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GLOBAL SEASONAL CLIMATE UPDATE

TARGET SEASON: July-August-September 2022

Issued: 26 June 2022



Summary

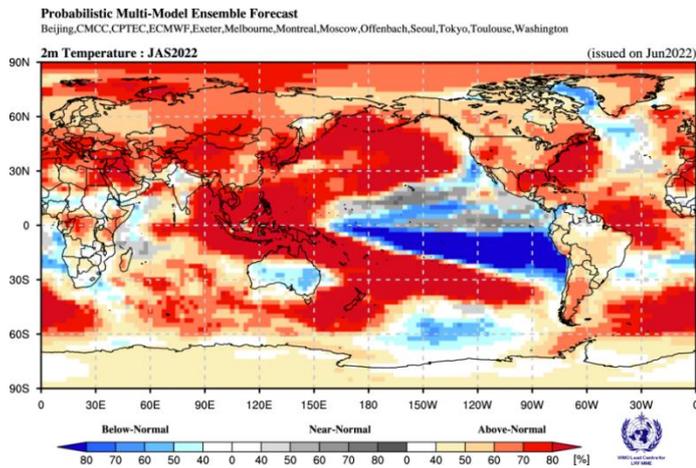
During March-May 2022, all four Pacific Niño sea-surface temperature (SST) indices in the central and eastern Pacific were below-normal. The observed SST conditions in the equatorial Pacific were characterized by a weak La Niña state. The Indian Ocean Dipole (IOD) over the observed period was negative.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

For the July-September 2022 season, below-normal SST anomalies in the Niño 3.4 and Niño 3 regions with values approximately -0.5°C (Niño 3.4) and -0.5°C (Niño 3) 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 become more negative. SSTs over most of the equatorial western Pacific, Indian, and Atlantic Oceans are expected to be near or above-normal. SSTs between about 30°N and 60°N in the Indian 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 widespread likelihood for warmer-than-average SSTs elsewhere dominates the forecast of air temperatures for July-September 2022. A likelihood for positive temperature anomalies is expected over most of the land areas in the Northern Hemisphere, with the exceptions being the Indian subcontinent, north-western South America, and in Africa along 15°N . The largest likelihood for above-normal land air-temperatures is expected over the eastern and south-eastern parts of Asia, the Arabian Peninsula, and northern Africa, where the models are very consistent in predicting likelihood for an anomalously warm July-September 2022. 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 New Zealand. Likelihood for above-normal temperatures is enhanced for most of South America below the equator. Other 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 the south of 25°S in 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 July-September 2022, together with an enhanced east-west SST gradient in the equatorial Pacific, some of the predicted rainfall patterns are similar to 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 parts of South America. Anomalously wet conditions are predicted in much of the Maritime subcontinent extending into the south-western Pacific. The areas of increased probability for unusually wet conditions extend over much of Australia. The other areas of likelihood for an increase in rainfall are the northern part of South America, southern central America, the Indian subcontinent, eastern Asia, and along 15°N in Africa. There is also a weak likelihood for wet conditions over part of north-western North America. There is moderate likelihood for below-normal rainfall in South America south of 20°S , western and eastern regions of equatorial Africa, between 30° - 50°N across Europe.

Surface Air Temperature, JAS 2022



Precipitation, JAS 2022

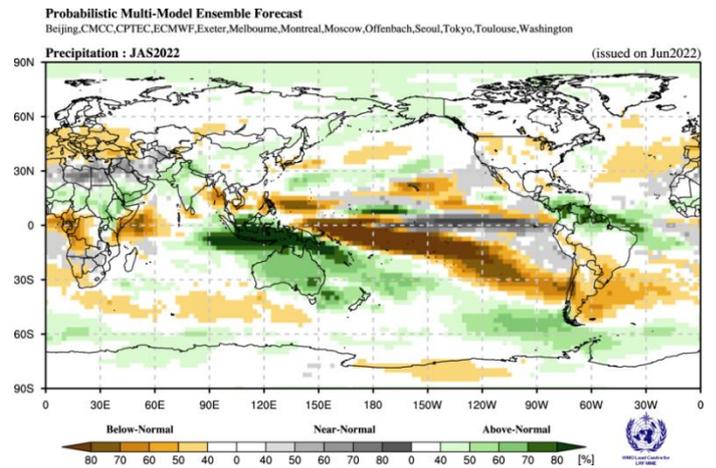


Figure 1. Probabilistic forecasts of surface air temperature and precipitation for the season July-September 2022. The tercile category with the highest forecast probability is indicated by shaded areas. The most likely category for below-normal, above-normal and near-normal is depicted in blue, red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

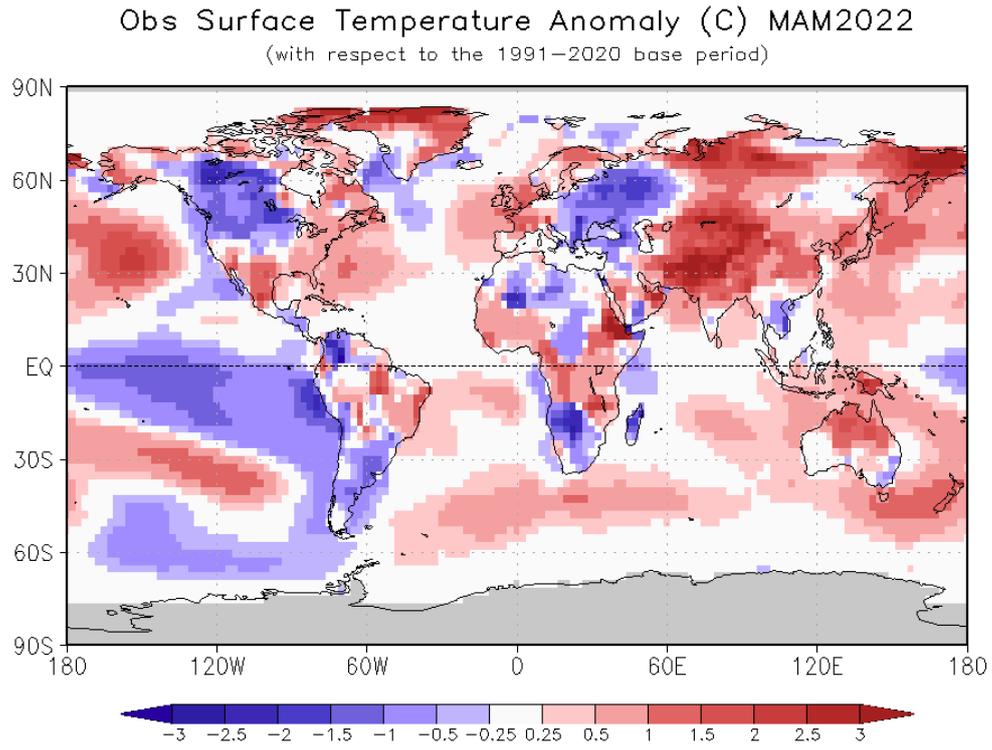


Figure 2. Observed March-May 2022 near-surface temperature anomalies relative to 1981-2010. (Source: U.S. [Climate Prediction Center](#)).

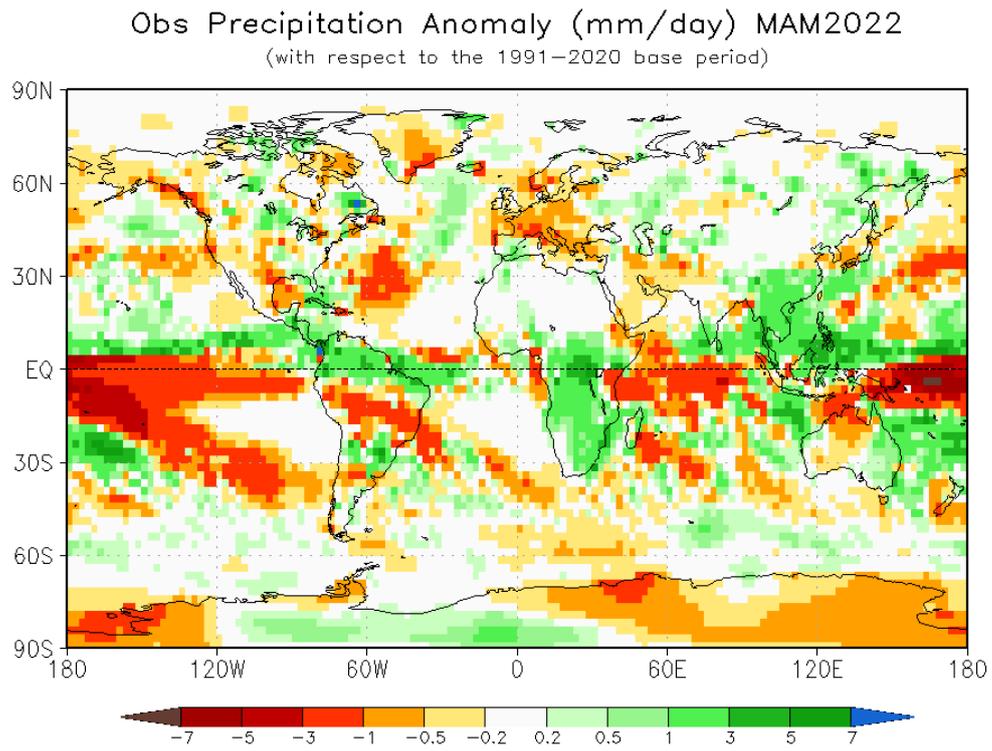


Figure 3. Observed March-May 2022 precipitation anomalies relative to 1981-2010 base period (top). (Source: U.S. [Climate Prediction Center](#)).