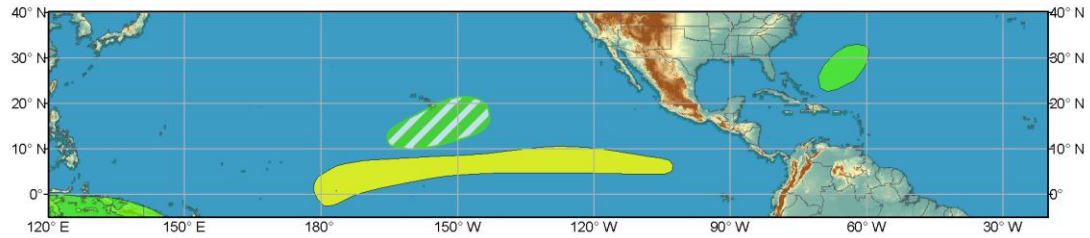




Global Tropics Hazards and Benefits Outlook - Climate Prediction Center

Week 1 - Valid: Nov 25 2017 - Nov 28 2017















Week 2 - Valid: Nov 29 2017 - Dec 05 2017



Confidence
High Moderate

Produced: 11/24/2017
Forecaster: Artusa

- | | | |
|-----------------------------------|---|--|
| 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
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A weak intraseasonal signal continues to be centered over the Maritime Continent region, as indicated by both CPC's velocity potential based index and the RMM index. Dynamical model MJO forecasts display substantial differences in both the predicted amplitude and degree of eastward propagation of this signal during the next two weeks. The NCEP GEFS depicts the emergence of an intraseasonal signal across the eastern Indian Ocean (phase 3) which acquires high amplitude rather quickly during Week-1, then propagates eastward while deamplifying across phases 4 and 5 (Maritime Continent) before eventually moving back inside the unit circle on the RMM plot. The Canadian RMM diagram indicates a rapidly amplifying signal into phase 4 during Week-1, only to deamplify just as rapidly across phases 4 and 5 during Week-2. The ECMWF solution maintains a MJO signal with eastward propagation to Phase 6 (west Pacific) late in Week-2. Finally, the CFSv2 ensemble RMM plot deviates significantly from the other solutions, keeping the intraseasonal signal well inside the unit circle during the two-week period on the side of the RMM diagram that includes phases 3,4,5 and 6 (eastern Indian Ocean through the Western Pacific).

Tropical Cyclone (TC) development within the Friday update's reduced domain appears to be very limited, with one possible exception. The deterministic GFS runs initialized at 0z, 6z, and 12z, and the

deterministic ECMWF run initialized at 0z, forecast the possibility of a TC forming over the Western Pacific, somewhere near 10N/140E, which then tracks towards the Philippines and South China Sea during the Nov 29 to Dec 5 period.

The Week-1 and Week-2 rainfall outlooks were adjusted based on the latest precipitation guidance from the ECMWF, GFS, and CFS models.

----- Original forecast discussion is shown below -----

During the approximately 30-day period from early October to early November, a robust MJO signal circumnavigated the global tropics, starting from and ending over the Maritime Continent region. This signal was on the high-frequency end of the conventional 30-60 day MJO period. All that remains now is a very weak intraseasonal signal over the Maritime Continent, as confirmed by both CPC's velocity potential based index and the RMM index. Dynamical model MJO forecasts display significant differences in both the forecast amplitude and phase of a potential developing MJO signal over the next one to two weeks. A general consensus of solutions favors an amplifying signal over the eastern Indian Ocean and western Maritime Continent during Week-1, followed by eastward propagation of this signal during Week-2. A modal decomposition technique that attempts to identify various subseasonal modes of variability (and uses the CFS model to predict outgoing longwave radiation anomalies for the next few weeks) reveals the most significant players during this period are likely to be the low-frequency base state (La Nina) with likely modulation by eastward-moving Kelvin waves, and westward-moving equatorial Rossby waves, with the MJO portion of the intraseasonal continuum expected to play a more subdued role.

In the past week, Tropical Storm Kirogi formed over the South China Sea and tracked westward into Vietnam. Peak winds with Kirogi reached 40 kts. However, the remainder of the global tropics remained quiet, as the Northern Hemisphere tropical cyclone (TC) season rapidly winds down. Late in Week-1 and early in Week-2, TC development is possible over the southern Bay of Bengal region. The 0z ECMWF and the 6z and 12z GFS solutions differ on exactly where and when this TC may form, but they do agree that if one forms, it will track westward towards Sri Lanka and far southern India.

For Week-1, areas of above-average rainfall are predicted over the eastern North Indian Ocean (in part related to expected TC development), the Maritime Continent area (due to Kelvin wave activity), and southeast of Hawaii (related to sustained easterly flow and possibly a weak low pressure area). Areas of above-average rainfall are also anticipated near/along the South Pacific Convergence Zone well east of

Australia and New Zealand, the central tropical and western subtropical Atlantic (related to the Intertropical Convergence Zone and to passing cold fronts, respectively), and over southern Brazil and adjacent waters of the South Atlantic (mid-latitude activity). Areas of below-average rainfall are anticipated over the tropical East Pacific, and off the northeast coast of Brazil.

For Week-2, above-average rainfall is more likely over central and eastern portions of the North Indian Ocean (related to possible TC activity), near New Guinea (possible intraseasonal activity), and near/over the Hawaiian Islands (as mentioned above). Below-average rainfall is favored over the tropical central Pacific.

Forecasts over Africa are made in consultation with CPCs international desk, and can represent local-scale conditions in addition to global-scale variability.