



# Weekly Cat Report

June 19, 2020

## This Week's Natural Disaster Events



Event	Impacted Areas	Fatalities	Damaged Structures and/or Filed Claims	Preliminary Economic Loss (USD)*	Page
<b>Flooding</b>	China	63+	145,300+	3+ billion	3
<b>Severe Weather</b>	Canada	0	10,000+	100s of millions	6
<b>Tropical Storm Nuri</b>	Philippines, China	0	Thousands	Millions	8
<b>Severe Weather</b>	Central Europe	2+	20,000+	10s of millions	9
<b>Flooding</b>	Pakistan, India	7+	Thousands	Unknown	11
<b>Flooding</b>	Nepal	9+	Thousands	Unknown	11
<b>Flooding</b>	Indonesia	0	1,500+	2.1+ million	11
<b>Flooding</b>	France	0	Hundreds	Millions	11
<b>Earthquake</b>	Turkey	1+	2,200+	Millions	11

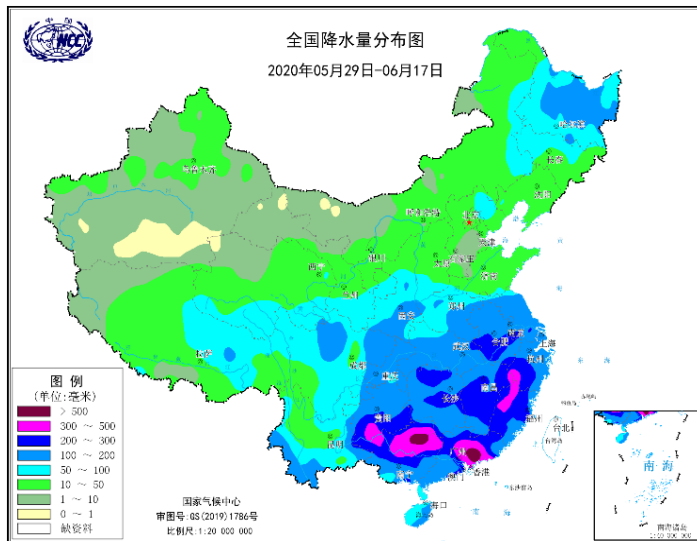
*\*Please note that these estimates are preliminary and subject to change. In some instances, initial estimates may be significantly adjusted as losses develop over time. This data is provided as an initial view of the potential financial impact from a recently completed or ongoing event based on early available assessments.*

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>

# Seasonal Mei-yu rains arrive in China

Torrential seasonal Mei-yu rains recently arrived in China and began initiating widespread flooding across the greater Yangtze River Basin. At least 63 people were left dead or missing. Data from China’s Ministry of Emergency Management cited that the rains – which began around May 29 and continued into June 19 – caused direct impacts in no fewer than 24 provincial regions. Among the hardest-hit included Guangdong, Guangxi, Hunan, Jiangxi, Guizhou, and Chongqing, where more than 145,000 homes were damaged or destroyed. Vast areas of cropland, 622,000 hectares (1.54 million acres), were also affected. Preliminary economic damage was listed at CNY20.7 billion (USD2.9 billion) but expected to rise.

## Meteorological Recap



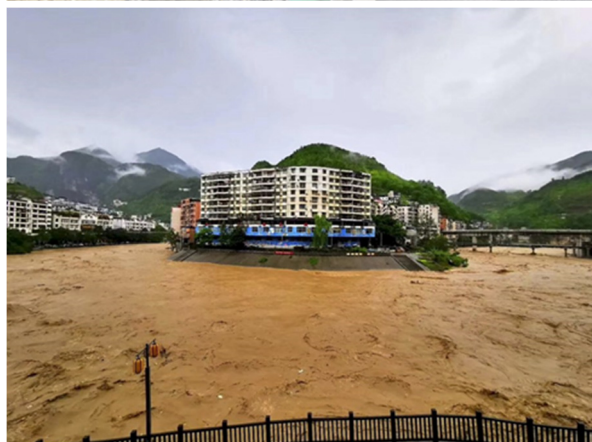
Strong convective weather associated with Mei-yu front brought heavy rainfall to southeastern and central China on May 29 – June 19. Between June 1 – June 18, the rainfall was concentrated along the rain belt over areas south of the Yangtze River. Guangxi and Guizhou, Hunan, Jiangxi, Hubei, Zhejiang, Fujian, and Guangdong in the southern China, along with the northern and central parts of the Yangtze River basin received notable precipitation. The rainy season started on June 12-16 in Sichuan province in southwestern China and Shanghai and Jiangsu province in eastern China. Moderate to heavy rain is expected to continue between June 19-23 as storms continue to propagate northward.

China Meteorological Administration declared that the East Asian rainy season (Mei-yu rains) had officially begun on June 1, nearly 8 days earlier than normal. Rainfall during this season occurs along a stationary front called the Mei-yu front (more below). Prior to June 1, torrential rains were cited in parts of Guizhou, Hunan and Guangxi provinces as well as Chongqing municipality. More than 150 rivers in these provinces broke their banks due to heavy flooding which caused widespread inundation damage.

*The arrival of East Asian summer monsoon rains over southern China is known as Mei-yu – also known as Plum Rains in China. This is caused by precipitation along a persistent stationary frontal zone (known as the Mei-yu front) that climatologically forms during early May across the South China Sea. The main characteristics of the Mei-yu front in China are heavy rain, high humidity, cloudiness, and weak winds. These rains are generally distributed across this east-west oriented frontal system, spanning over southern China, Taiwan, and the Okinawa region of Japan from early May through the middle of the June.*

*As the summer season evolves, the frontal system tends to migrate northward in tandem with the progression of the East Asian monsoon. As these systems propagate, their frontal characteristics change from a tropical to a mid-latitude frontal regime, and the rain bands arrive at the Yangtze River Valley and the main islands of Japan from mid-June to mid-July. They finally reach the Korean Peninsula and north-eastern China from mid-July to mid-August. Most of the rain falls on the southern side of the front. These weather systems contribute a significant proportion of rainfall to the East Asian monsoon.*

## Event Details



Flooding in Chongqing (Source: Xinhua)

Rains associated with the beginnings of the seasonal monsoon were first noted in Guizhou province started on May 29. Strong convective weather brought heavy rains to Guizhou Province in southwest China on May 29 – June 16. The provincial average precipitation reached up to 180 millimeters (7 inches); with locally higher amounts. Meteorological records suggest that the recorded rainfall was 85 percent higher than the average precipitation through June 15, and the highest on record during the past seven decades. Heavy rains embedded with the Mei-yu front caused flash floods and widespread inundation damage. According to the local media reports, the heavy rains caused 13 fatalities and affected at least 1.15 million, while 13 people are still missing. Torrential rains damaged at least 10,000 homes, of which 100 were destroyed, and additionally affected around 49,000 hectares (121,100 acres) of crops.

Five separate spells of heavy rainfall were recorded in Hunan province in central China since May 29, affecting around 1.4 million people and causing widespread damage to homes and croplands. Provincial officials noted damage to 140,000 hectares (345,948 acres) of crops. At least 1,600 houses were destroyed while thousands of houses sustained damage during the event.

Torrential rains impacting Guangdong Province in southern China between May 21 - June 15, triggered severe flash floods. According to The Emergency Management Department of Guangdong and media reports, flash floods caused relocation of more than 20,000 people in the province, and caused at least 10 casualties. Flooding resulted in swelling of more than 50 rivers above the danger mark in eight provinces including, Guangdong and Fujian provinces, and Guangxi Zhuang Autonomous Region.

Incessant rain triggered flash floods in Chongqing Municipality were also cited in southwest China since early June. Government officials said that at least 13 people were left dead or missing and that 13,000 people were evacuated. Episodes of heavy rainfall swept across the municipality, with maximum rainfall surpassing 200 millimeters (5 inches) across 20 counties and districts during one 24-hour stretch on June 11-12. Hundreds of homes were damaged or destroyed and more than 2,300 hectares (5,670 acres) of cropland affected in the wake of this event.

Heavy rains triggered flash floods and landslides in southwestern and central China provinces on June 8 - 18, particularly heavy rainfall battered the Sichuan province on June 16–18, causing casualties and damage. According to local media reports and provincial disaster authorities, at least one person was killed and 3 were missing in a landslide that occurred in Danba County. Initial reports suggest widespread damage to thousands of houses, businesses, roads, and cropland across the Sichuan province.

## Financial Loss

A preliminary combined loss estimate from the Chinese government cited economic costs approaching CNY20.7 billion (USD2.92 billion). This includes direct flood impacts across southern and central sections of the country during the period from May 29 to June 16. With additional rainfall in the forecast, and several rivers remaining at or above flood stage, it was anticipated that further damage was likely in the coming days and weeks. Given continued low insurance penetration in China, it was anticipated that most property and agricultural costs will be uninsured.

The table below highlights some of the costliest seasonal flood events in China during the past 25 years. Some of these floods also rank in the Top 20 costliest global flood events. In three of the four cases, these occurrences correspond to years where an ENSO transition from was in progress. This means a shift from El Niño to either La Niña or ENSO neutral.

Year	Month	Fatalities	Damaged Structures and/or Filed Claims	Economic Loss (2020 USD)
1996	June-July	3,048	Millions	13 billion
1998	June September	4,150	18,000+	31 billion
2010	July - August	2,500	1+ Million	35 billion
2016	May - August	475	1+ Million	28 billion

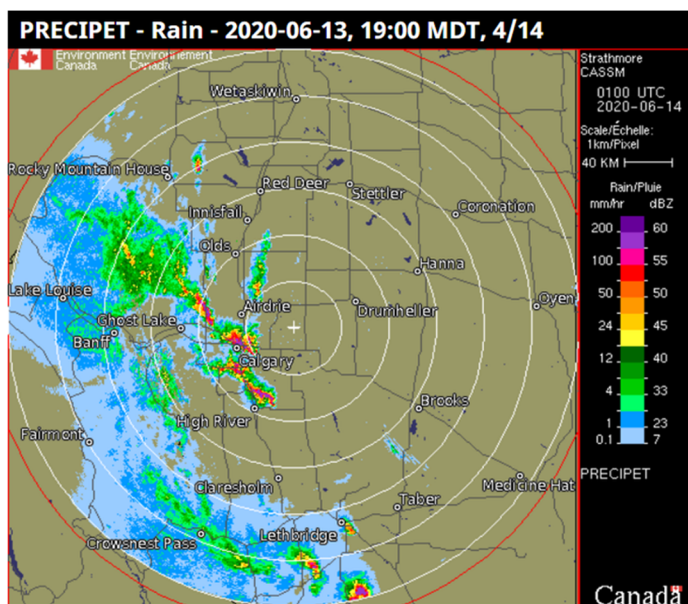
# Severe weather, damaging hail impacts Alberta

A deep upper level trough approaching the western Canadian Prairies led to a period of active weather and severe storms between June 13-14, with the greatest impacts across southern and central Alberta. On June 13, supercell and severe discrete storms produced extremely large hail along with high winds and heavy rainfall resulting in significant damage, particularly to localities northeast of Calgary. A high volume of homes and businesses were affected in addition to vast areas of agricultural land. Local government officials cited that damage costs were likely to approach and exceed CAD1 billion (USD735 million), and could end as one of the country's costliest hail events in the recent record. Most of the hail and wind-related damage was expected to be covered by insurance.

## Meteorological Recap

In the evening hours on June 13, northward tracking supercells and severe storms across southern and central Alberta which produced significant hail, localized flooding, and brief funnel clouds were initiated ahead of a cold frontal boundary and associated surface low pressure system. Atmospheric instability was enhanced by a plume of warm and humid air along with southeasterly flow at the surface and favorable wind-shear. The storms prompted Environment and Climate Change Canada (ECCC) to issue multiple severe thunderstorm and tornado warnings as the event was unfolding.

In northeast Calgary, hail approaching 61 millimeters (2.4 inches) were observed, while heavy rainfall resulted in flooded and impassable roadways. A weather station in Calgary measured a 24-hour rainfall total, ending the morning of June 14, of 58.9 millimeters (2.35 inches). Grapefruit-sized hail (100 millimeters, 3.9 inches) were reported in Duchess, and a maximum wind gust of 128 kph (80 mph) was measured at the Priddis Observatory. These high winds led to severe wind-driven hail in many locations across the Calgary metro region. A wind gust of 94 kph (58 mph) was reported in Champion. As of this writing, ECCC confirmed an EF0 tornado south of Barnwell, with estimated wind speeds ranging between 90 and 130 kph (55 and 80 mph).



Strathmore weather radar on June 13. Source: ECCC

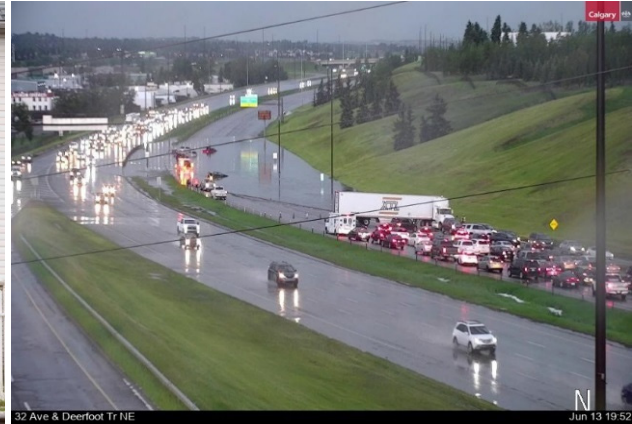
It should be noted that this portion of Alberta is known as “Hail Alley” in Canada. This region, which includes such metro regions as Calgary, Red Deer, and Lacombe, sit on the east side of the Rocky Mountains and is often an ideal location for rapid thunderstorm genesis as temperatures just above the surface tend to be much colder than the warmer air below. This topography allows the lapse rate – the change of temperature with height – to grow quite steep and means hailstones have less time to melt as they fall to the surface.

## Event Details

Periods of severe windblown hail from this event resulted in significant damage, including exterior structural damage to siding and windows along with extensive damage to vehicles and windshields. Many thousands of properties and vehicles were damaged or destroyed; in many instances due to wind-driven hail. Several different types of building construction were affected, though media pictures shows vinyl siding suffering some of the worst impacts. In some cases, vinyl siding was shredded.



*Damaged homes from Calgary hailstorm.  
Source: City of Calgary*



*Road flooding along Deerfoot Trail  
Source: YYC Transportation*

According to the Mayor of Calgary, it was estimated that tens of thousands of homes were impacted by this event. In some locations blocked storm drains from debris along with hailstones piled several inches high increased the severity of flash floods – at least 300 storm drains were clogged. Instances of hailstones responsible for destroying vegetation and crops as well as stripping branches from trees were observed. In northeast Calgary roadways were inundated with water, resulting in disruption to transportation and hundreds of stranded vehicles. Calgary firefighters used a fire rescue boat to assist trapped motorists along portions of Deerfoot Trail. According to the Calgary Fire Chief, more than 20 water rescues were performed.

## Financial Loss

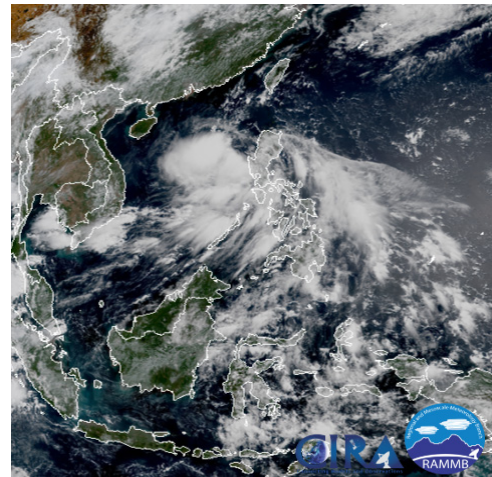
Given the extensive damage across southern and central Alberta included effects from large hail, high winds, and flash flooding, it is anticipated that the financial toll will be significant. Local government officials cited that damage costs were likely to approach and exceed CAD1 billion (USD735 million), and could end as one of the country's costliest hail events in the recent record. Most of the hail and wind-related damage was expected to be covered by insurance.

# Tropical Storm Nuri makes Philippines and China landfall

*Tropical Storm Nuri, locally known in Philippines as Butchoy, became the second named storm of the 2020 Western Pacific Ocean typhoon season. It made three distinct landfalls; two while tracking through the Philippines archipelago, and final landfall near Yangjiang region of southern China's Guangdong Province. Widespread flood- and wind-related damage was noted in the Quezon province of Philippines, and Guangdong and Guangxi provinces in China. Total economic losses were likely to be negligible.*

## Meteorological Recap

A marked low-pressure system formed east of the Visayas archipelago in the Philippines, and the Japan Meteorological Agency (JMA) began watching it on June 10. Owing to its proximity to the Philippines archipelago and potential to cause widespread flooding in a rare combination with an evolving southwest monsoon system, the storm, named as Butchoy by the Philippines Atmospheric Geophysical and Astronomical Services Administration (PAGASA), quickly evolved, tracked northwest, and made its first landfall along Polillo Island in Quezon, Philippines on June 11 at 5:30 PM local time (9:30 UTC) and subsequently made its second landfall in Infanta, Quezon 30 minutes later. The main hazards associated with Butchoy were heavy rainfall and flooding, which was most impactful in Manila where 140 millimeters (5.5 inches) of rainfall were recorded. Heavy rains due to Butchoy prompted the PAGASA to declare the onset of the rainy season in the Philippines on June 12. Soon after the storm made its second landfall in the Philippines, the Joint Typhoon Warning Center (JTWC) issued the first tropical depression formation alert for Butchoy and upgraded it to a Tropical Depression (02W).



Nuri after exiting Philippines (Source: CIRA/RAMMB)

As the system exited the Philippine area of responsibility, and further intensified in the South China Sea. JTWC upgraded Nuri as a Tropical Storm on May 13 with maximum winds of 65 kph (40 mph). The storm weakened while it continued to track westward on June 14, and JTWC downgraded it to a tropical depression. Nuri made its final landfall in Hailing Island in Yangjiang City of Guangdong province around 08:50 AM local time (00:50 UTC) as a tropical depression. It became the first tropical cyclone of 2020 to make landfall in China.

## Event Details

Damage details remained scarce at the time of this writing; however, according to the initial reports, wind- and flood-related damage were noted in the Quezon archipelago. Widespread damage to thousands of structures was likely given the poor construction quality of many homes and businesses in the affected areas. Butchoy landfall in the Philippines caused additional challenges as the country continues to deal with the COVID-19 pandemic. The damage assessment by officials continues and total combined losses could reach millions (USD).

Nuri affected three provinces – Guangdong, Guangxi and Hainan in southern and central China. Heavy rains associated with the storm triggered flash floods and landslides in these affected areas. According to initial reports, heavy rains and strong winds up to 85 kph (53 mph) were noted. No fewer than 13,000 people were evacuated to safety and more than 5,000 houses were damaged or destroyed during the event, according to local disaster authorities.



# Severe storms result in damage across Central Europe

*Locally severe thunderstorms affected parts of Central Europe during the weekend of June 13-14. Most impacts were associated with intense rainfall, strong winds, large hail, and lightning strikes. The most affected countries were Germany, the Czech Republic, and Hungary; local insurers collectively expected nearly 20,000 weather-related insurance claims. Economic and insured losses will likely reach into the tens of millions EUR.*

## Event Details

### Germany

Notable storm-related damage was observed across Central and Eastern Germany on June 13. In Bavaria, significant effects were felt in Erlangen, north of Nuremberg, where a city hall was flooded, and fire brigades intervened at least 180 times. A high number of emergencies were also reported from Aschaffenburg, Würzburg and elsewhere. 350 people were evacuated in Garmisch-Partenkirchen as a precaution due to risk of flooding and landslides; tourist paths and bridges were damaged in the region and several alpine areas were closed.

More than 500 incidents were recorded in Brandenburg, mostly associated with fallen trees, flooded basements and lightning-induced fires. State-wide effects were felt in Thuringia, particularly in Mühlhausen area, with streets, basements, and gardens inundated in many locations. Widespread effects were also felt across the federal state of Sachsen-Anhalt. German agricultural insurers noted that approximately 21,000 hectares (52,000 acres) of land were damaged to some degree, which generated loss of multiple millions of EUR

### Czech Republic

For the second week in a row, parts of Czech Republic were hit by localized strong thunderstorms that caused flash flooding, mostly in rural regions. During the weekend of June 13-14, fire brigades across the country responded to at least 1,350 weather-related incidents; many of these were due to flooded basements and fallen trees. Most affected were Central Bohemian, Pardubice and Vysočina regions. One person was killed, while dozens had to be evacuated in Heřmanův Městec and Načešice as local water bodies threatened to overflow. According to the latest data from insurers, number of claims resulting from the latest wave of severe weather might approach 6,000; total losses were expected to well exceed CZK100 million (USD4.3 million). This would be approximately twice as expensive as impacts from the first June wave of severe storms, which hit the country on June 7, claimed two lives and generated approximately 3,000 insurance claims.

### Hungary

Strong thunderstorms also resulted in notable impacts in parts of Hungary; effects were mostly associated with strong winds, heavy rain and lightning strikes. One person was killed in Veszprém County. A notable portion of the damage was reported from Budapest and Pest County, as well as from Szabolcs-Szatmár-Bereg and Borsod-Abaúj-Zemplén. Local insurers expected to receive approximately 8,000 weather-related claims from this event, with losses likely to reach HUF1.5 billion (USD4.9 million). According to latest data, this will be significantly higher than losses arising from storms during the first June weekend, when Hungarian insurers registered claims worth several hundreds of million HUF.

## Financial Loss

The latest wave of severe weather is likely to result in notable, but not exceptional, losses in the tens of millions EUR. Local insurers in Germany, the Czech Republic, Hungary and elsewhere expected to receive approximately 20,000 claims from the weekend outbreak, mostly associated with flood-related incidents. It is worth noting that the severe weather season (convective storm impacts) in Europe has been exceptionally mild so far, with no costly large-scale events recorded as of June 19. Historically, on average July is the costliest month, closely followed by June. The costliest event of 2019 was the outbreak on June 10-12, which included the hailstorm in the outskirts of Munich.

# Natural Catastrophes: In Brief

## *Flooding (Pakistan, India)*

Torrential rains resulted in flash floods and landslides in Khyber Pakhtunkhwa Province of Pakistan and adjacent Jammu district of India since June 1. According to the Provincial Disaster Management Authority (PDMA) of Pakistan, no fewer than 7 people lost their lives to the ongoing floods which inundated thousands of homes in the affected areas and washed away hundreds of vehicles. Floods affected thousands of homes in Jammu region of India, while no casualties were reported.

## *Flooding (Indonesia)*

Flash flooding on June 11 affected five districts (Sawawa, Sawawa Tengah, South Sawawa, and Botu Pingge) in the Bone Bolango Regency in northern Sulawesi province in Indonesia. According to National Board for Disaster Management (BNPB) and local media reports, at least 3 people sustained injuries and one person went missing during the event. Floods caused damage to nearly 2,500 homes and three bridges in the affected areas. On June 13, flooding prompted landslides in South Sulawesi Province of Indonesia. According to the disaster authority BNPB and media reports, at least one person died and 3 were missing during a landslide in Jeneponto Regency. Heavy rains resulted in breaking the banks of Calendu river and associated flooding up to 1.5 meters (5 feet) in the severely affected Bantaeng and Sinoa districts of Bantaeng Regency affected nearly 12,000 residents while around 2,350 homes were damaged or destroyed. Total economic losses were minimally estimated at IDR30 billion (USD2.1 million).

## *Flooding (France)*

Notable urban flooding episode hit Ajaccio, the administrative center of Corsica in southeastern France on June 11. The event was caused by a stationary thunderstorm. Within a four-hour period, rain gauges registered 44 millimeters (1.7 inches) of rain, which is twice as high as the average monthly rainfall for the month of June. Based on radar-based rainfall estimates, total accumulations in eastern Ajaccio might have reached above 100 millimeters (3.9 inches). The deluge resulted in widespread flooding within the city, with dozens of vehicles swept away, businesses and homes flooded; Salines, Cannes and Pietralba areas were affected the most. Nearly 200 people were evacuated to safety by the emergency services.

## *Earthquake (Turkey)*

A strong, magnitude-5.9 earthquake struck eastern Turkey on June 14, it was followed by a magnitude 5.4 aftershock the following day. The tremor was registered in a sparsely populated region on the borders of Bingöl and Erzurum provinces at a depth of approximately 10 kilometers (6.2 miles). Karlıova, Yedisu and Adaklı districts of Bingöl and Çat district of Erzurum were the most affected and reported material damage. According to the Disaster and Emergency Management Presidency (AFAD), one person died and 35 were injured. As damage assessments continue, more than 2,200 structures were marked as damaged. Insurance take-up in Bingöl is relatively high at approximately 75 percent.

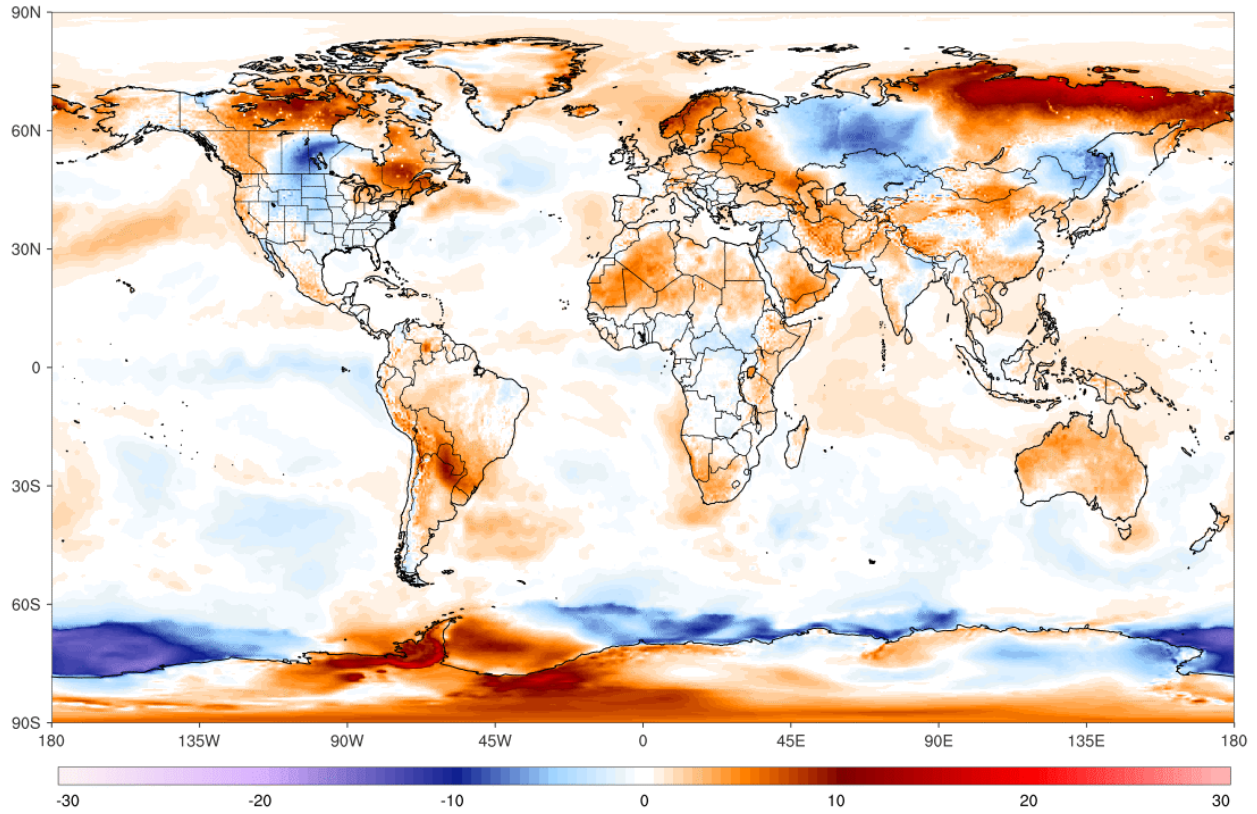
## *Flooding (Nepal)*

Torrential rains triggered flash floods and landslides in the Gandaki Pradesh Province in central Nepal on June 13-15. According to local media reports, at least 9 people have died due to a landslide that occurred in Kushma Municipality of Prapat District on June 13. Significant damage to houses, roads, and bridges was reported from Gandaki Pradesh Province. Damage assessments are ongoing, but the total economic losses are expected to be insignificant.

# Global Temperature Anomaly Forecast

GFS/CFSR 5-day Avg 2m T Anomaly (°C) [1979-2000 base]  
Thursday, Jun 18, 2020

ClimateReanalyzer.org  
Climate Change Institute | University of Maine

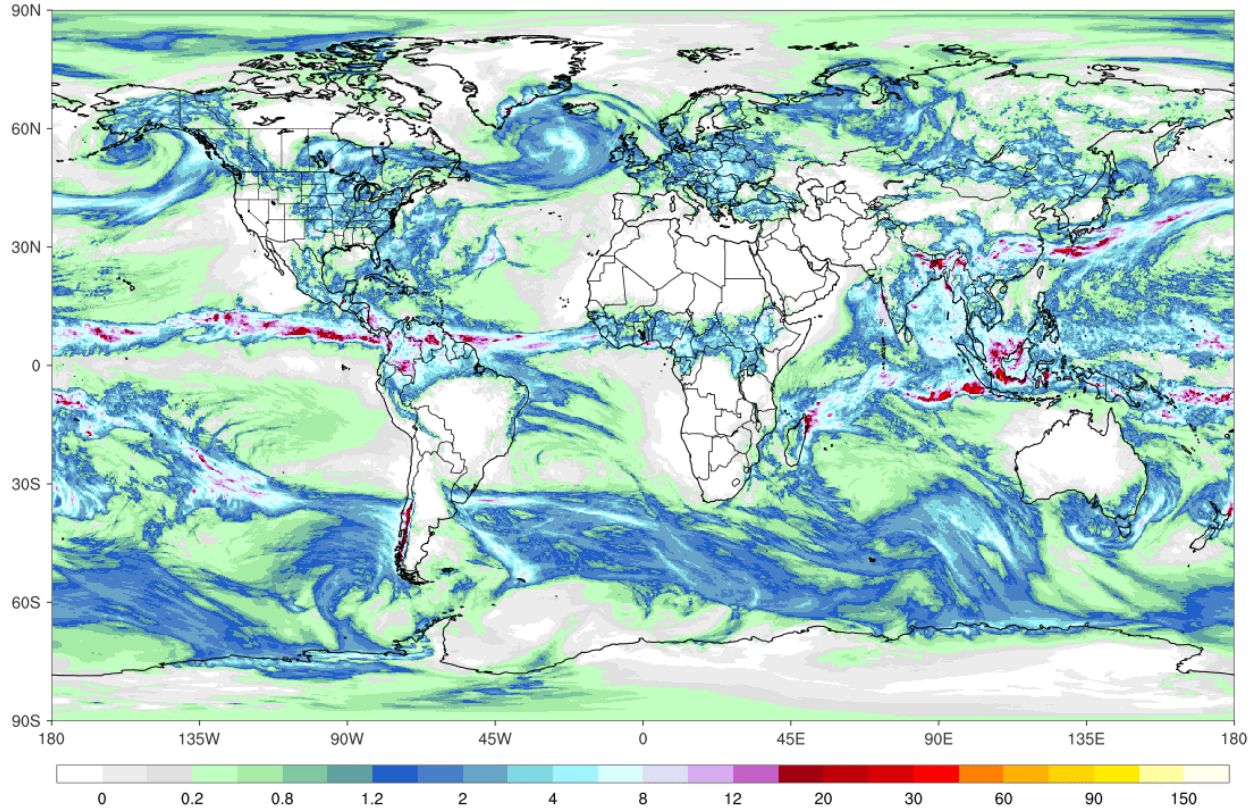


Source: Climate Reanalyzer, Climate Change Institute, University of Maine, USA

# Global Precipitation Forecast

GFS 5-day Total Accumulated Precipitation (cm)  
Thursday, Jun 18, 2020

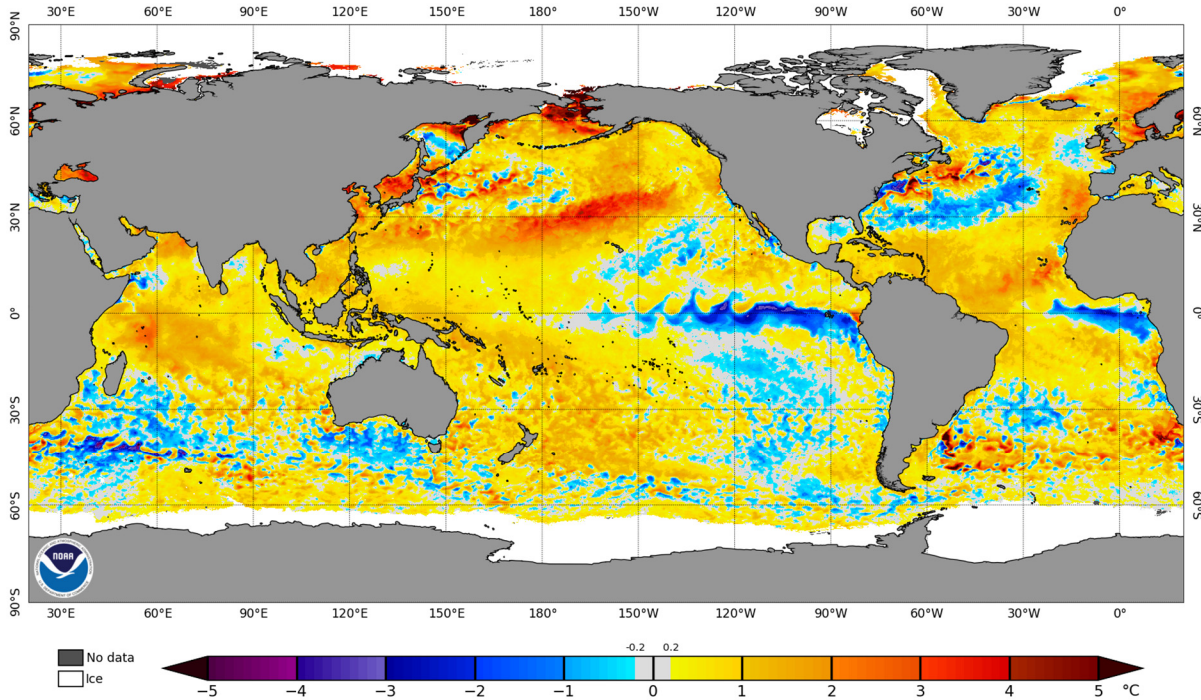
ClimateReanalyzer.org  
Climate Change Institute | University of Maine



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

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

NOAA Coral Reef Watch Daily 5km SST Anomalies (v3.1) 17 Jun 2020



The SST anomalies are produced by subtracting the long-term mean SST (for that location in that time of year) from the current value. This product with a spatial resolution of 0.5 degree (50 kilometers) is based on NOAA/NESDIS operational daily global 5 kilometer Geo-polar Blended Night-only SST Analysis. The analysis uses satellite data produced by AVHRR radiometer.

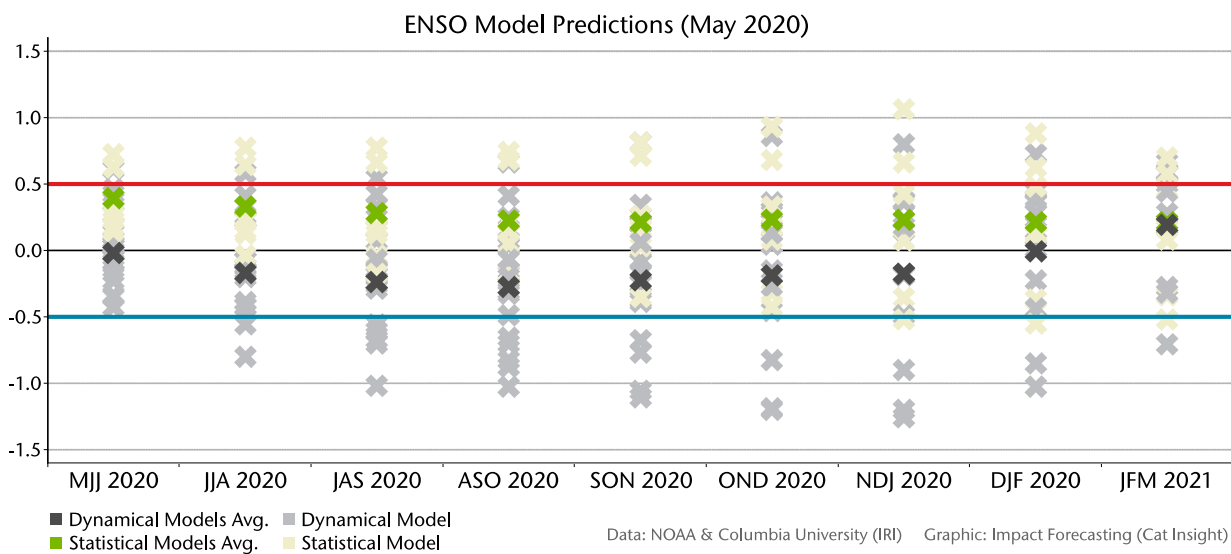
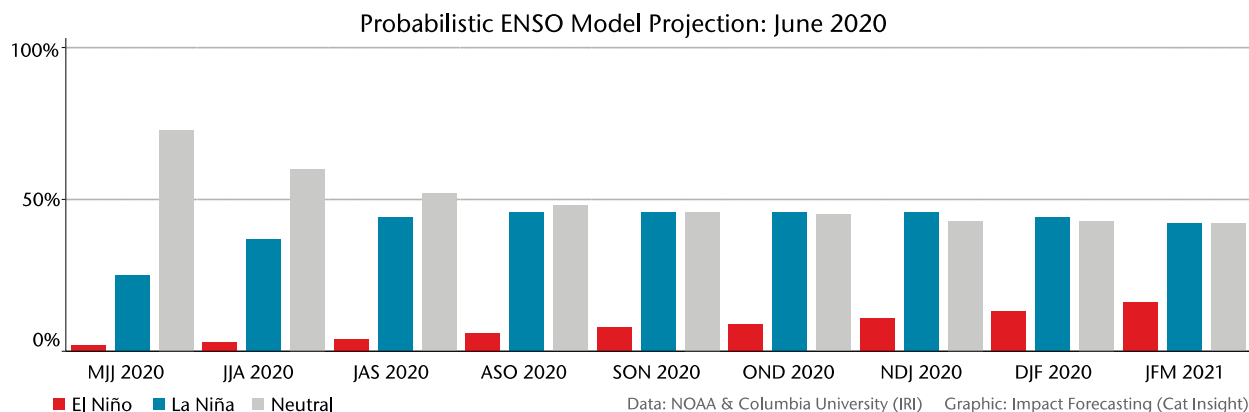
## Select Current Global SSTs and Anomalies

Location of Buoy	Temp (°C)	Departure from Last Year (°C)
Eastern Pacific Ocean (1,020 miles SW of San Salvador, El Salvador)	21.2	-2.2
Niño3.4 region (2°N latitude, 155°W longitude)	27.3	-2.1
Western Pacific Ocean (700 miles NNW of Honiara, Solomon Islands)	30.3	+0.3

Sources: ESRL, NOAA, NEIS, National Data Buoy Center

# El Niño-Southern Oscillation (ENSO)

ENSO-neutral conditions are currently present. NOAA notes that there is a roughly 65 percent chance of neutral conditions lingering through the Northern Hemisphere (boreal) summer months. The agency further states that a decreasing chance (lowering to 45 to 50 percent) into the boreal autumn.



**El Niño** refers to the above-average sea-surface temperatures (+0.5°C) that periodically develop across the east-central equatorial Pacific. It represents the warm phase of the ENSO cycle.

**La Niña** refers to the periodic cooling of sea-surface temperatures (-0.5°C) across the east-central equatorial Pacific. It represents the cold phase of the ENSO cycle.

El Niño and La Niña episodes typically last nine to 12 months, but some prolonged events may last for years. While their frequency can be quite irregular, El Niño and La Niña events occur on average every two to seven years. Typically, El Niño occurs more frequently than La Niña.

**ENSO-neutral** refers to those periods when neither El Niño nor La Niña conditions are present. These periods often coincide with the transition between El Niño and La Niña events. During ENSO-neutral periods the ocean temperatures, tropical rainfall patterns, and atmospheric winds over the equatorial Pacific Ocean are near the long-term average.

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 standard of measure is known as the Oceanic Niño Index (ONI).

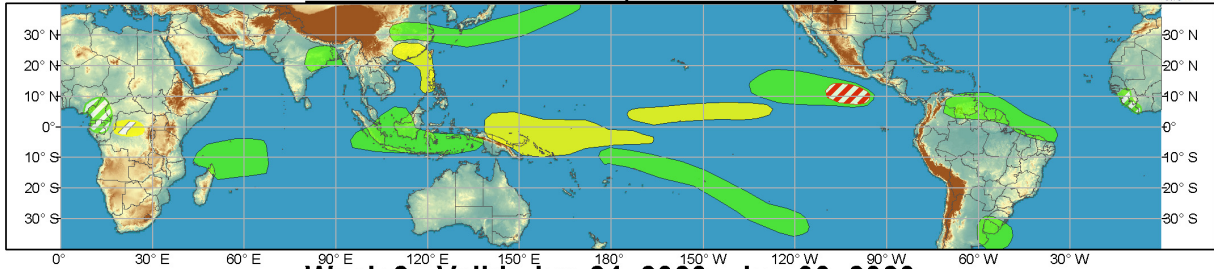
# Global Tropics Outlook



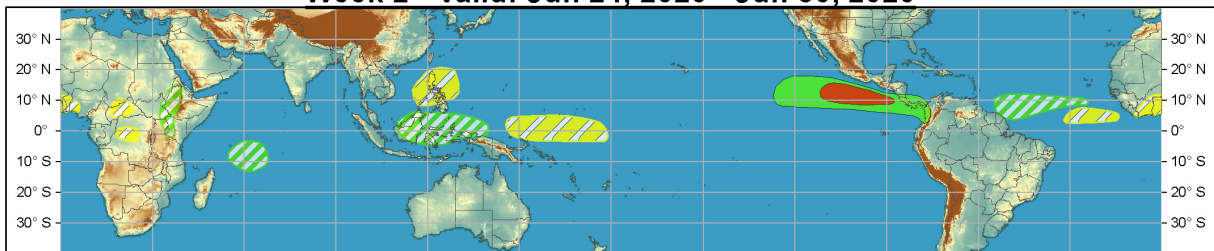
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Jun 17, 2020 - Jun 23, 2020



Week 2 - Valid: Jun 24, 2020 - Jun 30, 2020



**Confidence**  
High Moderate

- Tropical Cyclone Formation** Development of a tropical cyclone (tropical depression - TD, or greater strength).
- Above-average rainfall** Weekly total rainfall in the upper third of the historical range.
- Below-average rainfall** Weekly total rainfall in the lower third of the historical range.
- Above-normal temperatures** 7-day mean temperatures in the upper third of the historical range.
- Below-normal temperatures** 7-day mean temperatures in the lower third of the historical range.

Product is updated once per week, except from 6/1 - 11/30 for the region from 120E to 0, 0 to 40N. The product targets broad scale conditions integrated over a 7-day period for US interests only. Consult your local responsible forecast agency.

Produced: 06/16/2020

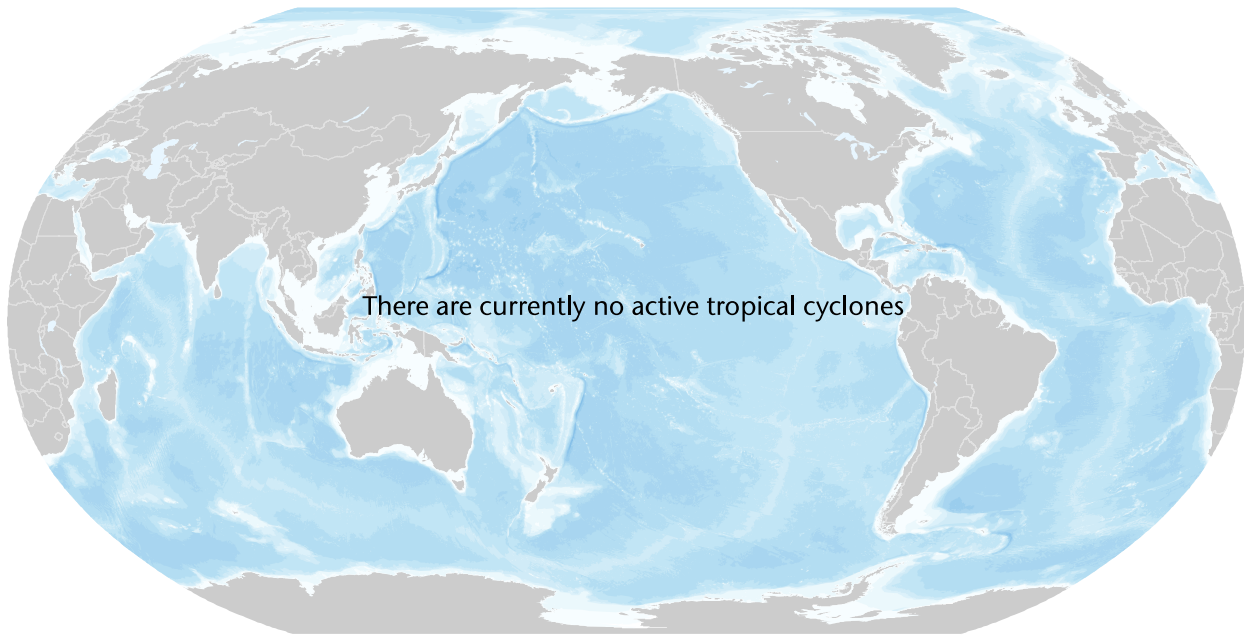
Forecaster: Novella



Source: Climate Prediction Center



# Current Tropical Systems



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

## Location and Intensity Information

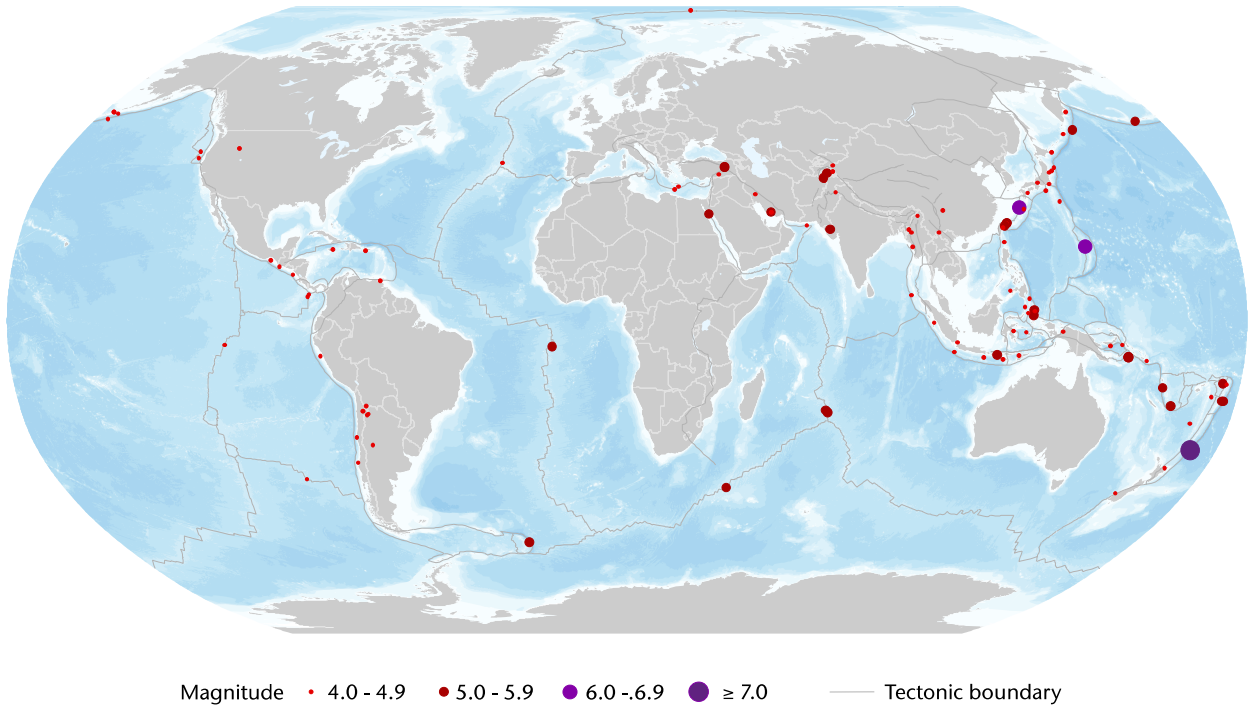
Name*	Location	Winds	Storm Reference from Land	Motion**
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\* TD = Tropical Depression, TS = Tropical Storm, HU = Hurricane, TY = Typhoon, STY = Super Typhoon, CY = Cyclone

\*\* N = North, S = South, E = East, W = West, NW = Northwest, NE = Northeast, SE = Southeast, SW = Southwest

Sources: National Hurricane Center, Joint Typhoon Warning Center, Central Pacific Hurricane Center

## Global Earthquake Activity ( $\geq M4.0$ ): June 12 – 18



### Significant EQ Location and Magnitude ( $\geq M6.0$ ) Information

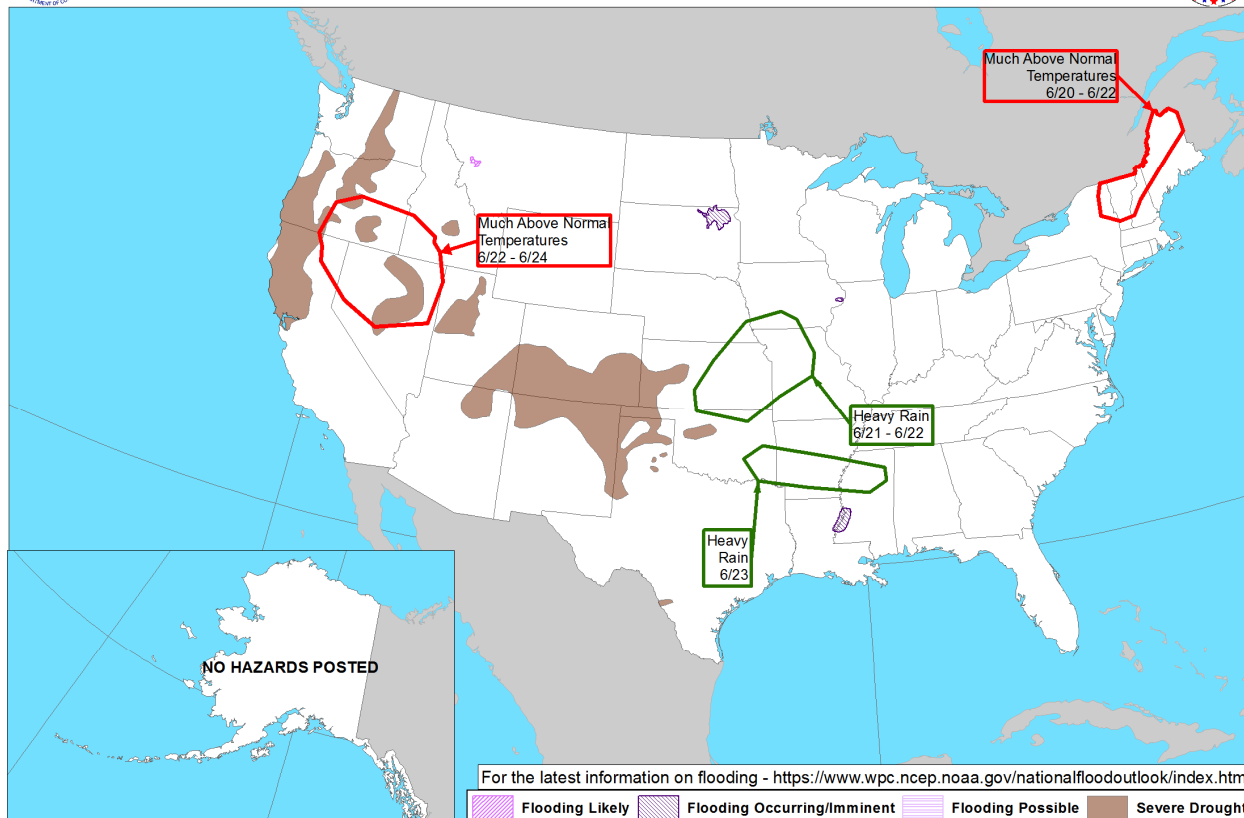
Date (UTC)	Location	Magnitude	Depth	Epicenter
6/13/2020	28.94°N, 128.26°E	6.6	160 km	13 kilometers (8 miles) WNW of Naze, Japan
6/13/2020	18.92°N, 145.10°E	6.2	622 km	61 kilometers (38 miles) WNW of Northern Mariana Islands
6/18/2020	33.29°S, 177.84°W	7.4	10 km	22 kilometers (14 miles) SSE of New Zealand

Source: United States Geological Survey

# U.S. Weather Threat Outlook



## Day 3-7 U.S. Hazards Outlook Valid: 06/20/2020-06/24/2020



Weather Prediction Center

Made: 06/17/2020 3PM EDT

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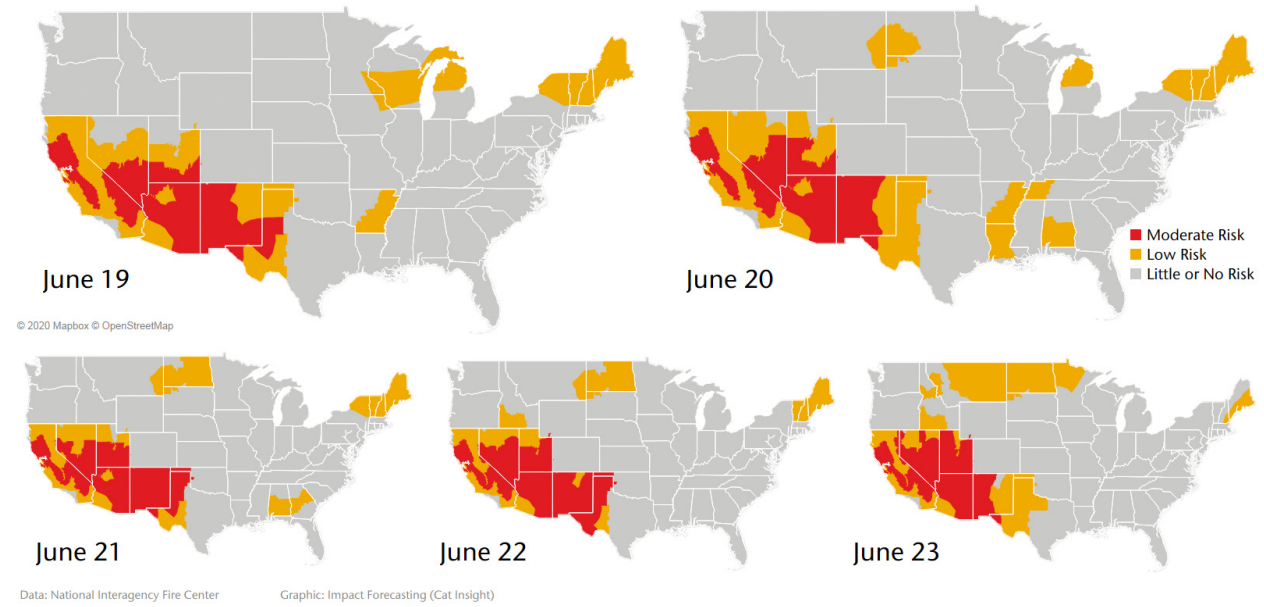
[www.wpc.ncep.noaa.gov](https://www.wpc.ncep.noaa.gov)

## Potential Threats

- A building ridge of high pressure progressing from the Great Lakes toward the Northeast will allow for much above normal temperatures across interior New England between June 20-22. Early next week, ridging out west will bring much above normal temperatures to the Great Basin and Intermountain Region between June 22-24.
- A frontal boundary anticipated to stall over the Central Plains will allow for a period of unsettled weather and locally heavy rainfall between June 21-22. A second frontal system is forecasted to bring convective weather to the Southern Plains and Tennessee River Valley by June 23.
- Severe drought conditions are persistent across portions of the western Central and Southern Plains, recently enhanced by high temperatures and gusty winds. Drought conditions are present in northern coastal California among other regions of the Pacific Northwest.

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

The National Interagency Fire Center has highlighted an extended risk of elevated wildfire conditions across parts of the West, Desert Southwest, and the Southern Plains into the latter half of June. Hot and dry conditions have become more prevalent in recent weeks, which has enhanced fire conditions.



## Annual YTD Wildfire Comparison: June 17\*

Year	Number of Fires	Acres Burned	Acres Burned Per Fire
2016	22,892	1,874,473	81.88
2017	27,182	2,512,806	92.44
2018	26,434	2,142,488	81.05
2019	17,305	464,109	26.82
2020	21,638	865,575	40.00
<b>10-Year Average (2010-2019)</b>	<b>24,616</b>	<b>1,537,289</b>	<b>62.45</b>

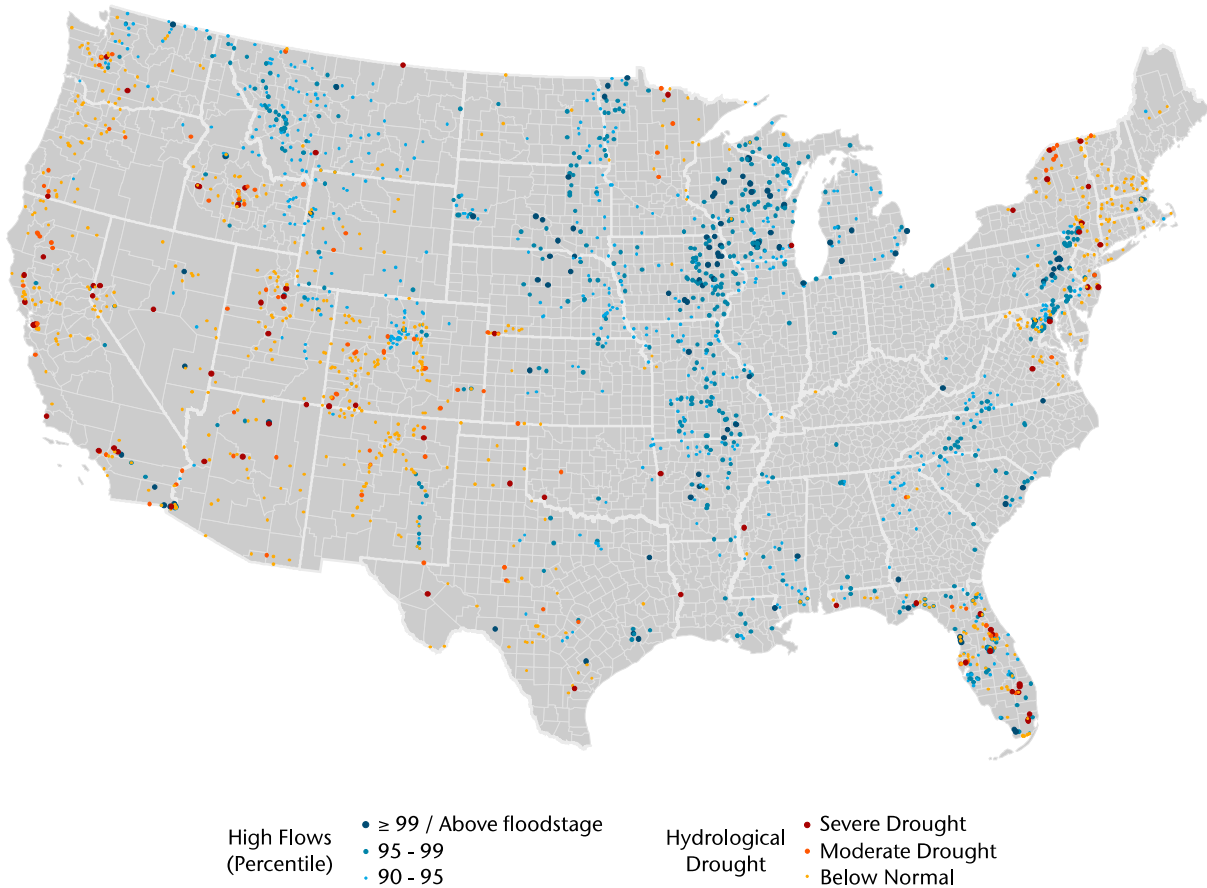
\*Last available update from NIFC  
Source: National Interagency Fire Center

## Top 5 Most Acres Burned by State: June 18

State	Number of Fires	Acres Burned	Acres Burned Per Fire
Arizona	952	281,932	296.15
Alaska	253	150,135	593.42
Florida	1,616	80,715	49.95
Texas	1,576	76,210	48.36
Oklahoma	552	75,274	136.37

Source: National Interagency Fire Center

# Current U.S. Streamflow Status



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 10<sup>th</sup> and 24<sup>th</sup> percentile.

## Top 5 Rivers Currently Nearing or Exceeding Flood Stage

Location	Current Stage (ft)	Flood Percentile
Suwannee River at White Springs, Florida	75.83	98.96
Craig Creek at Parr, Virginia	9.68	98.95
Johns Creek at New Castle, Virginia	7.89	98.92
Roanoke River at Niagara, Virginia	12.32	98.92
Fishing Creek near Enfield, North Carolina	16.34	98.92

Source: United States Geological Survey

# Source Information

## Seasonal Mei-yu rains arrive in China

*China floods kill 5 more, as rainstorms impact some 700,000 residents, Foxnews*  
*China's flood-hit regions battle natural disasters, Xinhua*  
*20,000 relocated after rainstorms hit China's Guangdong, Xihua*  
*1 killed, 4 missing as rainstorm lashes SW China's Chongqing, Xinhua*  
*Heavy rains continue to batter southwest China's Guizhou, Xinhua*  
*More than 1.45 mln people affected by floods in south China's Guangxi, Xinhua*  
*Floods disrupt lives of more than 700,000 residents in China's Guizhou, Global Times*  
*China launches emergency response for flood-hit regions, Xinhua*  
*Ministry of Emergency Management, China*  
*Chinese Meteorological Administration*  
*Climate system monitoring, diagnosis and forecasting system, China*  
*At Least 18 Dead, 8 Missing in China Flooding, The Weather Channel*  
*Widespread, severe flooding forces over 200,000 from their homes in southern China, AccuWeather*

## Severe weather, damaging hail impacts Alberta

*Environment and Climate Change Canada (ECCC)*  
*Damage from Calgary hailstorm 'extraordinary,' says mayor Naheed Nenshi, The World and Globe*  
*Calgary picks up the pieces after massive storm hits city with heavy hail damage, flooding, CBC*  
*Damage from devastating hail storm could top \$1 billion: Nenshi, Calgary Herald*

## Tropical Storm Nuri makes Philippines and China landfall

*Joint Typhoon Warning Centre*  
*Japan Meteorological Agency*  
*Philippines Atmospheric, Geophysical and Astronomical Services Administration (PAGASA)*  
*National disaster and risk reduction management council, Philippines*  
*China Meteorological Administration*

## Severe storms result in damage across Central Europe

*Weekend storms have caused hundreds of millions in damage, reported by thousands of clients. Idnes*  
*Severe weather has left its mark on many parts of Bavaria. BR24*  
*Storm over Bavaria: floods and lightning strikes. BR24*  
*Severe weather moves over Thuringia: floods cause damage. MDR*  
*The weekend storm may have caused HUF 1.5 billion in damage. Index*  
*MABISZ*

## Natural Catastrophes: In Brief

*Provincial Disaster Management Authority (PDMA), Pakistan*  
*National Board for Disaster Management (BNPB), Indonesia*  
*Damage assessment work continues in buildings affected by earthquake in Bingöl, Anadolu Agency*  
*European Civil Protection and Humanitarian Aid Operations*  
*Floodlist*

## Contact Information

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# About Aon

Aon plc (NYSE:AON) is a leading global professional services firm providing a broad range of risk, retirement and health solutions. Our 50,000 colleagues in 120 countries empower results for clients by using proprietary data and analytics to deliver insights that reduce volatility and improve performance.

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