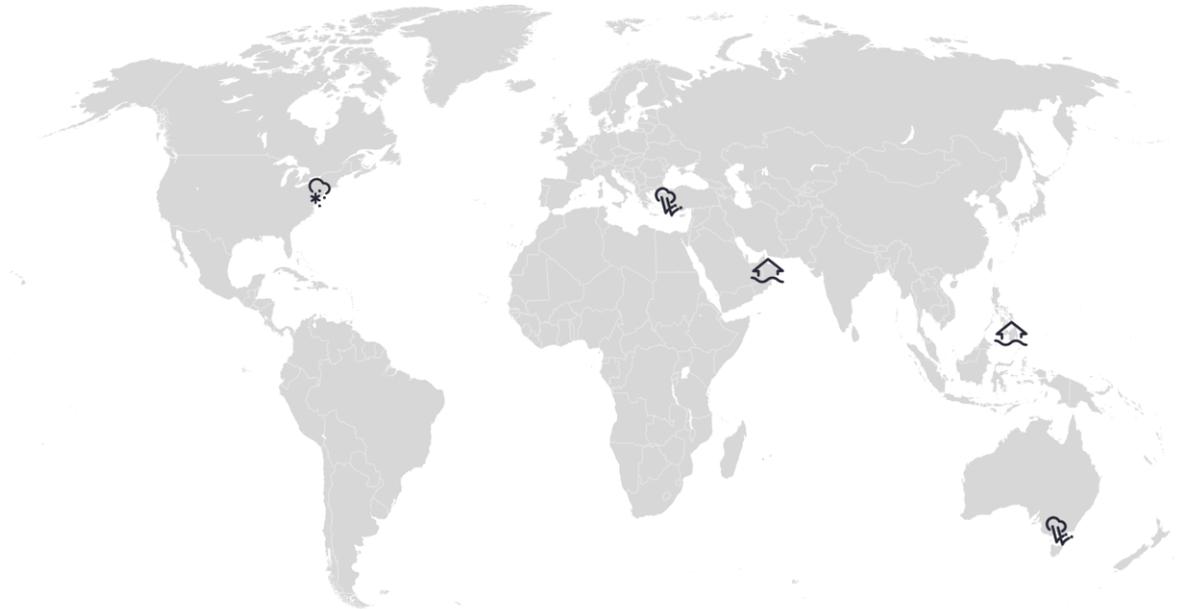


Weekly Cat Report

February 16, 2024



Executive Summary



Event	Affected Region(s)	Fatalities	Economic Loss (\$)	Page
Winter Weather, SCS, & Flooding	United States	1	10s of millions	3
Flooding & Landslide (Update)	Philippines	71	Unknown	6
Landslide	Kazakhstan	4	Negligible	8
Flooding	UAE & Oman	4	Millions	8
SCS & Flooding	Turkey, Cyprus, Greece	1	Millions	8
SCS & Wildfire	Australia	1	Millions	8

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>

United States: Winter Weather, SCS, & Flooding

Overview

Two storm systems brought winter weather, severe weather, and flooding hazards to the central and eastern United States on February 8-13. Strong winds, hail, and tornadoes caused property damage across the Midwest, Texas, and lower Mississippi Valley. Localized flooding was reported across the Southeast, while the Northeast experienced widespread power outages and travel disruptions due to heavy snow. Total economic and insured losses may reach into the tens of millions USD.

Meteorological Recap

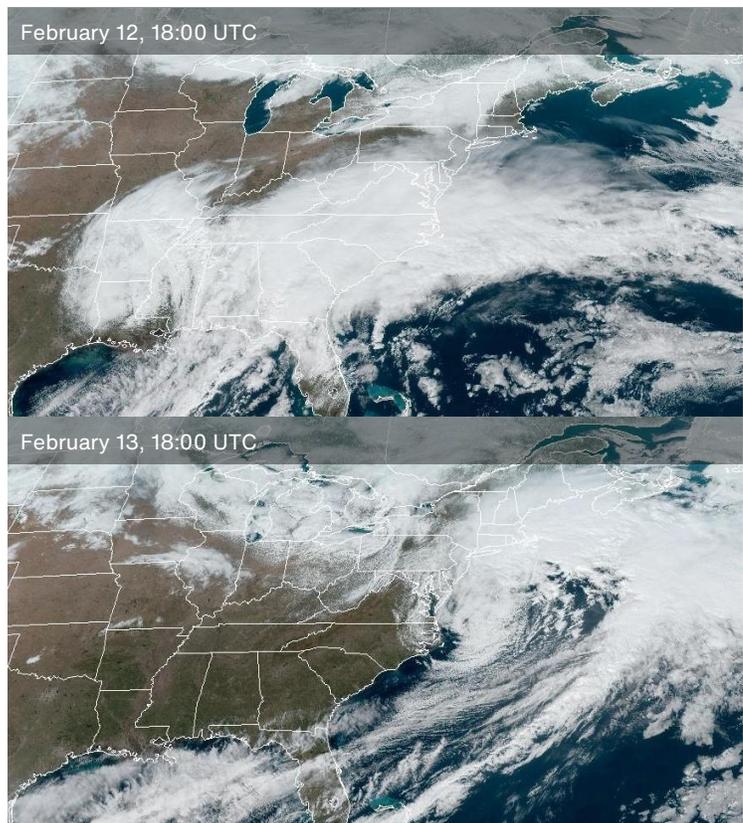
February 8-9

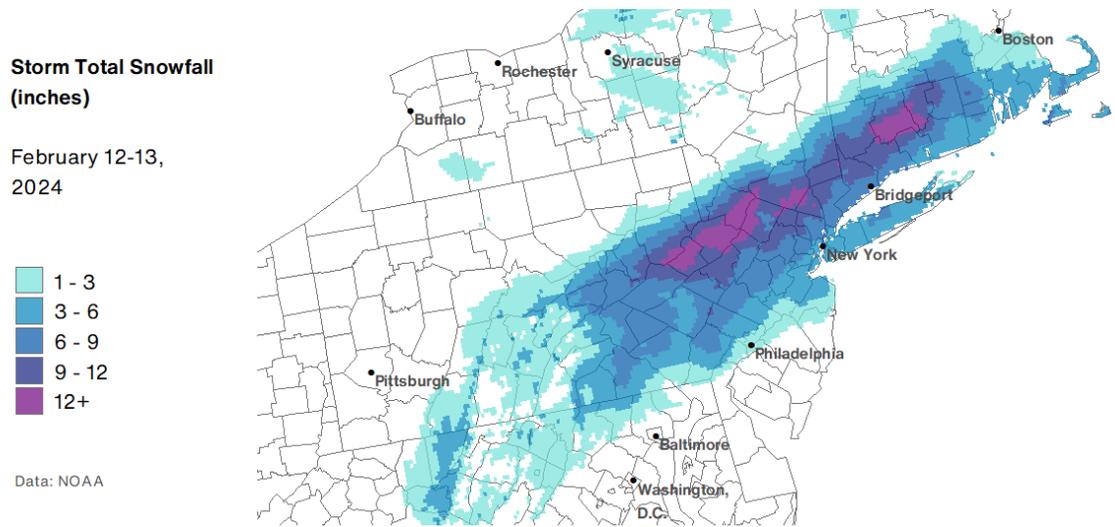
Sufficient wind shear ahead of a low-pressure system helped spark severe weather over the Midwest on February 8-9. Wind gusts over 60 mph (95 kph) and a few tornadoes were reported primarily across Wisconsin, Illinois, Indiana, and Kentucky. Interestingly, February 8 marked the first time a tornado had ever been reported in the month of February across all of Wisconsin, according to the NWS.

February 10-12

As the aforementioned low-pressure system eventually moved into southern Canada, a trailing cold front began to stall across the southern U.S. on February 10. By February 11-12, a new low-pressure system was developing and progressing across the Southeast. Abundant moisture pooling ahead of the developing storm system triggered repetitive showers and thunderstorms, which led to localized flooding impacts from east Texas to the Carolinas. Along with heavy rainfall, colder air over the southern Rockies and Great Plains allowed heavy snow to fall over parts of New Mexico, Colorado, Oklahoma, and northern Texas.

Additionally, severe storms over the southern U.S. produced strong winds and large hail up to 2 inches (5 cm) in diameter. Notable hail impacts were seen over east Texas and northwest Louisiana.





February 13

After impacting the Southeast, this low-pressure system quickly moved across the Northeast U.S. on February 13. Heavy snowfall occurred primarily over Pennsylvania, New Jersey, New York, and Connecticut. Despite the storm system's rapid pace, maximum snow totals of up to 15 inches (380 mm) were reported in towns such as West Hartford (CT), Sussex (NJ), and Shohola (PA). Much of the New York City metro area also received notable snowfall. In fact, Central Park had its snowiest single day in over 2 years on February 13 with 3.2 inches (81.3 mm) of snow, according to the NWS.

Aside from heavy snow, widespread strong winds combined with high tide caused minor coastal flooding over parts of New England, including Boston (MA) and Hampton (NH).

Event Details

In the Northeast U.S., intense winter weather conditions were responsible for 1 death, over 1,100 canceled flights, and dozens of school closures. Widespread downed trees and power lines caused thousands of customers to lose power, including 130,000 in Pennsylvania and 13,000 more in New



Snow in New York City (left); tornado damage in Wisconsin (right)

Source: NYSDOT (left); NOAA DAT (right)

Jersey. Additionally, strong winds and coastal flooding caused minor damage and road closures in New Jersey, Massachusetts, and New Hampshire.

Notable severe weather damage occurred in the Southern U.S. and Midwest. In southern Wisconsin, an EF-2 tornado near the town of Evansville caused 1 injury and extensive damage to several homes and structures. Meanwhile, notable hail damage to many homes and businesses occurred over eastern Texas and Northwest Louisiana. Some minor damage to roads due to flooding was also seen across the southeast.

Financial Loss

The EF-2 tornado near Evansville, Wisconsin is estimated to have caused nearly \$2.5 million in damages, according to the Rock County Sheriff's Office. Given the additional damage reported from hail, winter weather, and flooding from this past week, aggregated economic and insured losses may reach into the tens of millions USD.

Philippines: Flooding & Landslides (Update)

Overview

Following heavy rains, a large landslide occurred on the Philippine Island of Mindanao, which killed dozens of people and displaced hundreds of others. While this is a tragedy, particularly for relatives and families, the economic and insured losses will likely be relatively insignificant.

Meteorological Recap

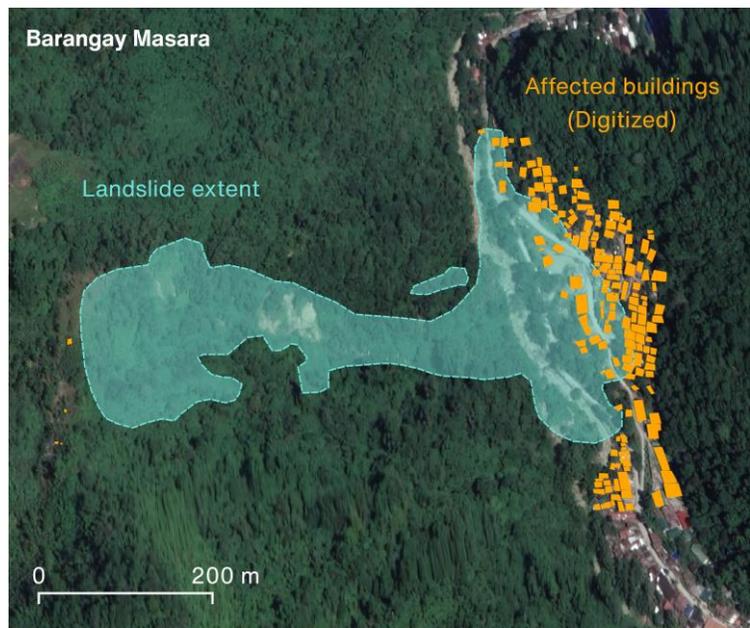
Following intense rains since early January, which already caused widespread flooding (see previous Weekly Cat Reports for details), additional scattered showers and thunderstorms caused by the easterly winds have elevated the risk of flash floods in Davao Region, Soccsksargen, Southern Leyte, Dinagat Islands, Surigao del Norte, and Surigao del Sur.

Event Details

On February 6 at around 7:40 p.m., a massive landslide occurred, affecting inhabitants of four barangays (Filipino for *villages*), including Elizalde, Mainit, Tagbaros, and Masara, all in Maco, an administrative unit of Davao de Oro. Masara was particularly affected, where an estimated 9.8 ha of soil from a nearby mountain covered a large part of the settlement and damaged 62 houses and vehicles, some of which were said to be transporting mining company employees.

This event and subsequent warnings of the risk of landslides resulted in the displacement of 1,250 families (5,227 people). According to the Department of Social Welfare and the Development of the Philippines, 71 people were killed and 47 are still missing.

At least 32 people were rescued from the debris that has already clogged the valley and increased the risk of flash floods from a blocked tributary of the Hijo River. Subsequent rescue operations organized by the Philippine Army, Bureau of Fire Protection, and Philippine Coast Guard were complicated by the risk of further landslides, the absence of telecommunications, and impassable roads. Moreover, retrieval operations were interrupted by two earthquakes (magnitude 5.9 and 5.2) and another landslide on



Extent of 2024 Maco Landslide
Source: Philippine Space Agency

February 13. A total of 13 evacuation centers have been temporarily set up in Maco and Mawabu, and approximately \$40,000 has been provided to supply the affected people with food and other vital items.

Financial Loss

Rescue operations are still ongoing. However, there are currently no publicly available estimates of economic or insured losses.

Natural Catastrophes: In Brief

Landslide (Kazakhstan)

On February 8, a landslide triggered by heavy rainfall occurred in Almaty City, resulting in casualties and damage. According to media reports, 4 people died, one house has been damaged, and dozens of people have been evacuated following the event. Given the relatively small extent of the event, associated losses are expected to be minor.

Flooding (United Arab Emirates & Oman)

Heavy rains on February 12 caused localized flooding in the United Arab Emirates (UAE) and Oman. Particularly affected were Dubai and Abu Dhabi as well as the cities on the east coast of the country (Kalba, Sharjah). In UEA, a total of 61 families (346 individuals) were displaced by the flooding. On February 13, the event affected Oman (Rustaq), claiming 4 lives, including 3 children. A further 108 people stranded in the cities of Yanqul, Buraimi, and Muscat were rescued.

SCS & Flooding (Turkey, Cyprus, Greece)

With more than 280 kg (617 lbs) of rainfall on February 13, the recent flooding has claimed the life of 1 person in the southern Turkish province of Antalya. Around 900 people who were stranded in the Kepez district were rescued. The Ministry of Interior announced that it has allocated an emergency fund of TL 20 million (\$650,899) to the Antalya Governor's Office. In Cyprus, the SCS and a tornado resulted in substantial damage in Germasogeia municipality, followed by power outages in large parts of Limassol and Nicosia. According to local media, total losses include, among others, damage to 81 buildings and 24 vehicles. Another tornado with large hailstones occurred in the northern part of the island of Rhodes, between the area of Kallithea and Zephyros, resulting in flooded roads and even overturned boats.

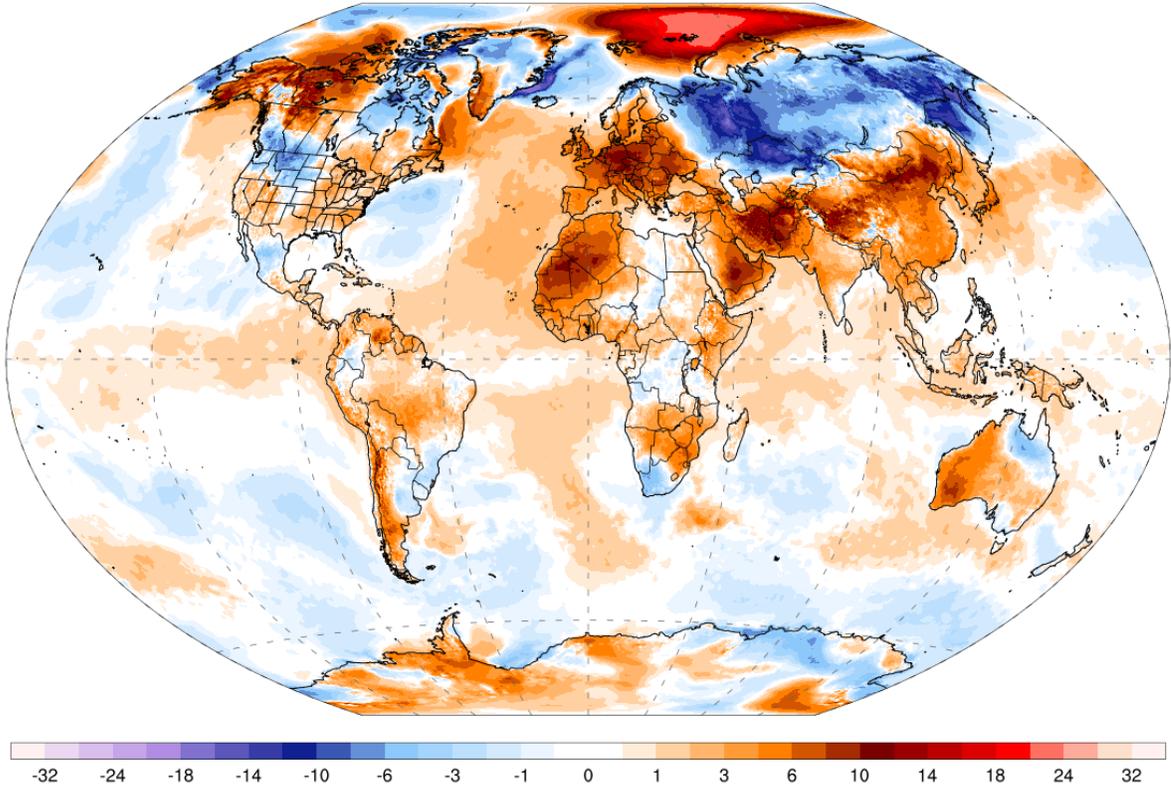
Severe Weather & Wildfire (Australia)

Severe storms impacted parts of the Australian state of Victoria on February 12–15, resulting in notable material damage. Authorities noted that nearly 600,000 customers were left without power across the state due to physical damage to the power grid. Additionally, severe wildfire conditions that were partly driven by strong winds resulted in some wildfire activity, most notably in the Grampians National Park. At least 24 homes and businesses were damaged or destroyed in the town of Pomonal.

Global Temperature Anomaly Forecast

GFS 2m T Anomaly (°C) [CFSR 1979-2000 baseline]
Days 1-3 Avg | Thu, Feb 15, 2024

ClimateReanalyzer.org
Climate Change Institute | University of Maine

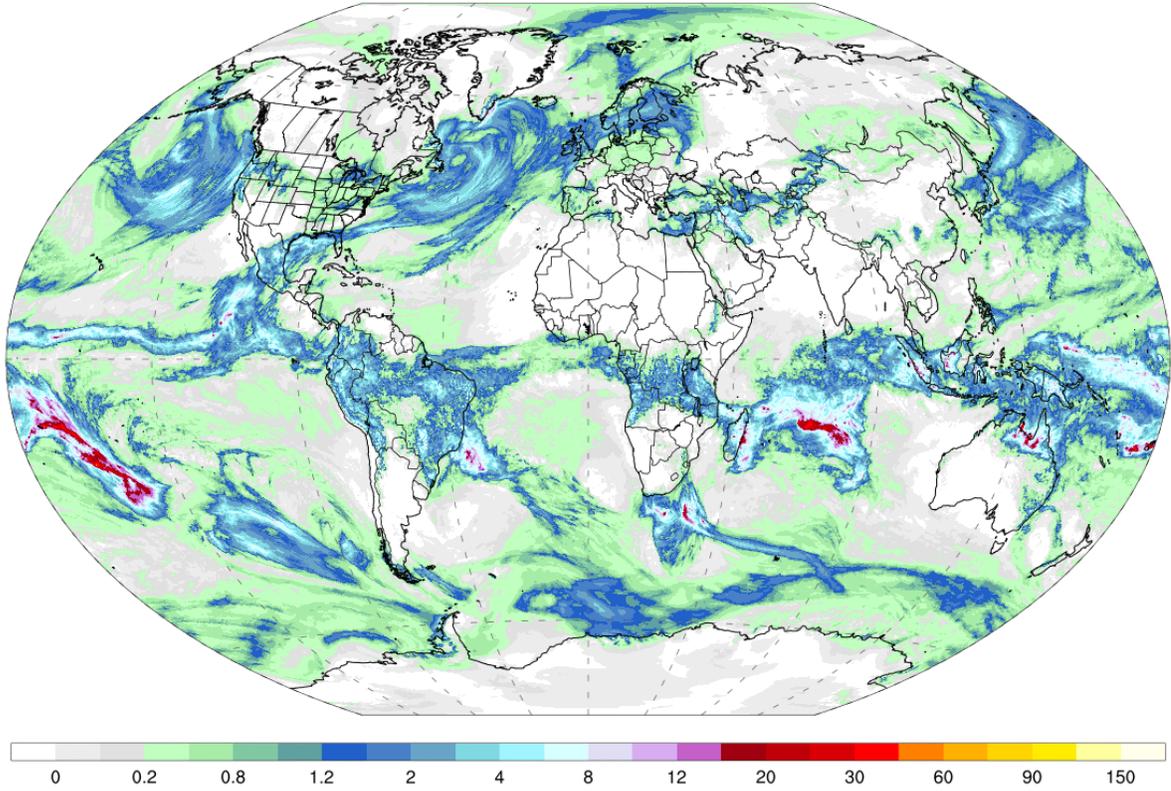


Source: Climate Reanalyzer, Climate Change Institute, University of Maine, USA

Global Precipitation Forecast

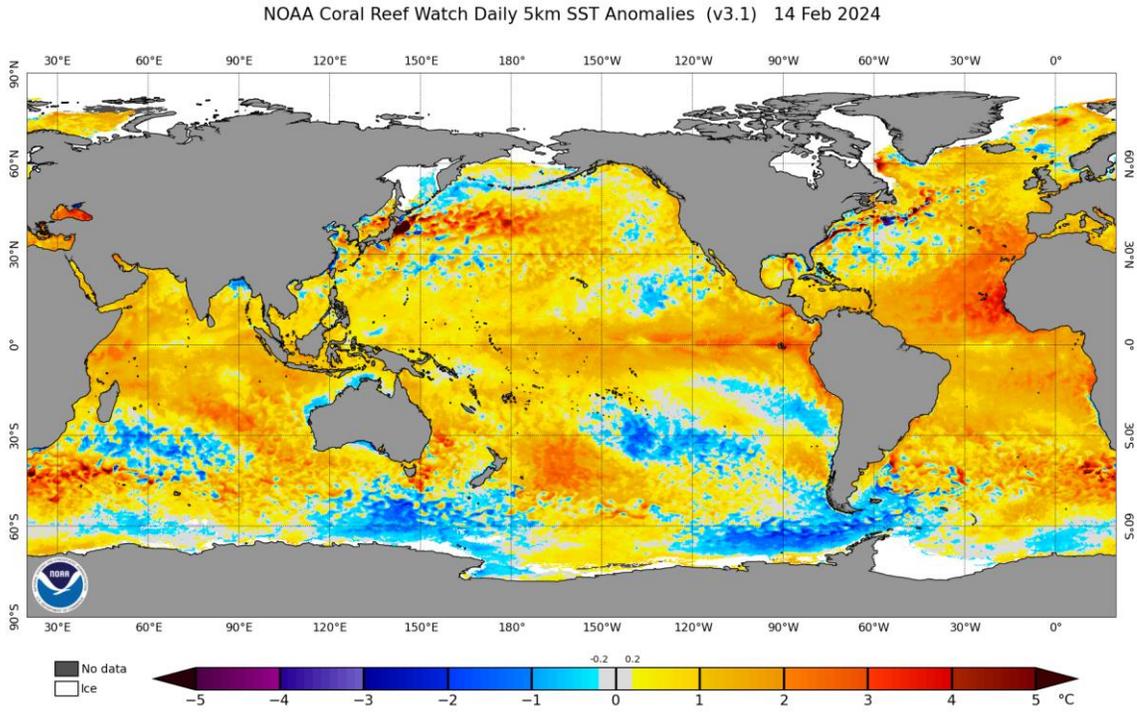
GFS Accumulated Precipitation (cm)
Days 1-3 Total | Thu, Feb 15, 2024

ClimateReanalyzer.org
Climate Change Institute | University of Maine

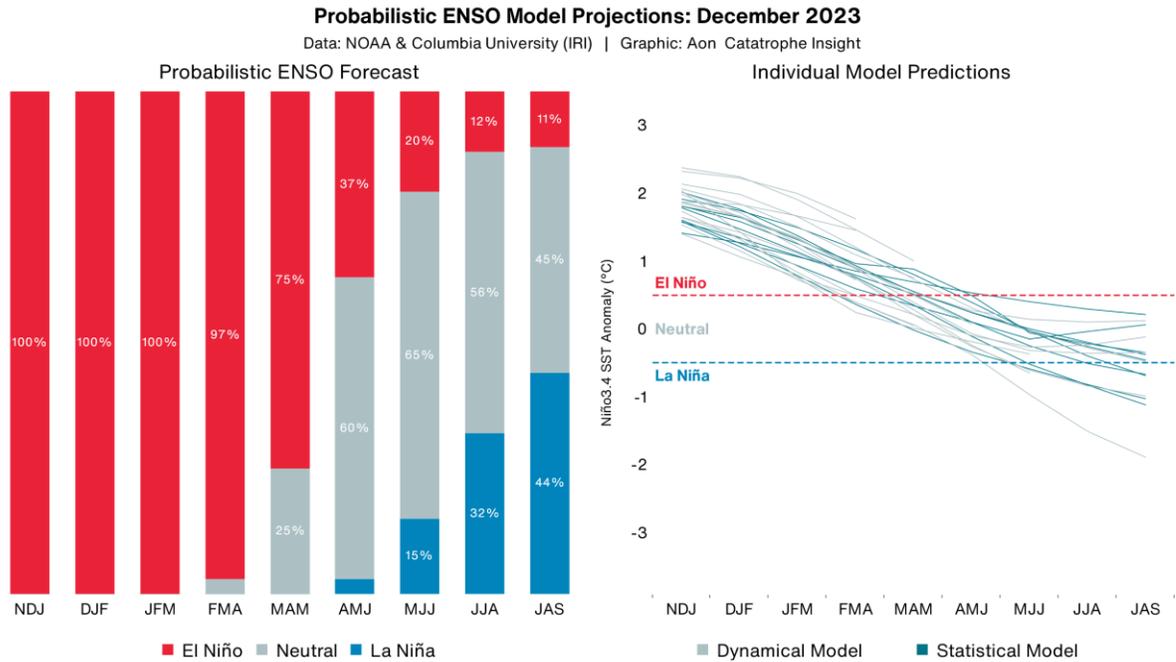


Source: Climate Reanalyzer, Climate Change Institute, University of Maine, USA

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



El Niño-Southern Oscillation (ENSO)



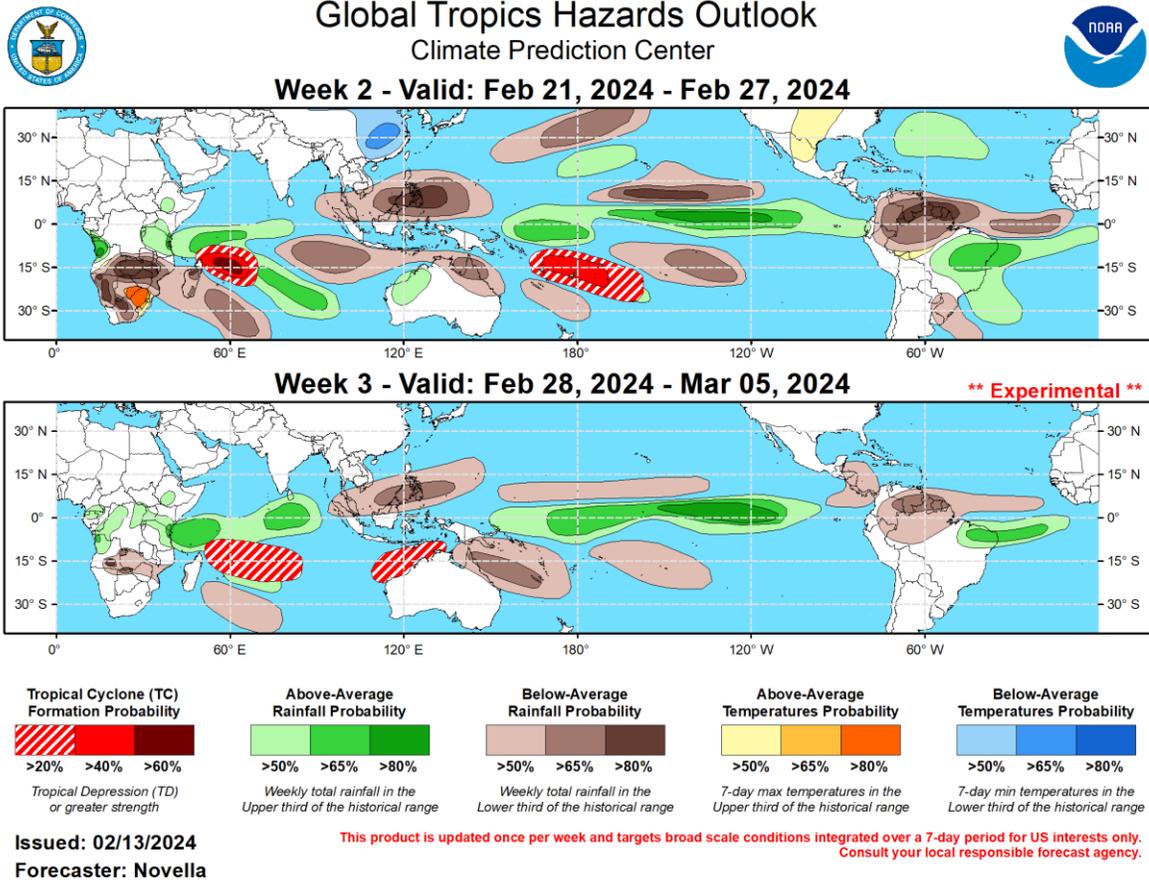
El Niño: Warm phase of an ENSO cycle. Sea surface temperatures of +0.5°C occur across the east-central equatorial Pacific.

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.

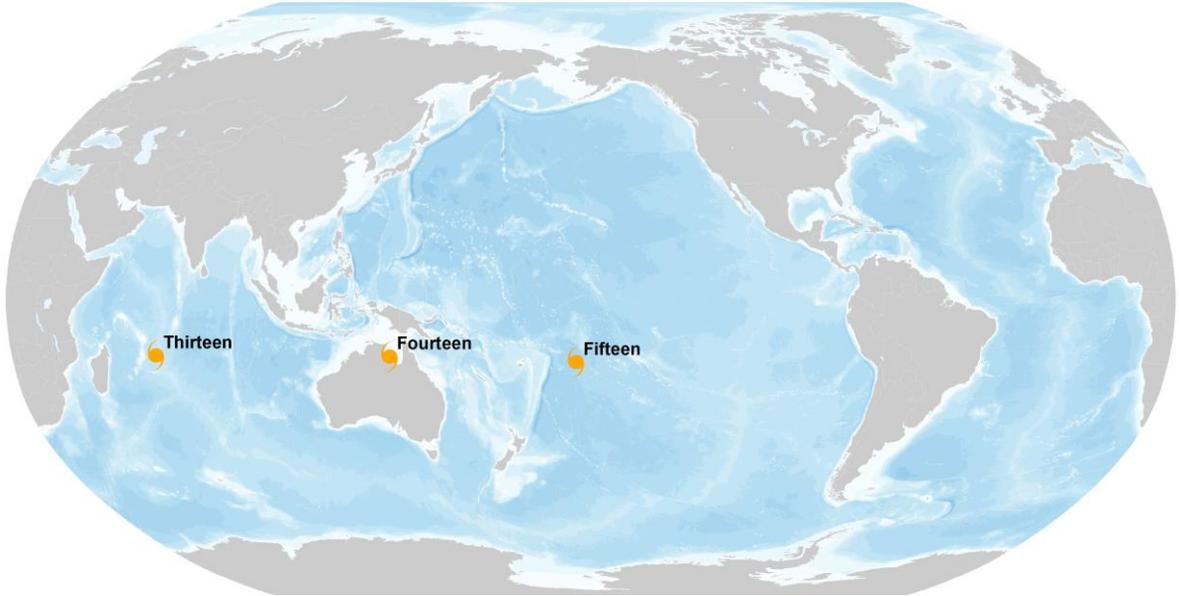
El Niño (La Niña) is a phenomenon in the equatorial Pacific Ocean characterized by a five consecutive 3-month running mean of sea surface temperature (SST) anomalies in the Niño 3.4 region that is above the threshold of +0.5°C (-0.5°C). This is known as the Oceanic Niño Index (ONI).

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

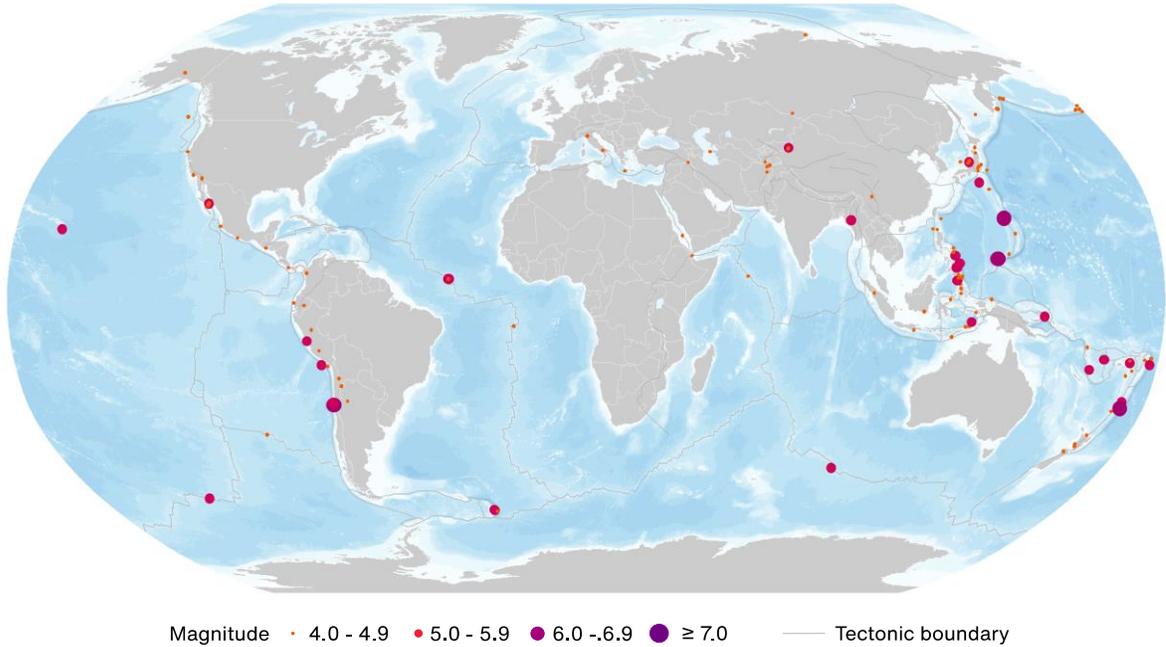
Name	Location	Winds	Center
CY Fifteen	17.0S, 164.5W	40	385 miles (615 km) E from Alofi, New Zealand
CY Fourteen	15.5S, 137.5E	40	495 miles (795 km) SE from Darwin, Australia
CY Thirteen	15.2S, 64.9E	40	595 miles (960 km) NE from Port Louis, Mauritius

* 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)

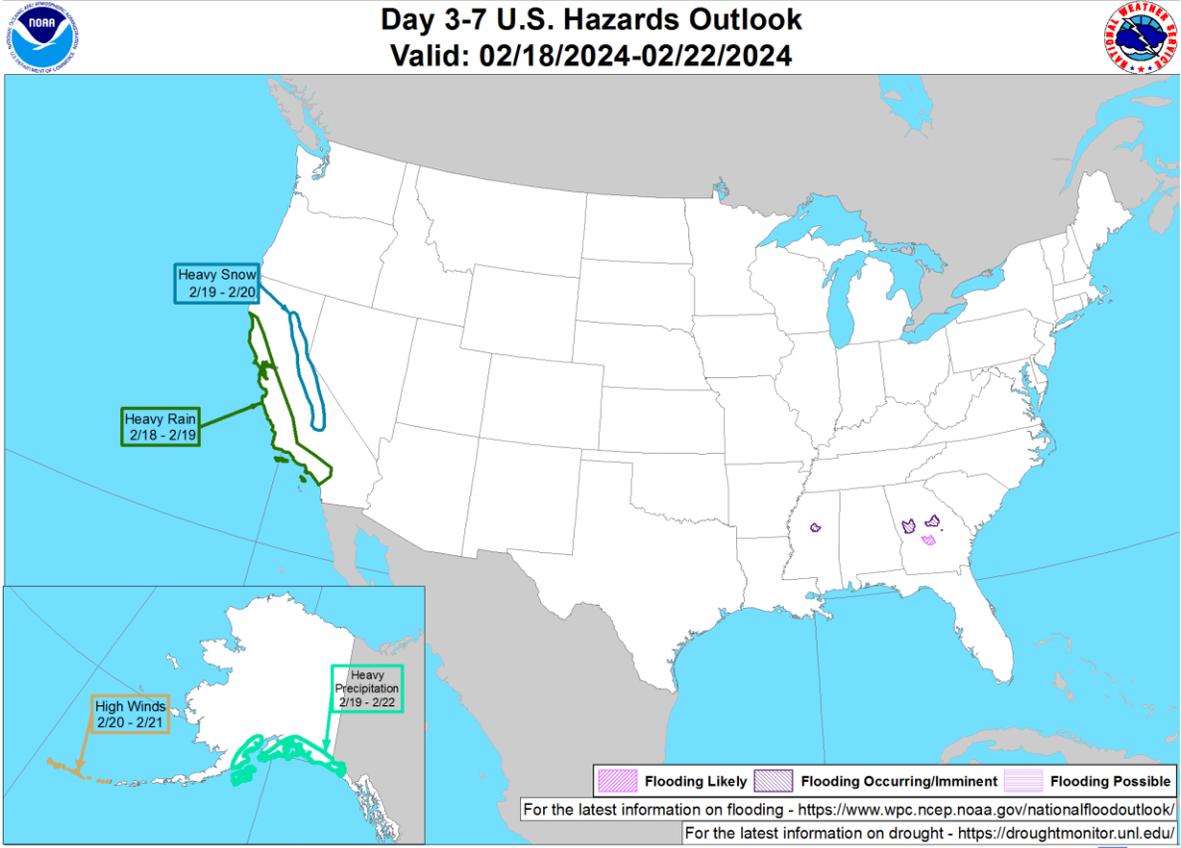
Global Earthquake Activity ($\geq M4.0$): February 9-15



Date (UTC)	Location	Mag	Epicenter
2/9/2024	29.91S, 177.29W	6.1	Kermadec Islands, New Zealand
2/12/2024	22.03N, 142.75E	6.1	Volcano Islands, Japan region
2/14/2024	28.92S, 71.53W	6	83 km (52 miles) WSW of Vallenar, Chile
2/14/2024	11.00N, 138.61E	6	17 km (11 miles) NNE of Colonia, Micronesia

Source: United States Geological Survey

U.S. Hazard Outlook

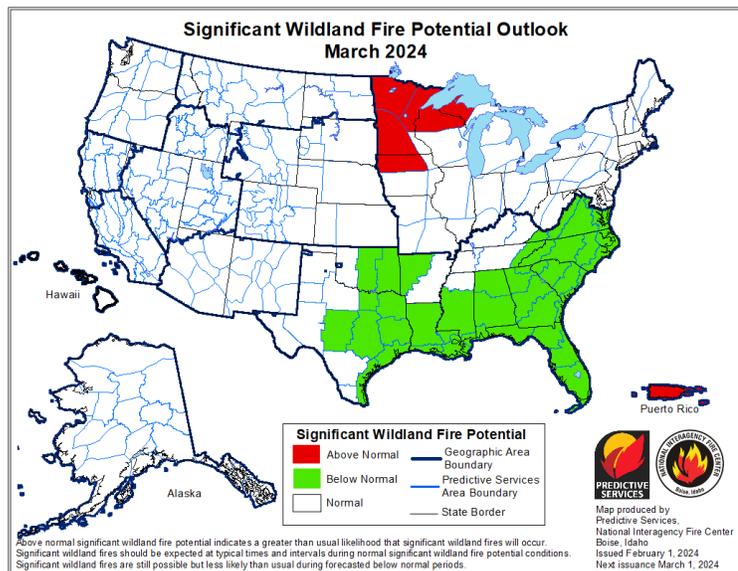
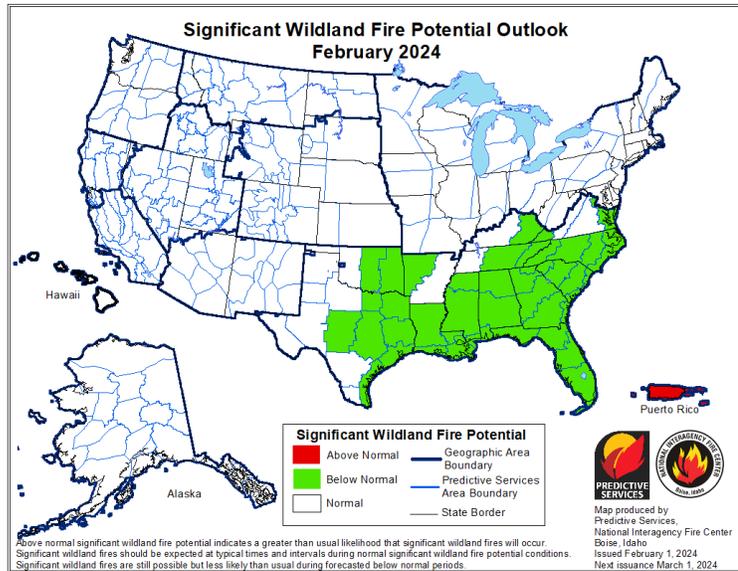


Weather Prediction Center
Made: 02/15/2024 02:44 PM EST

Follow us:  
www.wpc.ncep.noaa.gov

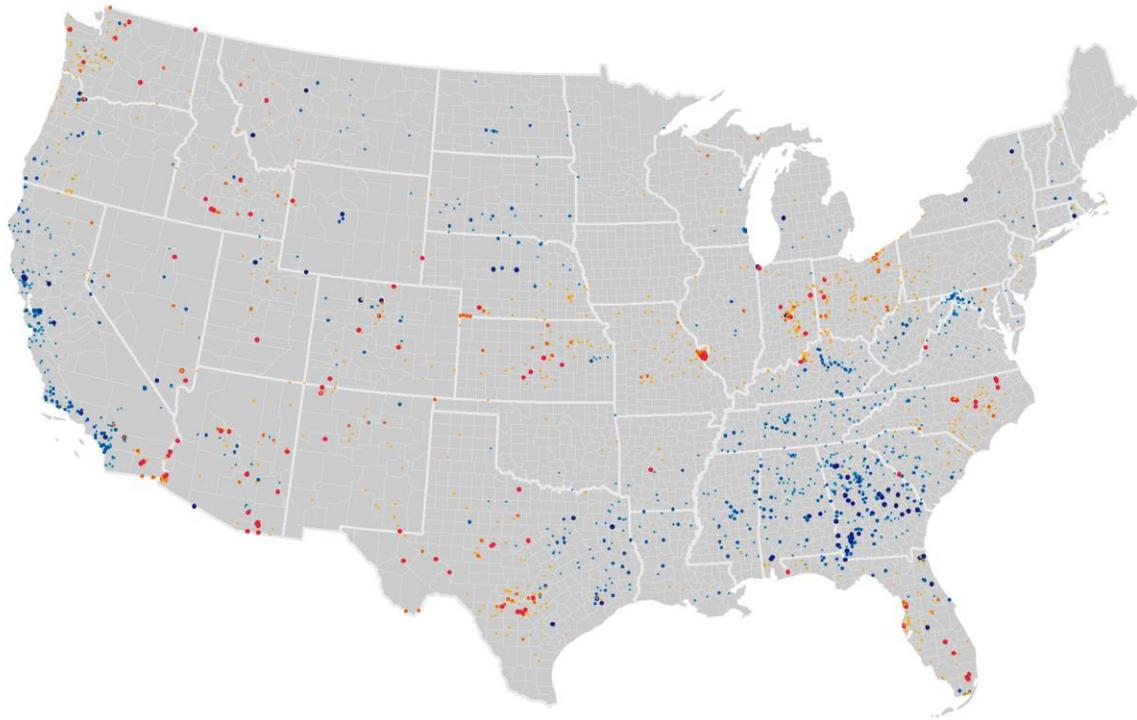
Source: Climate Prediction Center (NOAA)

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



Source: NIFC

U.S. Current Riverine Flood Risk



High Flows (Percentile)	• ≥ 99 / Above floodstage	Hydrological 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 99th 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 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: Winter Weather, SCS, & Flooding

NOAA Damage Assessment Toolkit (DAT)

New York State Department of Transportation (NYSDOT)

National Weather Service (NWS)

Weather Prediction Center (WPC)

Storm Prediction Center (SPC)

Some flooding seen at New Hampshire coastline after high tide, *WMUR*

The flakes fled south, but nor'easter brings flooding to Boston, *WBUR*

Deadly nor'easter winds down after dumping over a foot of snow in Northeast, *Fox Weather*

Winter Storm: 1 Dead In Pennsylvania; 15-Plus Inches Of Snow In Connecticut, *The Weather Channel*

Rock Co. officials say Evansville tornado caused over \$2.4 million in damage, *Channel 3000*

Houston County roads cave in after flooding, *News4*

Damaging hail, wind sweep across the ArkLaTex, *KSLA News 12*

Philippines: Flooding & Landslides (Update)

Philippine Space Agency, *Twitter*

Death toll from Philippines landslide climbs to 68, *Al Jazeera*

The 6 February 2024 landslide at Masara in the Philippines, *EOS.org*

Department of Social Welfare and Development, *DROMIC Report*

Philippine landslide death toll rises to 71, search for 47 continues, *CGTN*

Emergency Response Coordination Centre

Natural Catastrophes: In Brief

Kazakhstan – Landslide, *ECHO Daily Flash of 12 February*

Flooding in Dubai after heavy rain, *Associated Press*

Four people killed in deadly Oman floods including three children, *Euronews*

1 killed in flooding after heavy rainfall in southern Turkey, *Turkish Minute*

Cyprus Storm Chaos: Destruction, Despair, and the Race to Restore Power, *BNN*

Crews are on foot to close “wounds”, 156 houses are measuring damages, *Alphanews*

Australia: Severe weather batters state of Victoria, *BBC*

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