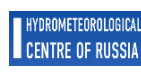WEATHER   CLIMATE   WATER

WORLD
METEOROLOGICAL
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GLOBAL SEASONAL CLIMATE UPDATE

TARGET SEASON: August-September-October 2022

Issued: 26 July 2022

Summary

During April-June 2022, all four Pacific Niño sea-surface temperature (SST) indices in the central and eastern Pacific were below-normal and ranged from -1.4 (Niño 1+2) to -0.6 (Niño 4). 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 also weakly positive.

For the August-October 2022 season, below-normal SST anomalies in the Niño 3.4 and Niño 3 regions with values approximately -0.7° C (both for Niño 3.4 and 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, 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 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 August-October 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, north-western South America, and a narrow band in Africa along 15° N. The largest likelihood for above-normal land air-temperatures is expected over the north-western Africa, western Europe, the northernmost regions of Asia, and parts of eastern and southeast Asia, 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 New Zealand. Likelihood for above-normal temperatures is enhanced for most of South America below the equator. 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 20° 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 August-October 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 south-western 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, 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, in the southern regions of Africa below the equator, and between 30°-50° N across Europe.

Surface Air Temperature, ASO 2022
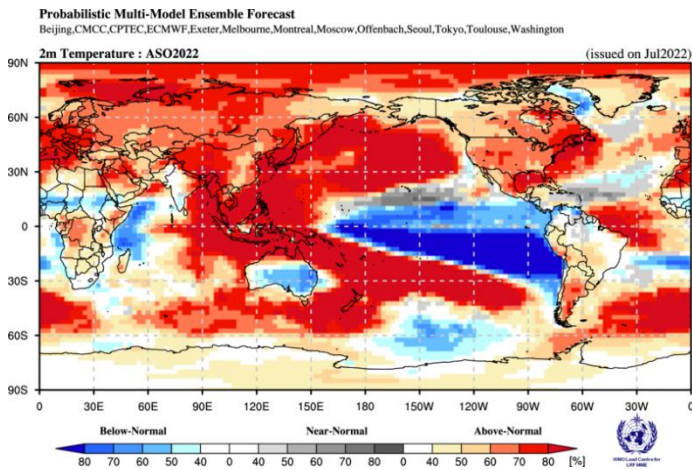
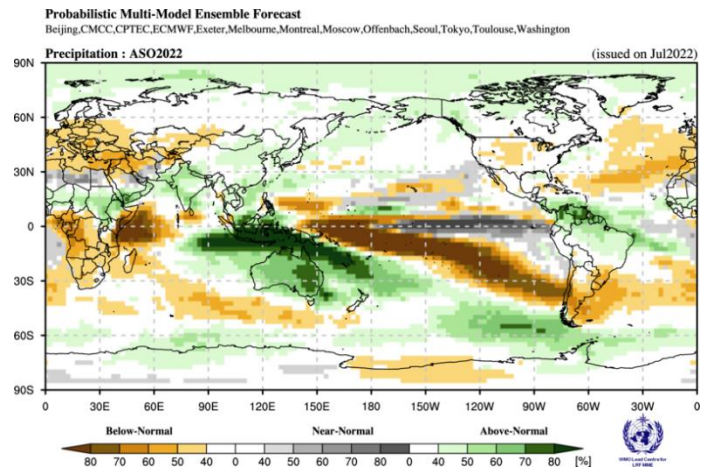## Precipitation, ASO 2022

Figure 1. Probabilistic forecasts of surface air temperature and precipitation for the season August-October 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.
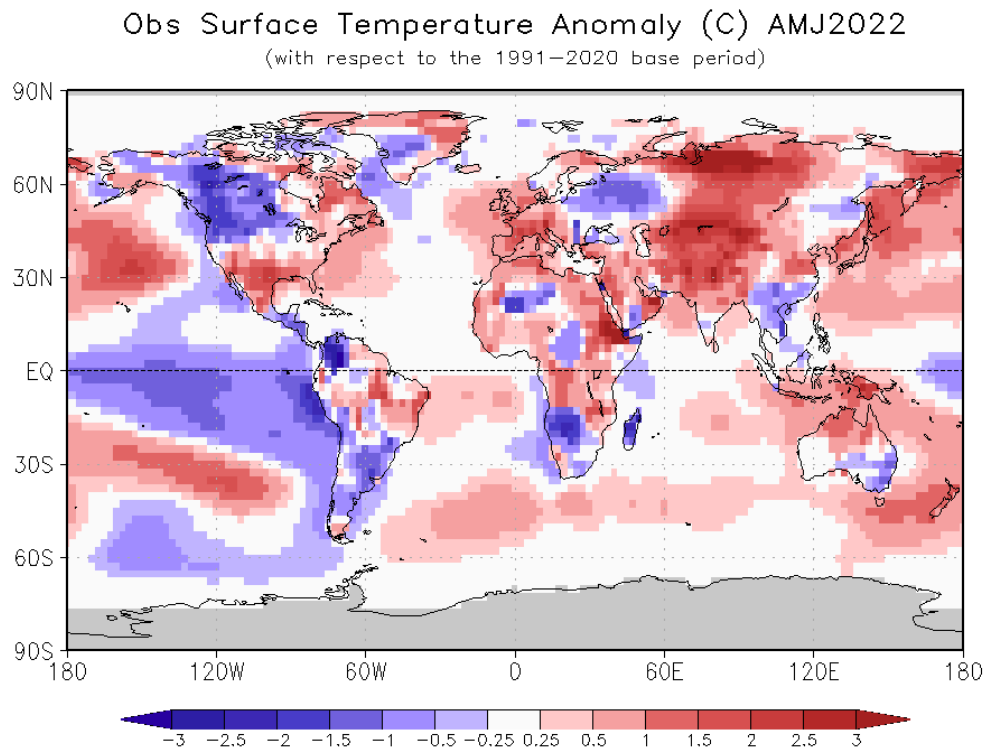
Figure 2. Observed April-June 2022 near-surface temperature anomalies relative to 1981–2010. (*Source:* U.S. Climate Prediction Center).

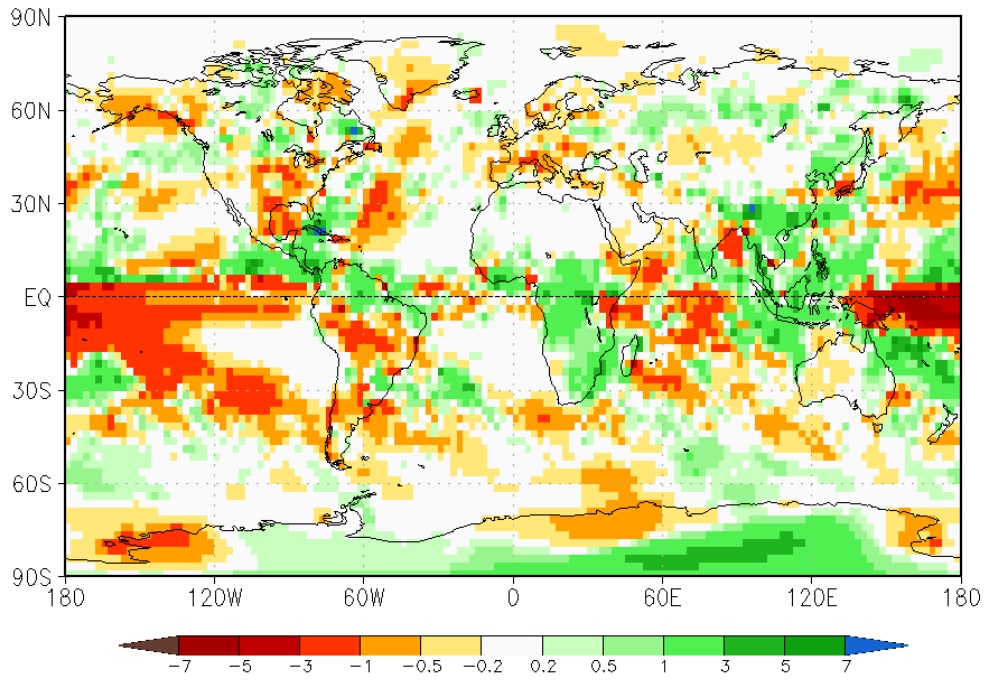Figure 3. Observed April-June 2022 precipitation anomalies relative to 1981–2010 base period (top). (*Source:* U.S. [Climate Prediction Center](#)).