

The APEC CLIMATE CENTER Climate Outlook for Pacific Islands for August 2015 – January 2016

BUSAN, 24 July 2015 – Synthesis of the latest model forecasts for August 2015 – January 2016 (ASONDJ) at the APEC Climate Center (APCC), located at Busan, Korea, indicates the El-Niño developing episode. Anomalously warm conditions are expected over Micronesia and northern Polynesia. Near normal and below normal temperatures are likely in central and Melanesia and southern Polynesia. The above normal rainfalls are highly probable in southern Micronesia, while the negative precipitation anomalies are likely to prevail in central and southern Melanesia and Polynesia.

Sea Surface Temperature and ENSO Outlook:

Positive SST anomalies in the central and eastern equatorial Pacific are expected to enhance through January 2016 suggesting further development of the El-Niño, with the Niño 3.4 index steadily increasing. The models predict the Niño 3.4 index to be within the range 1 to 3 in December-January indicating to an El-Niño episode.

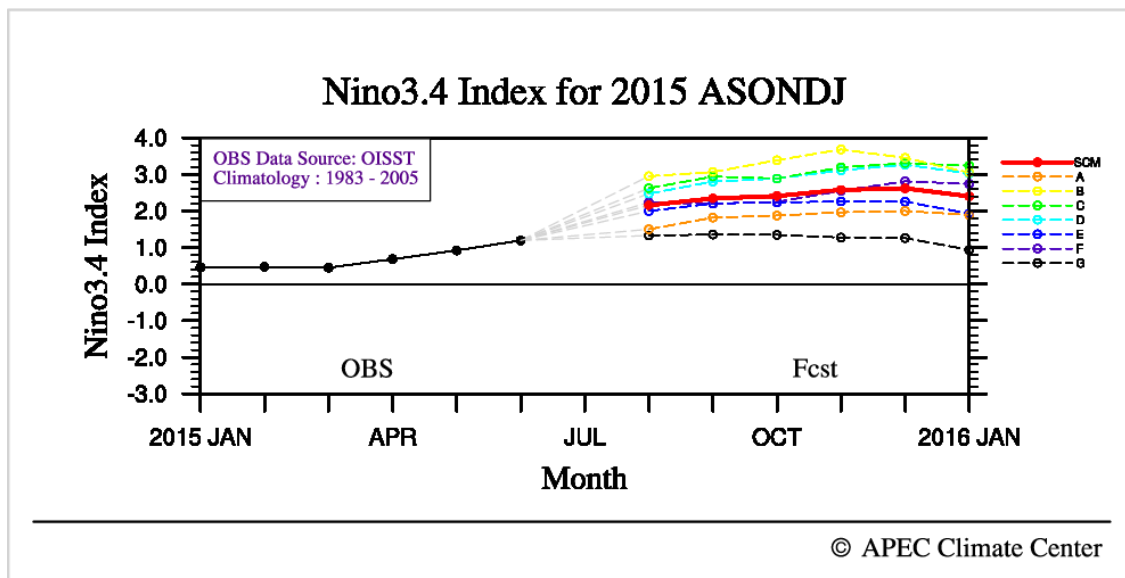


Fig. 1. Predicted Niño 3.4 Index. The predictions from the individual models are marked A, B, C, D, E, F and G while that from the simple composite MME method is marked as SCM.

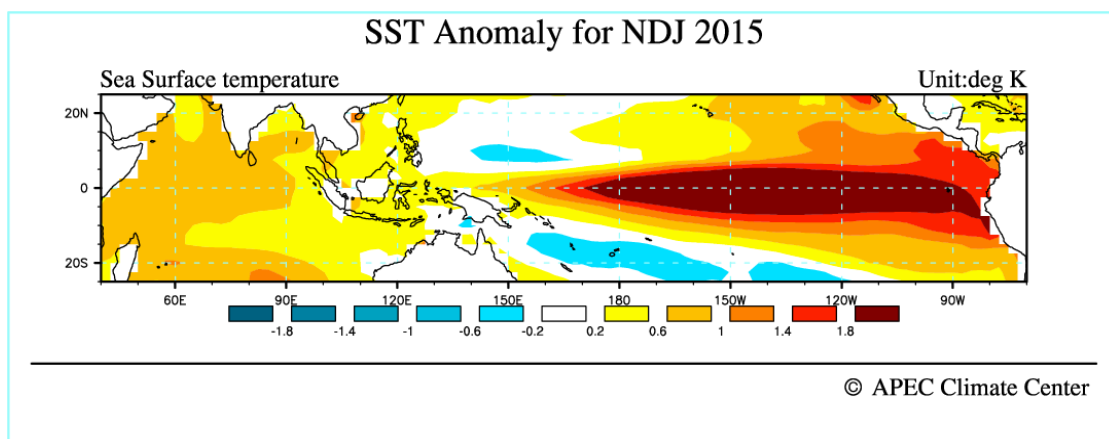
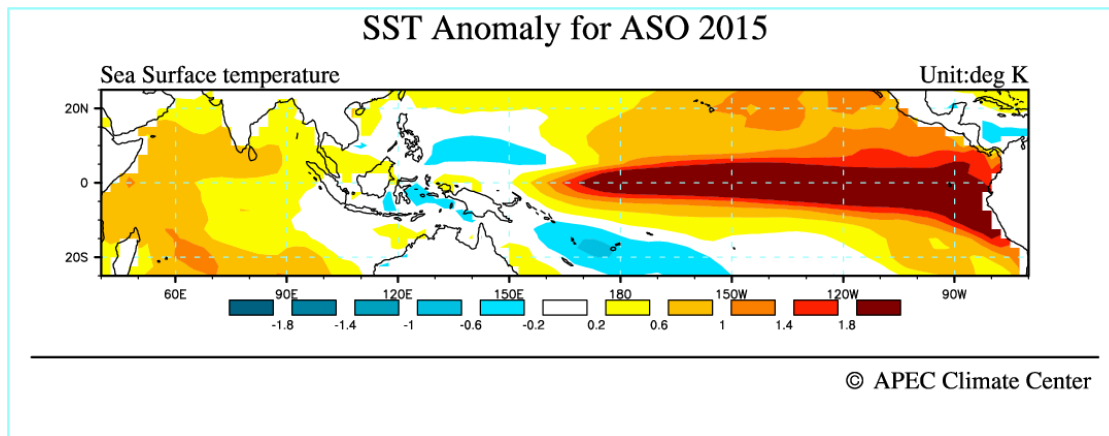


Fig. 2. Spatial distributions of forecasted SST anomalies for August 2015 – January 2016 over the tropical Indo-Pacific. Top panel shows SSTA forecast for August – October 2015 and bottom panel shows SSTA forecast for November 2015 – January 2016.

Temperature and Precipitation Outlook:

1. Forecast for August – October 2015

During August – October 2015 (ASO), warmer than normal conditions are expected across the whole Micronesia and northern Polynesia, while near normal and below normal temperature are probable in Melanesia and southern Polynesia. The band of highly probable above normal rainfalls is expected to span southern Micronesia, with the positive precipitation anomalies being likely to prevail over whole Micronesia. Meanwhile, anomalously dry conditions are probable in Melanesia and Polynesia.

2. Forecast for November 2015 – January 2016

The warmer than normal conditions are expected to persist in Micronesia and northern Polynesia, with near normal and below normal temperatures being likely in Melanesia and southern Polynesia. The rainfall band is expected in the southern Micronesia, with highly probable dry conditions spanning northern Micronesia, Melanesia and Polynesia.

3. Historical skill for APCC MME for ASO and NDJ 2015/16

Across the Pacific for the ASONDJ period, the APCC MME is reasonably skillful in predicting both temperature and precipitation, as indicated by the Heidke Skill Score (HSS). The highest HSS values are featured by both temperature and precipitation predictions for Micronesia located in the equatorial Pacific. For Melanesia and Polynesia prediction skill slightly decreases.

The APEC Climate Center is a major APEC science facility, which was established in November 2005 during the leaders meeting of the Asia-Pacific Economic Forum in Busan, Korea. It produces seasonal and monthly forecasts of climate conditions for all seasons around the globe. APCC collects seasonal forecasts from 15 institutes in the APEC region: the Australian Bureau of Meteorology, Meteorological Service of Canada, Beijing Climate Center China, Institute of Atmospheric Physics China, Japan Meteorological Agency Japan, Korea Meteorological Administration Korea, Pusan National University Korea, Met Office United Kingdom, Euro-Mediterranean Center on Climate Change Italy, Hydrometeorological Research Center of Russia, Voeikov Main Geophysical Observatory of Russia, Central Weather Bureau Chinese Taipei, National Aeronautics and Space Administration USA, National Centers for Environmental Prediction USA, International Research Institute for Climate and Society USA, Center for Ocean-Land-Atmosphere Studies USA.

The APCC climate forecasts are based on model simulations from 15 prominent climate forecasting centers and institutes in the APEC region. These forecasts are collected and combined using state-of-the-art schemes to produce a statistically 'consensual' forecast. The APCC forecasts are based not just on the magnitude of the seasonal changes that are predicted, but also take into account their simulated probability. Further details as well as the verification for the forecasts on a long term basis are available at <http://www.apcc21.org>. Historical verification of the forecast performance is based on a retrospective forecast period of all the models for the period 1983-2005.

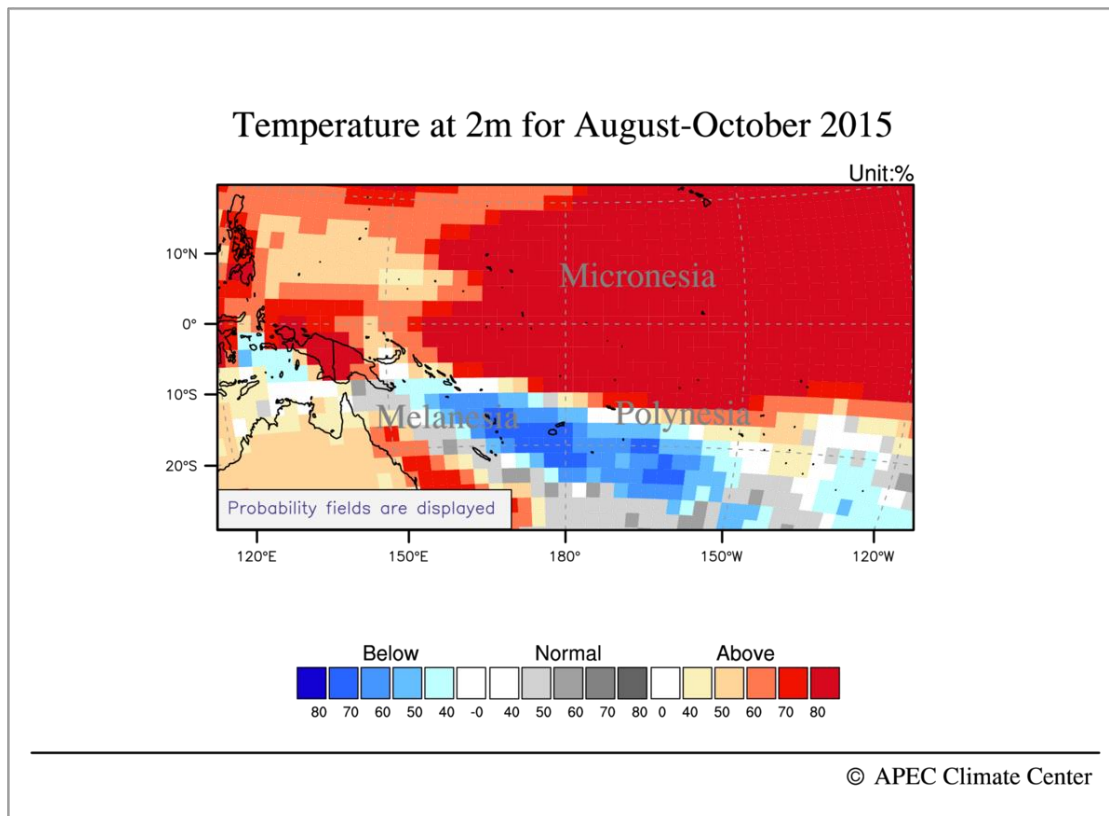


Fig. 3. Probabilistic MME seasonal 2m temperature forecast for August –October 2015.

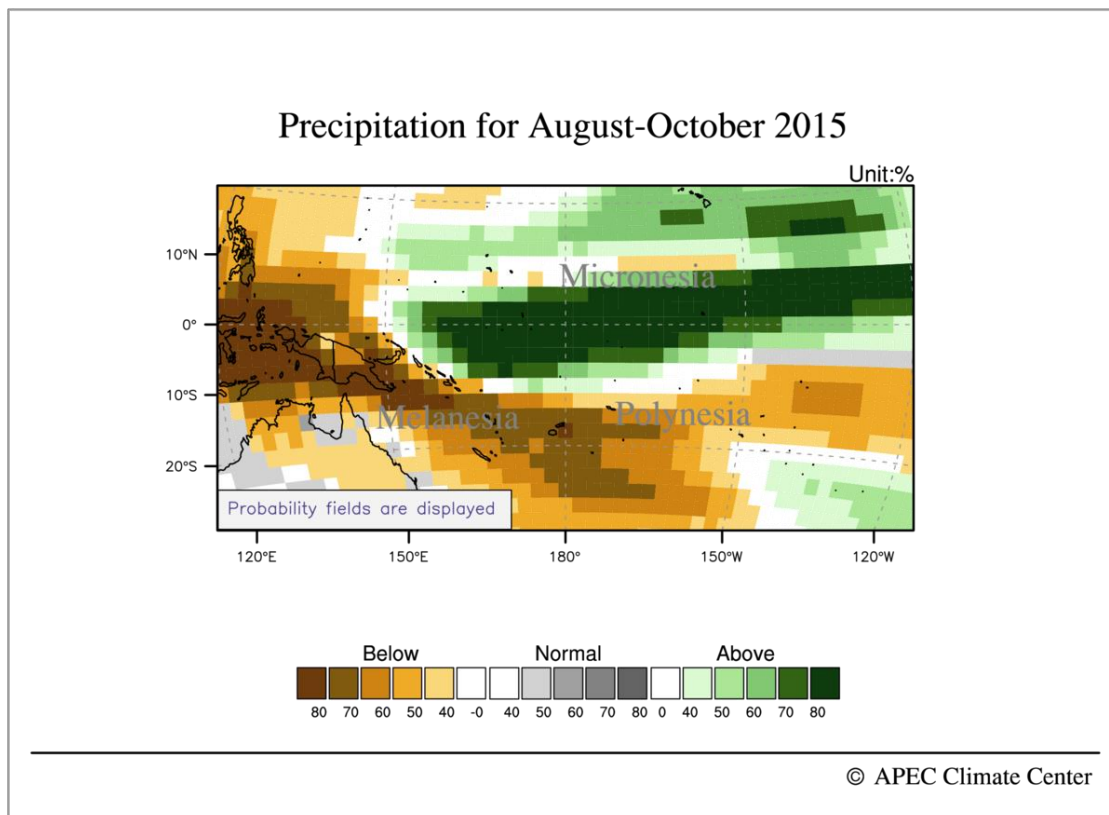
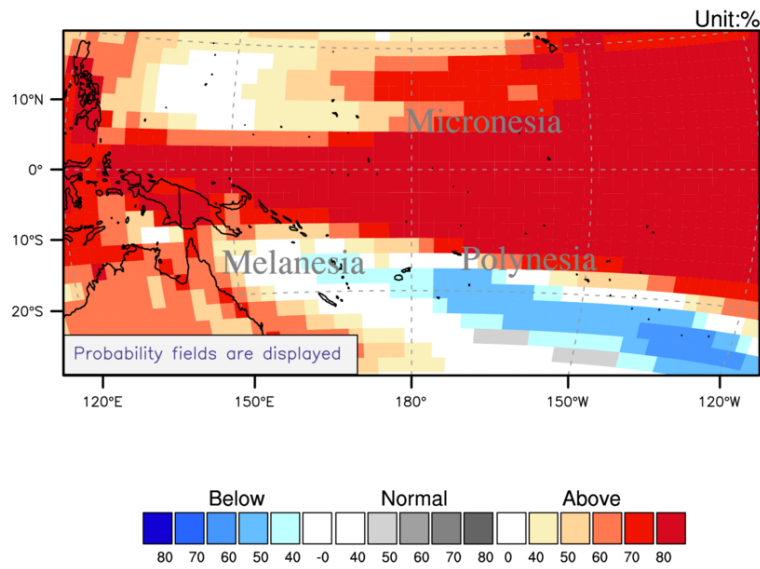


Fig. 4. Same as Fig. 3 but for precipitation.

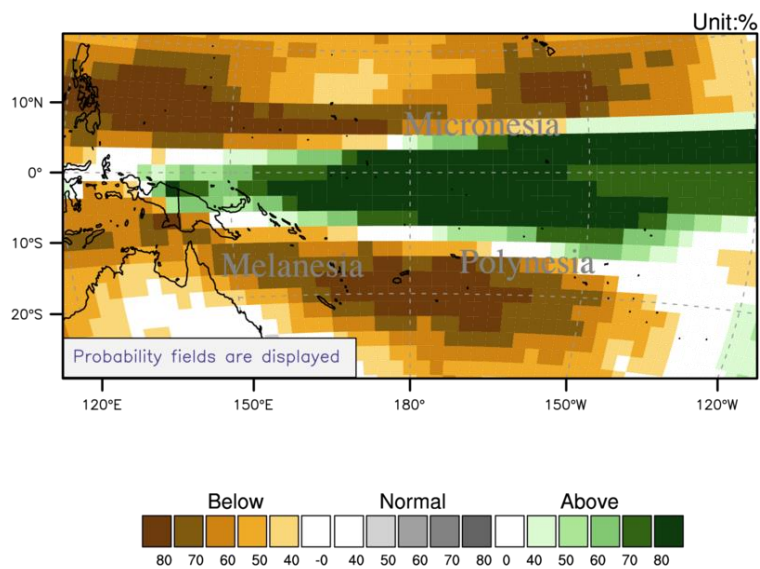
Temperature at 2m for November 2015-January 2016



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Fig. 5. Same as Fig. 3 but for November 2015 – January 2016.

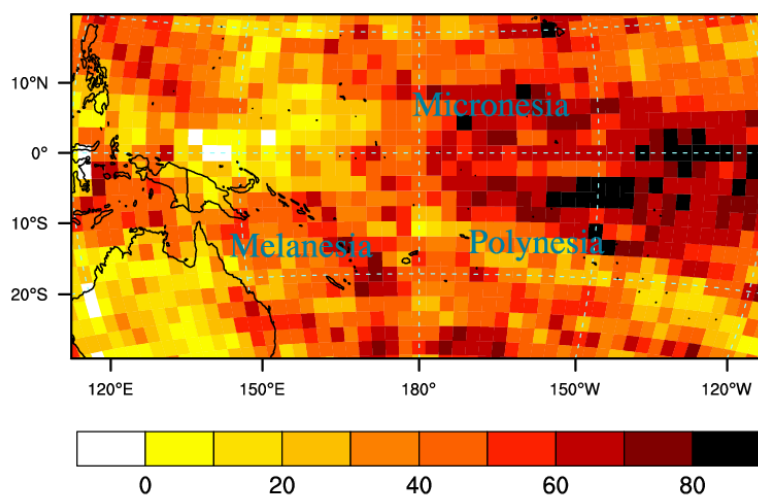
Precipitation for November 2015-January 2016



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Fig. 6. Same as Fig. 5 but for precipitation.

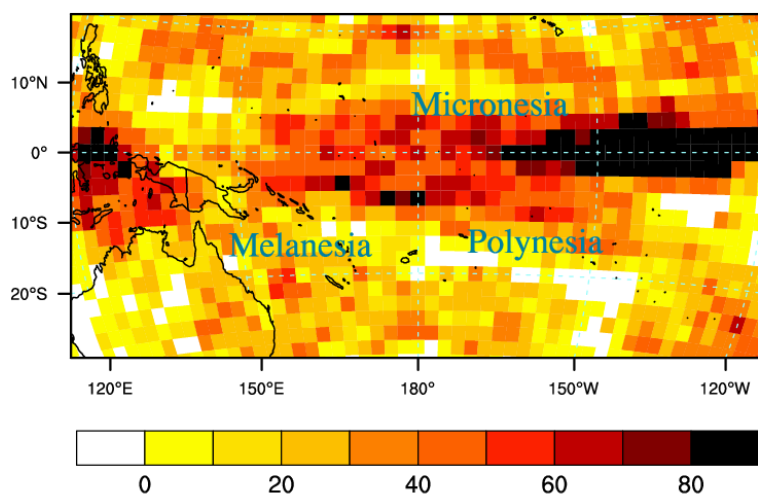
Heidke Skill Score : T2M, ASO (1983-2005)



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Fig. 7. Heidke Skill Score for probabilistic MME seasonal 2m temperature forecast for August – October.

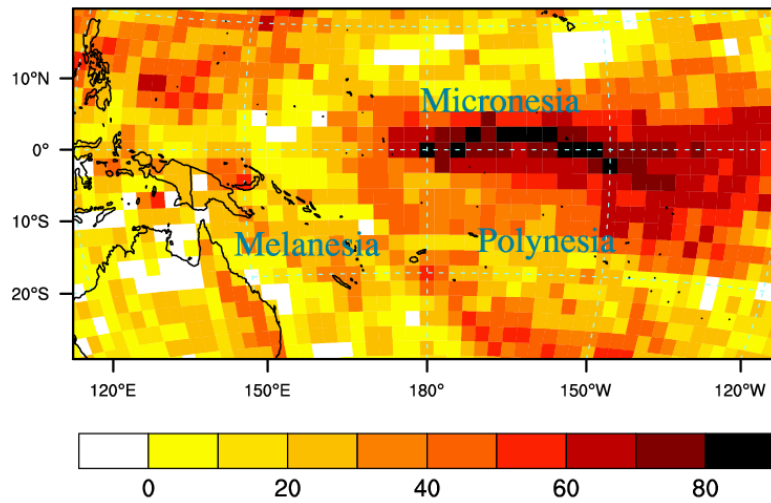
Heidke Skill Score : PREC, ASO (1983-2005)



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Fig. 8. Same as Fig. 7 but for precipitation.

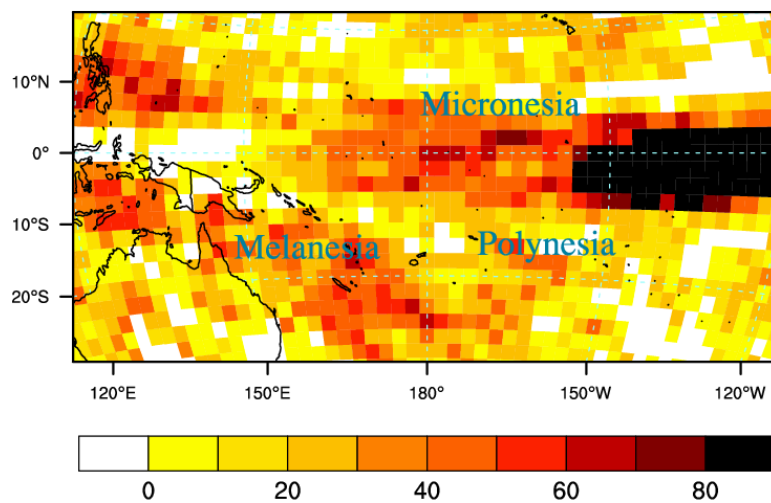
Heidke Skill Score : T2M, NDJ (1983-2005)



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Fig. 9. Same as Fig. 7 but for November – January.

Heidke Skill Score : PREC, NDJ (1983-2005)



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Fig. 10. Same as Fig. 9 but for precipitation.