



WORLD
METEOROLOGICAL
ORGANIZATION



GLOBAL SEASONAL CLIMATE UPDATE

TARGET SEASON: January-February-March 2022

Issued: 26 December 2021



Summary

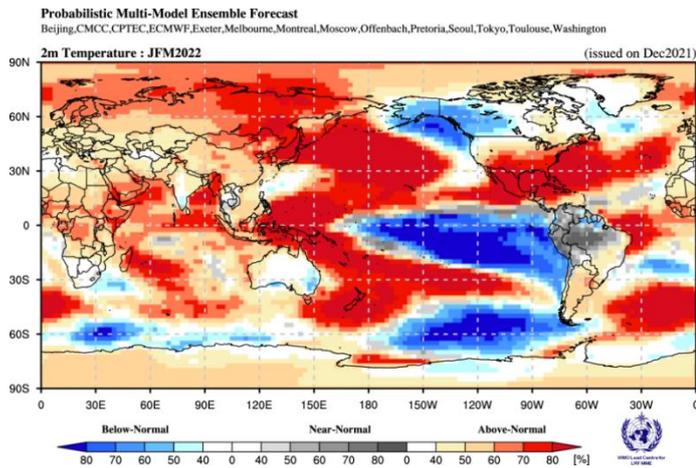
Observed sea surface temperatures (SSTs) in the central tropical Pacific continued in a neutral ENSO condition during September-November 2021. The Indian Ocean Dipole (IOD) also remained in a near-neutral condition and is predicted to continue being neutral. The near-normal sea-surface temperature anomalies in the Niño 3.4 and Niño 3 regions are predicted to evolve towards weak La Niña conditions in the January-March 2022 season. Farther west in the Niño 4 region, the sea surface temperature anomaly is also predicted to be below-normal. The January-March 2022 prediction, therefore, indicates weak La Niña conditions in the central tropical Pacific.

Apart from the tropical central and eastern Pacific Ocean (where prediction for SSTs is for slightly below-average), sea-surface temperatures over most of the equatorial western Pacific, Indian, and Atlantic Oceans are expected to be near or above-average for January-November 2022. Sea surface temperatures between about 30° and 60°N in the Pacific and Atlantic Oceans are expected to be above-average. The widespread warmer global sea-surface temperature anomalies are likely to contribute to the above-normal forecast of air temperatures for January-March 2022.

Air temperature anomalies over land in January-March 2022 are expected to be strongest in the Northern Hemisphere. Except for northwest North America where prediction is for below-average temperature, positive temperature anomalies are expected over almost the whole northern hemisphere and model consistency is high. The largest positive land air temperature anomalies are predicted over the Arctic, North Asia, and southern and north-eastern North America. There is also high consistency in the predictions of anomalously warm temperature anomalies over the Caribbean and Central America. In near-equatorial latitudes, positive temperature anomalies are predicted with high consistency over the Indonesian Archipelago and western Africa extending into central, eastern, and northern Africa. In the Southern Hemisphere, strongest signals for positive air temperature anomalies are over New Zealand and below 30°S in South America. Over Australia, the predicted signal is not well defined and over northern regions of South America probability for near or below-normal temperature is enhanced. Below-normal temperatures are predicted over some areas over the oceans, including in the vicinity of the equatorial Pacific and south of extreme northwest North America.

Predicted rainfall anomaly over the oceans is consistent with expected weak La Niña conditions - there are increased chances of unusually dry conditions in parts of the South Pacific and anomalously wet conditions to the western and south-western Pacific. Along the equator across most of the central Pacific Ocean, probabilities are highest for below-normal rainfall. Above-normal rainfall is expected over the Indonesian Archipelago, northeast South America, Australia, northern regions of North America, and over North Asia. Over the Caribbean and northern regions of Central America, there is a moderate to strong indication of below-normal rainfall. A band of above-normal rainfall along the equator is predicted in the Atlantic Ocean. Increased chances of below-normal precipitation are also indicated over the southern regions of South America, over much of western and eastern Europe, and over the southern regions of North America.

Surface Air Temperature, JFM 2022



Precipitation, JFM 2022

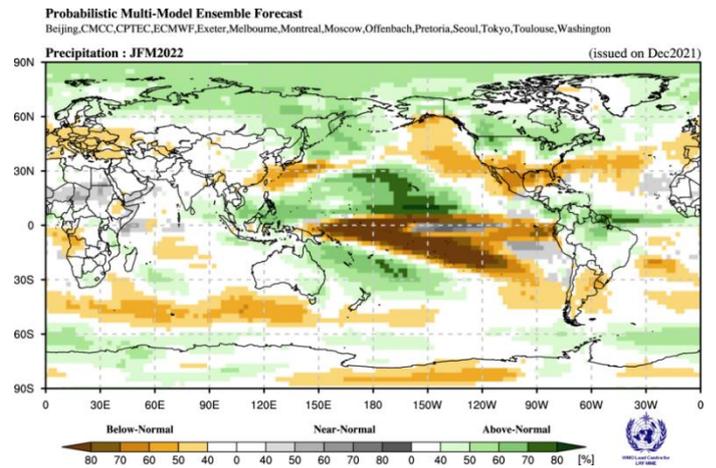


Figure 1. Probabilistic forecasts of surface air temperature and precipitation for the season January-March 2022. The tercile category with the highest forecast probability is indicated by shaded areas. The most likely category for below-normal, above-normal and near-normal is depicted in blue, red and 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.

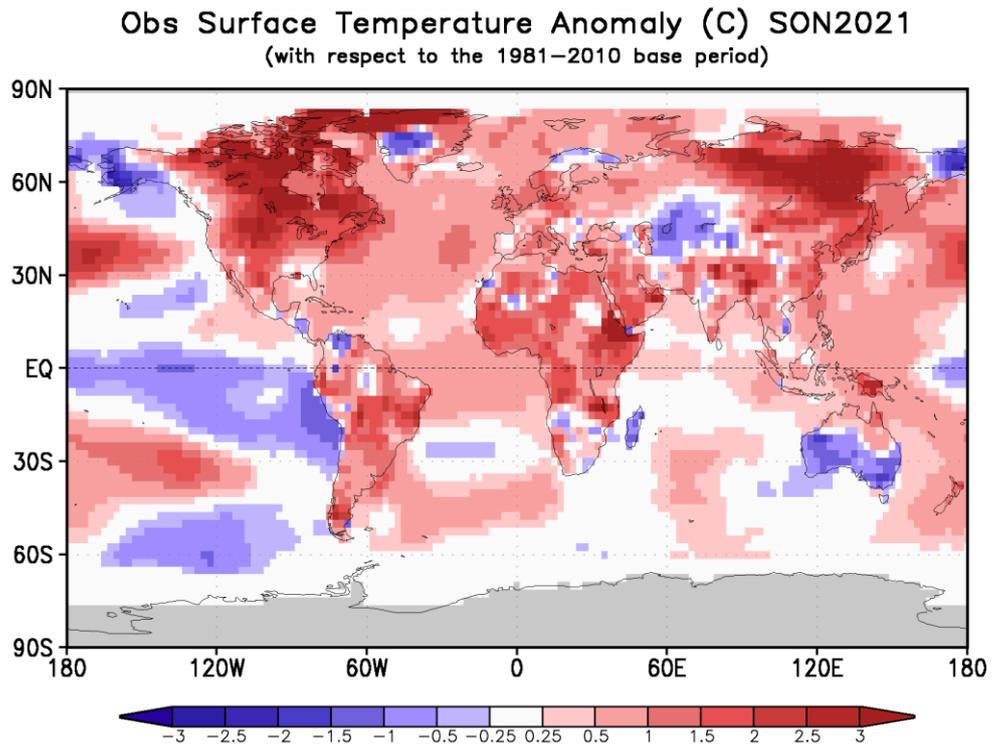


Figure 2. Observed September-November 2021 near-surface temperature anomalies relative to 1981-2010. (Source: U.S. [Climate Prediction Center](#)).

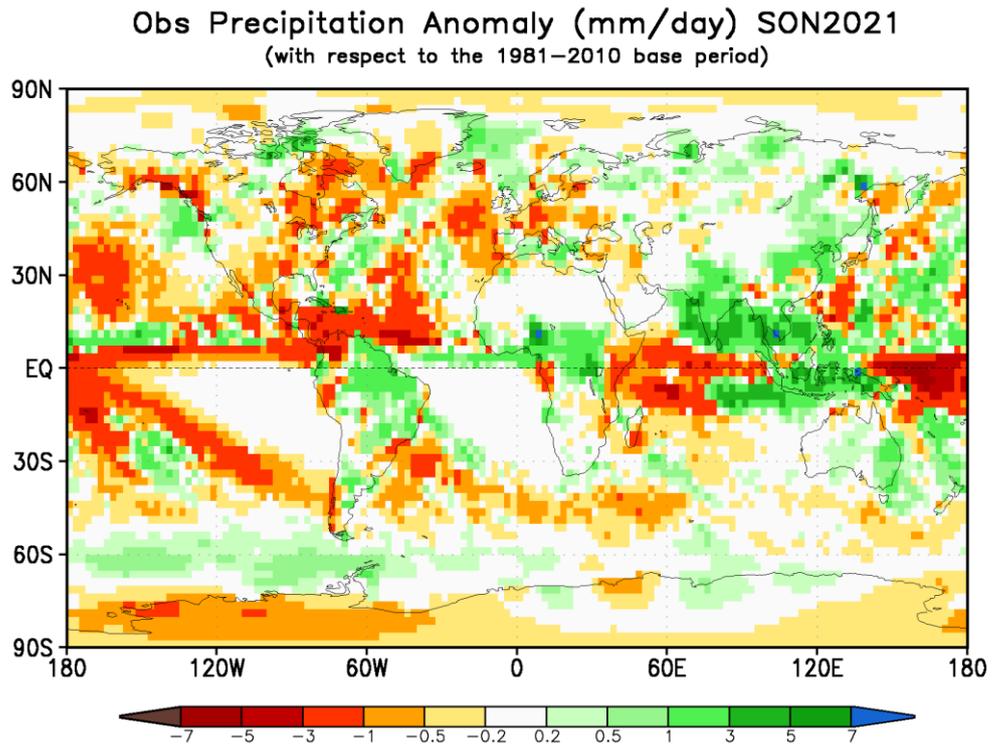


Figure 3. Observed September-October-November 2021 precipitation anomalies relative to 1981-2010 base period (top). (Source: U.S. [Climate Prediction Center](#)).