

No. 8-2007 MONTHLY PACIFIC ENSO DISCUSSION FOR MICRONESIA AND AMERICAN SAMOA

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The Pacific ENSO Applications Center (PEAC) disseminated its third quarter 2007 newsletter (refer to <http://www.soest.hawaii.edu/MET/Enso.html>). The Climate Prediction Center (CPC) stated the following in its August 9, 2007 *ENSO Diagnostic Discussion* (refer to <http://www.cpc.ncep.noaa.gov>): **“ENSO-neutral conditions are expected to continue through August 2007, with a slightly greater than 50% chance of La Niña developing during the next couple of months.”** In addition, the CPC noted: “ENSO-neutral conditions continued in the tropical Pacific during July 2007, with average to below-average sea surface temperatures (SSTs) extending from the date line to the west coast of South America. The CPC further stated: “Despite not meeting the SST threshold for La Niña, recent atmospheric circulation and tropical convection patterns are consistent with the evolution toward La Niña conditions.” This statement is supported by below-average upper-ocean heat content (average temperatures in the upper 300 m of the ocean) in the central and east-central equatorial Pacific, stronger than average low-level easterly winds in the west-central equatorial Pacific, and suppressed convection along most of the equatorial Pacific.” The CPC concludes: “Collectively, the oceanic and atmospheric conditions reflect a continuation of ENSO-neutral conditions.”

Nearly all of the latest climate forecast models predict a continued pattern of below-average equatorial SSTs in the central Pacific during the remainder of the year. The dynamic models suggest a rather rapid transition to La Niña, but over the last several months these models have consistently over-predicted the speed of the transition. Conversely, most of the statistical models are predicting a continuation of ENSO-neutral conditions or a slower transition to La Niña. CPC concludes: “When considered collectively, recent atmospheric conditions and model forecasts suggest a slightly greater than 50% chance of La Niña developing during the next couple of months.”

While SST indices in the region are ENSO-neutral, the atmospheric patterns are La Niña-like. For example, tropical cyclone activity to-date has been below normal and displaced to the west. Likewise, monsoon activity has remained in the western part of the basin.

The South Pacific Convergence Zone was fairly active over the Samoa region, but has shifted westward over the last few weeks. This shift is expected to reduce rainfall over the Samoa area, but amounts should still be about average. Easterly trade winds should continue to dominate the flow in eastern Micronesia (Pohnpei and eastward), and keep rainfall average to slightly below average. Monsoon and storm activity will have more influence in western Micronesia, and these areas will likely see average to slightly above average rainfall. Chuuk and the Marianas will have near average rainfall, with high month-to-month variability. The trade winds and sub-surface heating in the western Pacific will keep sea levels above normal for the next few months.

PREPARED BY NOAA'S NATIONAL WEATHER SERVICE

Coordinated with the Climate Prediction Center and the Pacific ENSO Applications Center.