EL NIÑO/SOUTHERN OSCILLATION (ENSO) DIAGNOSTIC DISCUSSION

issued by

CLIMATE PREDICTION CENTER/NCEP/NWS and the International Research Institute for Climate and Society

5 December 2013

ENSO Alert System Status: Not Active

Synopsis: ENSO-neutral is expected to continue into the Northern Hemisphere summer 2014.

During November, ENSO-neutral persisted, as reflected by near-average sea surface temperatures (SST) across much of the equatorial Pacific Ocean (Fig. 1). SST anomalies in all of the Niño regions were small, but showed increases in the Niño-3.4 and Niño-4 regions (Fig. 2). The oceanic heat content (average temperature in the upper 300m of the ocean) increased (Fig. 3) due to the eastward propagation of a downwelling oceanic Kelvin wave. This increased heat content reflects above-average subsurface temperatures across the Pacific (Fig. 4). The wind anomalies remained small at lower and upper levels during the month. Equatorial convection was suppressed in the central equatorial Pacific and enhanced over Indonesia (Fig. 5). Collectively, these atmospheric and oceanic conditions reflect ENSO-neutral.

The majority of model forecasts indicate that ENSO-neutral (Niño-3.4 index between -0.5°C and 0.5°C) will persist into the Northern Hemisphere summer 2014 (Fig. 6). While current forecast probabilities are still greatest for ENSO-neutral by mid-summer, there is an increasing chance for the development of El Niño. The consensus forecast is for ENSO-neutral to continue into the Northern Hemisphere summer 2014 (see CPC/IRI consensus forecast).

This discussion is a consolidated effort of the National Oceanic and Atmospheric Administration (NOAA), NOAA's National Weather Service, and their funded institutions. Oceanic and atmospheric conditions are updated weekly on the Climate Prediction Center web site (El Niño/La Niña Current Conditions and Expert Discussions). Forecasts for the evolution of El Niño/La Niña are updated monthly in the Forecast Forum section of CPC's Climate Diagnostics Bulletin. The next ENSO Diagnostics Discussion is scheduled for 9 January 2014. To receive an e-mail notification when the monthly ENSO Diagnostic Discussions are released, please send an e-mail message to: ncep.list.enso-update@noaa.gov.

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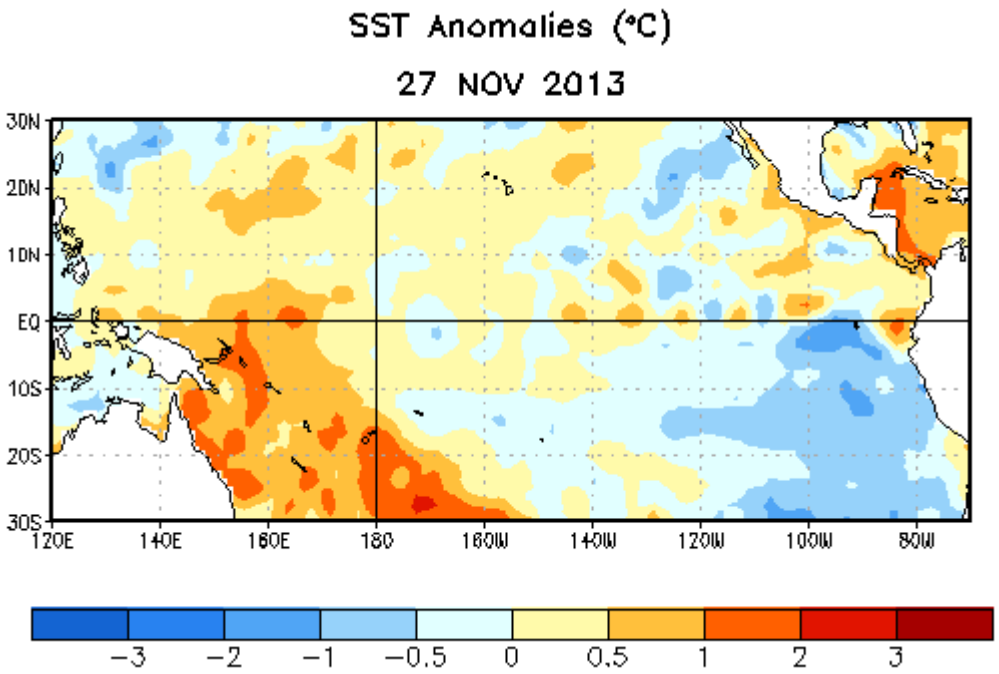

Figure 1. Average sea surface temperature (SST) anomalies (°C) for the week centered on 27 November 2013. Anomalies are computed with respect to the 1981-2010 base period weekly means.

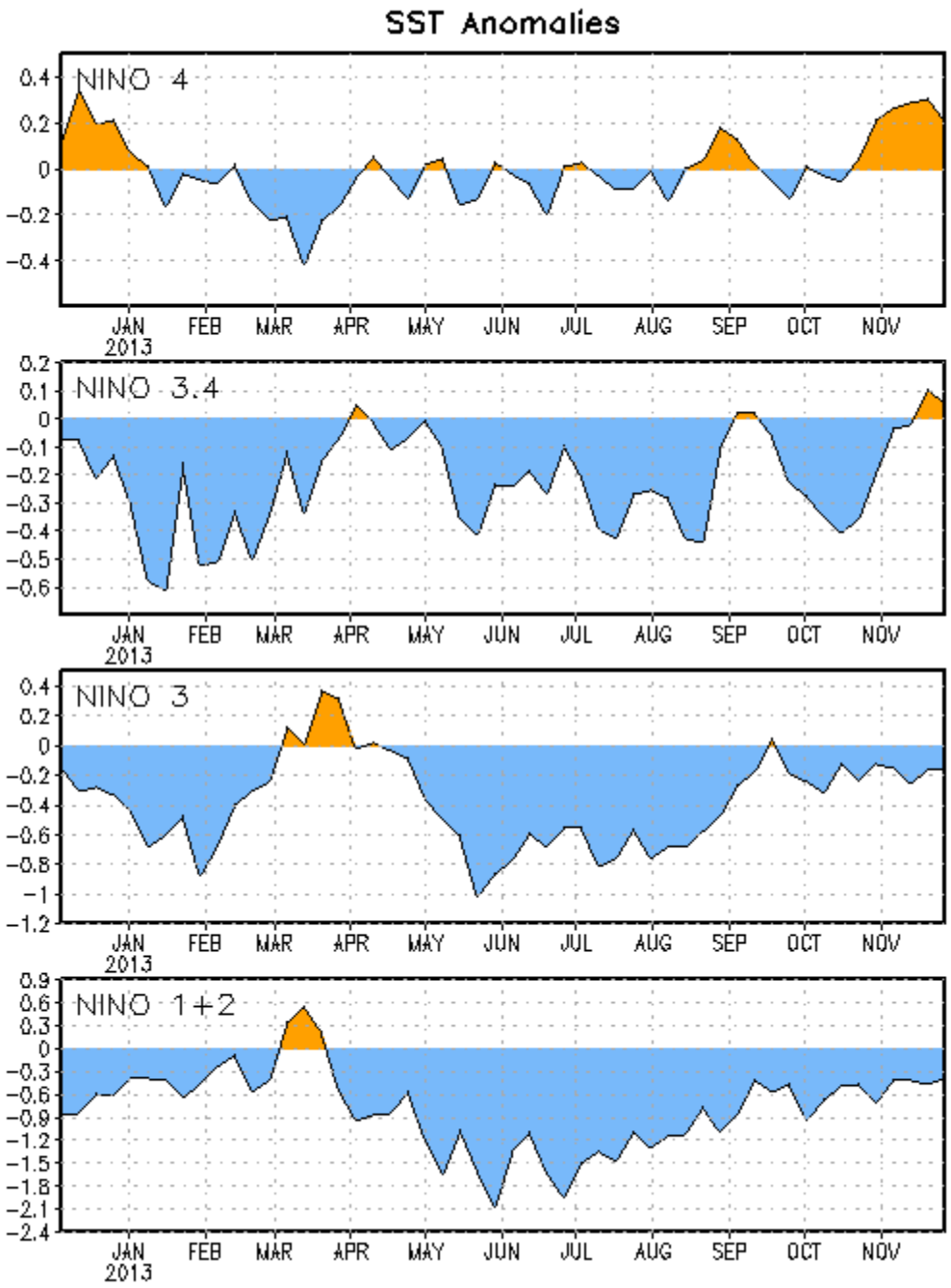

Figure 2. Time series of area-averaged sea surface temperature (SST) anomalies (°C) in the Niño regions [Niño-1+2 (0°-10°S, 90°W-80°W), Niño 3 (5°N-5°S, 150°W-90°W), Niño-3.4 (5°N-5°S, 170°W-120°W), Niño-4 (5ºN-5ºS , 150ºW-160ºE]. SST anomalies are departures from the 1981-2010 base period weekly means.

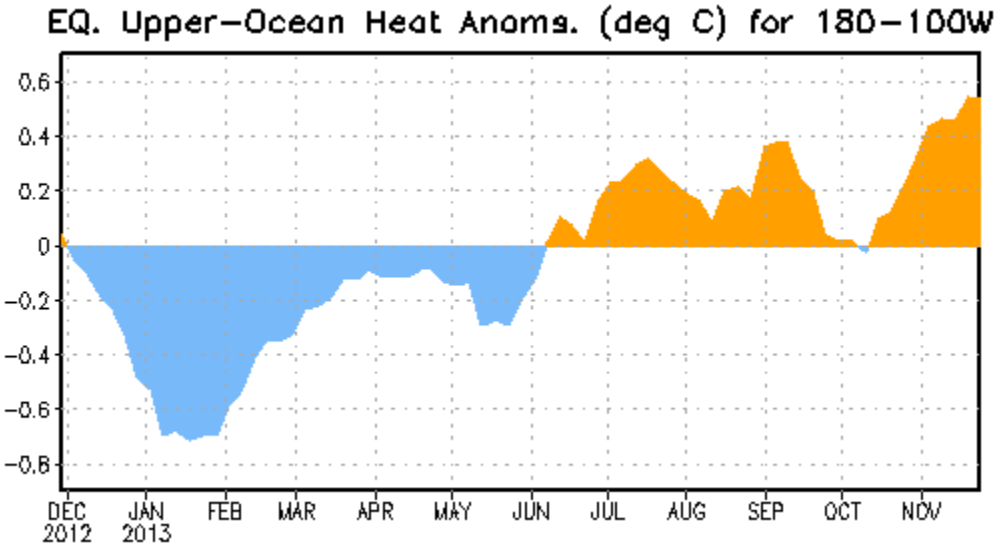

Figure 3. Area-averaged upper-ocean heat content anomaly (°C) in the equatorial Pacific (5°N-5°S, 180º-100ºW). The heat content anomaly is computed as the departure from the 1981-2010 base period pentad means.

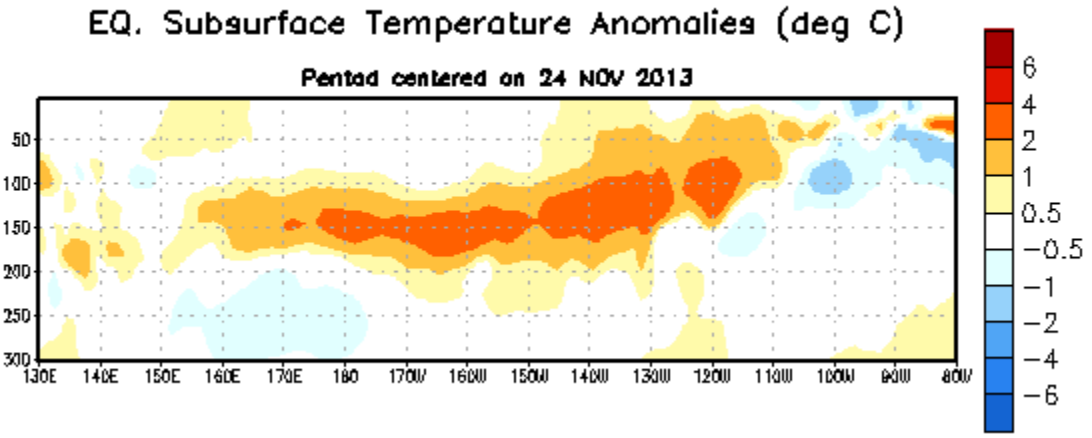

Figure 4. Depth-longitude section of equatorial Pacific upper-ocean (0-300m) temperature anomalies (°C) centered on the pentad of 24 November 2013. The anomalies are averaged between 5°N-5°S. Anomalies are departures from the 1981-2010 base period pentad means.

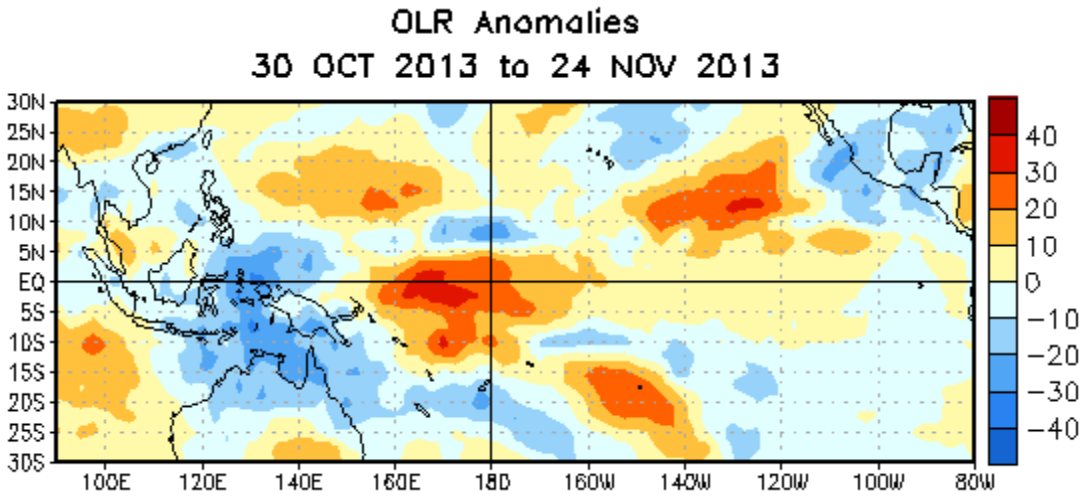

Figure 5. Average outgoing longwave radiation (OLR) anomalies (W/m^2) for the period 30 October – 24 November 2013. OLR anomalies are computed as departures from the 1979-1995 base period pentad means.

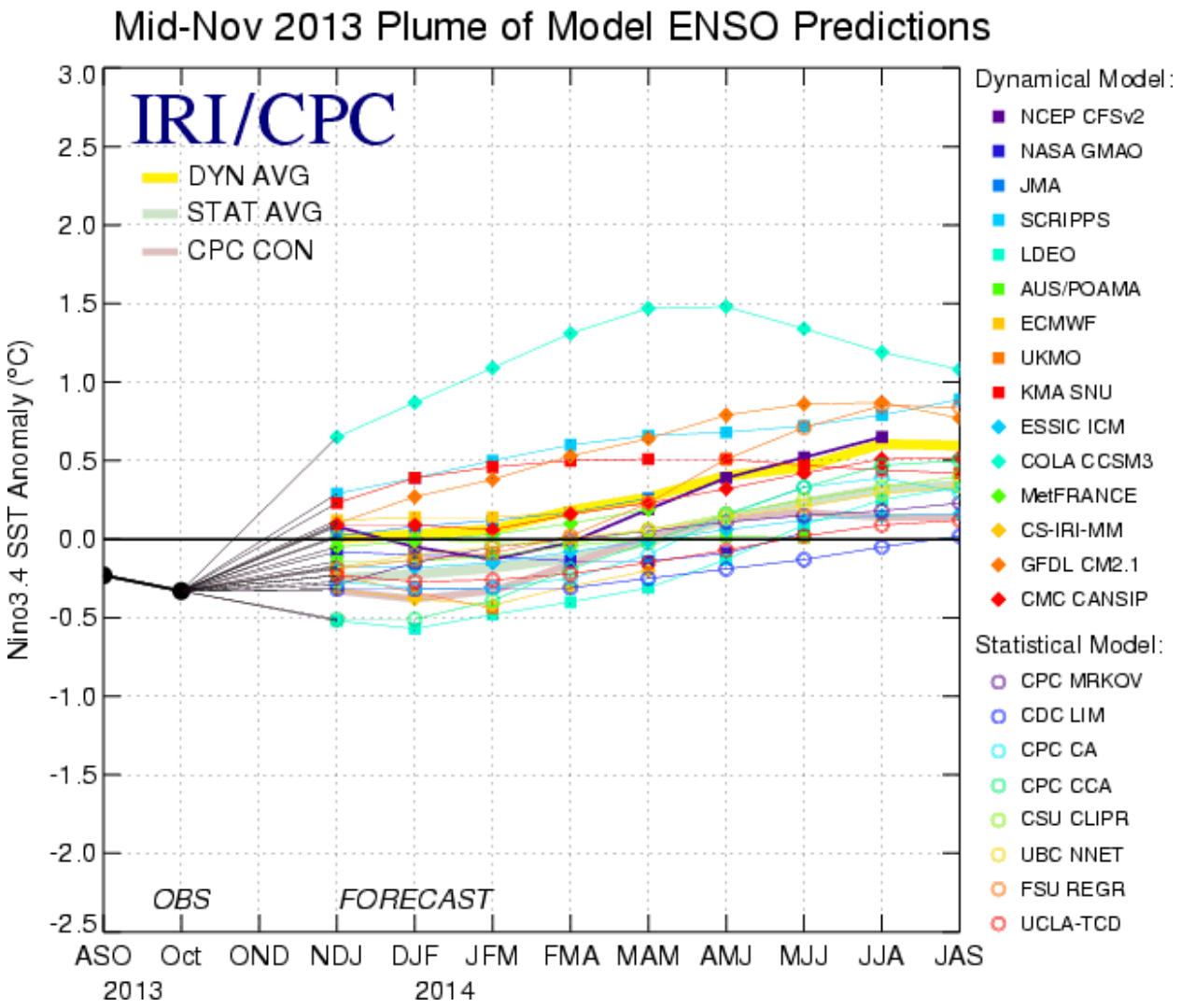

Figure 6. Forecasts of sea surface temperature (SST) anomalies for the Niño 3.4 region (5°N-5°S, 120°W-170°W). Figure updated 19 November 2013.