## Global Tropics Outlook



Source: Climate Prediction Center (NOAA)



## Current Tropical Cyclone Activity



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

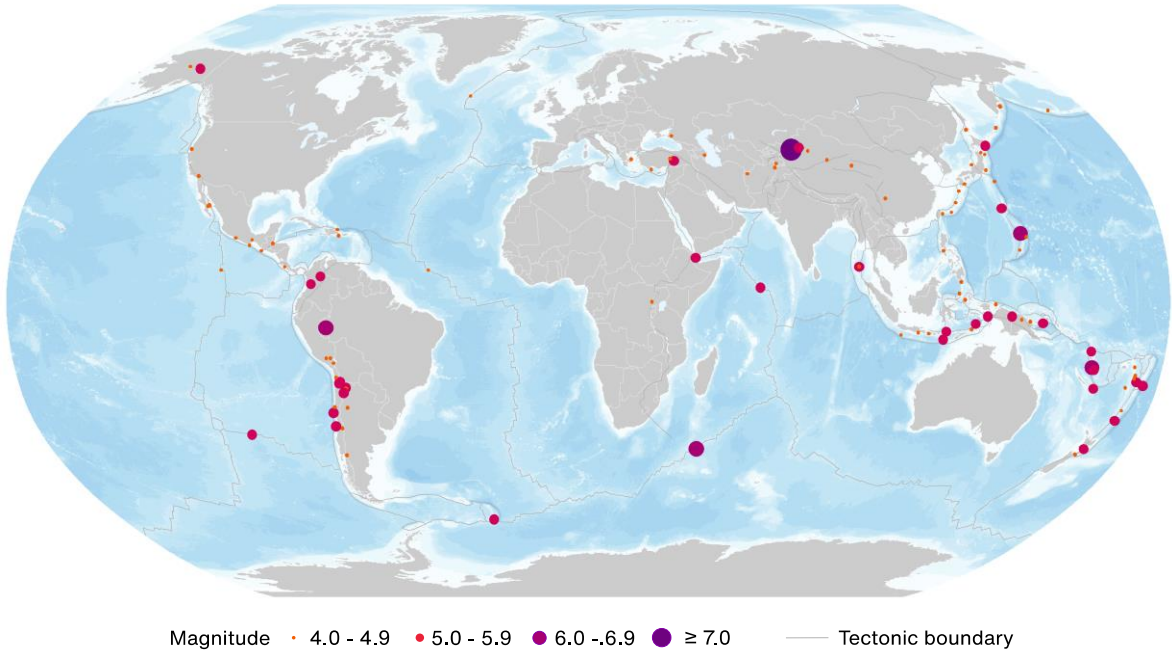
Name	Location	Winds	Center

\* 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)

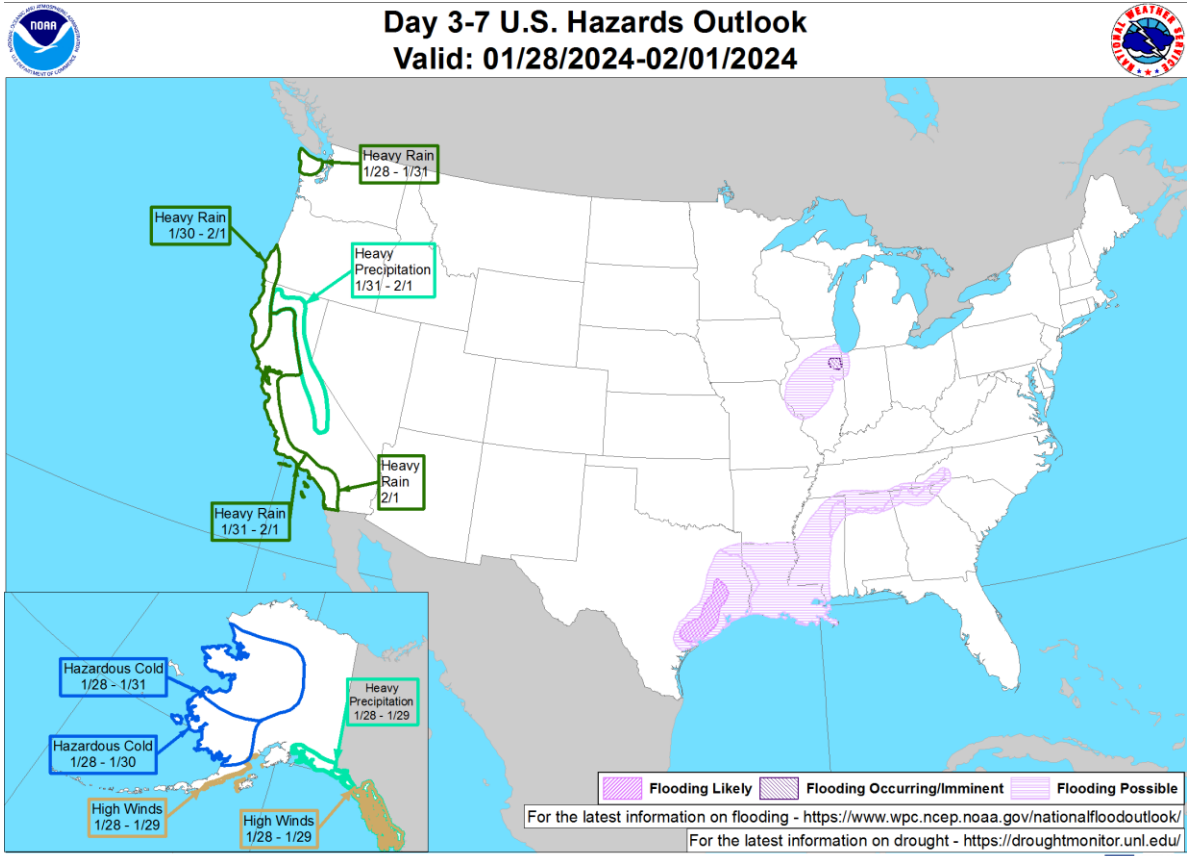
## Global Earthquake Activity ( $\geq M4.0$ ): January 19-25



Date (UTC)	Location	Mag	Epicenter
1/20/2024	18.53N, 145.64E	6.1	Pagan region, Northern Mariana Islands
1/20/2024	7.28S, 71.47W	6.6	12 km (7 miles) NW of Tarauacá, Brazil
1/20/2024	39.92S, 46.18E	6.2	Southwest Indian Ridge
1/22/2024	41.27N, 78.65E	7	12 km (7 miles) WNW of Aykol, China
1/23/2024	18.01S, 168.02E	6.3	43 km (27 miles) SW of Port-Vila, Vanuatu

Source: United States Geological Survey

## U.S. Hazard Outlook

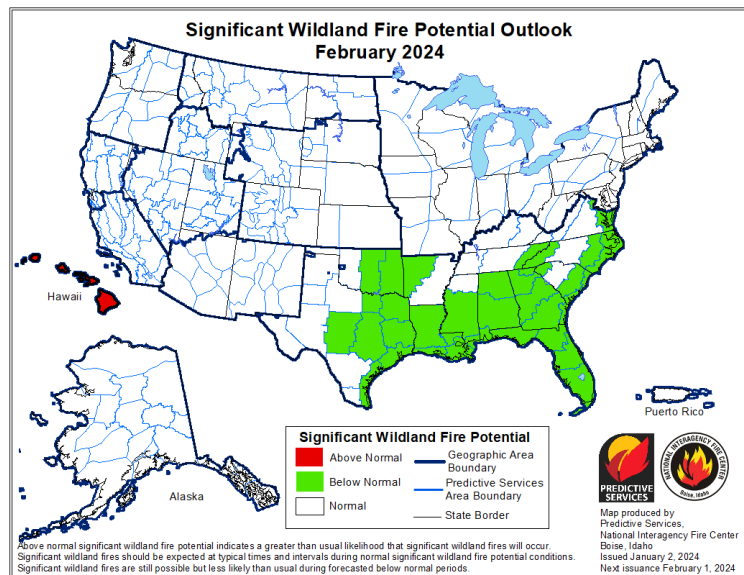
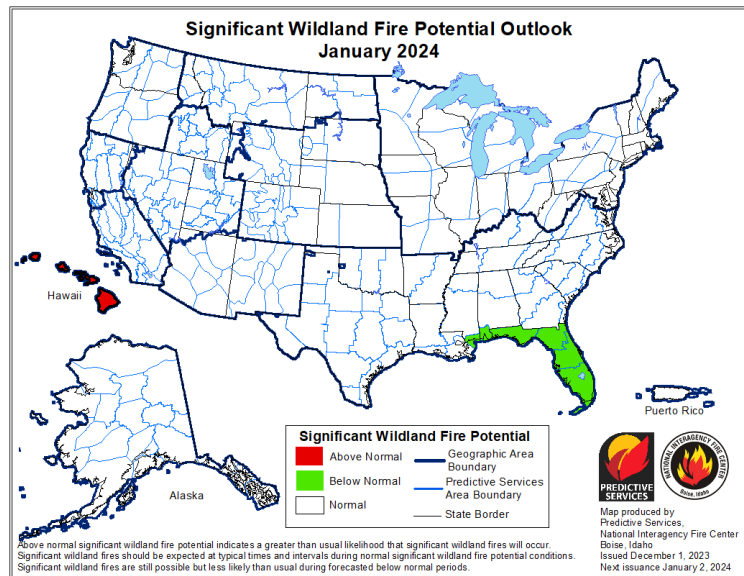


**Weather Prediction Center**  
Made: 01/25/2024 03:03 PM EST

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[www.wpc.ncep.noaa.gov](http://www.wpc.ncep.noaa.gov)

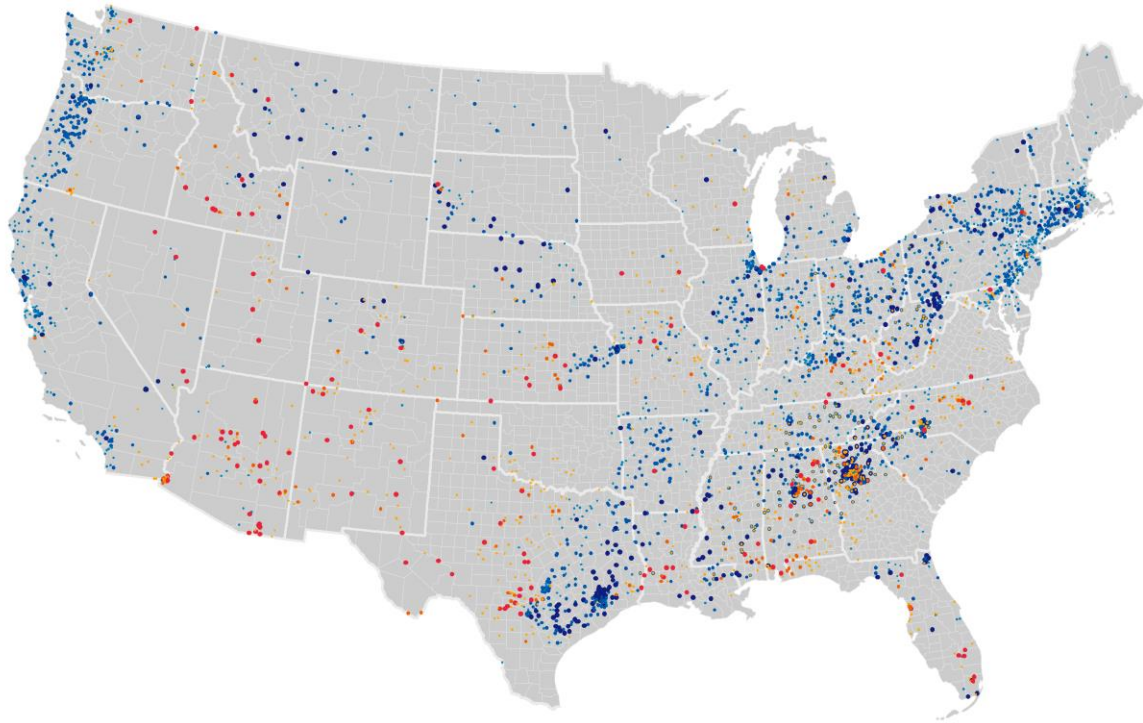
Source: Climate Prediction Center (NOAA)

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



Source: NIFC

## U.S. Current Riverine Flood Risk



- |                            |                                |                         |                    |
|----------------------------|--------------------------------|-------------------------|--------------------|
| High Flows<br>(Percentile) | • $\geq 99$ / Above floodstage | Hydrological<br>Drought | • Severe Drought   |
|                            | • 95 - 99                      |                         | • Moderate Drought |
|                            | • 90 - 95                      |                         | • Below Normal     |

*A  $\geq 99^{\text{th}}$  percentile indicates that estimated streamflow is greater than the 99<sup>th</sup> percentile for all days of the year. This methodology also applies for the other two categories. A stream in a state of severe drought has 7-day average streamflow of less than or equal to the 5<sup>th</sup> percentile for this day of the year. Moderate drought indicates that estimated 7-day streamflow is between the 6<sup>th</sup> and 9<sup>th</sup> percentile for this day of the year and 'below normal' state is between 10<sup>th</sup> and 24<sup>th</sup> percentile.*

Source: United States Geological Survey

## Source Information

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### **Europe: Windstorms Isha & Jocelyn**

UK's Met Office  
Irish Met Éireann

### **United States: Winter Weather, SCS, Flooding (Update)**

NOAA  
National Weather Service (NWS)  
Tennessee Department of Health  
Mississippi Emergency Management Agency  
Louisiana Department of Health  
Milwaukee County Medical Examiner Office  
U.S. sees over 90 weather-related deaths as dangerous cold continues, *CBS News*  
More than 90 dead after fierce US winter storms, *BBC*  
More snow is hitting the Great Lakes and Northeast, closing schools and hampering travel, *CNN*  
10 states from Arkansas to Pennsylvania on alert for snow, freezing rain, *ABC News*  
'Thousand-year storm' leaves San Diego reeling from punishing rainfall, floods, *Los Angeles Times*  
Memphis Residents Endure Day 4 of Water Problems as Freezing Weather Bursts Pipes Across the South, *US News*  
A month's worth of rain in 3 days triggers dangerous flash flooding in Texas and Louisiana, *CNN*

### **China, Kazakhstan: Earthquake**

USGS  
China's Earthquake Networks Center  
The earthquake has injured 6 people and 47 houses collapsed in Aheqi County, *TS News*

### **Natural Catastrophes: In Brief**

NDRRMC  
Death toll in southwestern China landslide rises to 39, with 5 people still missing, *AP News*  
Heavy flooding in Syria damages tents sheltering Idlib earthquake survivors, *Arab News*  
BoM Australia

## Contacts

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