Weekly Cat Report

October 2, 2020

This Week's Natural Disaster Events
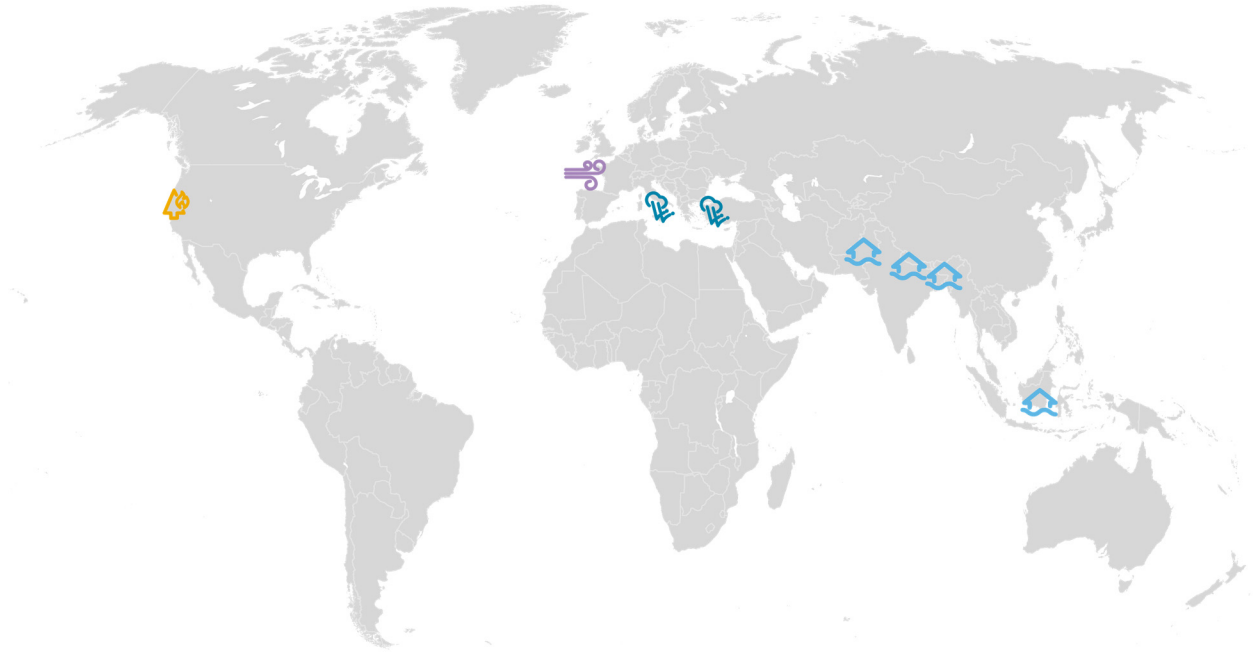
	Drought		Flooding		Wildfire
	Earthquake		Severe Weather		Winter Weather
	EU Windstorm		Tropical Cyclone		Other

Event	Impacted Areas	Fatalities	Damaged Structures and/or Filed Claims	Preliminary Economic Loss (USD)*	Page
Wildfire	United States	40+	10,000+	Billions	3
Flooding	India	40+	7,000+	Millions	6
Flooding	Pakistan	10+	50,000+	10s of Millions	6
Flooding	Nepal	26+	Hundreds	Unknown	6
Flooding	Bangladesh	0	Thousands	Unknown	6
Flooding	Indonesia	11+	2,100+	Unknown	7
Windstorm Odette	Belgium, France	0	Hundreds	Millions	7
Severe Weather	Italy	0	Hundreds	10s of millions	7
Severe Weather	Turkey	0	Hundreds	Unknown	7

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

Additional wildfires ignite across California

A dome of high pressure produced a period of above average temperatures across California the final week of September, while further extending a stretch of abnormally dry conditions and aiding in enhanced fire weather concerns. Between September 26-28, a strong offshore wind event created critical fire weather conditions sparking several new wildfires across portions of California, as officials continued working to contain multiple ongoing large fires in the Western United States, some of which have been burning since mid-August.

Meteorological Recap

California and much of the Southwest continued to be impacted by abnormally dry weather throughout the month of September, aiding in prolonged and severe drought conditions accompanied by a continued threat for enhanced fire weather. According to data from the U.S. Drought Monitor (USDM), 68 percent of California was experiencing drought conditions as of October 1, while an additional 17 percent was abnormally dry.

During the period of September 26-28, a strong pressure gradient between a series of frontal systems over the central United States and a building northern Pacific ridge produced a notable offshore wind event for large sections of California, particularly localities adjacent to the Central Valley and North Bay regions. Strong north and easterly winds descending the mountains and flowing toward the coast subsequently warmed and significantly dried the surrounding air, leading to a period of critical fire weather conditions. The dry, gusty winds, prompted the National Weather Service (NWS) to issue Red Flag Warnings spanning from coastal Southern California through the Central Valley and into northern portions of the state. During this period, wind gusts approaching 25 to 45 mph (40 to 72 kph) were common, with locally higher gusts recorded. In addition to the winds, the building area of strong high pressure led to multiple Heat Advisories, as record-breaking temperatures in San Francisco soared into the 90s (°F), while highs approached and exceeded 100 °F (37.8 °C) near Los Angeles. In the southern half of the state, above average temperatures continued over inland areas through the beginning of October.

September 28
1:00 UTC

Source: NOAA / NASA / CSU (RAAMB)
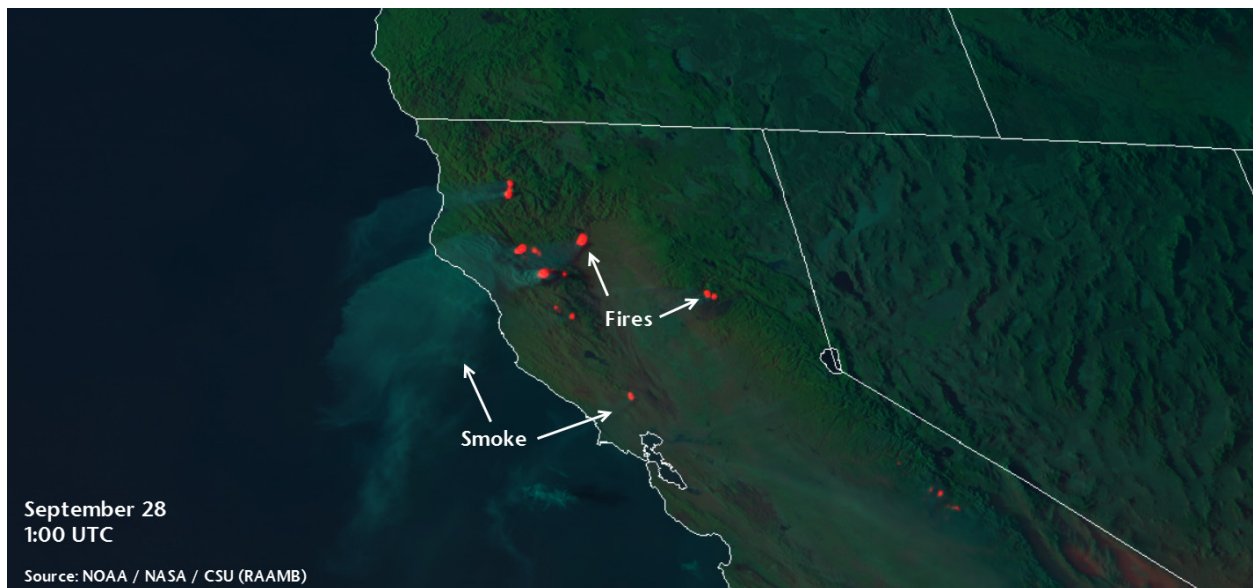
Event Details

In 2020 to date, the U.S. has recorded 22 fires with at least 100,000 acres (40,468 hectares) burned. That breaks the old record of 21 set in 2004 as the most in a year since the National Interagency Fire Center (NIFC) started keeping such statistics in 1997. Most of the 2004 fires occurred in Alaska, while so far in 2020 the large fires have burned in California, Oregon, Washington, and Colorado, with only one in Alaska.
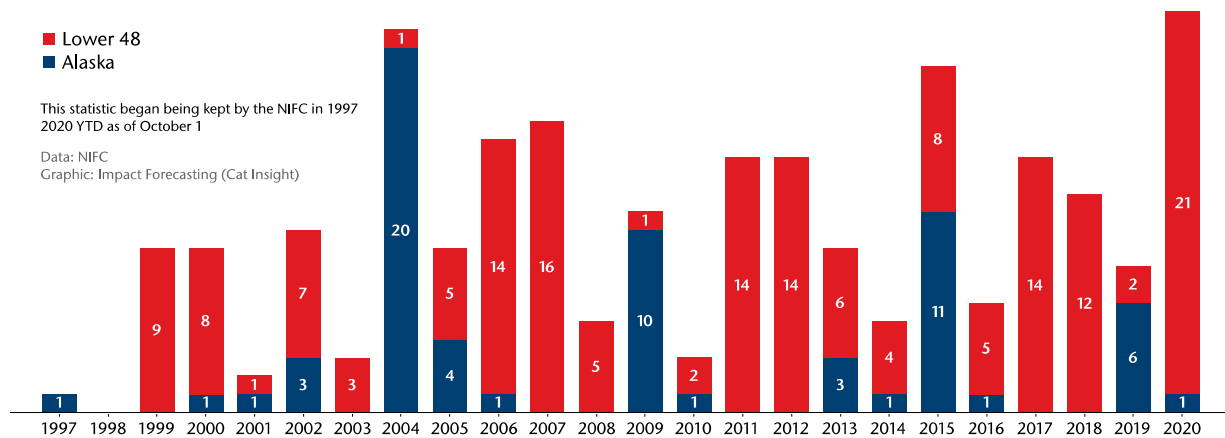
U.S. Wildfires: >100,000 Acres
1997-2020

■ Lower 48
■ Alaska

This statistic began being kept by the NIFC in 1997
2020 YTD as of October 1

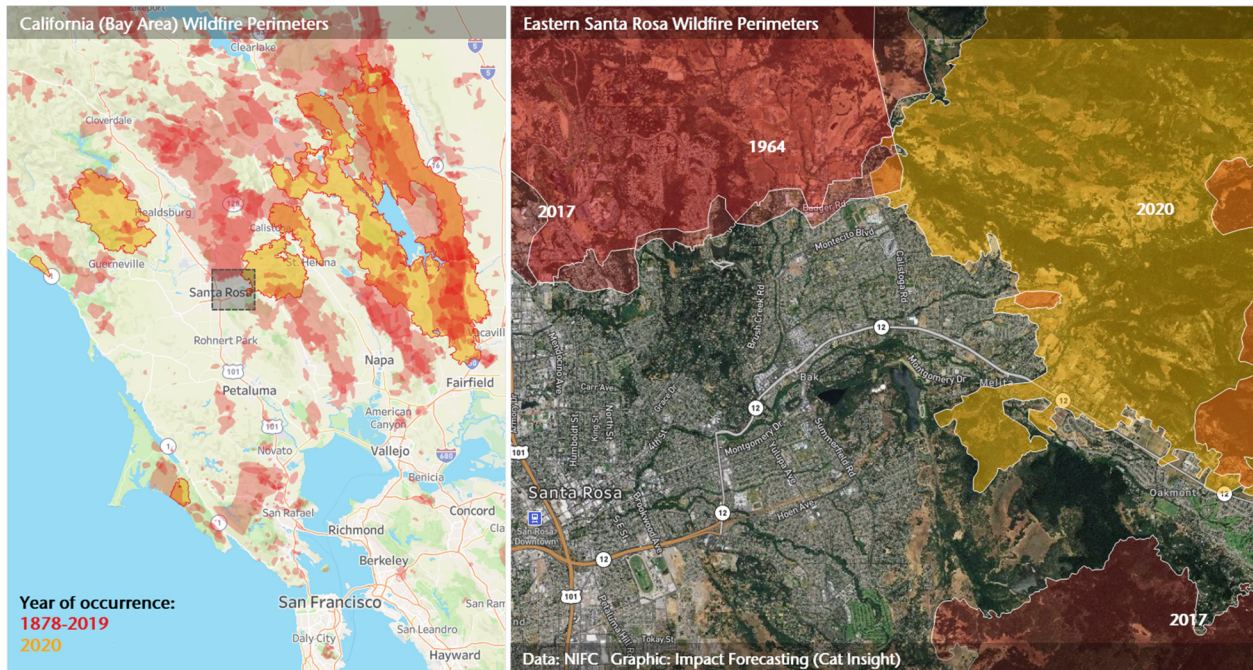Data: NIFC
Graphic: Impact Forecasting (Cat Insight)

As of this writing, there have been at least 8,100 wildfires across **California** in 2020, which have burned no less than 3.9 million acres (1.58 million hectares). Since mid-August, 30 fatalities have been reported, while at least 7,500 structures were destroyed. On September 27, Pacific Gas and Electric (PG&E) began to temporarily shut off power affecting 65,000 customers in California for safety concerns related to enhanced fire weather conditions. On September 28, the Governor of California declared a State of Emergency for Napa, Sonoma, and Shasta counties.

Glass Fire burning near St. Helena in Napa County
Source: Napa County Sherriff's Office

In Napa and Sonoma Counties the **Glass Incident Fires**, which began on September 27 rapidly expanded as several smaller blazes burned in close proximity and merged due to extreme fire behavior. The fires were burning in a region of forest and wildlands which has been relatively untouched by major wildfire activity dating back through 1878, according to data from the California Office of Emergency Services and NIFC. The lack of burn allowed the Grass Fire to rapidly spread as ample available fuel combined with the hot, dry, and windy conditions to exacerbate the severity of the fire conditions.

California (Bay Area) Wildfire Perimeters

Year of occurrence:
1878-2019
2020

Eastern Santa Rosa Wildfire Perimeters

Data: NIFC   Graphic: Impact Forecasting (Cat Insight)

In Sonoma County, multiple structures were impacted in the Skyhawk Community of Santa Rosa. Nearby, the wildfire jumped Highway 12 where additional structures were destroyed in Oakmont, prompting local officials to initiate door to door evacuation orders. The Oakmont Village retirement community, home to at least 5,000 residents was among those evacuated. In Napa County, the Chateau Boswell Winery was extensively burnt by the fire, while other local vineyards sustained minor damage. Damage was incurred at the Foothills Elementary School, in addition to Castello di Amorosa, and the Meadowood Resort. Adventist Health St. Helena was forced to suspend hospital and emergency care. Additional structures and residences near St. Helena were damaged or destroyed, with notable impacts to buildings along Silverado Trail. The fire has affected 56,781 acres (22,978 hectares) and destroyed 248 structures, of which 143 were single family residential, 144 additional structures were damaged.

In Shasta and Tehama Counties, the **Zogg Fire** which began on September 27, west of Redding, has affected at least 55,303 acres (22,380 hectares). The fire damaged or destroyed multiple structures and residences in and near the towns of Igo, Happy Valley, and Ono. In addition, two historical building in the town of Ono were destroyed. Multiple evacuation orders were issued due to the rapid expansion of the wildfire. As of this writing, the fire resulted in at least four fatalities, and destroyed 147 structures.

In Butte and Plumas Counties, the **North Complex Fire**, portions of which began burning on August 18, has expanded to 314,949 acres (127,455 hectares). As of this writing, the fire has destroyed 2,342 structures, while damaging 113 others, and resulted in 15 fatalities. Significant progress has been made to contain the blaze, which is preliminarily ranked as the 5th most destructive wildfire in California history.

On October 1, Cal Fire announced that the **SCU Lightning Complex**, which began on August 18, reached 100 percent containment.

A more complete meteorological recap and event details pertaining to the western wildfires and recent heatwaves can be found in previous Weekly Cat Reports.

Update: Monsoon flooding in South Asia

This year's Southwest Monsoon officially began in the Indian state of Kerala on June 1. Since that time, India recorded several episodes of heavy monsoon rainfall and associated flooding across some of the hardest-hit states of Assam, Karnataka, Madhya Pradesh, Odisha, West Bengal, Kerala, and Chhattisgarh. By mid-June, the South Asian monsoon progressed northward to arrive in the neighboring countries of Pakistan, Nepal, and Bangladesh. This resulted in significant flooding. At least 2,980 combined fatalities and widespread damage to more than two million homes were noted. The total combined losses in these countries alone were likely to cross USD8 billion.

Meteorological Recap
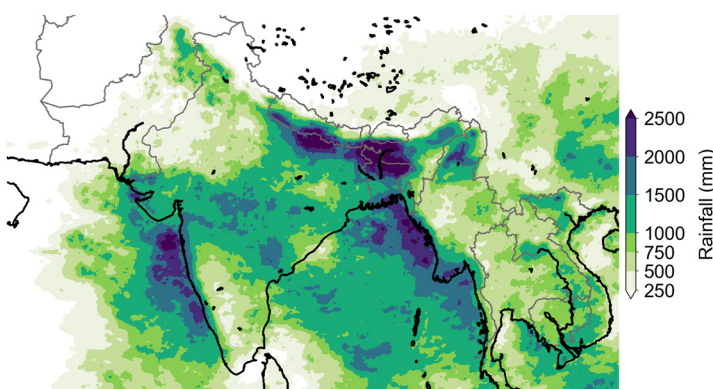
Satellite rainfall estimate for South Asia, June 1 – September 30. Data: NASA, Graphic: Catastrophe Insight, Impact Forecasting

The Southwest Monsoon, which typically occurs during the northern hemispherical summer season (June – September), serves as the principal rainy season for the South Asian countries of India, Pakistan, Nepal, and Bangladesh. An official arrival of the monsoon over the southern state of Kerala in India was declared on June 1, according to the Meteorological Department of India (IMD). Record-breaking rains were noted across the parts of South Asian countries during the ongoing monsoon season, which has now started to retreat southwards.

According to the IMD, the withdrawal of the Southwest monsoon from the northwestern parts of India started on September 28, roughly 10 days after the climatological date, suggesting that the monsoon rains persisted for a longer than usual period over South Asia. This late withdrawal of the monsoon from the Indian landmass could be attributed to the prevailing La Nina conditions in the Pacific Ocean.

In India, parts of Kerala, Assam, Maharashtra, Gujrat, Chhattisgarh, Madhya Pradesh, and Karnataka saw the heavy precipitation episodes which were listed among one of the heaviest one-day accumulations, per the historical records of IMD. India received nearly 27 percent excess rainfall in August, which was the highest since 1976. Since mid-June, heavy monsoon precipitation wreaked havoc in the northeastern parts of India and Bangladesh. In Pakistan, there were at least eight spells of heavy to very heavy precipitation. The heavy precipitation period between August 26-30 was noted as one of the strongest precipitation events in Pakistan, per the meteorological records. Total precipitation in Pakistan in August was nearly 10 percent more than the long-term average for the same period. In Nepal, the area-averaged precipitation had been above the long-term average throughout the season. The monsoon rains were particularly impactful in the southcentral and southeastern parts of the Nepal.

Event Details

India

Continuing monsoon rains affected parts of India since September 24. States of Assam, Meghalaya, Maharashtra, and Karnataka were the worst-hit. At least 36 additional people were killed and 40 others were injured since September 24, according to the information provioded by the Disaster Management Division, Ministry of Home Affairs, India. The country recorded approximately 9 percent surplus June - September precipitation during the 2020 monsoon season, according to the India Meteorological Department. Since the Arrival of monsoon in India this year, at least 1,922 people were killed and 500 others were injured in 30,000 villages located across the Indian states. According ot the NDMA, India, approximately 260,000 houses and hundreds of thousands of other structures were either damaged or destroyed since the beginning of monsoon this year. Roughly 22 million people were critically affected and aprroximately 1.4 million hectares (3.5 million acres) of cropland was inundated.

*June – September rainfall anomaly over India; Source: IMD*
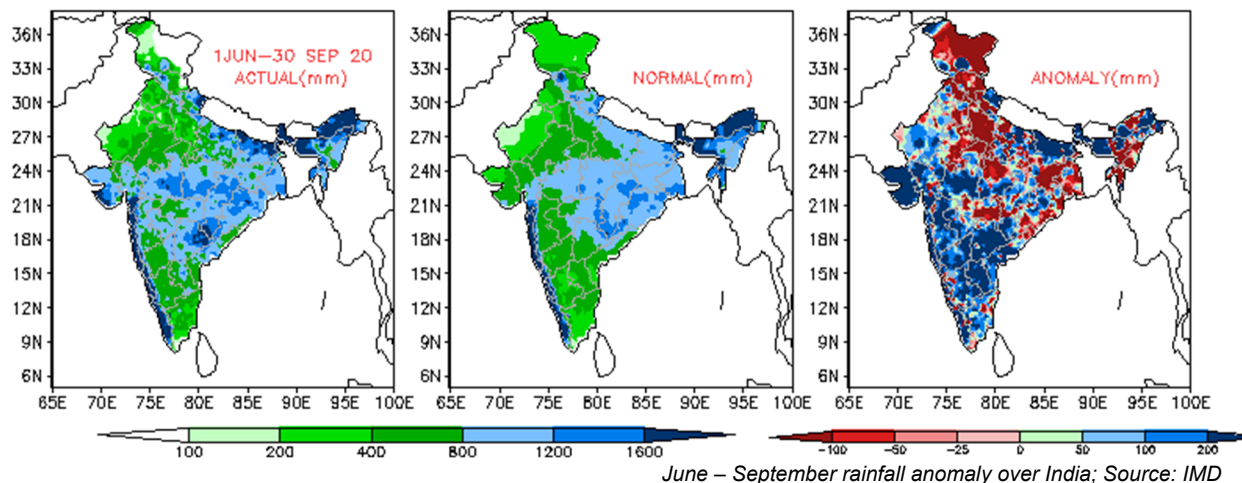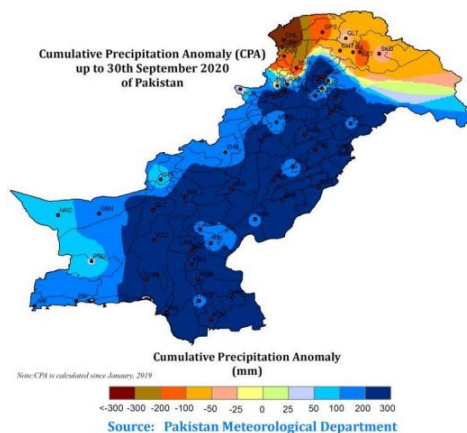
Pakistan

At least ten people have died due to continued flooding in Pakistan since September 24. According to the National Disaster Management Agency Pakistan, approximately 50,000 houses were damaged or destroyed. Heavy monsoon rainfall, thunderstorms, along with glacial lake outburst floods caused widespread damage in Pakistan between July 1 through September 30. According to the National Disaster Management Authority of Pakistan, at least 410 combined fatalities were noted in the provinces of Sindh (145), Punjab (104), Balochistan (21), and Khyber Pakhtunkhwa (116). Official reports suggests as many as 310,000 homes and other structures were damaged to varying degrees across the Pakistani provinces. Further losses were inflicted on the local infrastructure and agricultural land. A major proportion of these casualties and damage were reported during the month of August as Pakistan recorded more than 10 percent above normal rainfall.

South Asia
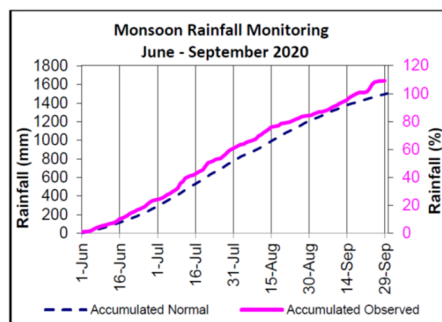
Persistent, heavy monsoon rains affected parts of **Nepal** since September 24, causing widespread damage and casualties. Flash floods and landslide associated with the recent rounds of rains claimed at least 26 lives while 25 others were severely injured. Hundreds of additional structures were damaged or destroyed and thousands of residents were directly affected due to the recent rounds of monsoon precipitation in Nepal. Widespread losses to agricultural land and local infrastructure was also noted. Monsoon rains arrived in the southeastern parts of Nepal around mid-June.

From mid-June onward there were at least seven episodes of heavy rainfall which affected all the Nepalese provinces. Among the hardest-hit districts included Sindhupalchowk where at least 75 people were killed in rain-related incidents since the arrival of this year's monsoon. According to the NDRRMA, Nepal, more than 400 people were killed due to seasonal flooding in Nepal this year, of which at least 288 people had been killed in landslide events. No fewer than 15,000 combined houses were either damaged or destroyed and a vast area of cropland was inundated since the arrival of monsoon in Nepal this year.

Since mid-September, heavy monsoon rains along the northeastern limb of the Southwest monsoon renewed the flooding situation in the **Bangladesh**; Rangpur, Nilphamari, Lalmonirhat and Thakurgaon District were the worst hit. As of this writing, approximately 125,000 residents were critically affected, according to the Ministry of Disaster Management and Relief, Bangladesh. Thousands of houses, businesses, and roads were either damaged or destroyed. Since the arrival of this year's monsoon in Bangladesh, at least 260 people have died, and more than 1.3 million homes were damaged; most of them were of poor construction quality.

Financial Loss

The total combined economic losses across the South Asian countries were anticipated to surpass USD8 billion; majority of these losses were incurred in India and Pakistan.

Given the damage details and initial estimates from the state governments of Karnataka, Madhya Pradesh, Odisha, Assam, and Gujrat, the total combined losses were anticipated to surpass USD6 billion; likely even higher. Given tha damage footprints in Pakistan, particularly the damage situation in the metropolitan city of Karachi of Sindh Province, the combined economic losses were anticipated to cross USD1.5 billion. Elsewhere in South Asia, the economic toll was expected to surpass USD500 million. Owing to the continued low-insurance take-up rates across these South Asian Countries, a significant proportion of these economic losses were anticipated to be uninsured.

Natural Catastrophes: In Brief

Flooding (Indonesia)
Incessant rains triggered landslides in North Kalimantan Province, northern Borneo Island, and central Indonesia on September 28, causing casualties and widespread damage. The data from the met department of Indonesia suggested that the rain gauges located in Tarakan City recorded at least 150 millimeters (6 inches) of 24-hour precipitation accumulation on September 28. According to the Indonesian National Board for Disaster Management, Indonesia, at least eleven people were killed, and three others were injured following landslides in North Tarakan (7) and central Tarakan (4) sub-districts. Dozens of houses were either damaged or destroyed. Severe flooding affected West Kalimantan on September 25. Approximately 10,000 people were critically affected in rain-related incidents. According to the BNPB, approximately 2,100 homes were damaged to varying degrees. Further losses were inflicted on the agricultural land and local infrastructure.

Windstorm Odette (Belgium, France)
Coastal areas of western Belgium and northern France were hit by a period of strong winds on September 26; the low-pressure area that caused the event was named Odette within the joint naming system of meteorological agencies in France, Spain, Portugal and Belgium. Odette was the last name on the 2019/2020 season list, although the storm should meteorologically be attributed to the new 2020/2021 winter storm season. Effects were minor, although gusty winds and high waves on the North Sea coast caused some damage in West Flanders, Belgium; particularly in Middelkerke, De Panne, Koksijde, Nieuport and elsewhere. At least three people were injured. Hundreds of vehicles were reported to be damaged and left in need of repair after being partially covered or buried by sand blown from the beaches by strong winds.

Severe Weather (Italy)
A severe weather outbreak with widespread effects felt across Italy occurred on September 25-27; it produced large hail, waterspouts and tornadoes, and strong winds. The most affected regions were Veneto, Lombardia, Friuli-Venezia-Giulia, Toscana, Lazio, Campania, Basilicata and Sardegna. Dozens of people were injured in total; eight people were injured in Rosignano Solvay in Tuscany after a tornado struck the community and caused property losses, preliminarily expected to reach into low-digit millions. Large hail affected agricultural land in Veneto, particularly in the areas north of Vicenza and north of Treviso. Total losses in the sector were tentatively estimated in the tens of millions EUR nationwide.

Severe Weather (Turkey)
A notable hailstorm accompanied by strong winds and locally heavy rain affected Istanbul and the Marmara region of Turkey in the morning of September 29. Notable effects were initially reported from the European side of the city, including neighborhoods of Silivri, Buyukcekmece, Catalca, and Arnavutkoy. Further damage was also observed on the eastern side in Umraniye or Suadiye. Hundreds of vehicles were reportedly damaged by large hail; which reached a maximum diameter of 6 centimeters (2.4 inches). The full extent of damage was not yet available.

Global Temperature Anomaly Forecast

GFS/CFSR 5-day Avg 2m T Anomaly (°C) [1979-2000 base]
Thursday, Oct 01, 2020

ClimateReanalyzer.org
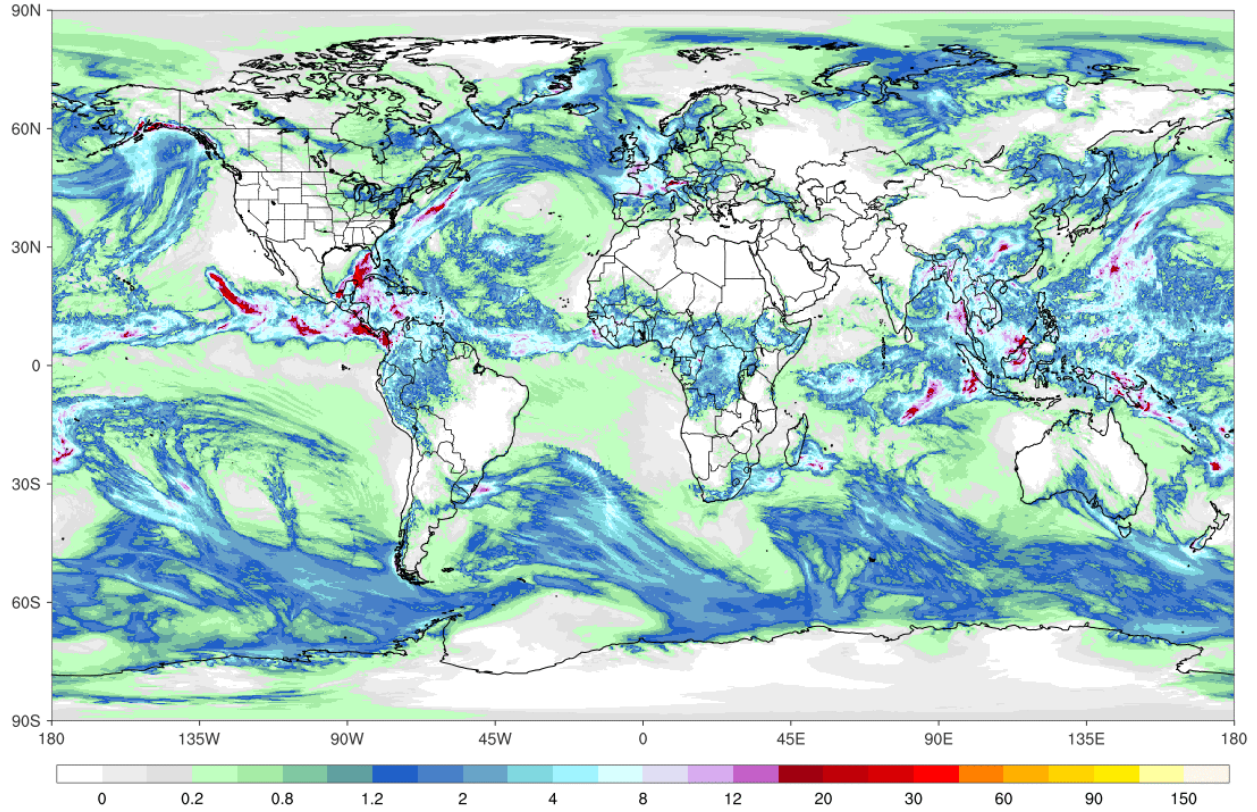Climate Change Institute | University of Maine
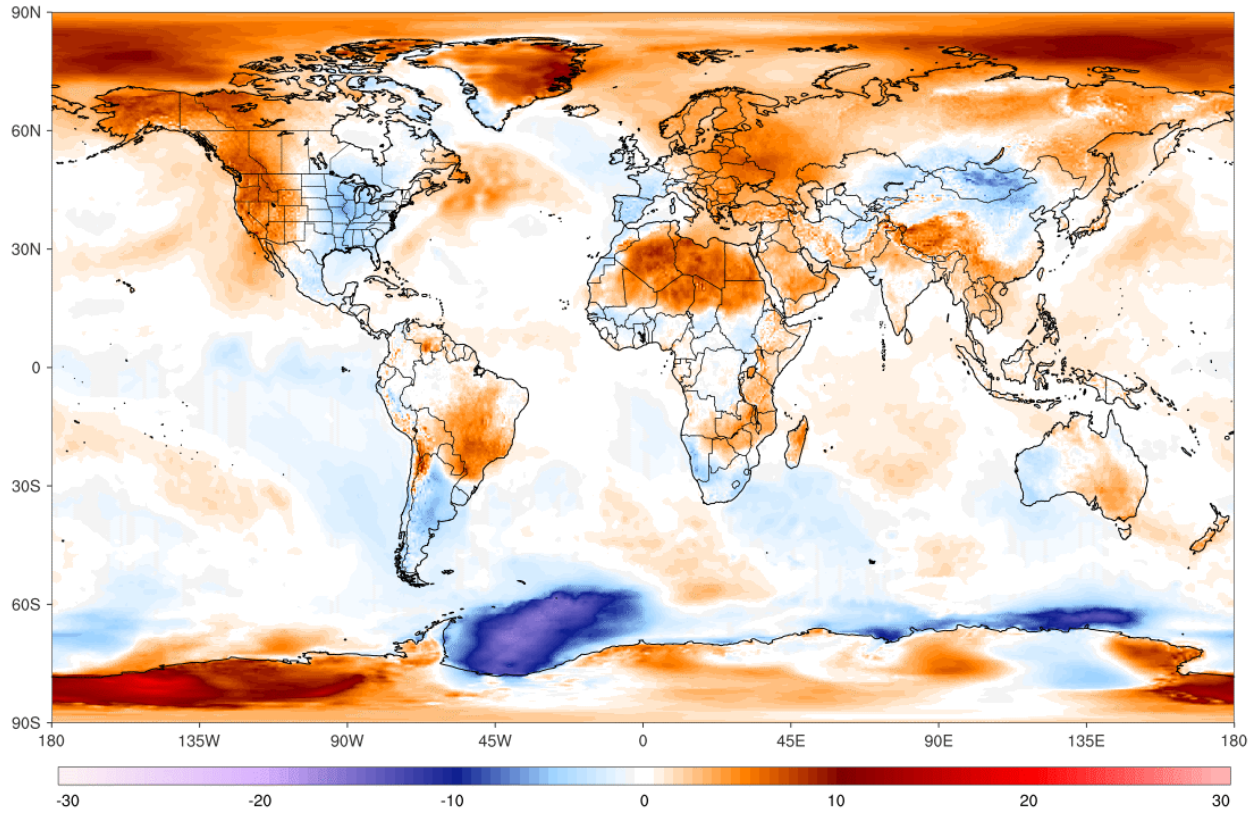
Source: Climate Reanalyzer, Climate Change Institute, University of Maine, USA

Global Precipitation Forecast

GFS 5-day Total Accumulated Precipitation (cm)
Thursday, Oct 01, 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)   30 Sep 2020
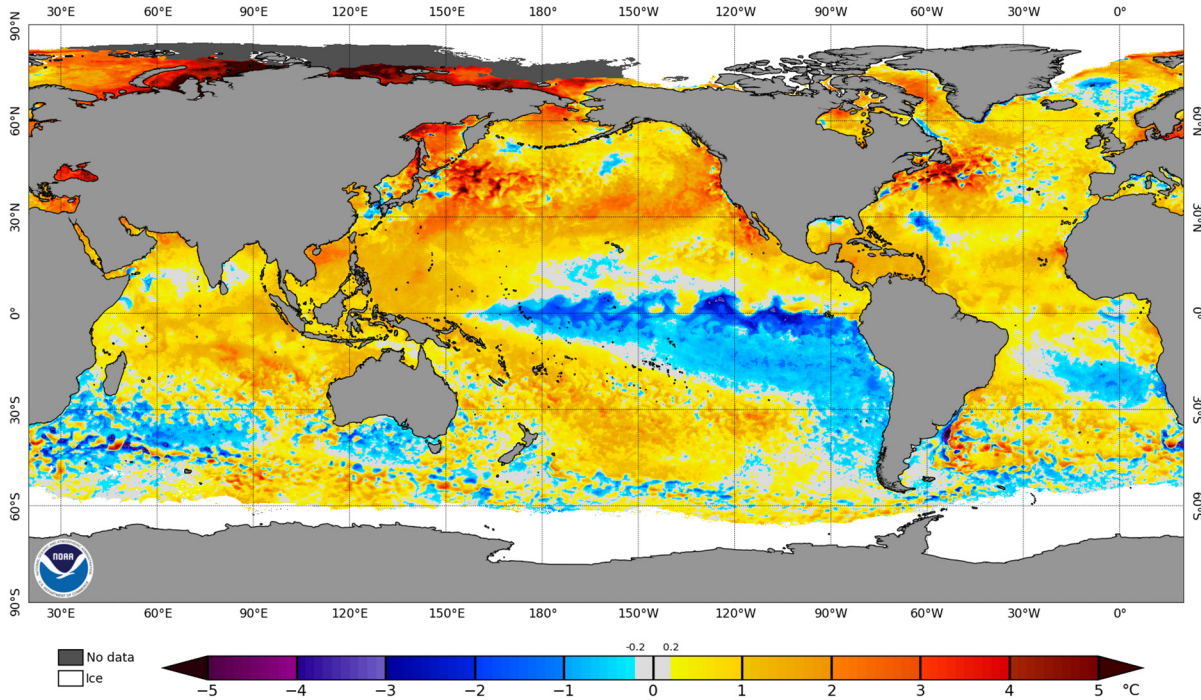
The SST anomalies are produced by subtracting the long-term mean SST (for that location in that time of year) from the current value. This product with a spatial resolution of 0.5 degree (50 kilometers) is based on NOAA/NESDIS operational daily global 5 kilometer Geo-polar Blended Night-only SST Analysis. 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)	25.2	-1.1
Niño3.4 region (2°N latitude, 155°W longitude)	24.6	-1.6
Western Pacific Ocean (700 miles NNW of Honiara, Solomon Islands)	29.6	-0.8

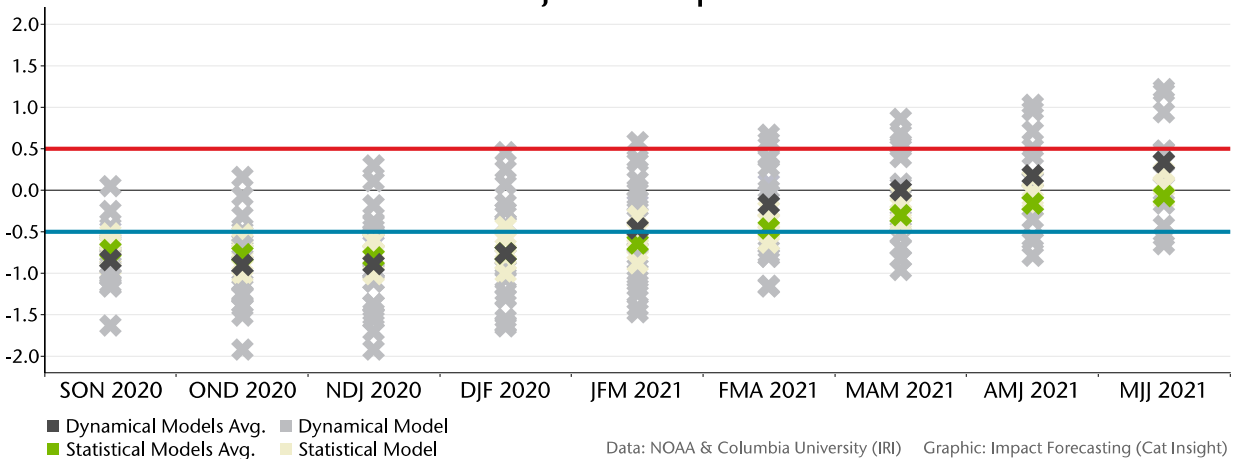Sources: ESRL, NOAA, NEIS, National Data Buoy Center

El Niño-Southern Oscillation (ENSO)

La Niña conditions are currently present, though NOAA has officially issued a **La Niña Advisory**. NOAA notes that there is a 75 percent chance that La Niña conditions will persist through emerge in the boreal (Northern Hemisphere) winter of 2020 / 2021.

Probabilistic ENSO Model Projections: September 2020

Data: NOAA & Columbia University (IRI)   Graphic: Impact Forecasting (Cat Insight)

ENSO Model Projections: September 2020

Data: NOAA & Columbia University (IRI)   Graphic: Impact Forecasting (Cat Insight)
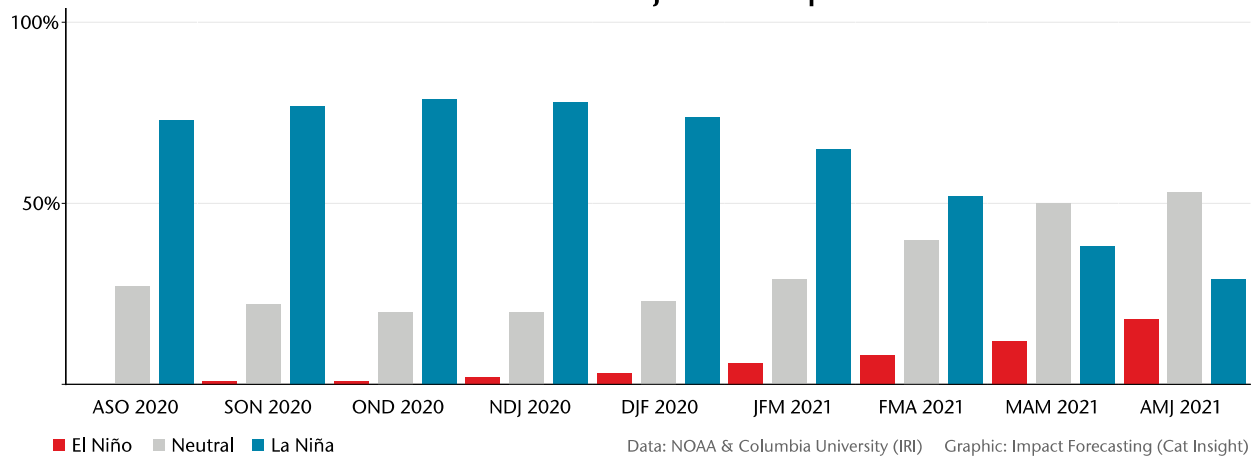
El Niño refers to the above-average sea-surface temperatures (+0.5°C) that periodically develop across the east-central equatorial Pacific. It represents the warm phase of the ENSO cycle.

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 is known as the Oceanic Niño Index (ONI).
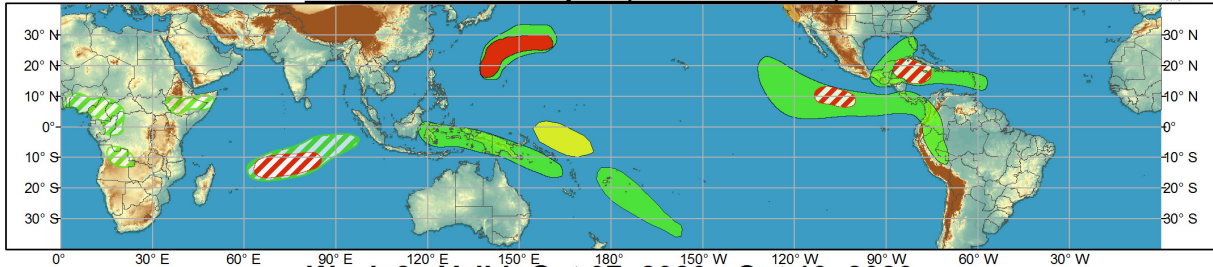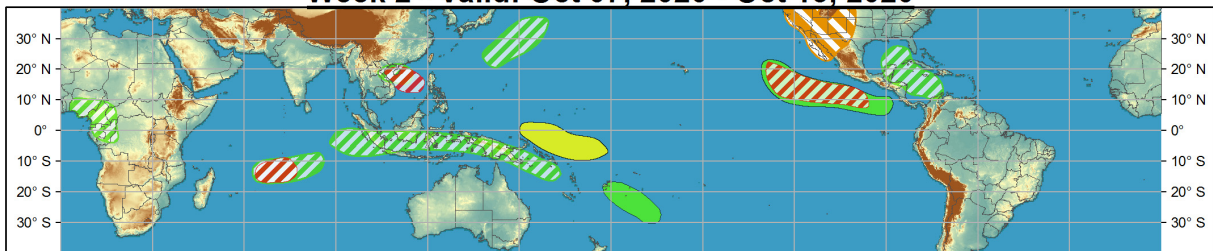
Global Tropics Outlook

Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Sep 30, 2020 - Oct 06, 2020

Week 2 - Valid: Oct 07, 2020 - Oct 13, 2020

Produced: 09/29/2020
Forecaster: MacRitchie

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.

Source: Climate Prediction Center

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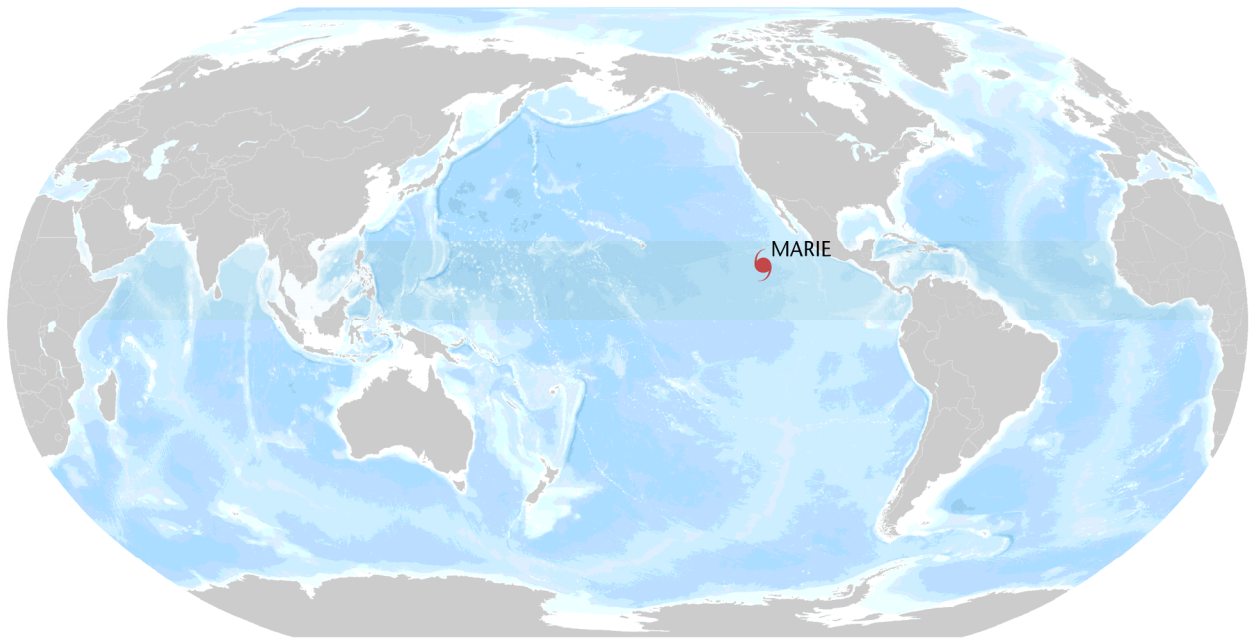
🌀 Tropical Depression 🌀 Tropical Storm 🌀 Category 1 🌀 Category 2 🌀 Category 3 🌀 Category 4 🌀 Category 5

Location and Intensity Information

Name*	Location	Winds	Storm Reference from Land	Motion**
HU Marie	15.1°N, 120.9°W	110 mph	895 miles (1,445 kilometers) SW of Baja California	W at 16 mph

* 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 (≥M4.0): Sep 25 – Oct 1

Magnitude   • 4.0 - 4.9   ● 5.0 - 5.9   ● 6.0 -.6.9   ● ≥ 7.0   —— Tectonic boundary
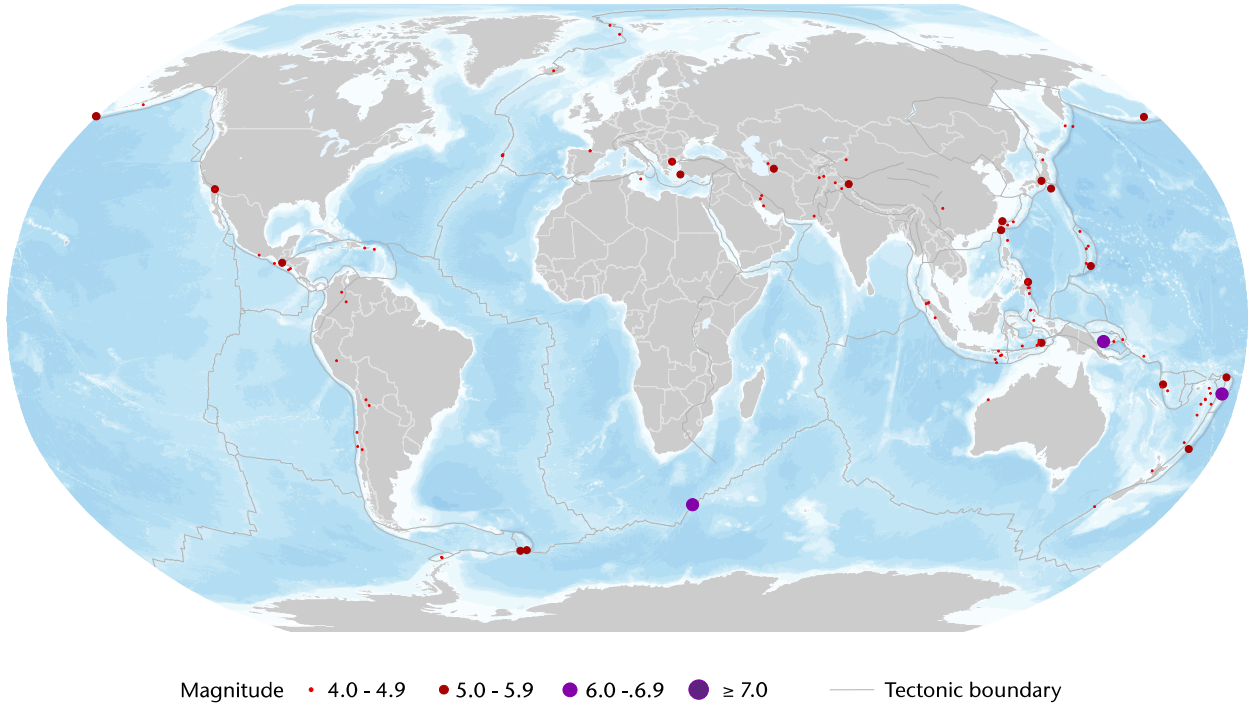
Significant EQ Location and Magnitude (≥M6.0) Information

Date (UTC)	Location	Magnitude	Depth	Epicenter
09/26/2020	48.03°S, 31.76°E	6.1	10 km	south of Africa
10/01/2020	19.50°S, 174.23°W	6.4	35 km	37 kilometers (23 miles) NNE of Pangai, Tonga
10/01/2020	6.09°S, 148.66°E	6	109 km	99 kilometers (62 miles) W of Kandrian, Papua New Guinea

Source: United States Geological Survey

U.S. Weather Threat Outlook

Day 3-7 U.S. Hazards Outlook
Valid: 10/04/2020-10/08/2020

Much Above Normal Temperatures 10/4

High Winds 10/5 - 10/7

Heavy Precipitation 10/4 - 10/5

Heavy Rain 10/4

Heavy Rain 10/7

For the latest information on flooding - https://www.wpc.ncep.noaa.gov/nationalfloodoutlook/index.html

Flooding Likely   Flooding Occurring/Imminent   Flooding Possible   Severe Drought
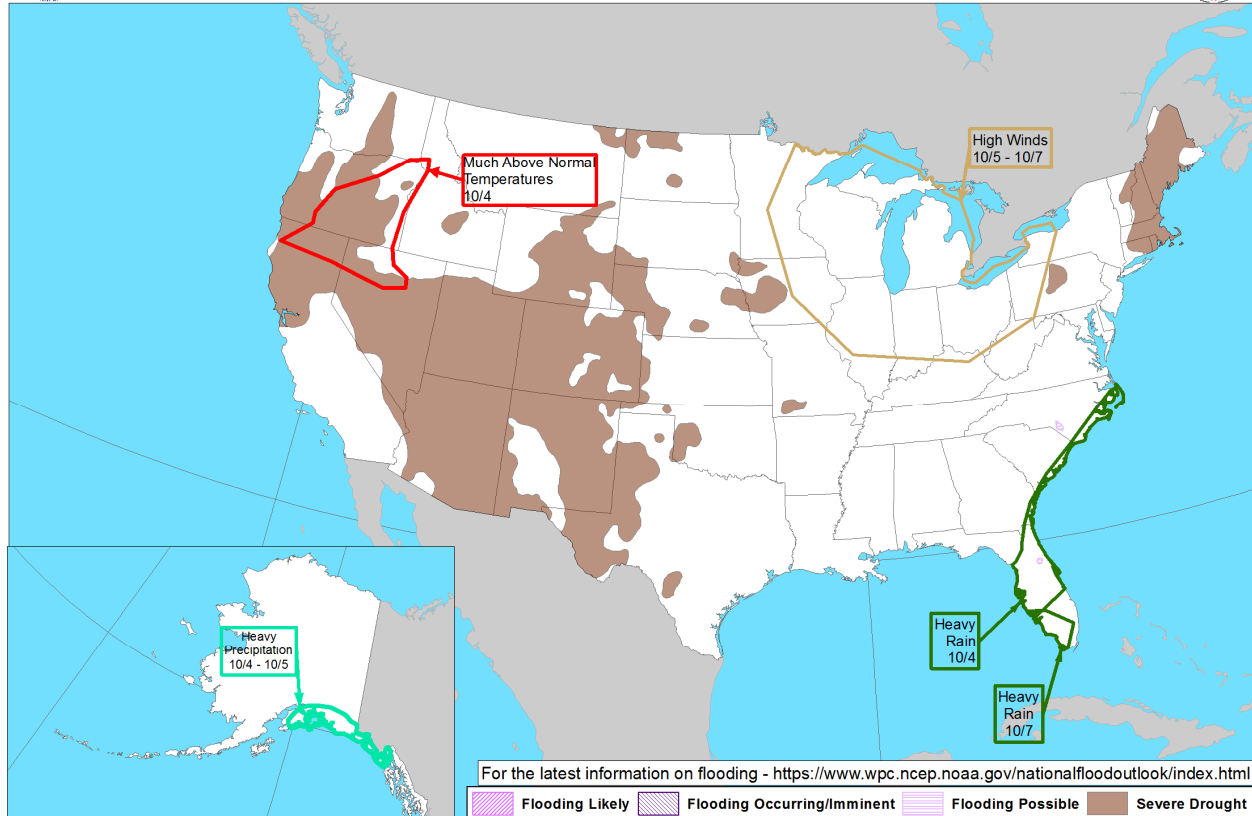
Weather Prediction Center

Made: 10/01/2020 3PM EDT

Follow us:

www.wpc.ncep.noaa.gov

Potential Threats

- A lingering ridge over the Western United States will produce much above normal temperatures across the interior Pacific Northwest on October 4.

- A stalled frontal boundary across the Southeast will allow a plume of moist, tropical air associated with a wave of low-pressure to spread heavy rainfall to portions of Florida and the Southeastern coast on October 4. A second surge of moisture is anticipated to impact southern Florida by October 7.

- A developing strong pressure gradient associated with a frontal system traversing from western Canada toward the Northeast will produce high winds across portions the Midwest, Great Lakes, and Ohio Valley between October 5-7.

- Abnormally dry conditions continue to persist over large regions of the southern Plains, Rockies, and Western portions of the country, leading to prolonged severe drought and enhanced fire weather.

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

The National Interagency Fire Center has highlighted an extended, yet lowered risk of elevated wildfire conditions across parts of the West and Desert Southwest during the first week of October. Several fires continue to burn across parts of California as the peak of the wildfire season has now arrived. With above average temperatures, offshore winds, and a lack of moisture, enhanced fire conditions are anticipated to persist through the rest of the month.

October 2

October 3

Moderate Risk
Low Risk
Little or No Risk

© 2020 Mapbox © OpenStreetMap

October 4

October 5

October 6

Data: National Interagency Fire Center   Graphic: Impact Forecasting (Cat Insight)
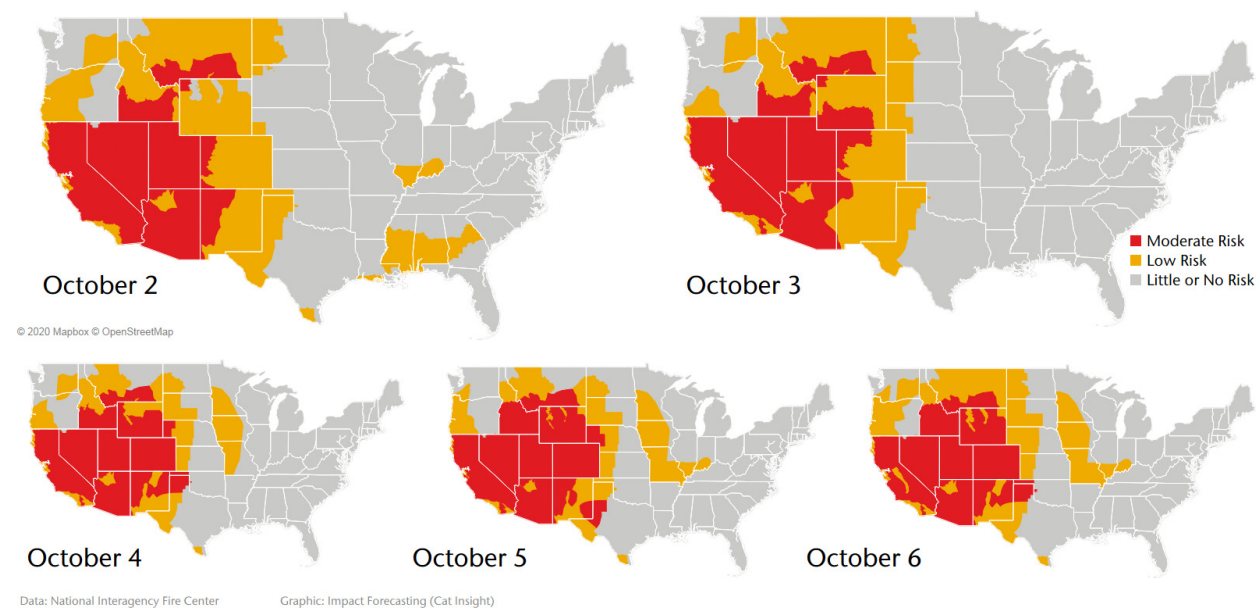
Annual YTD Wildfire Comparison: October 1

Year	Number of Fires	Acres Burned	Acres Burned Per Fire
2016	45,340	4,890,112	107.85
2017	49,563	8,422,251	169.93
2018	49,432	7,755,181	156.89
2019	40,263	4,371,586	108.58
2020	44,253	7,672,398	173.38
10-Year Average (2010-2019)	**47,710**	**6,111,256**	**128.09**

Source: National Interagency Fire Center

Top 5 Most Acres Burned by State: October 1

State	Number of Fires	Acres Burned	Acres Burned Per Fire
California	8,501	2,812,350	330.83
Arizona	2,078	881,117	424.02
Washington	1,534	769,223	501.45
Oregon	1,811	658,158	363.42
Montana	2,203	379,478	172.26

Source: National Interagency Fire Center

Note: There is often a multi-day lag between NIFC and the California Department of Forestry and Fire Protection (CAL FIRE)

Current U.S. Streamflow Status
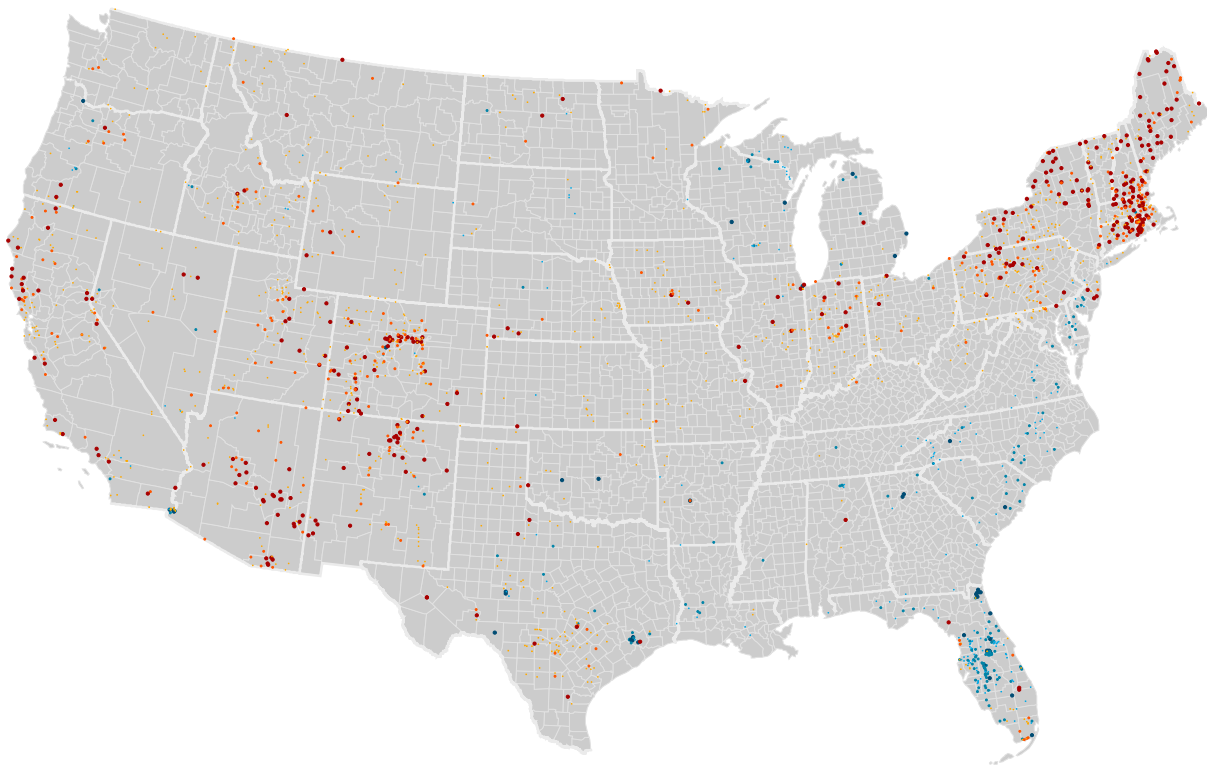
| High Flows (Percentile) | • ≥ 99 / Above floodstage
• 95 - 99
• 90 - 95 | Hydrological Drought | • Severe Drought
• Moderate Drought
• Below Normal |

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.

Top 5 Rivers Currently Nearing or Exceeding Flood Stage

Location	Current Stage (ft)	Flood Percentile
Black River at Kingstree, South Carolina	11.63	98.91
Sacandaga River near Hadley, New York	5.53	98.90
Maurice River at Norma, New Jersey	3.62	98.85
Calcasieu River near Oberlin, Louisiana	13.89	98.82
Ogeechee River near Eden, Georgia	10.92	98.81

Source: United States Geological Survey

Source Information

Additional wildfires ignite across California

U.S National Weather Service
California Department of Forestry and Fire Protection (Cal Fire)
National Interagency Fire Center (NIFC)
Pacific Gas and Electric (PG&E)
California Office of Emergency Services
InciWeb
Glass Fire Update: Residents Flee Area Around St. Helena, CBS San Francisco
California wildfires erupt in wine country, damaging Santa Rosa and prompting evacuations, The Washington Post
Historic Ono Store, Ono Grange destroyed by Zogg Fire, Redding Record Searchlight

Update: Monsoon flooding in South Asia

India Meteorological Department
Disaster Management Division, Ministry of Home Affairs, India
National Disaster Management Agency, India
Pakistan Disaster Management Agency
Pakistan Meteorology Department
National Disaster Risk Reduction and Management Authority, Nepal
Ministry of Disaster Management and Relief, Bangladesh
Reliefweb
Floodlist
Emergency Response Coordination Centre, European Civil Protection and Humanitarian Aid Operations

Natural Catastrophes: In Brief

Storm Odette: damage to the coast, three firefighters injured. Le Soir
Damage assessment studies started after the storm and hail. Haber Turk
Indonesian National Board for Disaster Management, Indonesia

Contact Information

Steve Bowen
Director & Meteorologist
Head of Catastrophe Insight
Impact Forecasting
Aon
steven.bowen@aon.com

Brian Kerschner
Senior Catastrophe Analyst
Impact Forecasting
Aon
brian.kerschner@aon.com

Michal Lörinc
Senior Catastrophe Analyst
Impact Forecasting
Aon
michal.lorinc@aon.com

Gaurav Srivastava
Catastrophe Analyst
Impact Forecasting
Aon
gaurav.srivastava6@aon.com

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.