



GLOBAL SEASONAL CLIMATE UPDATE

TARGET SEASON: November-December-January 2020-21

Issued: 21 October 2020



Canada



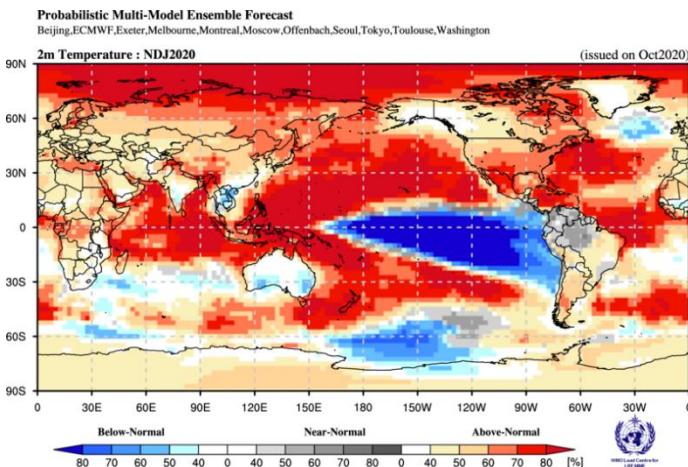
Summary

Observed sea surface temperatures anomalies in the east-central topical Pacific were in a weak La Niña condition during July-September 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 become cooler and remain in La Niña conditions during November-December-January 2020-21. Sea surface temperature anomalies in other ocean basins are predicted to be in above normal conditions.

Influences from the expected tendency towards positive sea surface temperature anomalies across sizeable portions of the globe, both in the tropics (except for below-normal conditions in the central and eastern Pacific) and extra-tropics, are seen in the temperature forecast for November-December-January 2021, which everywhere (except southern Australia) leans towards above-normal land temperature, particularly in the Arctic latitudes. The moderate La Niña sea surface temperature conditions predicted in much of the eastern equatorial Pacific may noticeably affect the overlying tropical atmospheric circulation and climate, as they can enhance the SST gradients with positive SST anomalies in the western Pacific. A global warming trend also contributes to the sea surface temperature and air temperature forecast, leading to a general prevalence of increased chances of above-average temperatures compared to a climatological base period (1993-2009) that is centred nearly 20 years in the past.

Below-average precipitation conditions are expected in the equatorial Pacific east of 150°E, and an enhanced probability for above normal precipitation is expected along a narrow band just north of the equator in the central tropical Pacific. Above-average precipitation conditions is predicted over the Indonesian Archipelago and are likely associated with equatorial sea surface temperature anomalies and their east-west gradient in the equatorial Pacific. An enhanced probability for above-normal precipitation is predicted for Australia, islands in Melanesia, western equatorial and northwest South America, northern regions of North America and Asia. A shift of the odds towards below-normal precipitation is predicted in the southern regions of South America, western and central Asia, equatorial Africa, and southern regions of North America.

Surface Air Temperature, NDJ 2020-21



Precipitation, NDJ 2020-21

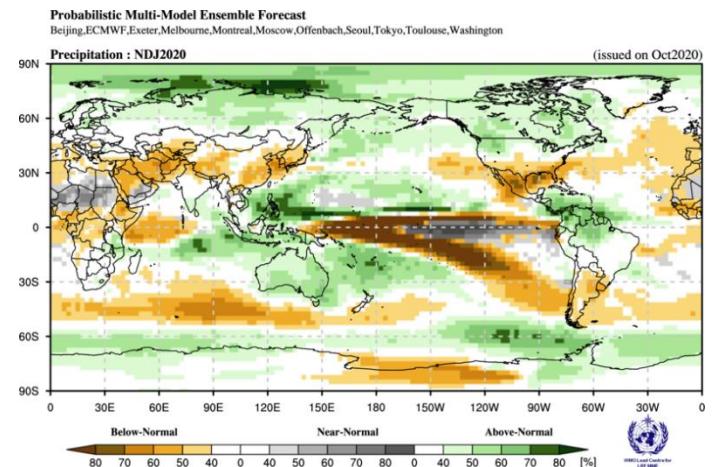


Figure 1. Probabilistic forecasts of surface air temperature and precipitation for the season November-December-January 2020-21. The tercile category with the highest forecast probability is indicated by shaded areas. The most likely category for below-normal, above-normal and near-normal is depicted 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.

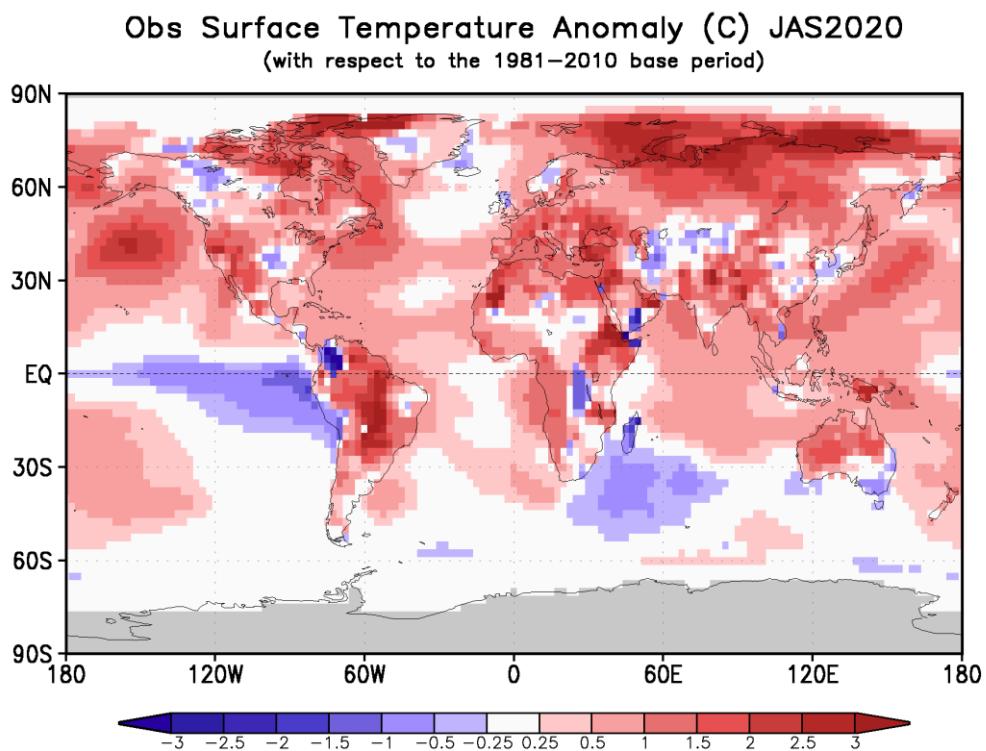


Figure 2. Observed July-September 2020 near-surface temperature anomalies relative to 1981-2010. (Source: U.S. Climate Prediction Center).

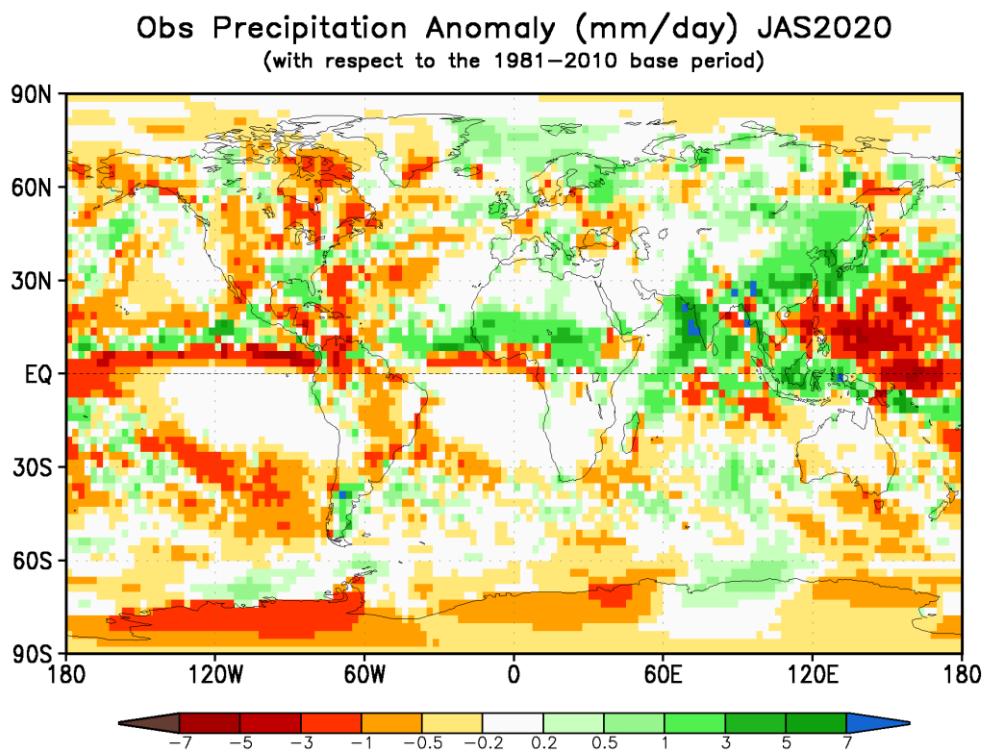


Figure 3. Observed precipitation anomalies for July-September 2020, relative to 1981-2010 base period (top). (Source: U.S. Climate Prediction Center).