



# It's official: El Niño is back

Low water levels, a consequence of El Niño, at Lake Calima in Colombia in 2016

Source: *Christian Escobar Mora/EPA*

On February 14, 2019, scientists at the Climate Prediction Center, USA confirmed the climate pattern formed in the Pacific.

El Niño is expected to remain weak through the rest of this winter and will likely persist through the spring in the Northern Hemisphere.

The climate pattern plays a big role in what weather we can expect across the United States and around the world. And it's possible El Niños might get stronger. A study released in December 2018 claims future El Niños will grow more powerful and lead to more extreme weather because of global warming.

## **What is El Niño?**

It's a natural climate pattern where sea water in the central and eastern tropical Pacific Ocean is warmer than average. As for its name, El Niño means the Little Boy, or Christ Child in Spanish. El Niño was originally recognized by fishermen off the coast of South America in the 1600s, with the appearance of unusually warm water in the Pacific Ocean around Christmas.

According to the National Oceanic and Atmospheric Administration (NOAA), USA, scientists today measure El Niño by calculating the average sea-surface temperature each month, then averaging it with the previous and following months.

That number is compared to average temperatures for the same three-month period between 1986 and 2015, called the Oceanic Niño index.

When the index hits 0.5 degrees Celsius warmer or more, it's classified as an El Niño. When it's 0.5 degrees Celsius cooler or more, it's a La Niña.

The overall climate pattern is known as the El Niño-Southern Oscillation (ENSO) cycle.

## **Impacts of El Niño**

The last El Niño event ended in 2016 and helped make that year the hottest ever recorded by adding to the heating caused by humanity's carbon emissions. The 2019 event is not currently forecast to be as strong as in 2016.

## **Historically, El Niño impacts various regions differently:**

### **Africa**

East Africa — including Kenya, Tanzania, and the White Nile basin — experiences, in the long rains from March to May, wetter-than-normal conditions. Conditions are also drier than normal from December to February in south-central Africa, mainly in Zambia, Zimbabwe, Mozambique, and Botswana.

## Asia

As warm water spreads from the west Pacific and the Indian Ocean to the east Pacific, it takes the rain with it, causing extensive drought in the western Pacific and rainfall in the normally dry eastern Pacific. It results in below-average rainfall over Indonesia and surrounding regions.

## Australia and the Southern Pacific

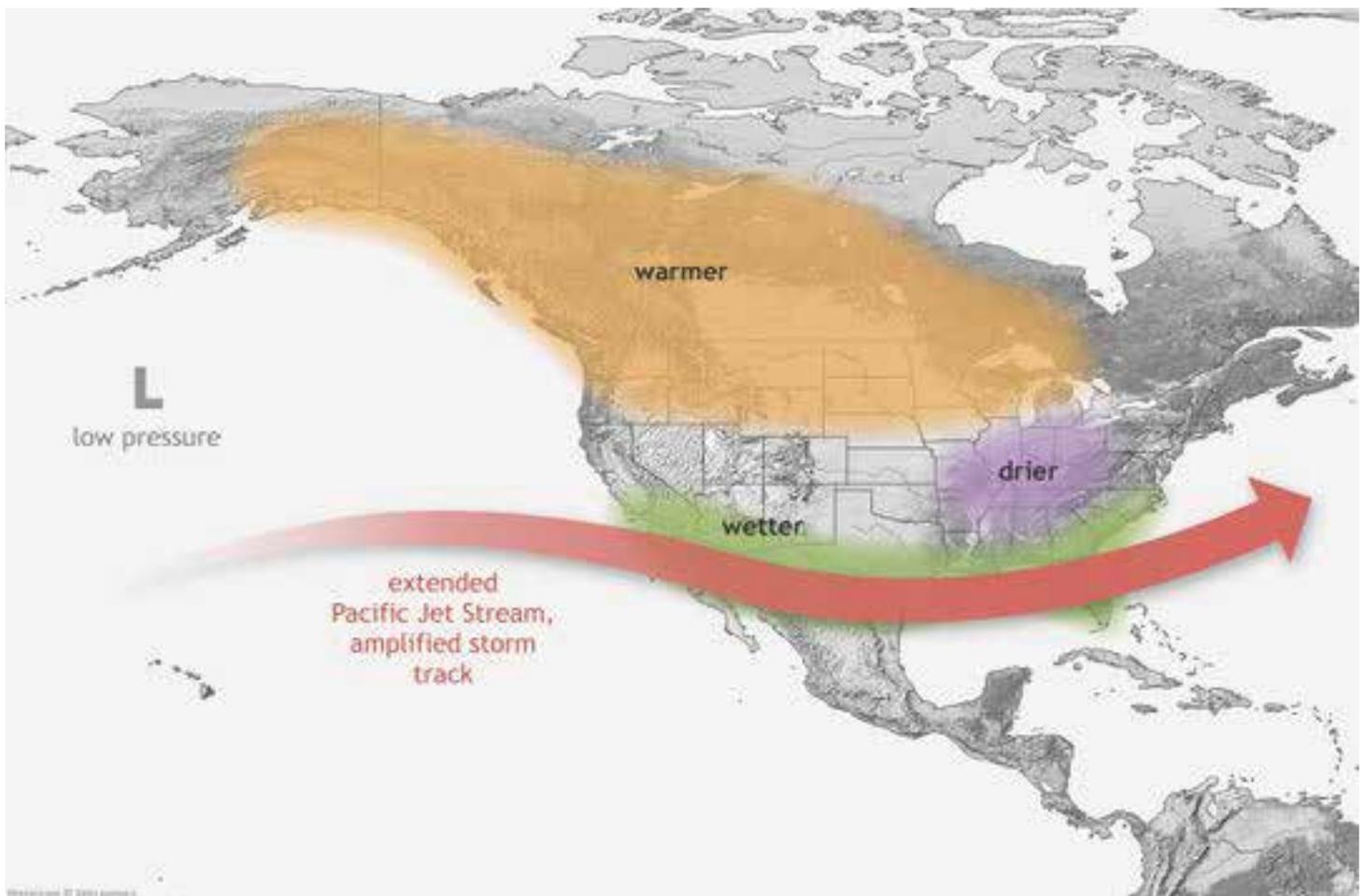
During El Niño events, the shift in rainfall away from the Western Pacific results in reduced rainfall across Australia. The risk of a significant bushfire season in south-eastern Australia is higher following an El Niño event.

During an El Niño event, New Zealand tends to experience stronger or more frequent westerly winds during their summer, which leads to an elevated risk of drier than normal conditions along the east coast. There is more rain than usual though on New Zealand's West Coast, because of the barrier effect of the North Island mountain ranges and the Southern Alps.

## North America

Over North America, the main temperature and precipitation impacts of El Niño, generally occur in the six months between October and March. In particular, the majority of Canada generally has milder than normal winters and springs, with the exception of eastern Canada where no significant impacts occur.

During an El Niño, the southern part of the U.S. typically experiences wetter than average conditions, while the northern part is less stormy and milder than usual, said NOAA. During a La Niña, it flips, with colder and stormier conditions to the north and warmer, less stormy conditions across the south.



Impact of El Niño on U.S. winter weather. However, not all impacts occur during every event, and their strength and exact location can vary. | Source: Climate Prediction Center, USA

Researchers believe the climate pattern won't have a significant impact on the weather. However, forecasts for the next few weeks are for wetter conditions across the southern U.S., which is common with El Niño.



Sections of land are missing from coastal properties in Pacifica, Calif., on Jan. 26, 2016. Storms and powerful waves caused by El Niño have intensified erosion.  
*(Photo 11: Josh Edelson, AFP/Getty Images)*

Observations of 2016 showed a weak El Niño could increase the risk of tornado outbreaks in May in the upper Midwest. El Niño also tends to suppress the number of hurricanes that form in the Atlantic, which NOAA does factor in when issuing its seasonal hurricane predictions in May.

### **South America**

The effects of El Niño in South America are direct and stronger than in North America. An El Niño is associated with warm and very wet weather months in April–October along the coasts of northern Peru and Ecuador, causing major flooding whenever the event is strong or extreme.

Southern Brazil and northern Argentina also experience wetter than normal conditions, but mainly during the spring and early summer. Central Chile receives a mild winter with large rainfall, and the Peruvian-Bolivian Altiplano is sometimes exposed to unusual winter snowfall events. Drier and hotter weather occurs in parts of the Amazon River Basin, Colombia, and Central America.

This year, in Colombia, El Niño has caused drought like situations. As a result, 391 municipalities throughout Colombia are suffering water shortages. The Magdalena River, Colombia's largest, has low water levels between Barrancabermeja and Puerto Wilches, causing water shortages throughout the country's Caribbean region.

Due to its varied impacts, El Niño, causes severe economic and insured losses to insurance industry in form of damage of property and loss of lives and hampers economic growth. The high temperatures also cause major bleaching on coral reefs resulting in environmental hazards.

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