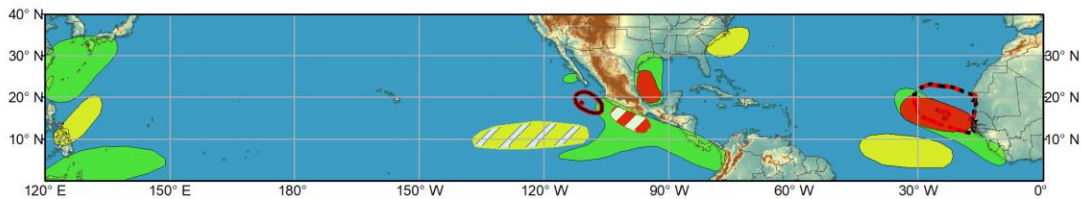




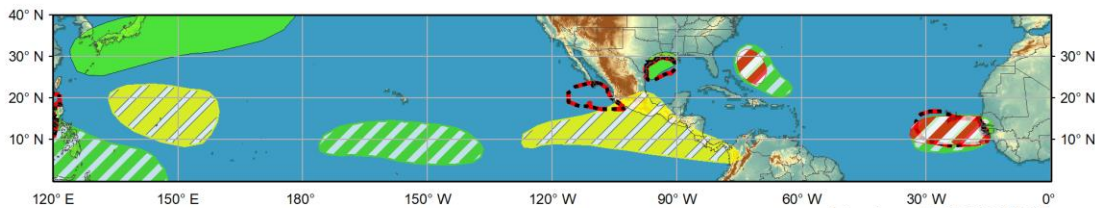
Global Tropics Hazards and Benefits Outlook - Climate Prediction Center



Week 1 - Valid: Sep 11 2021 - Sep 14 2021















Week 2 - Valid: Sep 15 2021 - Sep 21 2021



Confidence
High Moderate

Produced: 09/10/2021
Forecaster: Collow

- | | | | |
|-----------------------------------|---|---|--|
| Tropical Cyclone Formation |  |  | Development of a tropical cyclone (tropical depression - TD, or greater strength). |
| Prior TC Formation Outlook |  |  | Tropical cyclone outlook from previous release. |
| 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. The product targets broad scale conditions integrated over a 7-day period for US interests only. Consult your local responsible forecast agency.



中央氣象局
Central Weather Bureau



UNIVERSITY AT ALBANY
State University of New York



The Madden Julian Oscillation (MJO) has been weak, but has since emerged from the RMM unit circle with the greatest negative outgoing longwave radiation (OLR) anomalies present over the Indian Ocean. Dynamical models indicate that the MJO will slowly propagate over the Maritime Continent with variable change in amplitude. The latest GEFS has reduced the overall amplitude of the intraseasonal signal compared to forecasts earlier this week, but still remains slightly stronger than the ECMWF ensemble solution. The GEFS also continues to depict a strong subsistence phase emerging across the Western Hemisphere. The ECMWF favors more equatorial Rossby wave activity lingering over the East Pacific in week-1, but with weaker wave signals by week-2, aligning more with the GEFS. This supports a trend toward relatively quieter conditions for the East Pacific coinciding with the climatological peak of hurricane season.

Over the Atlantic basin, Tropical Storm Mindy developed on 9/8 and made landfall along the northern Gulf of Mexico coast several hours after its classification. The system degenerated into a remnant low off the southeastern coast of the U.S. early on 9/10. Hurricane Larry is quickly moving across the North Atlantic and is expected to undergo extratropical transition in the next couple of days. In the East Pacific, Tropical Storm Olaf is located near southern Baja California and is predicted to weaken to a remnant low

over open waters in the next 48-hours. In the western Pacific, Typhoon Chanthu and Tropical Storm Conson both developed on August 6th. Typhoon Chanthu is currently forecast to move toward Taiwan and eastern mainland China, with peak winds in excess of 105 knots at the time of landfall in Taiwan. Guidance favors Chanthu to eventually become absorbed in the westerlies providing increased chances for heavy rain across portions of southern Japan, and extending northeastward into the North Pacific. Tropical Storm Conson is forecast to move into Vietnam and bring heavy rainfall in the next two days.

During the next 5-days, Tropical Cyclone (TC) development is likely over the western Gulf of Mexico with the National Hurricane Center (NHC) monitoring an area of disturbed weather currently near the Yucatan with a 70% chance for development. Therefore, a high risk of TC development is designated over this region. This system is likely to track toward the western Gulf Coast bringing enhanced rainfall to the east coast of Texas and the Lower Mississippi Valley. The NHC has designated another high confidence area (70% chance of development in the next 5 days) off the west coast of Africa, prompting a high risk in today's update. In the East Pacific, moderate confidence for TC formation exists associated with an area of low pressure to the south of Mexico during the next 5 days. For week-2, moderate confidence for TC formation remains over the Main Development Region. Several GEFS ensemble members also support TC development over the west Atlantic, to the northeast of the Bahamas, around day 6. The East and West Pacific Basins look generally quiet in terms of tropical activity with the CFS and ECMWF ensemble solutions indicating suppressed convection over much of the Pacific.

Forecasts for above and below normal precipitation have been modified to reflect the latest model guidance for the remaining outlook periods.

----- Previous discussion released on September 7, 2021 follows -----

The interaction of the Madden-Julian Oscillation (MJO) and a Kelvin Wave (KW) caused destructive interference in the MJO in the Wheeler-Hendon framework. The signal fell into the unit circle for about a week in late August, but the core MJO signal for the convectively active phase moved over the Indian Ocean. During the next two weeks, the KW and the MJO are more likely to constructively interfere, with some potential reinforcement from the seasonal time-scale variability. The resultant outlook, from combining the likely interactions and dynamical model outlooks, is for the active phase of the MJO to be centered over the Maritime Continent, though the strength is uncertain. The GEFS is the most bullish on a strong MJO event with enhanced convection over the Maritime Continent, with the ECMWF consistently indicating a weaker expression. The subsident phase in the GEFS is strong as well over the Western Hemisphere, during the peak of the Atlantic Hurricane season.

Hurricane Larry formed and is out over the open waters of the Atlantic. Hurricane Larry is the third major hurricane of the Atlantic hurricane season. Hurricane Larry is forecast to remain over water, though impacts to Bermuda and the Canadian Maritime provinces cannot be ruled out. Over the West Pacific, Typhoon Chanthu and Tropical Storm Conson developed on August 6th. Typhoon Chanthu is currently forecast to move toward Taiwan and southern mainland China, with peak winds in excess of 110 knots at the time of landfall. Tropical Storm Conson is forecast to move toward Hainan and potentially into Vietnam before the end of the outlook period. Heavy rains are likely for the affected regions of these tropical cyclones in the next 7 days.

During the next week, tropical cyclone formation is possible close to the coast of Africa and a moderate confidence area is issued in the outlook. The National Hurricane Center (NHC) is monitoring an area for potential development off the west coast of Mexico, with a 90% chance of formation in the next 5 days. An area of low confidence for formation is along the Gulf Coast of the U.S. that extends into the northwest Atlantic off the Southeast coast. The NHC maintains a 30% chance of formation during the next 5 days. Later in Week-2, tropical cyclone formation odds are enhanced over the South China Sea, after a brief lull from the predicted passage of Tropical Storm Conson. Guidance also supports a moderate confidence for TC formation over the western Gulf of Mexico and the eastern Main Development Region during the week-2 period.

During Week-1, the predicted signal over the Maritime Continent is likely to result in sustained convection from South Asia to the equatorial West Pacific. The enhanced rainfall predicted over South Asia will likely have a northward movement through the week. The Week-2 map has little coverage, due to the uncertain strength of the MJO and potential for a KW to rapidly progress through the pattern. The most consistent signals are for enhanced rain over the Maritime Continent, while the signal over Southeast Asia is likely to be heavily influenced by tropical cyclone formations. A break in the ITCZ over the east Pacific is likely to result in dry conditions, especially if a tropical storm develops early in Week-1.

The precipitation outlook during the next two weeks is based on a consensus of GEFS, CFS, and ECMWF guidance, and anticipated TC tracks. For hazardous weather concerns during the next two weeks across the U.S., please refer to your local NWS Forecast Office, the Weather Prediction Center's Medium Range Hazards Forecast, and CPC's Week-2 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.