

State of the Climate 2020

Latin America & the Caribbean

State of the Climate in Latin America and the Caribbean 2020 represents the first multi-agency effort involving National Meteorological and Hydrological Services (NMHSs), WMO Regional Climate Centres (RCCs), research institutions, and international and regional organizations.

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Climate Indicators



Temperature

2020 was one of the three warmest years on record for Mexico/Central America and the Caribbean, and the second warmest year for South America. Temperatures were 1.0 °C, 0.8 °C and 0.6 °C above the 1981–2010 average, respectively.



Glacier Mass Balance

In the Chilean and Argentine Andes, glaciers have been retreating during the last decades. Ice mass loss has accelerated since 2010, in line with an increase in seasonal and annual temperatures and a significant reduction in annual precipitation in the region.



Sea Level Rise

Sea-level rise in the region is not uniform. The trend is rising at a higher rate than the global average in the along the Atlantic coast of South America, as well as in the Caribbean Sea and Gulf of Mexico.



Sea Surface Temperature

Sea surface temperature in the Tropical North Atlantic Ocean was significantly warmer than normal throughout the year. In the Caribbean, 2020 was the year with the highest positive anomalies on record.



Extreme Events



TROPICAL CYCLONES

Hurricanes Eta and Iota reached category 4 intensity and made landfall in the same region in quick succession; they followed identical paths across Nicaragua and Honduras, affecting the same areas and exacerbating related impacts.



FLOODS

Heavy rains and related floods, flash floods and landslides affected Brazil, Bolivia Colombia, Ecuador, Peru and Uruguay, destroying infrastructure, affecting thousands of people and claiming lives.



DROUGHT

Widespread drought across the Latin America and the Caribbean region has had significant impact on inland shipping routes, crop yields and food production, leading to worsening food insecurity in many areas.



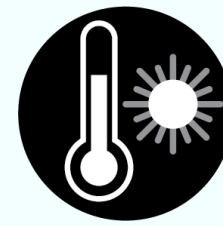
COLD WAVES

In August, a cold wave affected most of Brazil, reaching as far as western Amazonia. A high pressure blocking pattern over southern Patagonia led to extremely low temperatures and produced significant accumulation of snow depth.



WILDFIRES

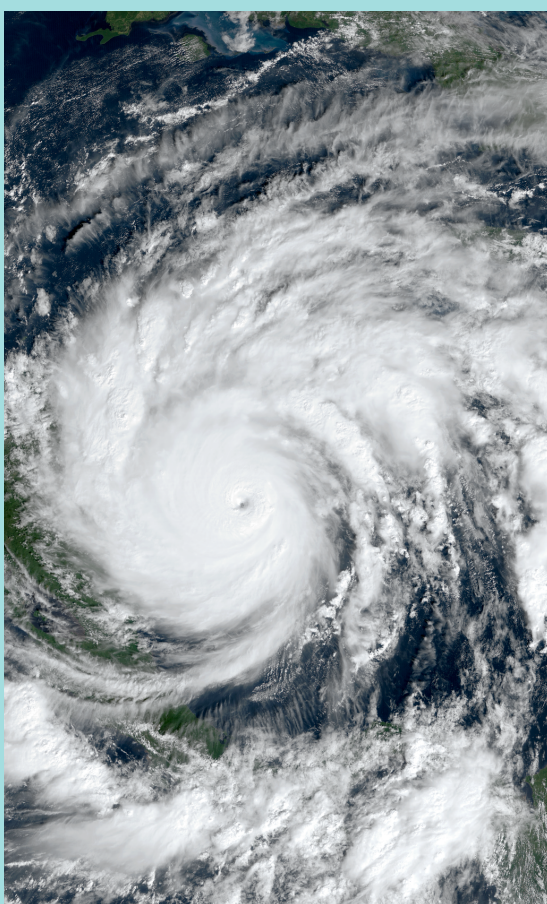
The year 2020 saw the most catastrophic fire season over the Pantanal, with burned area exceeding 26% of the region, four times larger than the long-term average observed between 2001 and 2019.



HEAT WAVES

A series of heatwaves and extreme temperatures affected several places in South America during the year and induced favourable weather conditions for wildfires, especially in the Amazonian forest.

Impacts



INFRASTRUCTURE LOSS & DAMAGE

Hurricanes Eta and Iota, two category 4 hurricanes, were among the most destructive events of 2020 for Latin America and the Caribbean.

In Nicaragua alone, 1.8 million people were affected, including damages to 220,000 hectares of cultivated land and losses of 43,667 livestock animals. Material damages were estimated to be approximately US\$172 million, while immediate restoration costs are around US\$36.4 million.

FOOD SECURITY

Extreme weather events affected over 8 million people across Central America, exacerbating food insecurity in countries already crippled by economic shocks, COVID-19 restrictions, and conflict.

Drought conditions significantly impacted crop yields--almost 80% of maize grown in Guatemala's highland region was lost. In Mexico, the Cerritos municipality suffered a 50% drop in cultivated crops due to the drought, including sorghum, sunflower, and corn.



Climate Policy

Adaptation measures, particularly multi-hazard early warning systems, are underdeveloped in the Latin America and the Caribbean region. Support from governments and the science and technology community is critical to strengthening their development, as well as to improving data collection and storage and firmly integrating disaster risk information into development planning. Strong financial support is fundamental to achieving this outcome.