



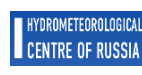
WORLD
METEOROLOGICAL
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GLOBAL SEASONAL CLIMATE UPDATE

TARGET SEASON: October-November-December 2022

Issued: 26 September 2022



Summary

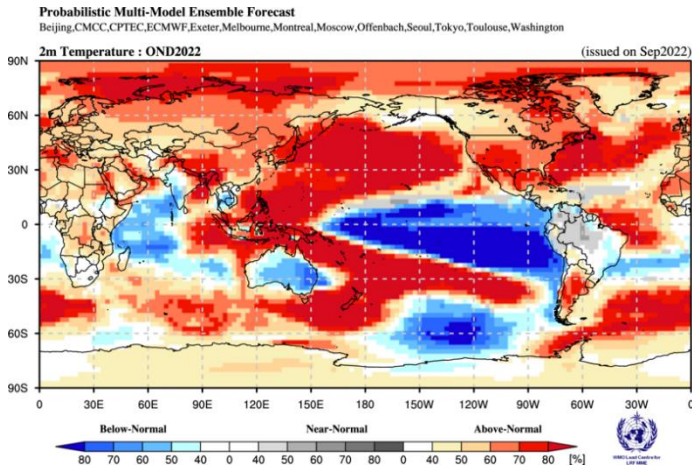
During June-August 2022, all four Pacific Niño sea-surface temperature (SST) indices in the central and eastern Pacific were below-normal. The observed SST conditions in the equatorial Pacific were characterized by a weak La Niña state. The Indian Ocean Dipole (IOD) over the observed period was in its negative phase. The North Tropical Atlantic (NTA) and the South Tropical Atlantic (STA) SST indices were also weakly positive.

For the October-December 2022 season, below-normal SST anomalies in the Niño 3.4 and Niño 3 regions with values approximately -0.9°C are predicted, indicating a tendency for weak La Niña conditions to continue. Starting from a negative value, the Indian Ocean Dipole index is predicted to return towards normal. SSTs over most of the equatorial western Pacific, eastern Indian, and western equatorial Atlantic Oceans are expected to be near or above-normal. SSTs between about 30°N and 60°N in the Pacific and Atlantic Oceans are expected to be above-normal.

Although weak La Niña conditions are predicted in the equatorial central and eastern Pacific, a forecast for the likelihood for warmer-than-average SSTs elsewhere dominates the forecast of air temperatures for October-December 2022. A likelihood for positive temperature anomalies is expected over most of the land areas in the Northern Hemisphere, with the exceptions being the southernmost Indian subcontinent and southeast Asia. The highest likelihood for above-normal land air-temperatures is expected over northern Asia, southwest regions of North America, and eastern parts of the Indian subcontinent, where the models are also very consistent in predicting likelihood for anomalously warm conditions. In near-equatorial latitudes and the Southern Hemisphere, the likelihood for positive temperature anomalies is predicted with high consistency over a large area from the Maritime subcontinent extending into the South Pacific and over to New Zealand. Likelihood for above-normal temperatures is enhanced for most of South America below 30°S . Areas with high consistency in the likelihood of predictions of below-normal temperatures are the central and eastern tropical Pacific, reflecting the presence of below-average SST conditions. Over most of Australia, the predicted signal is for an increased likelihood for below-normal temperature and the model consistency is weak to moderate.

Because of below-average SST conditions associated with a weak La Niña that are predicted for October-December 2022, together with an enhanced east-west SST gradient in the equatorial Pacific, some of the predicted rainfall patterns are similar to the canonical rainfall impacts of La Niña. There are increased chances of unusually dry conditions along the equator centred near the dateline and extending towards the southern regions of South America. Anomalously wet conditions are predicted in much of the Maritime subcontinent extending into the southwestern Pacific. The areas of increased probability for unusually wet conditions also extend over much of Australia. The other areas of likelihood for an increase in rainfall are the northern part of South America, the Indian subcontinent, southeast Asia, northern regions of Asia and Europe. There is also a weak likelihood for above-normal conditions over part of northern regions of North America. There is moderate likelihood for below-normal rainfall in South America south of 20°S , between 30° - 50°N across Europe extending into western and central Asia, and south-eastern parts of North America.

Surface Air Temperature, OND 2022



Precipitation, OND 2022

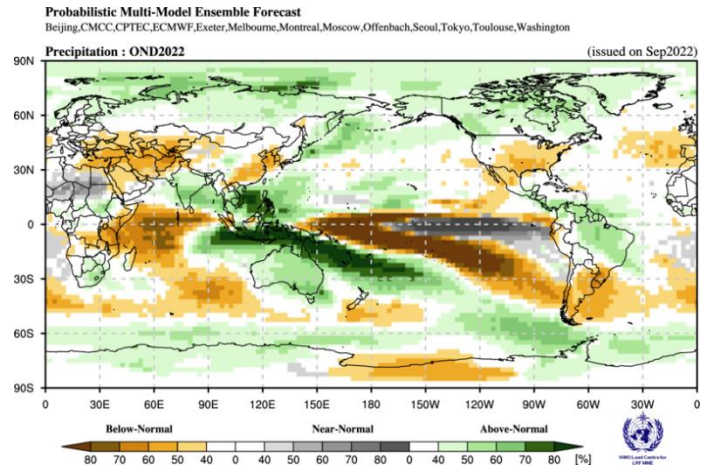


Figure 1. Probabilistic forecasts of surface air temperature and precipitation for the season October-December 2022. The tercile category with the highest forecast probability is indicated by shaded areas. The most likely category for below-normal, above-normal and near-normal is depicted in blue, red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

Obs Surface Temperature Anomaly (C) AMJ2022
(with respect to the 1991–2020 base period)

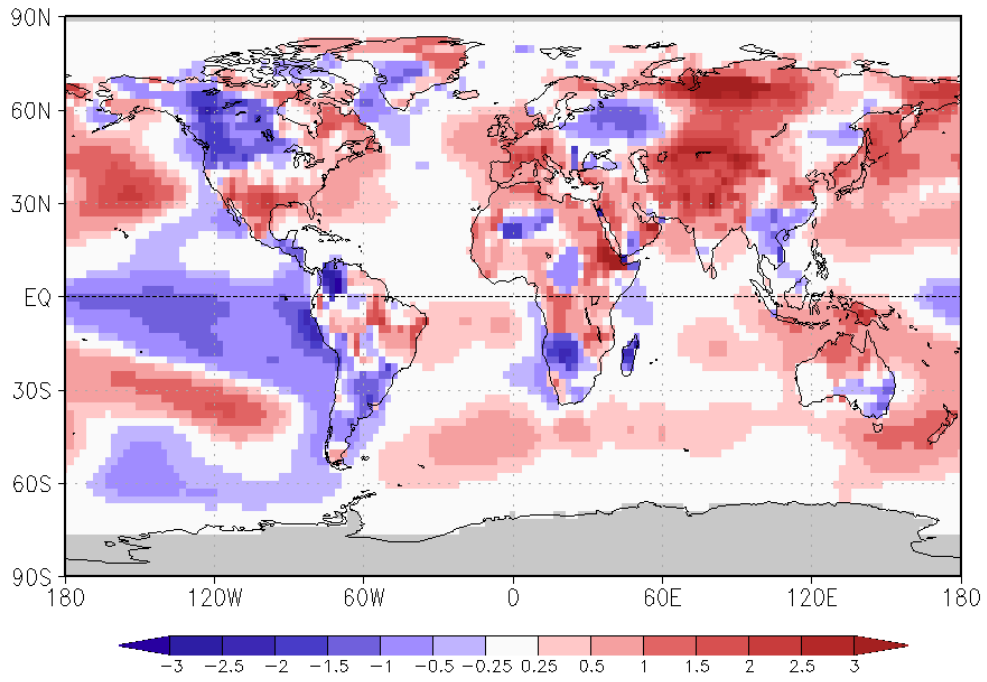


Figure 2. Observed June-August 2022 near-surface temperature anomalies relative to 1981-2010. (Source: U.S. [Climate Prediction Center](#)).

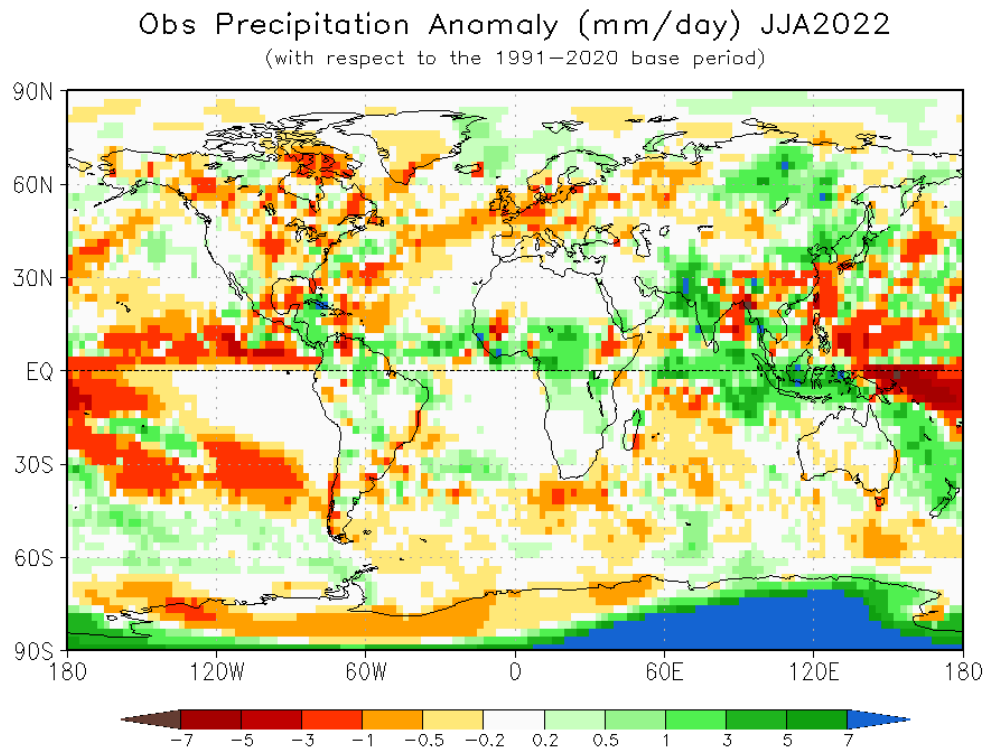


Figure 3. Observed June-August 2022 precipitation anomalies relative to 1981-2010 base period (top). (Source: U.S. [Climate Prediction Center](#)).