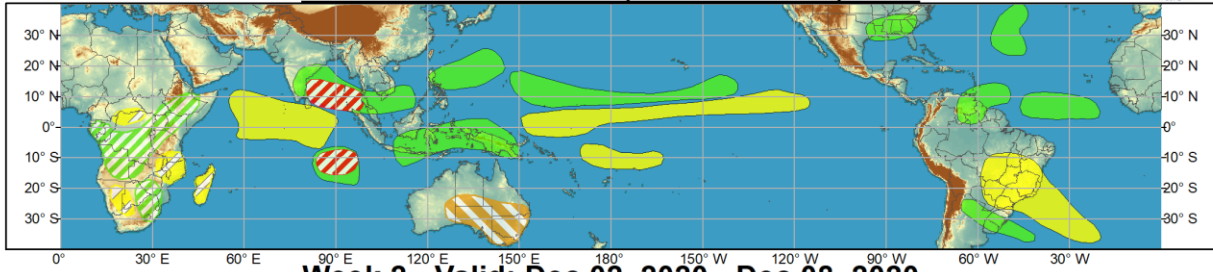




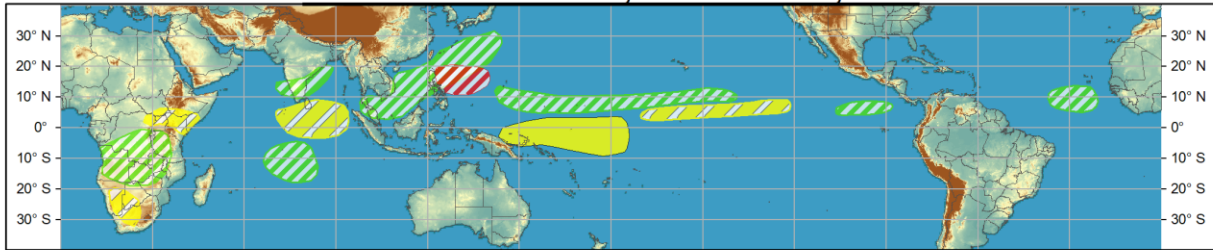
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Nov 25, 2020 - Dec 01, 2020



Week 2 - Valid: Dec 02, 2020 - Dec 08, 2020



Confidence
High Moderate

Tropical Cyclone Formation Development of a tropical cyclone (tropical depression - TD, or greater strength).

Above-average rainfall Weekly total rainfall in the upper third of the historical range.

Below-average rainfall Weekly total rainfall in the lower third of the historical range.

Above-normal temperatures 7-day mean temperatures in the upper third of the historical range.

Below-normal temperatures 7-day mean temperatures in the lower third of the historical range.

Product is updated once per week, except from 6/1 - 11/30 for the region from 120E to 0, 0 to 40N. The product targets broad scale conditions integrated over a 7-day period for US interests only. Consult your local responsible forecast agency.

Produced: 11/24/2020
Forecaster: Novella



After a period of destructive interference between the MJO and La Niña over the Western Hemisphere earlier this month, the MJO became better organized and strengthened during mid-November. Upper-level velocity potential anomalies show a better defined wave-1 pattern, with the enhanced phase of the MJO propagating eastward over the Indian Ocean and a broad envelope of suppressed convection prevailing across much of the Western Hemisphere. However, the RMM index indicates the intraseasonal signal has decreased in amplitude during the past several days, while accelerating through phase 3 over the Indian Ocean and nearing phase 4 of the Maritime Continent. Objective decomposition of tropical modes of variability suggests this recent acceleration may be associated with a Kelvin wave currently traversing the Pacific. Consistent with previous guidance since last week, dynamical models suggest a continued weakening of the MJO as many models favor the intraseasonal signal to remain within the unit circle in RMM space during week-1 and week-2. Compared to the CFS and ECMWF, the GEFS continues to be most progressive with the signal, suggesting possible renewed MJO activity over the Maritime Continent during week-2. However, the large degree of spread among the ensemble members continues to limit forecast confidence on the predicted evolution of the MJO and its associated impacts on the extratropics.

Three tropical cyclones (TC) formed during the last seven days. In the East Pacific, TC Polo formed on 11/18 and peaked at 40kts before dissipating in open waters on 11/19. Across the eastern Hemisphere, TC Nivar formed yesterday in the Bay of Bengal to the east of Sri Lanka (10N/84E). The Joint Typhoon Warning Center (JTWC) forecasts Nivar to gradually strengthen and track northwest into the Andhra Pradesh state of India by the start of the week-1 period. While Nivar is expected to dissipate after landfall, JTWC notes that the remnants of Nivar may track over the Arabian Sea, but maintain low chances for regeneration. Farther east, TC Gati formed in the Arabian Sea on 11/21 and made landfall as a Category 2 storm near Xaafuun, Somalia on 11/22. Remarkably, Gati strengthened from 40mph to 115mph over a 12-hour period prior to making landfall, and was the first Hurricane strength system on record to make landfall in Somalia, bringing heavy rainfall amounts, flooding and damages to infrastructure to the country.

Despite the uncertainty regarding the predicted evolution of the MJO, the enhanced phase of the MJO over the Indian Ocean is anticipated to favor increased chances of TC development. Both the GEFS and ECMWF ensembles have shown good continuity with an area of low pressure developing near (8S/90E) during week-1. With anomalously warm sea surface temperatures exceeding 1.5 degrees C in this region of the southern Indian Ocean, a moderate confidence of TC formation is posted in the outlook. Guidance also depicts some potential for TC formation to the northeast of Madagascar during week-1, however probabilistic TC tools are less supportive of this and a TC formation area is omitted in the outlook. In the Bay of Bengal, both the GEFS and the ECWMF model ensembles indicate an elevated potential for TC formation following the dissipation of TC Nivar late during week-1 and a moderate confidence region is added to the forecast. In the West Pacific, models favor a deepening area of low pressure over the Philippine Sea late in week-1 and into week-2. Although there is some uncertainty relative to the timing of potential formation, probabilistic TC tools show greater chances during the week-2 period and a moderate confidence area for TC development is added for week-2 to the east of the Philippines.

With the suppressed phase of the MJO forecast over the western Hemisphere, TC activity looks to quiet down across the East Pacific and the Atlantic into early December. The National Hurricane Center (NHC) is, however, monitoring an area of low pressure to the south of Bermuda with at least a 30% chance of formation during the next 5 days. There remains some uncertainty regarding whether this low merges or separates from a predicted frontal passage during week-1. This morning's GEFS and ECMWF ensembles depict the low remaining in the wake of the front, where it may possibly develop subtropical characteristics and linger over the Central Atlantic but there is not enough confidence to include it as a formation area in today's outlook. Beyond this potential disturbance, no additional TC activity is favored across the Atlantic for the remainder of the outlook period. In the East Pacific, there is little to no support for TC formation through early December.

The precipitation outlook during the next two weeks is based on the consensus among the CFS and ECMWF ensemble means, the low frequency state, MJO composites, and anticipated TC tracks. For temperatures, there are increased chances for excessive heat over southern Australia associated with a mid-level ridge predicted by the models during week-1. The GEFS show widespread positive temperature departures of 8 to 12 degrees C, with daytime ensemble mean maximum temperatures approaching 45 degrees C over southeastern Australia. For hazardous weather concerns over the U.S. during the next two weeks, please refer to your local NWS Forecast Office, the Weather Prediction Center's Medium Range Hazards Forecast, and CPC's Week-2 U.S. Hazards Outlook. Forecasts over Africa are made in consultation with the International Desk at CPC, and can represent local-scale conditions in addition to global-scale variability.