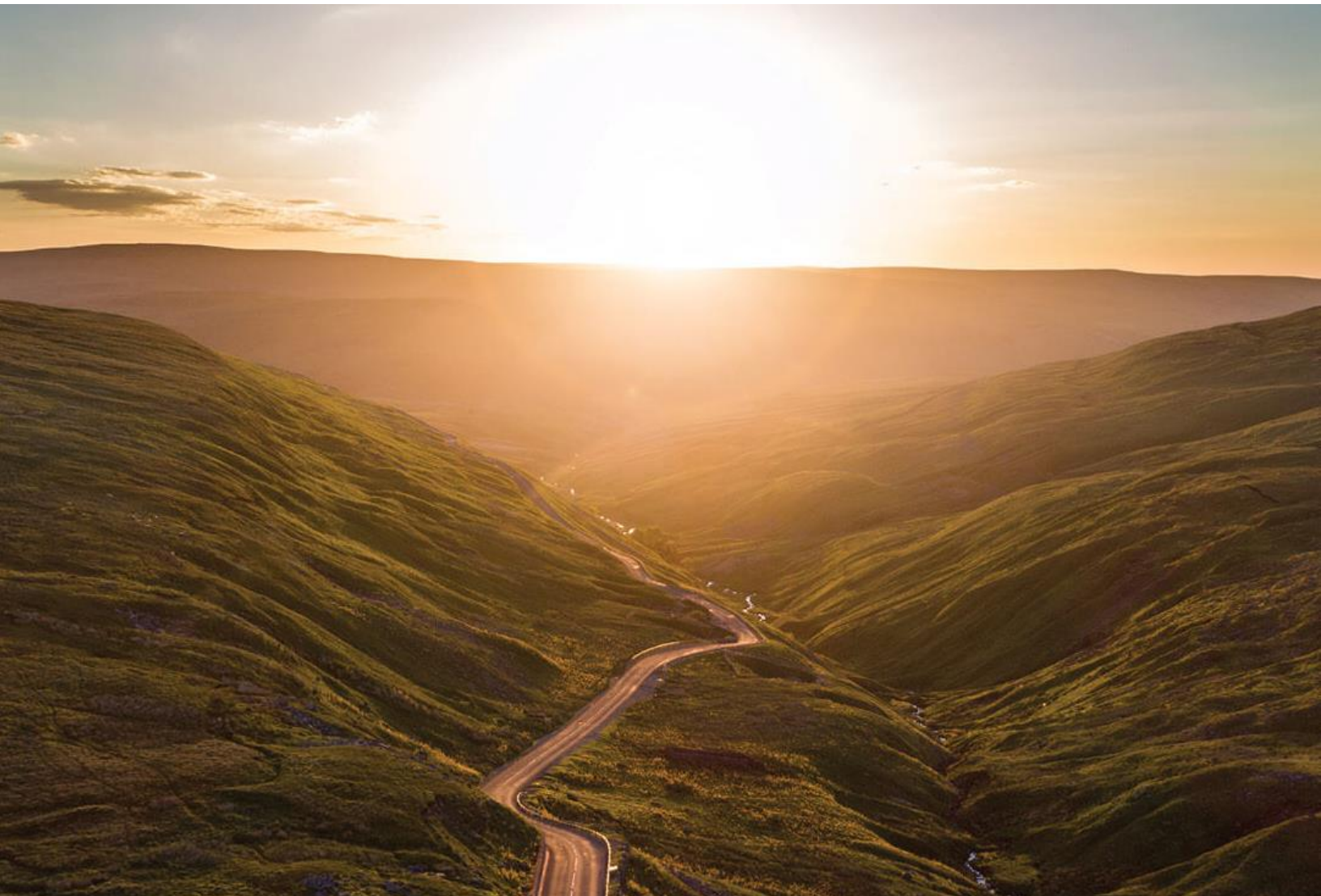
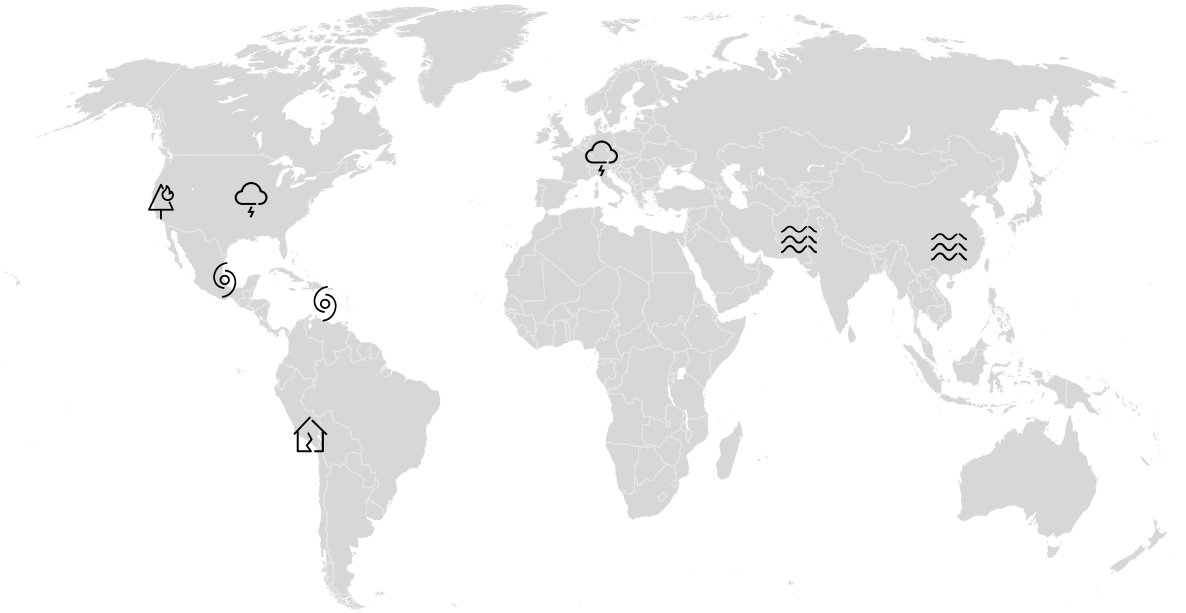
Weekly Cat Report

July 5, 2024



Executive Summary



Event	Affected Region(s)	Fatalities	Economic Loss ($)	Page
Hurricane Beryl	Caribbean	7	100s of millions	3
Severe Convective Storm	Europe	9	100s of millions	6
Wildfire	United States	0	Unknown	9
SCS & Flooding	United States	1	Millions	10
Tropical Storm Chris	Mexico	0	Millions	10
Flooding	China	0	Millions	10
Earthquake	Peru	0	Negligible	10
Flooding & Landslide	Pakistan	8	Unknown	10

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

Caribbean: Hurricane Beryl

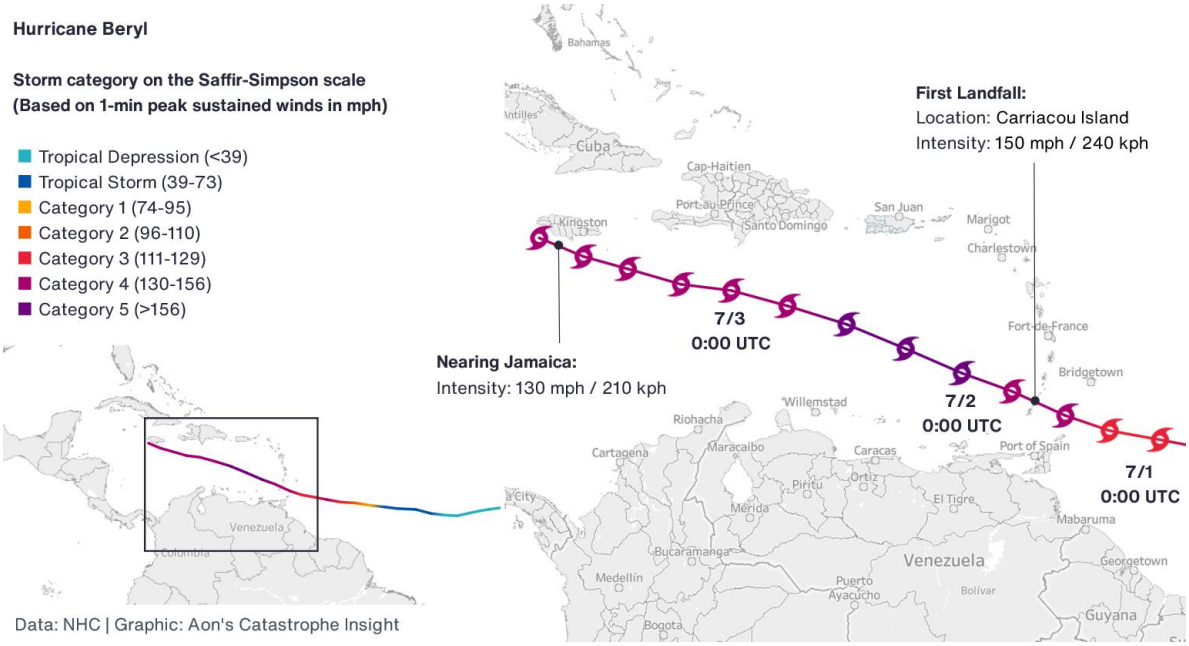
Overview

After rapidly intensifying in the Atlantic Ocean in late June, Hurricane Beryl has now become a historic, early-season storm. Record warm waters and ideal atmospheric conditions allowed Beryl to strengthen into a powerful category 5 hurricane, bringing heavy rainfall, intense winds, and storm surge to multiple Caribbean Island nations. Additional impacts are likely as Beryl continues west into the Gulf of Mexico.

Meteorological Recap

Between June 26-28, a tropical depression began forming over the central tropical Atlantic Ocean, in an area between the eastern Caribbean and Africa known as the Main Development Region (MDR). By June 30, this system (Beryl) rapidly intensified into a powerful category 4 storm as its maximum wind speeds remarkably increased by nearly 100 mph (160 kph). Rapid intensification was possible primarily due to record warm waters in the MDR, which currently mirror temperatures more typically seen in early September at around 29 °C (84.2 °F).

Around 11:10 am local time (15:10 UTC) on July 1, Beryl made landfall on Carriacou Island within the country of Grenada. It struck the island with 150 mph (240 kph) winds as a category 4 storm. Roughly 24 hours later, Beryl would reach peak strength as a **category 5 hurricane with maximum wind speeds of 165 mph (265 kph)**. The storm steadily weakened soon afterward due to strong wind shear while moving to the west-northwest over the Caribbean Sea. Severe winds, storm surge, and heavy rain affected many adjacent countries, including Venezuela, the Dominican Republic, and Haiti. On July 3-4, severe hurricane-force winds hit Jamaica while the Cayman Islands experienced tropical storm-force winds. Further damaging impacts are expected as Beryl is likely to affect the Yucatán Peninsula, northern Mexico, and possibly Texas in the upcoming days (see the next Weekly Cat Report for updates).

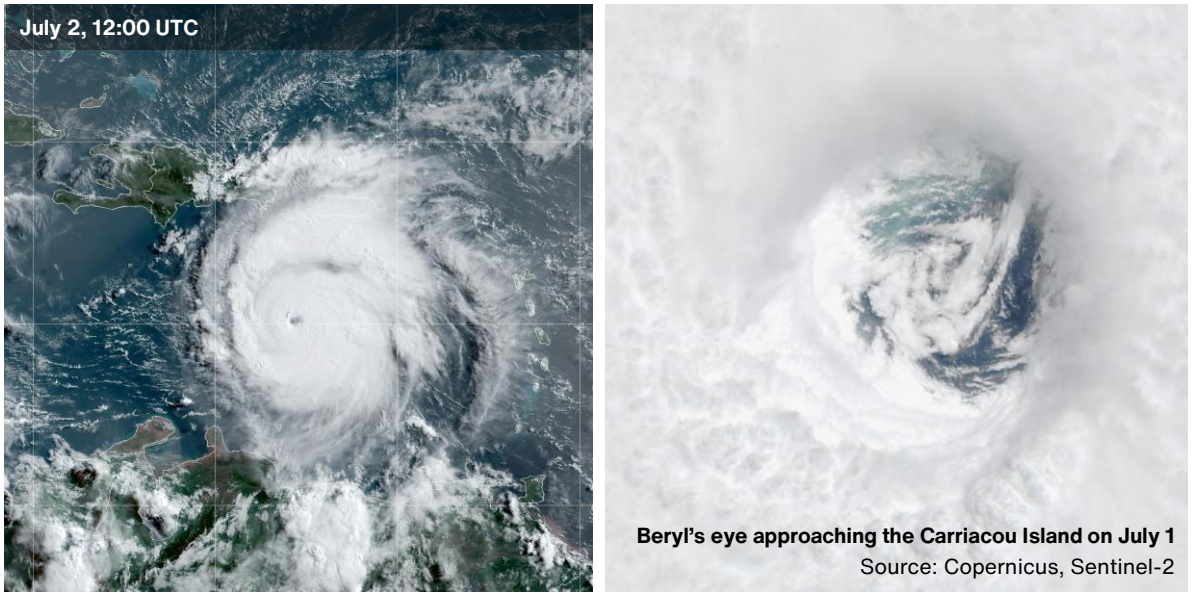


Data: NHC | Graphic: Aon's Catastrophe Insight

Historical Context

The timing, location, and intensity of Beryl's development this early into the Atlantic Hurricane season is unprecedented. Below are some of the remarkable, long-standing, tropical cyclone records for the Atlantic Basin that were recently broken by this historic storm:

- Strongest June hurricane on record in the Atlantic Ocean (130 mph), surpassing the previous record (125 mph) held by Hurricane Audrey in 1957.
- Strongest July Atlantic hurricane (165 mph) ever, passing Hurricane Emily (160 mph) in 2005.
- Earliest category 4 storm on record (June 30, 2024), and the only category 4 storm ever to form in June. This beat Hurricane Dennis, which reached category 4 strength on July 8, 2005.
- Earliest category 5 storm in the Atlantic Basin (July 1, 2024), surpassing the previous record set by Hurricane Emily on July 17, 2005.
- Earliest landfalling major hurricane on record (July 1), just ahead of the 1916 Gulf Coast Hurricane (July 5).
- The easternmost hurricane to form in the tropical Atlantic Ocean in June, breaking a record set back in 1933.

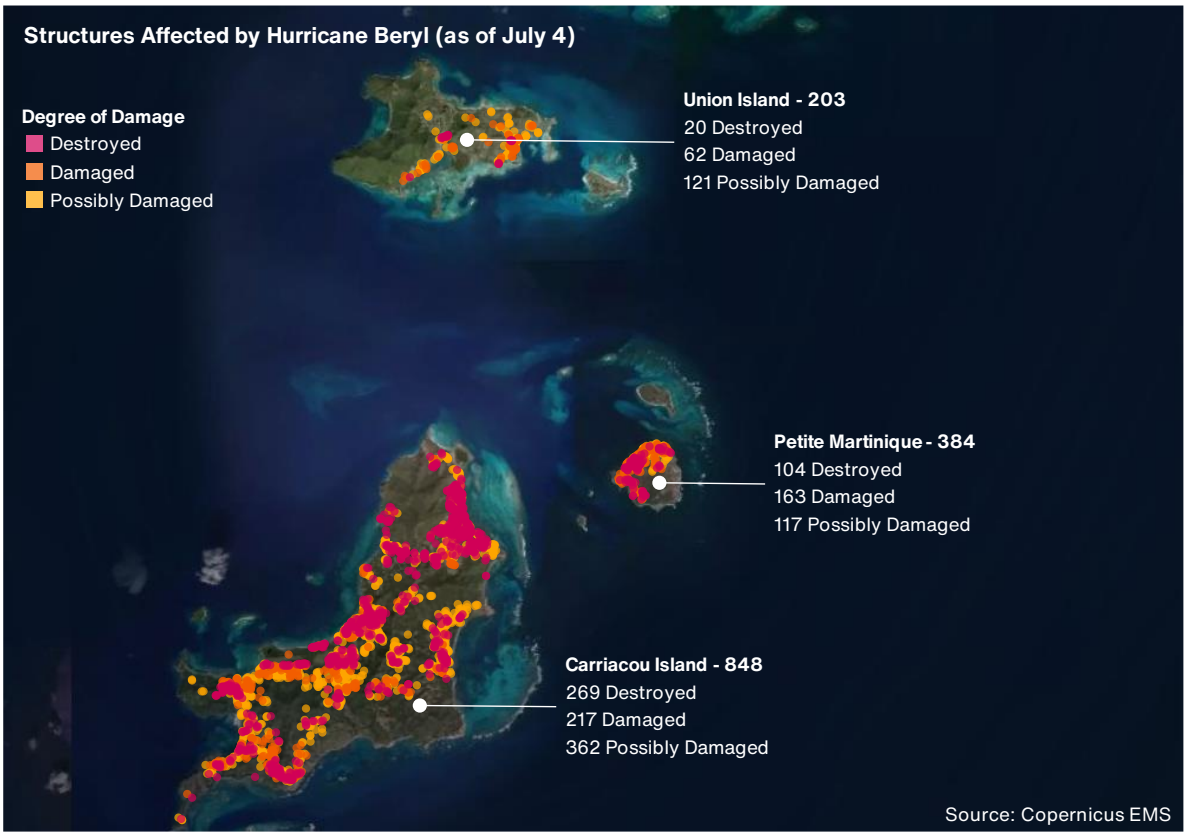


Beryl's eye approaching the Carriacou Island on July 1
Source: Copernicus, Sentinel-2

Event Details

Portions of the Windward Islands in the eastern Caribbean were heavily impacted by Hurricane Beryl due to heavy rainfall, strong winds, and storm surge. **Grenada**, along with **St. Vincent and the Grenadines**, were especially hit hard due to their proximity to the eyewall of the storm. Significant damage occurred on Carriacou and Petite Martinique islands as local officials reported that around 98% of the buildings on both islands were damaged or destroyed (see Graphic below). All electricity and communication systems have also been lost on both islands, affecting a population of nearly 10,000 people. Other impacted island nations include Barbados, Trinidad and Tobago, and St. Lucia.

Hurricane Beryl also produced gusty winds, heavy rainfall, and storm surge in north-eastern Venezuela. In the Dominican Republic, dozens of people were evacuated and several houses were damaged.



On July 3-4, the storm brushed the southern coast of **Jamaica**, prompting local officials to declare a state of emergency. The storm left more than 400,000 people without power and hundreds more displaced. Damage assessments within the island are ongoing, and more accurate loss figures will likely be included in the upcoming Weekly Cat Report.

As of this writing, 7 people have died due to the storm, however, the final death toll is expected to rise further.

Financial Loss

It is too early to determine exact loss figures related to Beryl as damage across the affected areas is still being assessed and further impacts are expected in Mexico and possibly Texas. Given the storm's intensity and reported damage thus far across the Caribbean, which includes significant infrastructural, structural, and agricultural losses, Beryl may drive total economic losses into the hundreds of millions USD. While insured losses are anticipated to be significantly lower, this largely depends on which areas will be impacted next.

Europe: Severe Convective Storm

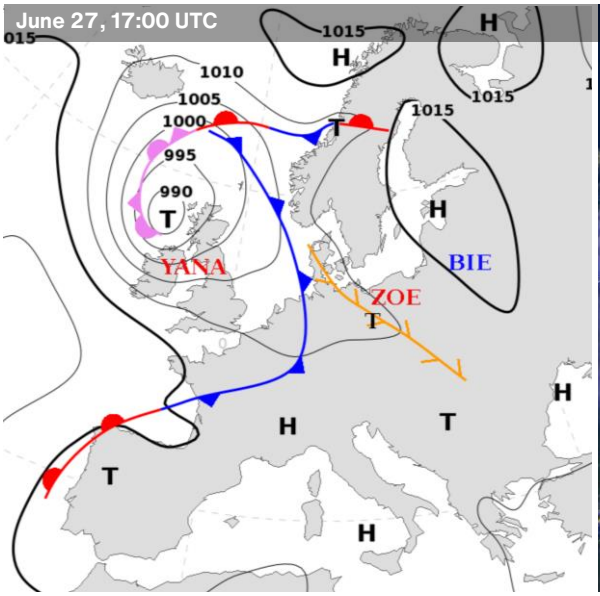
Overview

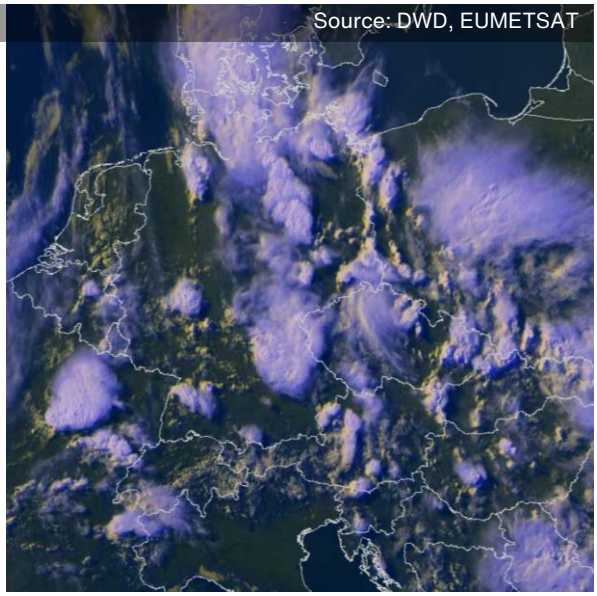
Western, Central, and Southeastern Europe remained impacted by severe convective weather between June 27 and July 2. Locally severe storms again generated large hail, flash flooding, and damaging wind gusts, resulting in additional seasonal losses for local insurers. At least 9 people were killed and total financial losses are expected to reach hundreds of millions of EUR.

Meteorological Recap

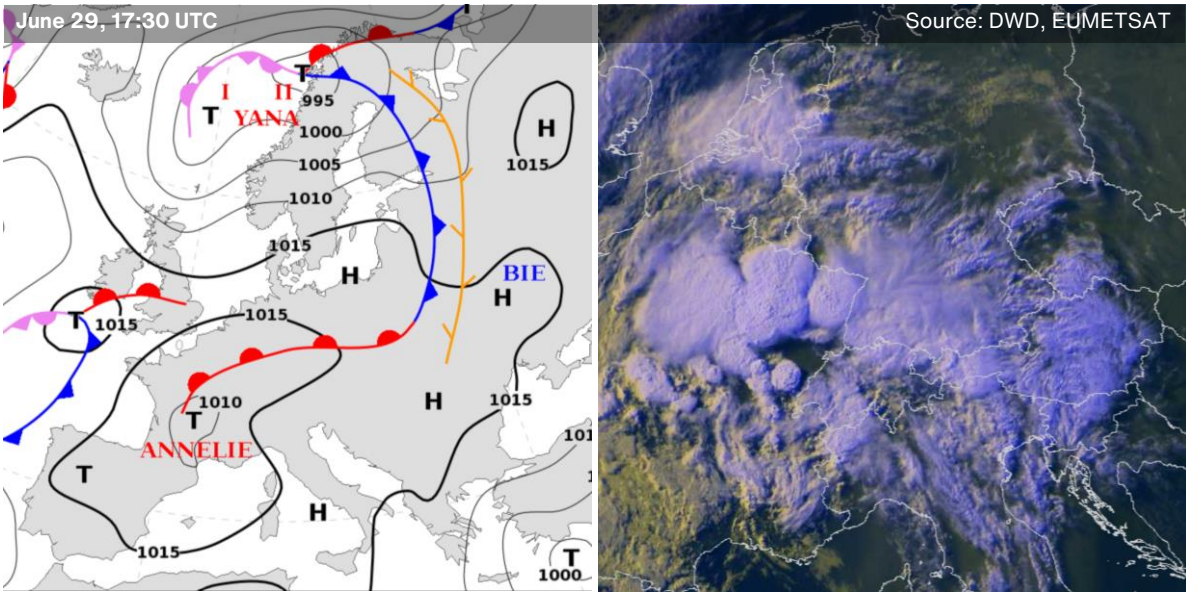
With a blocking anticyclone positioned over Scandinavia, a pronounced convergence zone over parts of Central Europe and a cut-off low named Zoe became the focus for most active thunderstorm initiation on **June 27-28**. Further activity was related to a slow-moving cold front associated with the low-pressure system Yana. The storm activity was further enhanced by the advection of warm and humid airmass from the south.

The primary hazards associated with the storms on June 27 were localized heavy rainfall and strong wind gusts. Although the ESWD reported more than 100 hail reports, their size did not exceed 3 cm (1.2 in) in most cases and had limited potential to cause significant property losses.





On **June 28-30**, more storms with all associated hazards developed on the frontal boundary ahead of an advancing short-wave trough and associated surface low named Annelie. Large hail with diameters of up to 8 cm (3.1 in) occurred in central France on June 28. Notably, these storms generated downbursts (*powerful winds descending from a storm cloud*) and localized wind gusts exceeding 100 kph (60 mph) in Germany, France, Czechia, and elsewhere. In northern Italy, giant **12-cm (4.7-in) hailstones** were reported in Castellamonte.

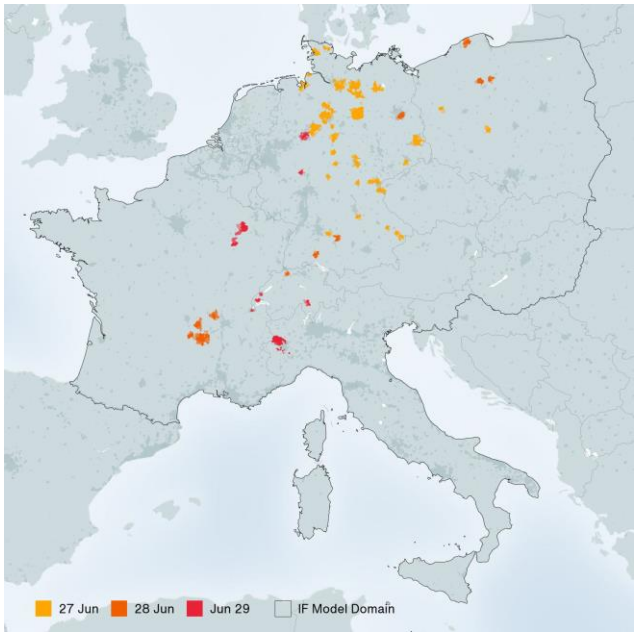


Additional severe storms related to the progression of the frontal system further east were observed in the Balkan region. On July 1, a line of storm produced relatively minor impacts in Central Slovenia and continued to generate very large hail in Croatia roughly between Zagreb and Slavonski Brod on the borders with Bosnia and Herzegovina. Finally, this particular system spawned additional hail and wind effects around Šabac and Beograd.

Event Details

On June 27-28, potentially notable losses related mainly to hailstorms were reported particularly across **Germany**, along with at least 5 people who suffered injuries. Other 2 people were injured in **Poland** on June 27.

Additional property damage occurred on June 28-30 when many European countries reported severe weather-related material and human losses. Strong thunderstorms occurred in eastern **France**, claiming 3 fatalities and one injury due to the fallen tree near the Brienne-le-Châteauvillage municipality. In **Luxembourg**, storms affected about 36 municipalities on June 29. Local emergency services responded to more than 2,800 emergency calls and intervened more than 630 times, with the majority of operations located in the municipalities of Petingen and Käerjeng.



Area affected by notable hail on June 27-29
Source: Aon Impact Forecasting's Automated Event Response

Other 3 people were killed during the landslide event in the Fontana region in southern **Switzerland**. One more flood-related fatality was reported in Saas-Grund in the canton of Valais, where mudslides and flash flooding damaged several buildings and vehicles. Severe flooding returned also to Zermatt, just 8 days after the previous severe weather event.

Localized severe flash flooding and hail damage were incurred in northern **Italy** and northern **Austria**. Hundreds of interventions were carried out in eastern **Czechia** particularly due to flooded houses and fallen trees that cut power lines to thousands of customers. In **Poland**, almost 600 operations due to the strong wind, heavy rain, large hail, and lightning were carried out in the Wielkopolskie voivodeship, west-central Poland. Dozens of homes and cars were damaged as the storm passed.

Hail damage in Waidhofen an der Thaya, northern Austria
Source: Local Fire Brigade

Severe storms also continued to impact the Balkan region on July 1-2. Notable damage was incurred mainly due to large hail spawned by a severe storm system in central **Croatia** between Zagreb and Slavonski Brod on July 1. Notably, widespread damage occurred around the village of Bošnjaci, where several millions of EUR of damage was initially estimated. On July 2, two people were also killed in **Montenegro**.

Financial Loss

Total aggregated economic and insured losses from the recent thunderstorm activity in Western and Central Europe are estimated to reach hundreds of millions EUR. Most financial losses will likely be related to hailstorms that hit Germany and France, with additional damage resulting from heavy rainfall and flash flooding that were elsewhere across the region.

United States: Wildfire

Overview

The Thompson Fire in northern California has caused considerable impacts in Butte County amid a dangerous heatwave over the western United States. Around 28,000 residents have been evacuated primarily from the towns of Oroville East, Oroville, and Kelly Ridge. Since igniting on July 2, the fire has burned over 3,500 acres of land and reportedly damaged several homes and vehicles. Fire suppression efforts will likely be challenged as record temperatures are likely to persist into next week.

Meteorological Recap

Since July 2, an extreme heatwave has hit much of the western U.S. Temperatures over 105 °F (40.6 °C) have been seen throughout the Central Valley of California, which has dried out vegetation and provided ample fuel for wildfire ignition and growth.


Source: Cal Fire Butte County

In northern California, the Thompson Fire began early on July 2 before quickly burning over 3,500 acres (1,400 hectares) within Butte County. The fire originally ignited just outside of the town of Oroville and has since grown, threatening adjacent towns such as Oroville East and Kelly Ridge. According to Cal Fire officials, the Thompson Fire is 7% contained as of early July 4.

Notably, Butte County is also the site of the historic Camp Fire – the deadliest wildfire event in California state history. In November 2018, this fire consumed nearly the entire town of Paradise and caused over $16 billion in economic losses.

Event Details

The Thompson Fire has heavily impacted the towns of Oroville, Oroville East, and Kelly Ridge. A state of emergency was declared by the state governor for the affected area as 28,000 people have been evacuated. According to local media reports, at least 8 people have been injured. Several homes and vehicles have reportedly been burned, although Cal Fire officials have yet to conduct an accurate damage assessment. As the ongoing western U.S. heatwave is expected to persist into next week, fire suppression efforts will likely remain difficult in the coming days.

Financial Loss

It is too early to determine financial estimates related to the Thompson Fire as local officials have yet to conduct accurate damage assessments. Updates will be provided in the next Weekly Cat Report.

Natural Catastrophes: In Brief

SCS & Flooding (United States)

Continuous severe weather and flash flooding have impacted numerous communities within the United States since June 28. Notably, heavy rainfall over burn scars triggered significant flash flooding in Ruidoso (AZ), which led to at least 100 water rescues across the town. Multiple rounds of severe storms and heavy rain also affected much of Missouri on July 2-3. Nearly 30,000 people in Kansas City lost power while one person was killed during a flooding incident in Columbia.

Tropical Storm Chris (Mexico)

Parts of central Mexico were affected by Tropical Storm Chris, which made landfall on June 30 at a peak intensity of 40 mph (65 kph). The state of Veracruz bore the brunt of the damage, largely related to heavy rainfall and subsequent flooding and landslides. Initial assessments revealed that at least 1,500 homes were damaged in the state, including 600 in the community of Huiloapan. At least 500 homes were also flooded in the state of Mexico.

Flooding (China)

Heavy rainfall and severe flooding have continued to affect parts of southern-central China since early June. In recent days, Pingjiang County in the Hunan Province was among the hardest hit, experiencing the most severe flooding along the Miluo River in at least 70 years. Local government has declared a state of emergency as floodwaters inundated dozens of buildings and forced evacuation orders for more than 5,000 people.

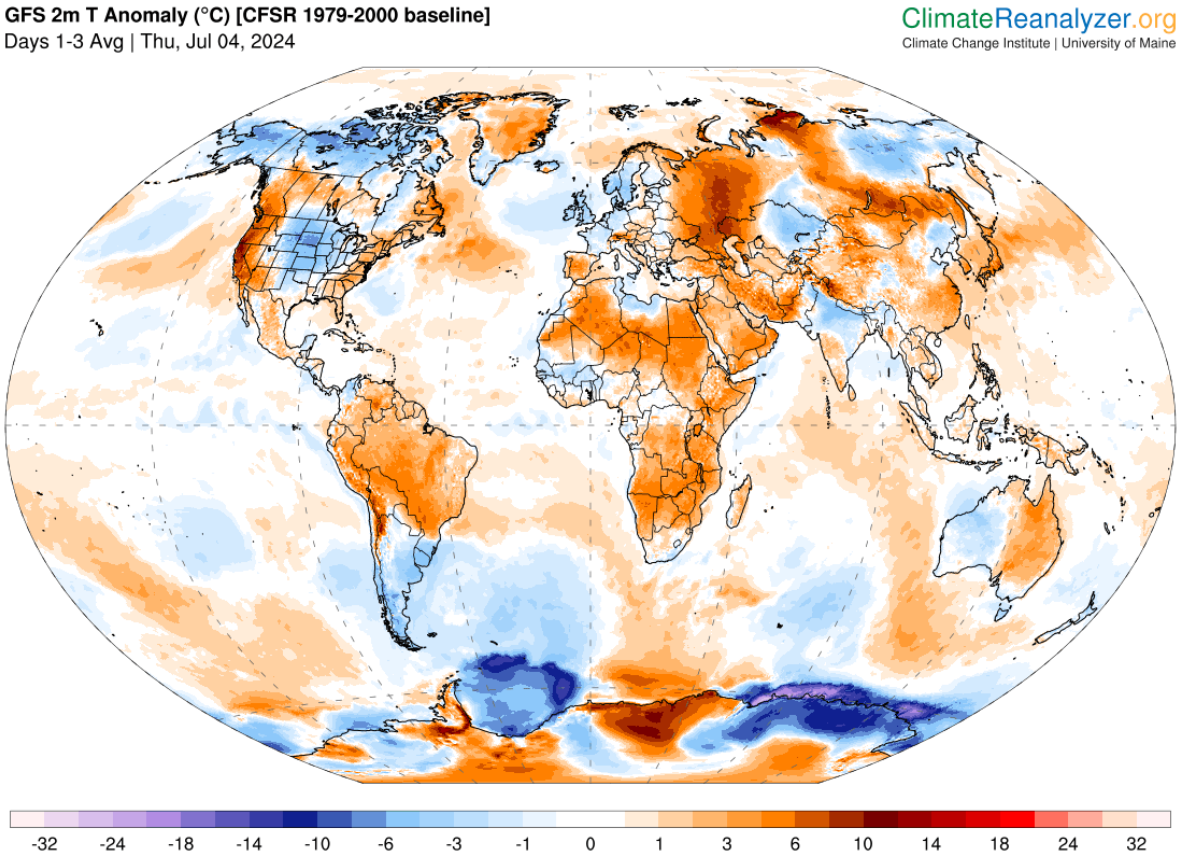
Earthquake (Peru)

A strong earthquake with a moment magnitude of 7.2 struck near the coast of the Arequipa province in Peru on June 28 (UTC) at a depth of approximately 28 km (17 mi). The event left 9 people injured but failed to generate significant property losses. Power outages and minor infrastructural damage were reported across the affected area.

Flooding & Landslide (Pakistan)

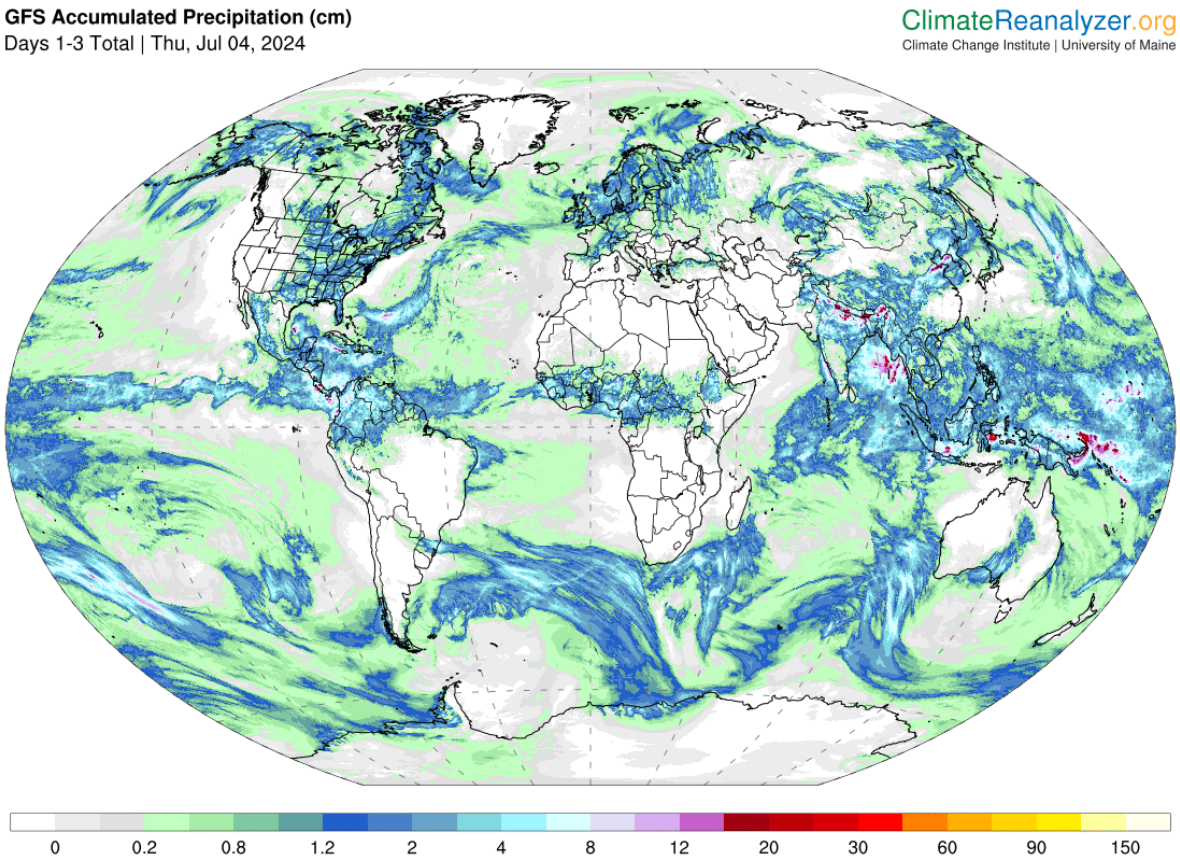
Since June 28, heavy rainfall triggered flash flooding and landslides across parts of western Pakistan. Various towns such as Zhob, Barkhan, and Dera Bugti within the Baluchistan Province were especially impacted. At least 8 people have been killed, dozens more were injured, and over 300 homes were destroyed.

Global Temperature Anomaly Forecast



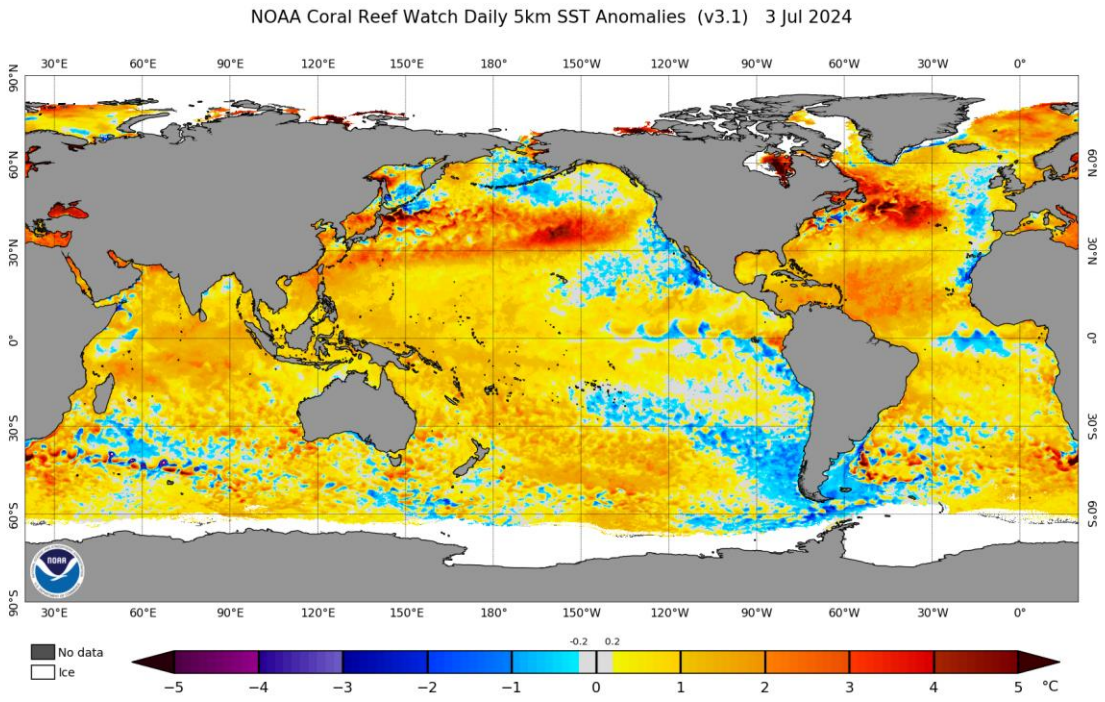
Source: Climate Reanalyzer, Climate Change Institute, University of Maine, USA

Global Precipitation Forecast

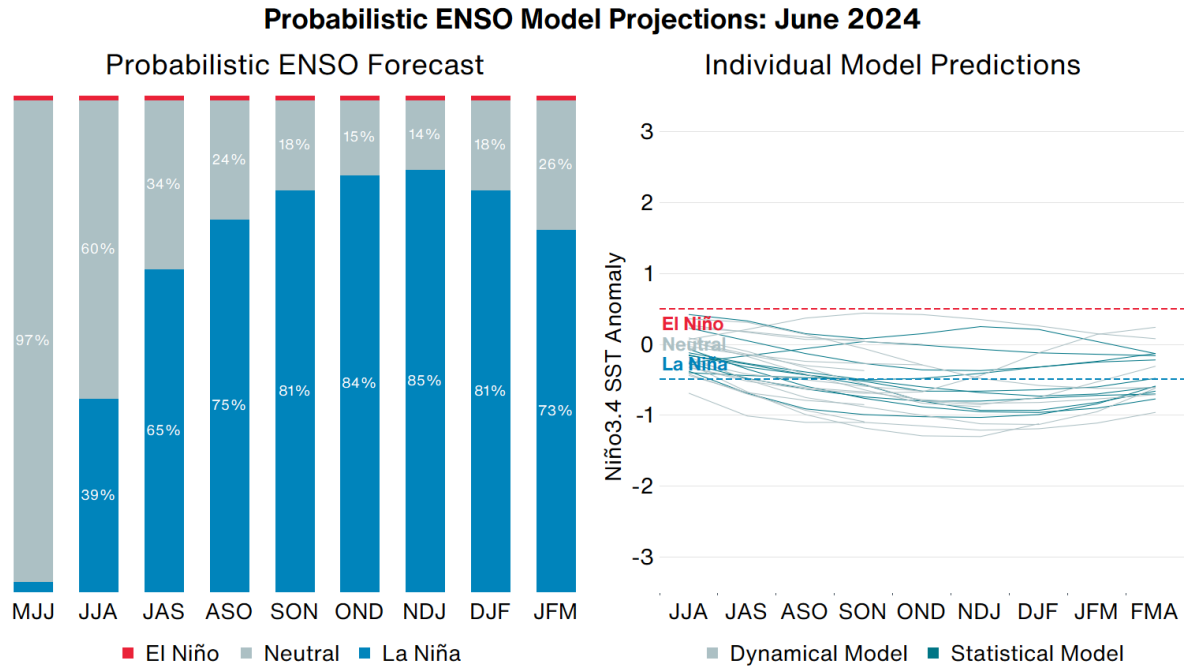


Source: Climate Reanalyzer, Climate Change Institute, University of Maine, USA

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.*

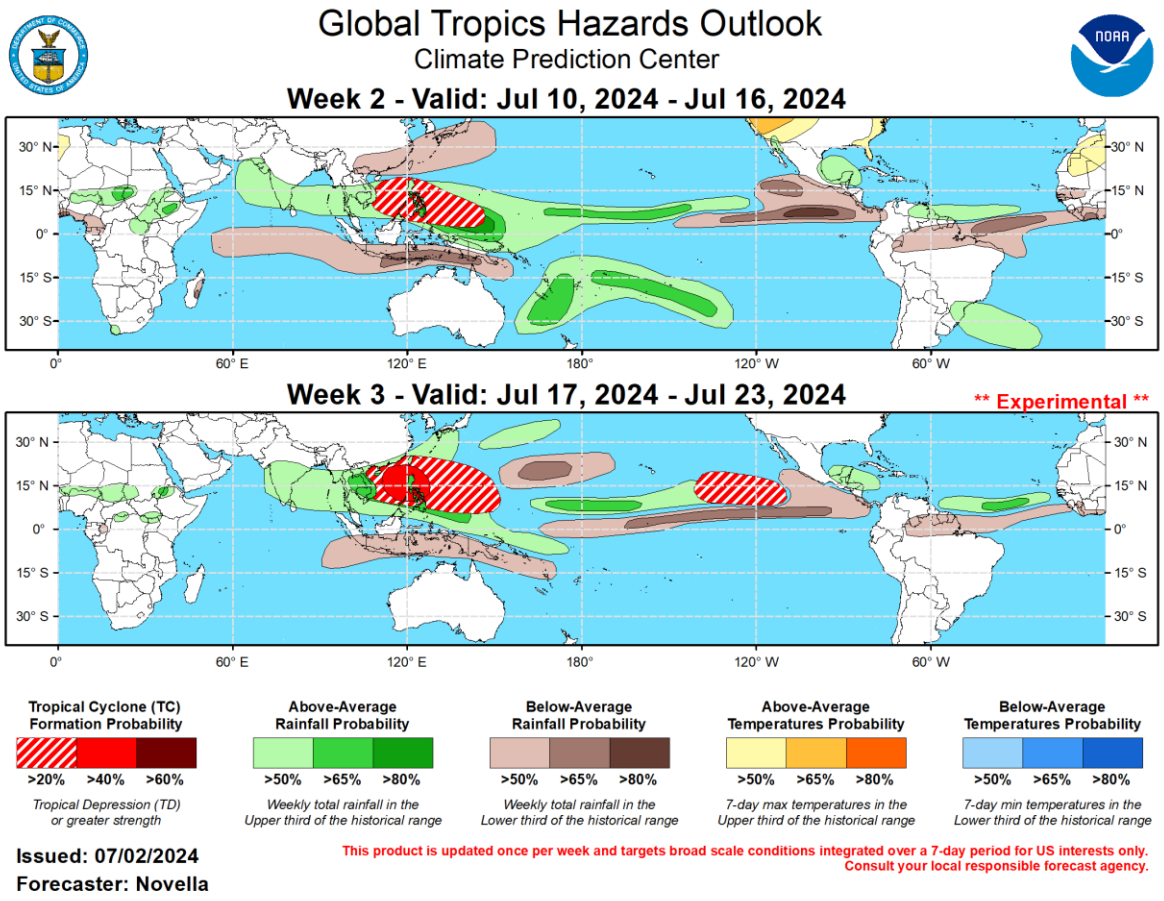
La Niña: *Cool phase of an ENSO cycle. Sea surface temperatures of -0.5°C occur across the east-central equatorial Pacific.*

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).

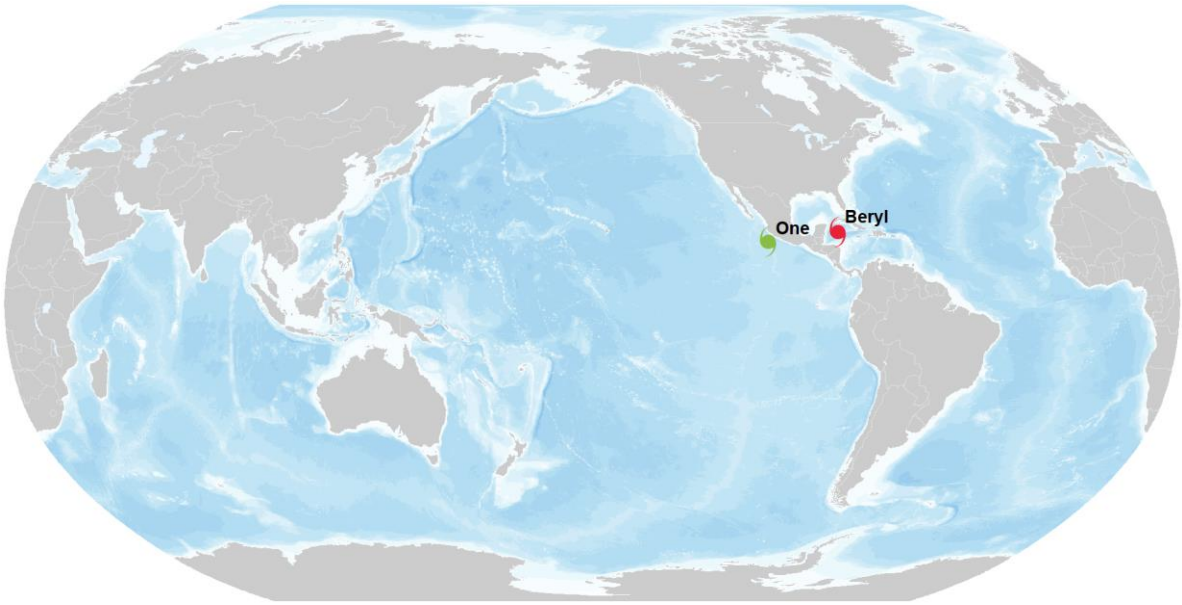
Source: NOAA, Columbia University | Graphic: Aon Catastrophe Insight

Global Tropics Outlook



Source: Climate Prediction Center (NOAA)

Current Tropical Cyclone Activity

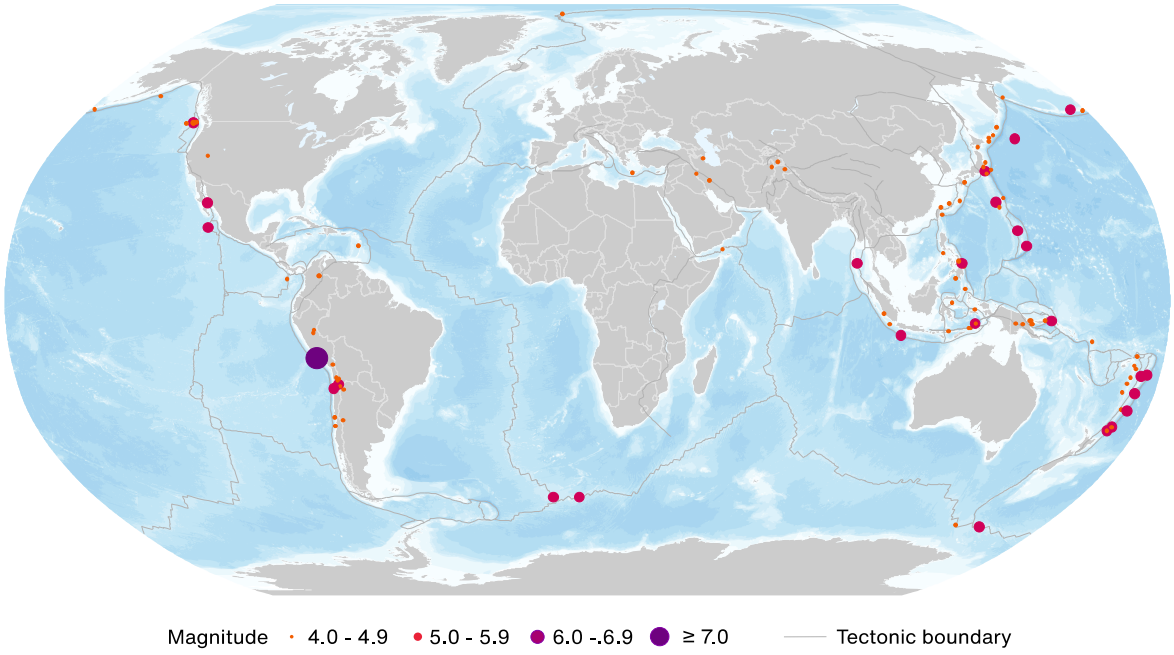


Name	Location	Winds	Center
TS One	16.8N, 105.3W	35	195 mi (315 km) SW from Colima, Mexico
HU Beryl	19.3N, 83.5W	110	140 mi (230 km) W from George Town

* 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)

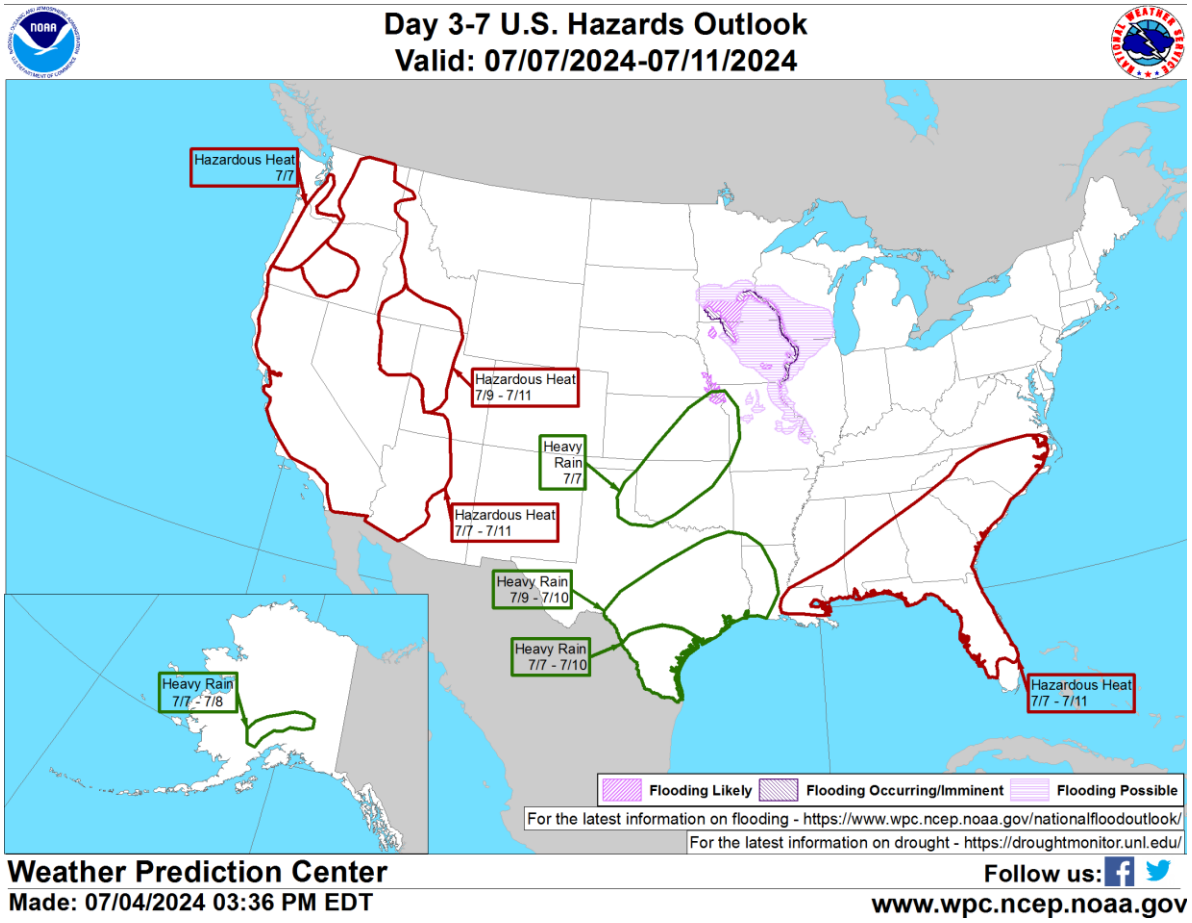
Global Earthquake Activity (≥M4.0): June 28 - July 4



Date (UTC)	Location	Magnitude	Epicenter
6/28/2024	15.81S, 74.44W	7.2	8 km (5 mi) W of Atiquipa, Peru
6/29/2024	16.12S, 74.58W	6.1	42 km (26 mi) SSW of Atiquipa, Peru

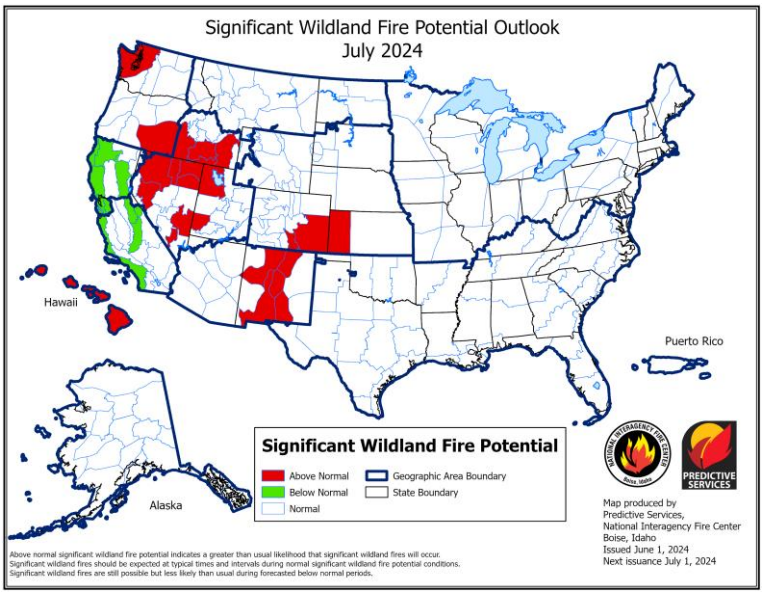
Source: United States Geological Survey

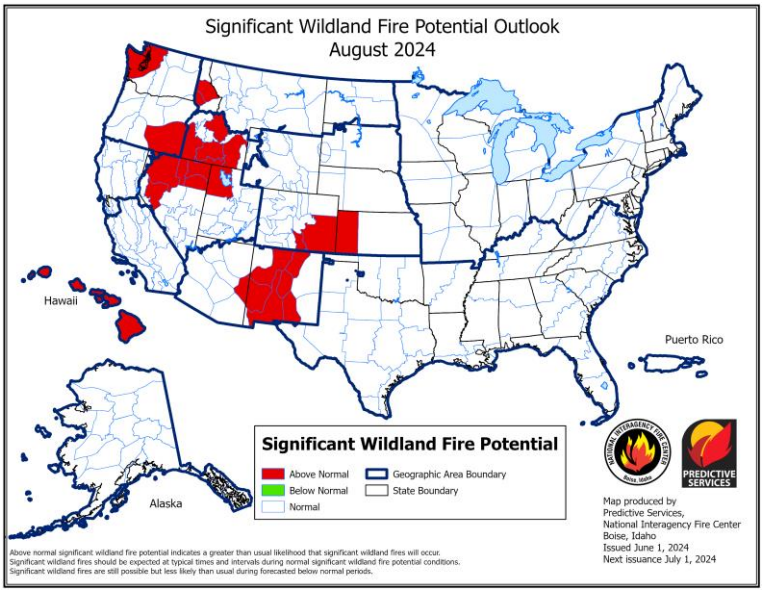
U.S. Hazard Outlook



Source: Climate Prediction Center (NOAA)

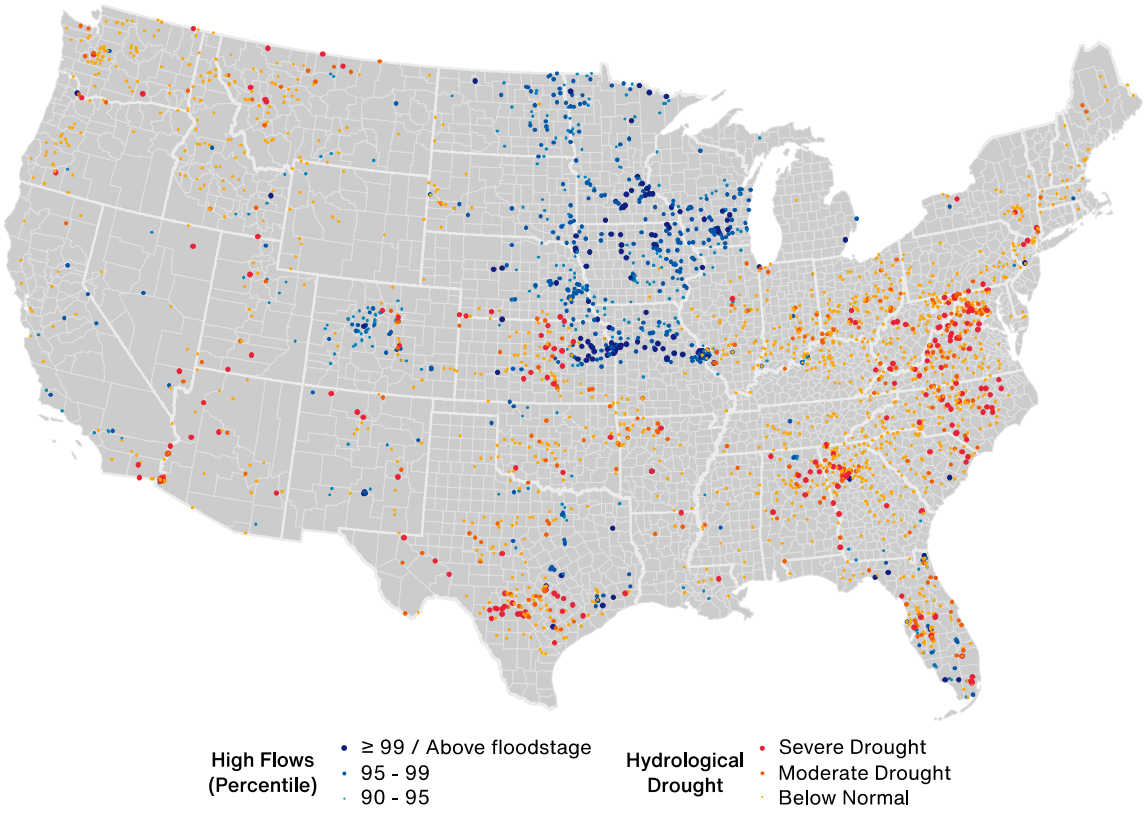
U.S. Wildfire: Significant Fire Risk Outlook & Activity





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

Caribbean: Hurricane Beryl

National Hurricane Center (NHC)
Copernicus EMS
Hurricane Beryl hits historic Category 5 intensity over Caribbean, *Axios*
Category 4 Beryl on collision course with Windward Islands, *Yale Climate Connections*
Hurricane Beryl broke a startling record before making landfall in the Caribbean, *NBC News*
Hurricane Beryl Caused 'Unimaginable' Damage in Grenada, Leader Says, *The New York Times*
Hurricane Beryl roars by Jamaica after killing at least 7 people in the southeast Caribbean, *AP News*

Europe: Severe Convective Storm

European Severe Weather Database (ESWD)
Aon Impact Forecasting's Automated Event Response (AER)
Storm over Luxembourg: extent of damage becomes visible, *Luxemburger Wort*
Almost 600 interventions by evening: Cleanup after storms in Wielkopolska is underway, *CodziennyPoznań*
Two people died in the storm in Montenegro. Heavy rains hit Croatia, Serbia, Bosnia and Herzegovina. *RTV Slovenia*

United States: Wildfire

California Department of Forestry and Fire Protection (Cal Fire) - Butte County
26,000 Evacuate as Wildfire Spreads in Northern California, *The New York Times*
Thompson Fire in Northern California forces evacuations as blaze rages, *NBC News*
Thompson Fire in Butte County slows; 28,000 people near Oroville remain under evacuation orders, *CBS News*
Wildfire prompts evacuation order for thousands in Northern California as 'exceptionally dangerous' heat builds in the West, *CNN*

Natural Catastrophes: In Brief

National Weather Service (NWS)
100 people rescued by National Guard from flash flooding in Ruidoso, *KOAT7*
Columbia woman presumed dead in floodwaters near Gillespie Bridge Road, *KOMU8*
Storm Chris causes damage to 1,500 homes in Veracruz, La Jornada

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