



WORLD
METEOROLOGICAL
ORGANIZATION



GLOBAL SEASONAL CLIMATE UPDATE

TARGET SEASON: January-February-March 2021

Issued: 22 December 2020



Canada



HYDROMETEOROLOGICAL
CENTRE OF RUSSIA



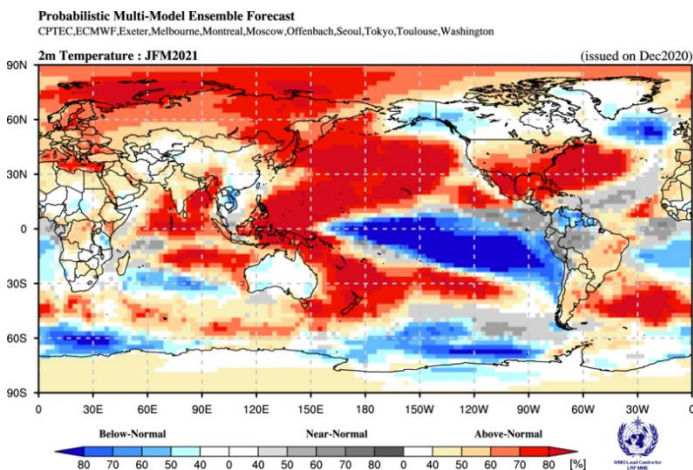
Summary

Observed sea surface temperatures anomalies in the east-central tropical Pacific were in a La Niña condition during September-November 2020. The Indian Ocean Dipole (IOD) was in a near neutral condition. The sea surface temperatures in the Niño 3.4 and Niño 3 regions, both of which are often used to characterize ENSO conditions, are predicted to remain in La Niña conditions during January-March 2021. Sea surface temperature anomalies in other ocean basins (except for south of 60°S) are generally predicted to be in above normal conditions.

Other than a large area of the tropical eastern Pacific Ocean, sea-surface temperatures in other tropical oceans are generally expected to be above-normal for January-March 2021. The expected impacts on air temperatures over land are strongest in the maritime continent and over the southern half of North America, where temperatures are most likely to be above-normal. Above-normal temperatures are also likely over much of the northern high latitudes (except in the vicinity of Greenland and over north-western North America). Pockets of below-normal temperatures are predicted for South-east Asia, and the north-western part of South America. There is a higher chance that the southern, central and eastern parts of South America will be above-normal. The equatorial regions of Africa are also predicted to be above-normal, but elsewhere in Africa south of the equator and over Australia there is no clear signal.

The expected La Niña conditions are reflected in the rainfall forecasts for January-March 2021, which indicate many of the typical (canonical) La Niña impacts. These canonical impacts include increased chances of unusually wet conditions over much of the maritime continent, Australia, upper half of North America, and northern South America, plus dry conditions over parts of the Greater Horn of Africa, sub-tropical latitudes of North America, and some parts of south-eastern South America. Probabilities for below-normal rainfall are also increased over much of western and central Asia, and along about 30°N in the East Asia. Central Africa is also predicted to be below-normal. There are increased probabilities of above-normal rainfall (possibly as snow) over much of the Northern Hemisphere north of about 45°N. There is weak agreement about the impacts on rainfall over southern Africa.

Surface Air Temperature, JFM 2021



Precipitation, JFM 2021

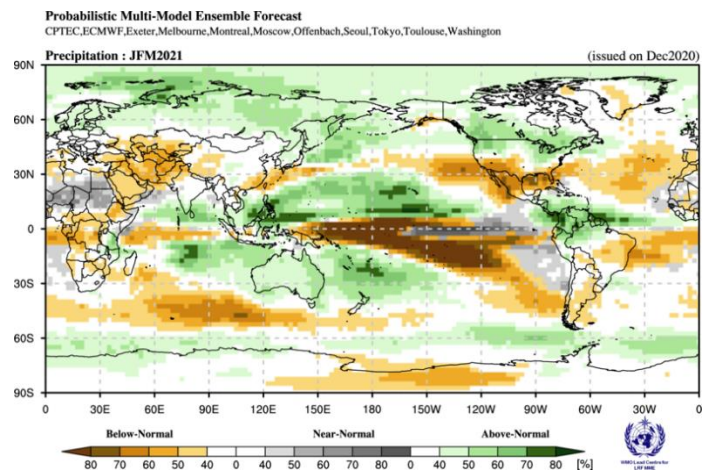


Figure 1. Probabilistic forecasts of surface air temperature and precipitation for the season January-February-March 2021. The tercile category with the highest forecast probability is indicated by shaded areas. The most likely category for below-normal, above-normal and near-normal is depicted in blue, red and grey shadings respectively for temperature, and orange, green and grey shadings respectively for precipitation. White areas indicate equal chances for all categories in both cases. The baseline period is 1993-2009.

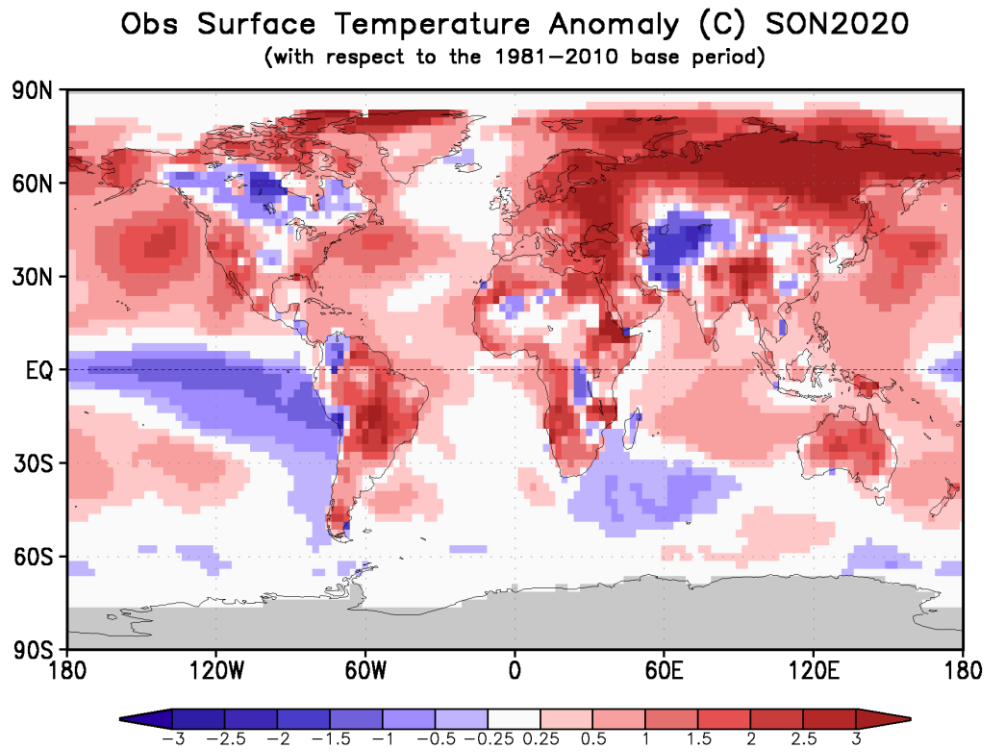


Figure 2. Observed July-September 2020 near-surface temperature anomalies relative to 1981-2010. (Source: U.S. Climate Prediction Center).

Obs Precipitation Anomaly (mm/day) SON2020
(with respect to the 1981–2010 base period)

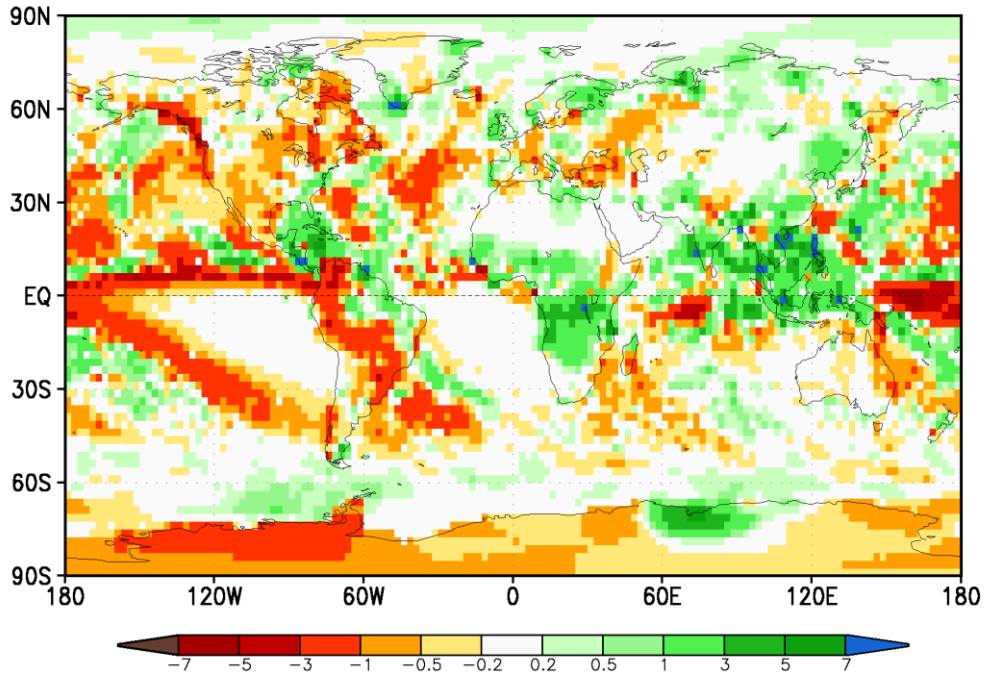


Figure 3. Observed precipitation anomalies for July-September 2020, relative to 1981-2010 base period (top). (Source: U.S. Climate Prediction Center).