WEATHER   CLIMATE   WATER

WORLD
METEOROLOGICAL
ORGANIZATION

GLOBAL SEASONAL CLIMATE UPDATE

TARGET SEASON: April-May-June 2022

Issued: 26 March 2022

Summary

During December-February 2021/22, 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 weakly negative. The North Tropical Atlantic (NTA) and the South Tropical Atlantic (STA) SST indices were weakly positive.

For the April-June 2022 season, below-normal SST anomalies in the Niño 3.4 and Niño 3 regions with values of approximately -0.5°C (Niño 3.4) and -0.5°C (Niño 3) are predicted indicating a tendency towards a return to near-normal conditions. The Indian Ocean Dipole is predicted to be weakly negative. SSTs over most of the equatorial western Pacific, Indian, and Atlantic Oceans are expected to be near or above-normal. SSTs between about 30ºN and 60ºN in the Pacific and Atlantic Oceans are expected to be above-normal.

Although near-normal ENSO conditions are predicted to return in the equatorial central and eastern Pacific, a forecast for widespread warmer-than-average SSTs elsewhere dominates the forecast of air temperatures for April-June 2022. Positive temperature anomalies are expected over most of the land areas in the Northern Hemisphere, with the exceptions being north-western North America, the Indian subcontinent, and southeast Asia. The largest land air-temperature anomalies are expected over the far northern and north-eastern parts of Asia and the Arctic, southern parts of North America, northern central America, and the Arabian Peninsula where the models are very consistent in predicting likelihood for an anomalously warm April-June 2022. Consistency for likelihood for above-normal temperature is also high over much of Europe. Models have a moderate consistency in predicting higher probabilities for below-normal temperatures over the coastal Pacific areas of north-western North America. 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, as well as over near-equatorial Africa extending south-eastwards over Madagascar. Likelihood for near-normal temperatures is enhanced for most of South America north of about 30° S. 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, and the south-eastern Pacific. Over Australia, the predicted signal is not well defined. Over the southern regions of South America temperature is predicted to be above-normal, however, model consistency is low.

Because of below-average SST conditions associated with a declining La Niña that are predicted for April-June 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 immediately north of the equator and extending into the south-west Pacific and north central Pacific. The areas of increased probability for unusually wet conditions extend over much of Australia, but model consistency is weak. The other areas of likelihood for an increase in rainfall are the north-eastern and the far north-western part of South America, northern Asia, the Indian subcontinent, and southeast Asia. There are weaker indications of wet conditions over part of north-western North America and over some parts of southern Africa. There are moderately strong indications of below-normal rainfall across the southern part of North America, part of South America south of 20° S, the western and the far eastern regions of Asia, eastern parts of Central Africa, western and southern Europe, and the central western Indian Ocean. Over much of the rest of Africa, there is little consistency in predicted rainfall.

Surface Air Temperature, AMJ 2022
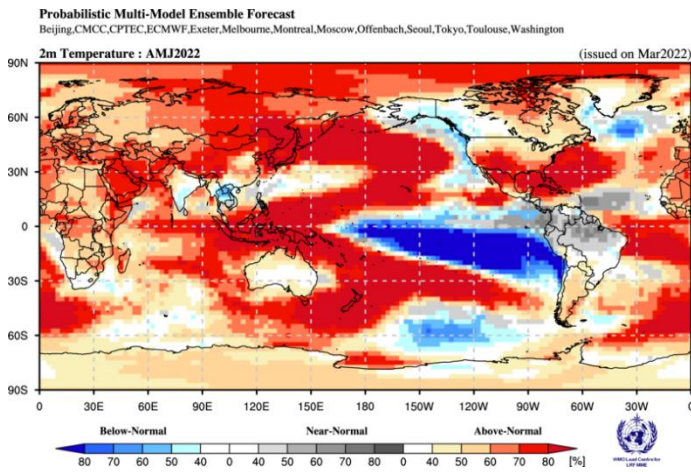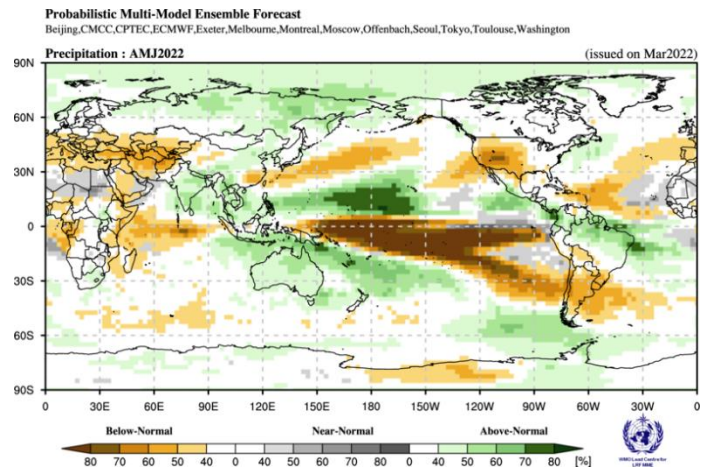

Precipitation, AMJ 2022

Figure 1. Probabilistic forecasts of surface air temperature and precipitation for the season April-June 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.
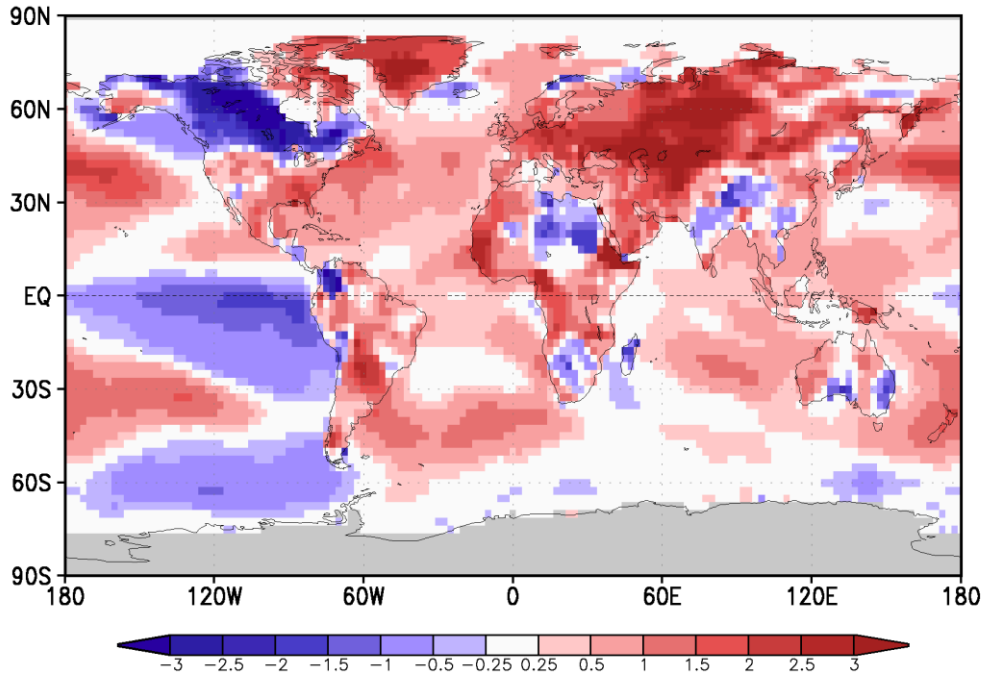
Figure 2. Observed December-February 2021/2022 near-surface temperature anomalies relative to 1981–2010. (*Source:* U.S. Climate Prediction Center).
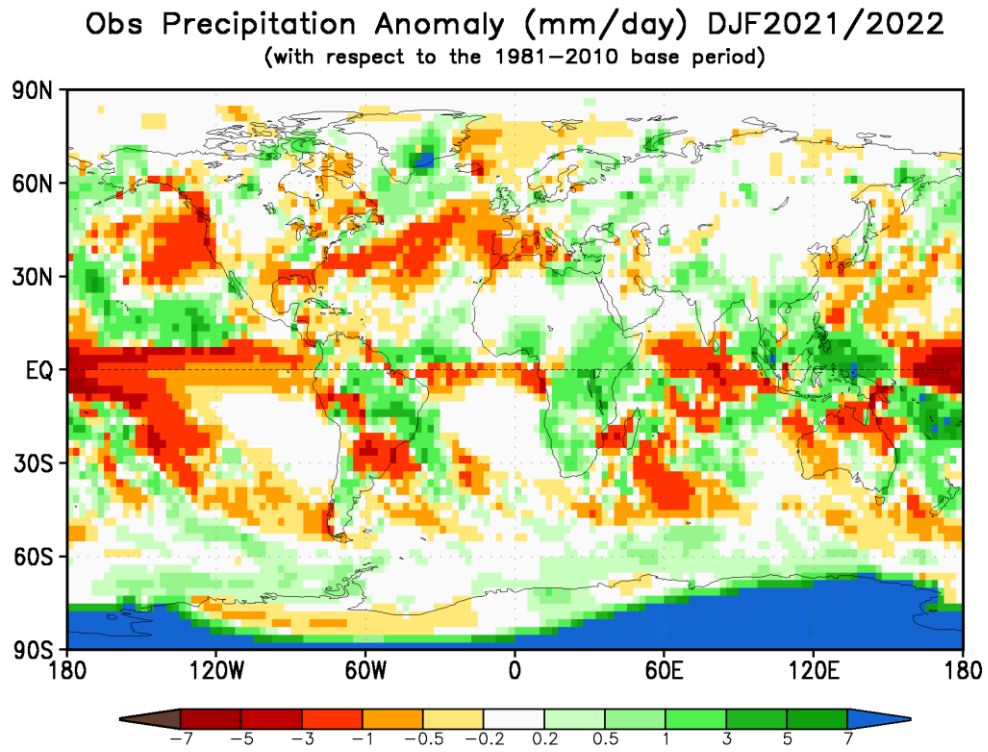
Figure 3. Observed December-February 2021/2022 precipitation anomalies relative to 1981–2010 base period (top). (*Source:* U.S. Climate Prediction Center).