The Asian-Australian Monsoon System: Recent Evolution, Current Status and Prediction

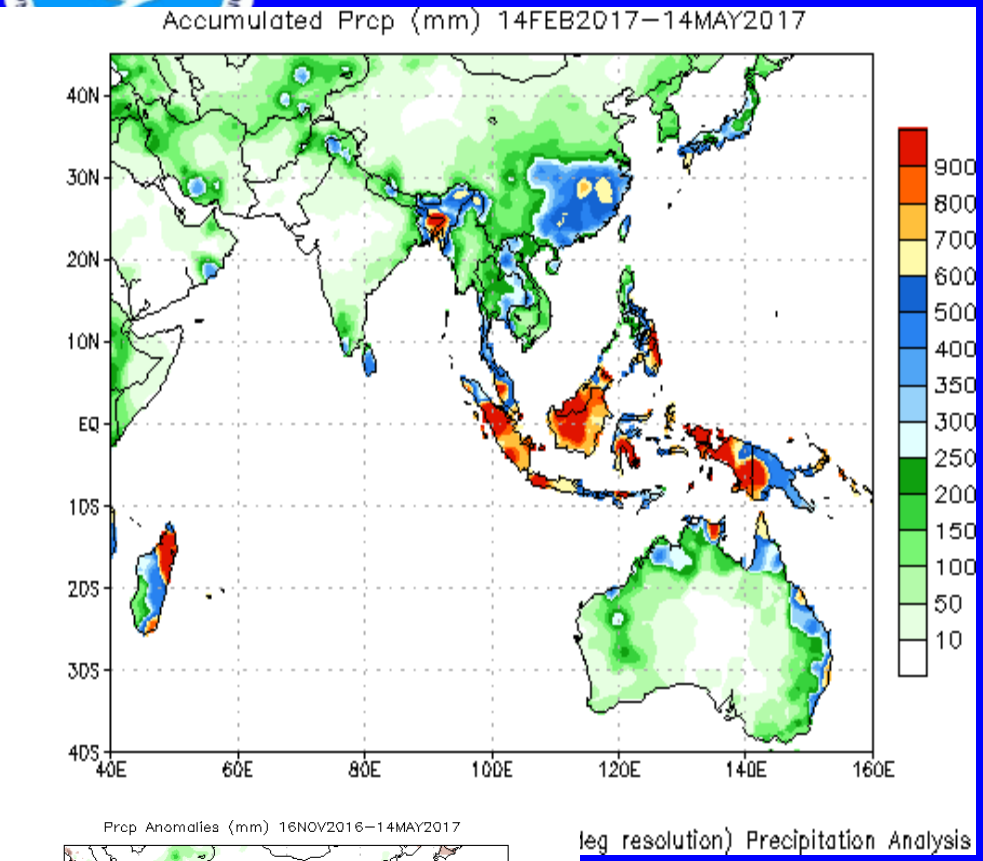
Update prepared by
Climate Prediction Center / NCEP
May 15, 2017

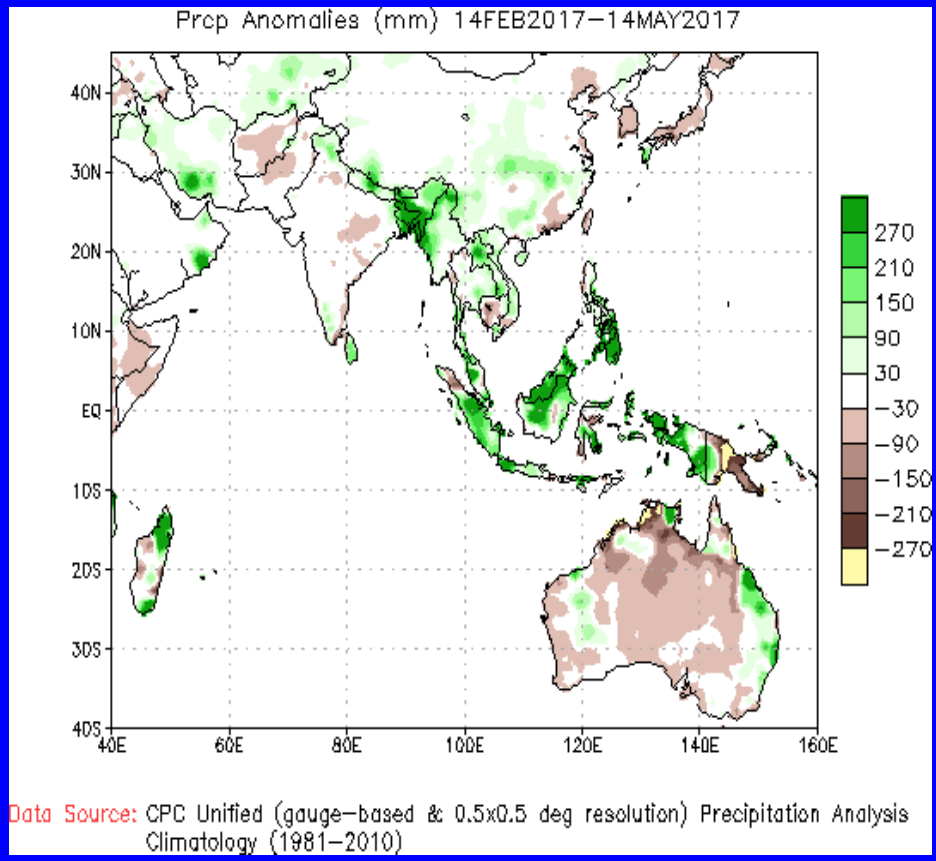
For more information, visit:
http://www.cpc.ncep.noaa.gov/products/Global_Monsoons/Asian_Monsoons/Asian_Monsoons.shtml

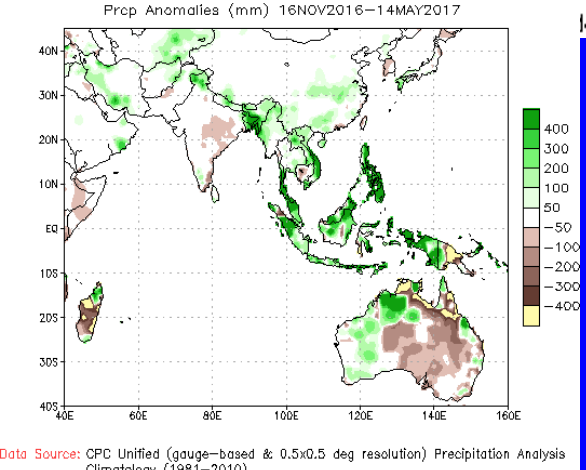
Outline

- Recent Rainfall and Current Conditions
- Monsoon Prediction
- Summary
- Climatology

Precip Patterns: Last 90 Days

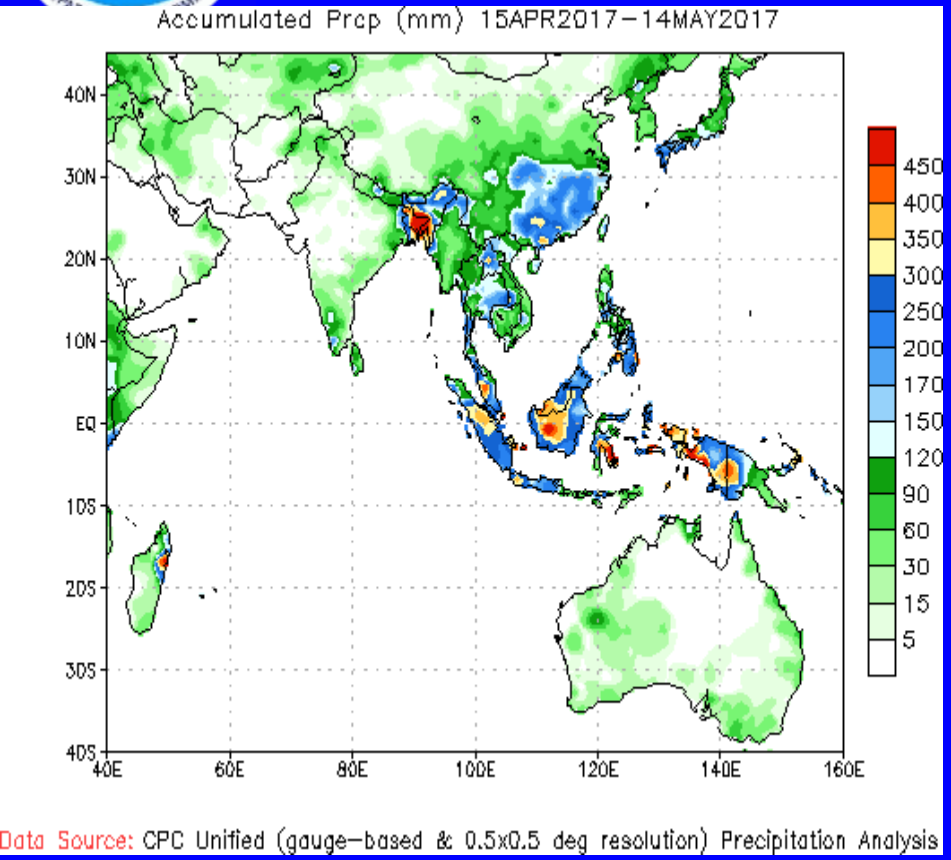


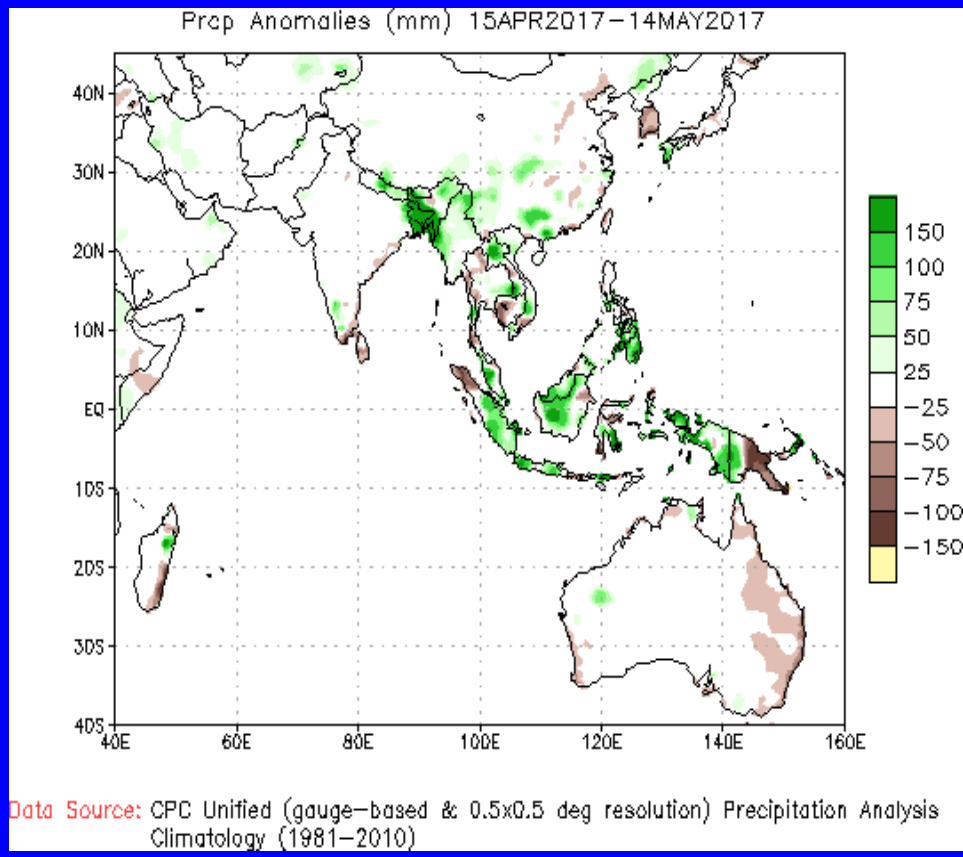




For the past 90 days, normal to slightly below normal rainfall deficits remain in general over most parts of India, except over northeastern India and Bangladesh where the rainfall was excess. Large rainfall deficits are noted over large parts of Australia, except along its east coast. Elsewhere , the rainfall was generally near to above normal, except over Papa New Guinea where it was below.

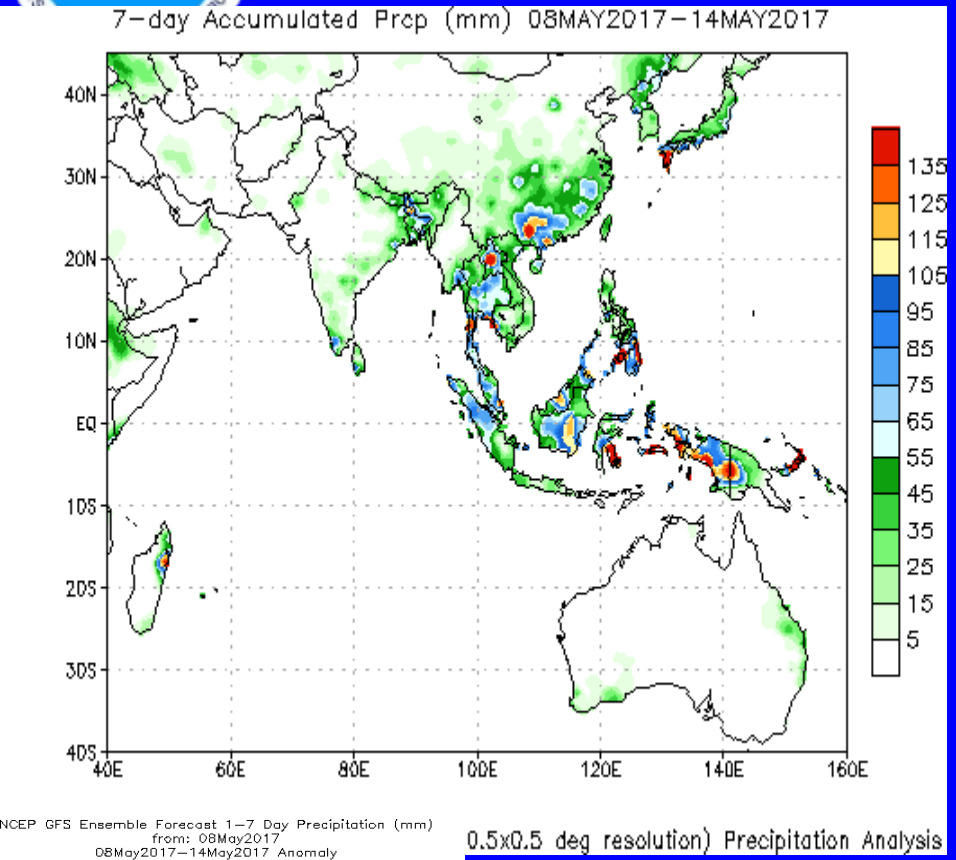
Precip Patterns: Last 30 Days

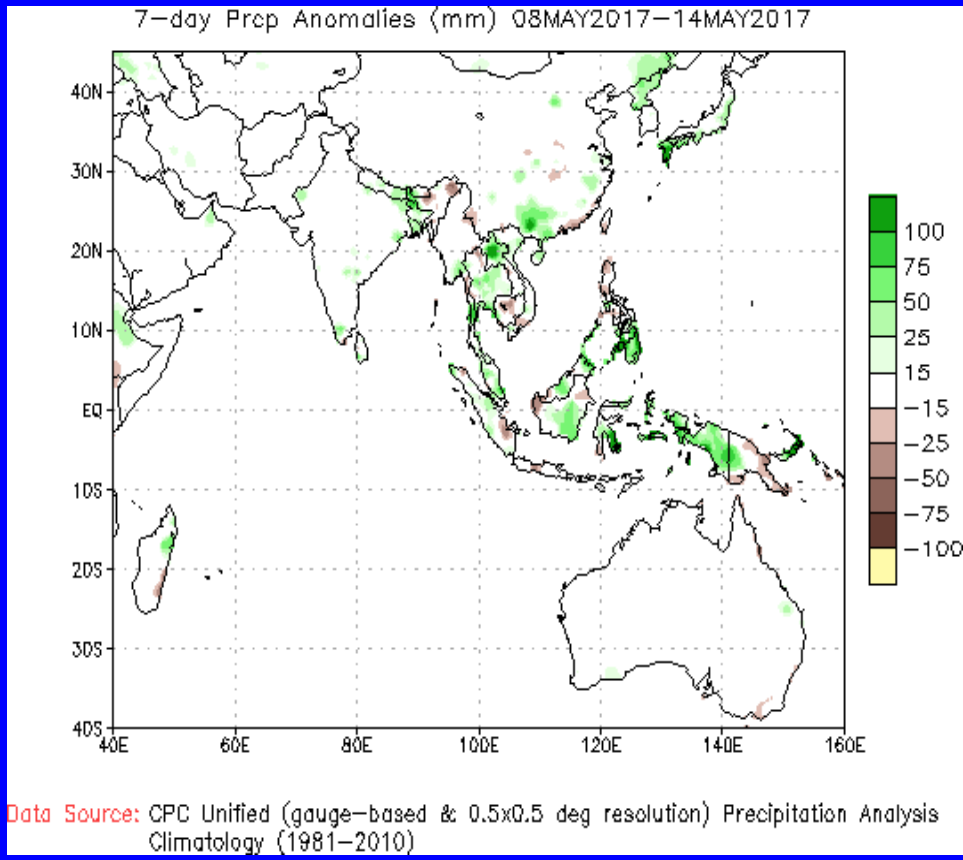




For the past 30 days rainfall deficits are found over Papa New Guinea and along the east coast of Australia. Small deficits are also noted along coastal southern India, South Korea and some parts of Japan. Large excess precipitation is noted over northeastern India. Elsewhere, the rainfall is generally above to near normal.

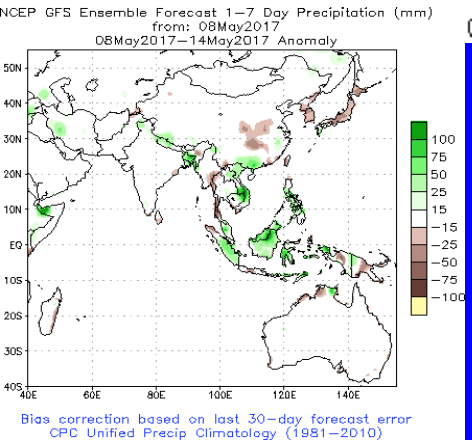
Precip Patterns: Last 7 Days





0.5x0.5 deg resolution) Precipitation Analysis

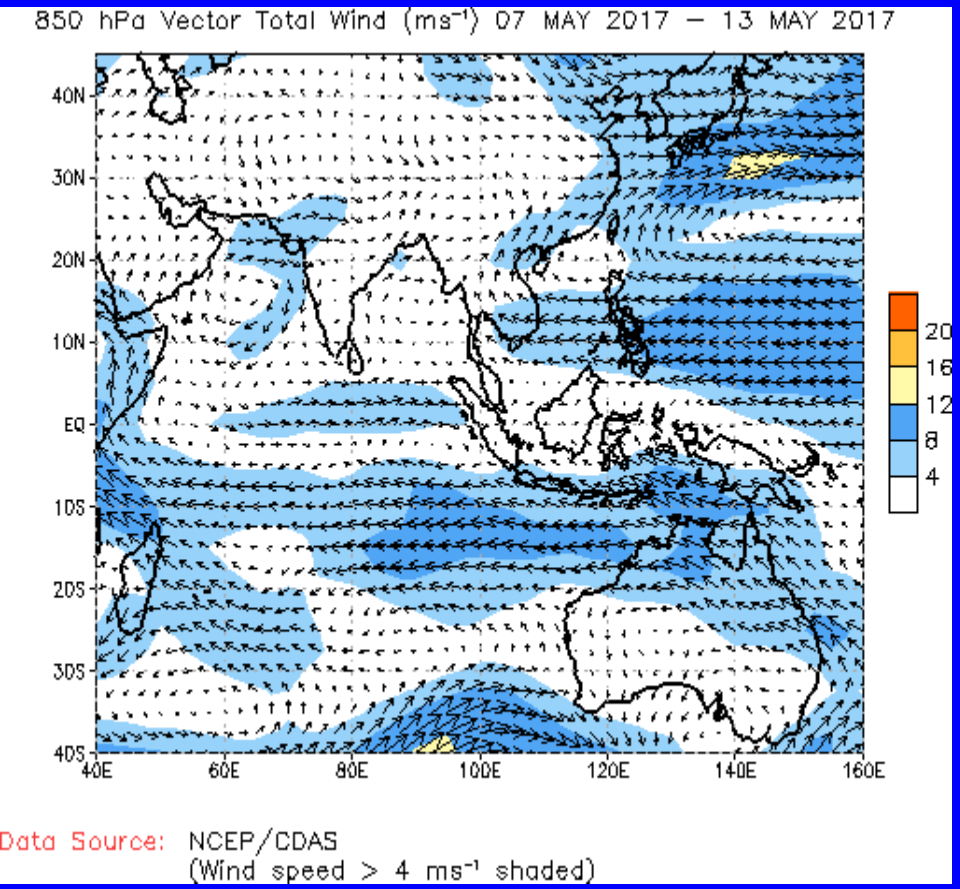
Data Source: CPC Unified (gauge-based & 0.5x0.5 deg resolution) Precipitation Analysis
Climatology (1981-2010)



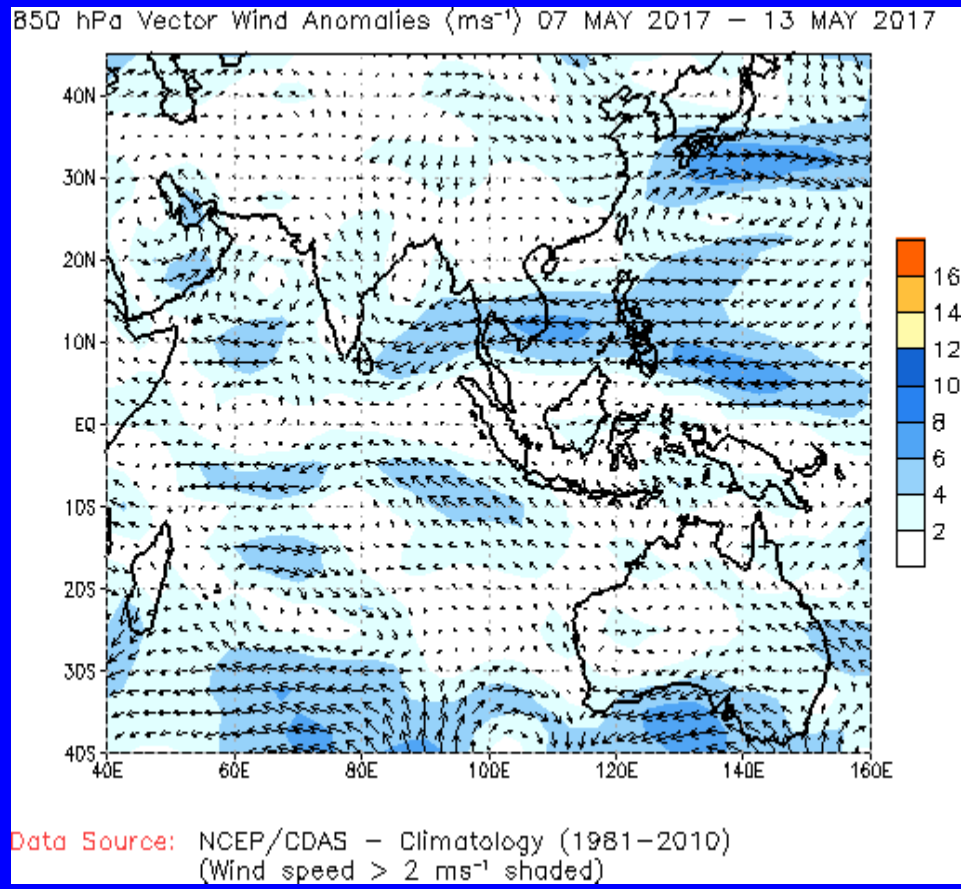
Bias correction based on last 30-day forecast error
CPC Unified Precip Climatology (1981-2010)

In this past week, the observed rainfall amounts have generally been sporadic, and are slightly above normal in some places.

Atmospheric Circulation



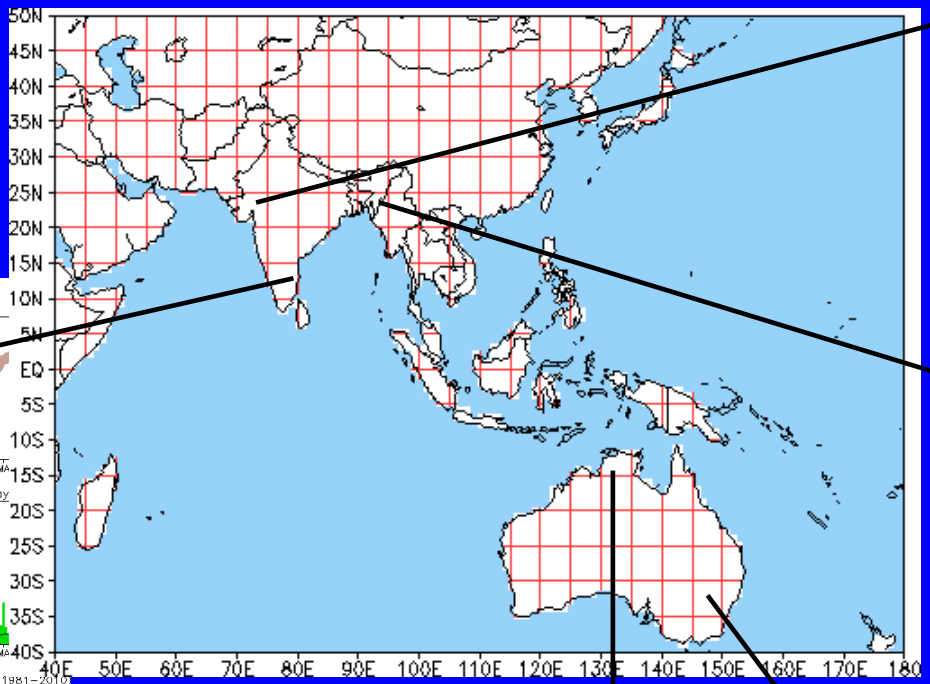
Data Source: NCEP/CDAS
(Wind speed > 4 ms⁻¹ shaded)

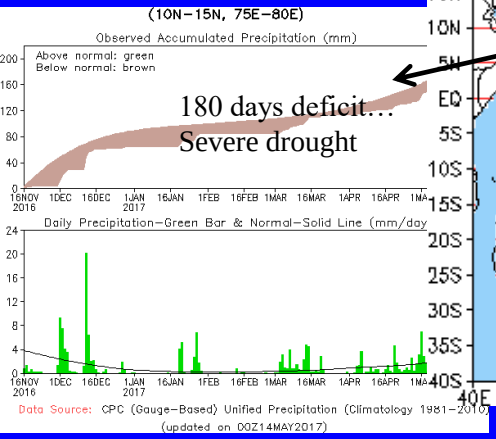


Data Source: NCEP/CDAS – Climatology (1981–2010)
(Wind speed > 2 ms⁻¹ shaded)

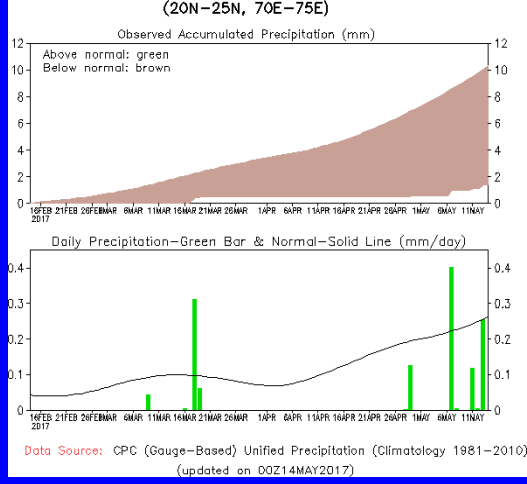
Rainfall Time Series

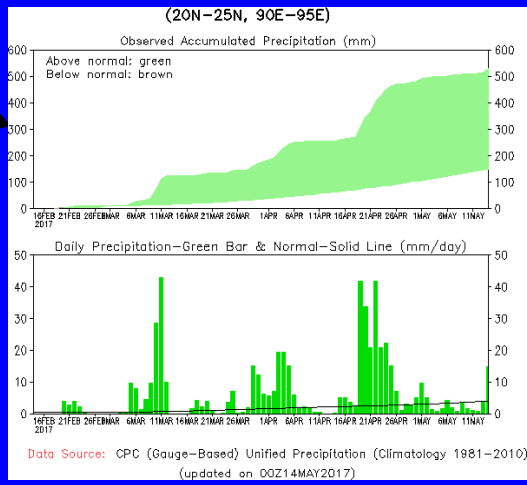
over 5x5 lat-lon boxes

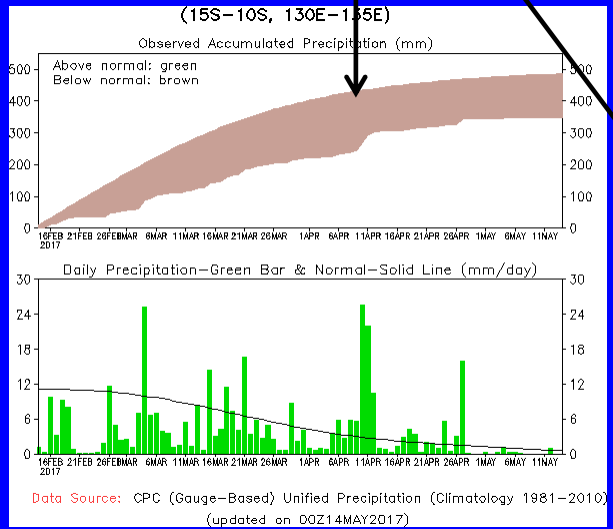


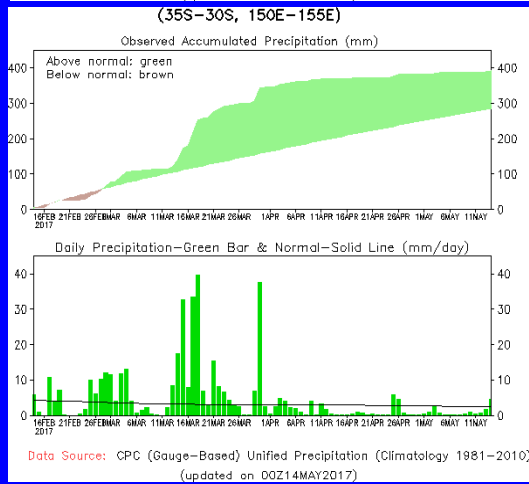


180 days deficit…
Severe drought



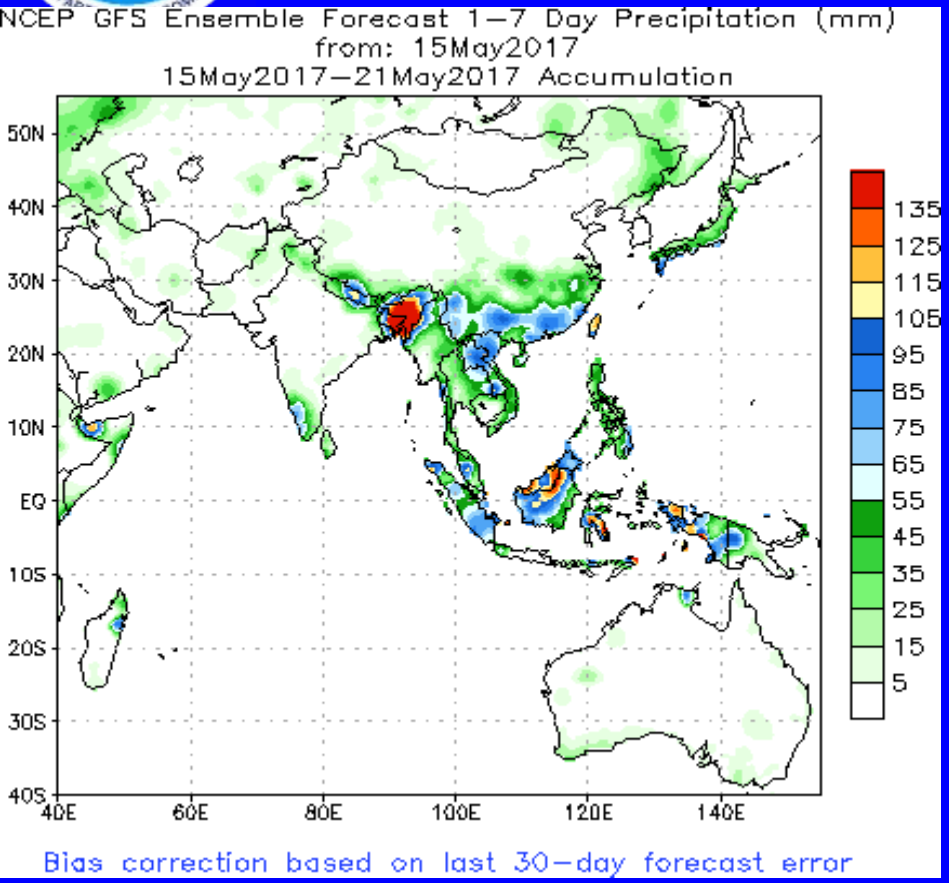






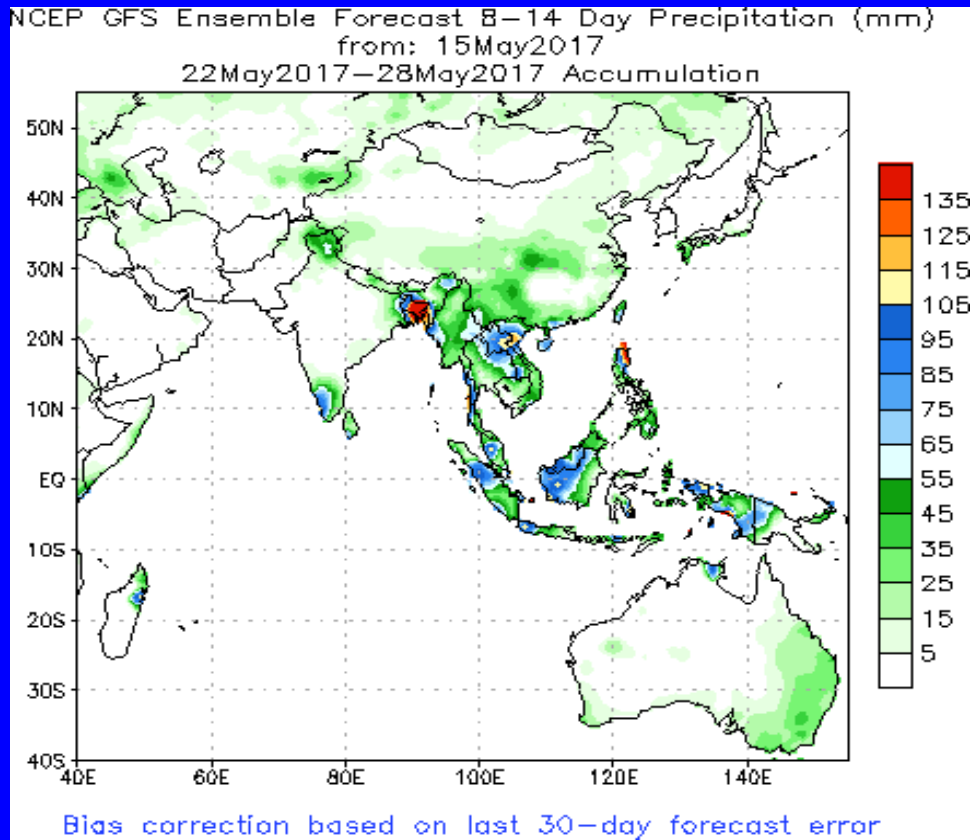
The time series of precipitation over the various regions is pretty much consistent with the spatial maps shown earlier.

NCEP/GFS Model Forecasts
Accumulated Precip. for Week 1 & Week 2



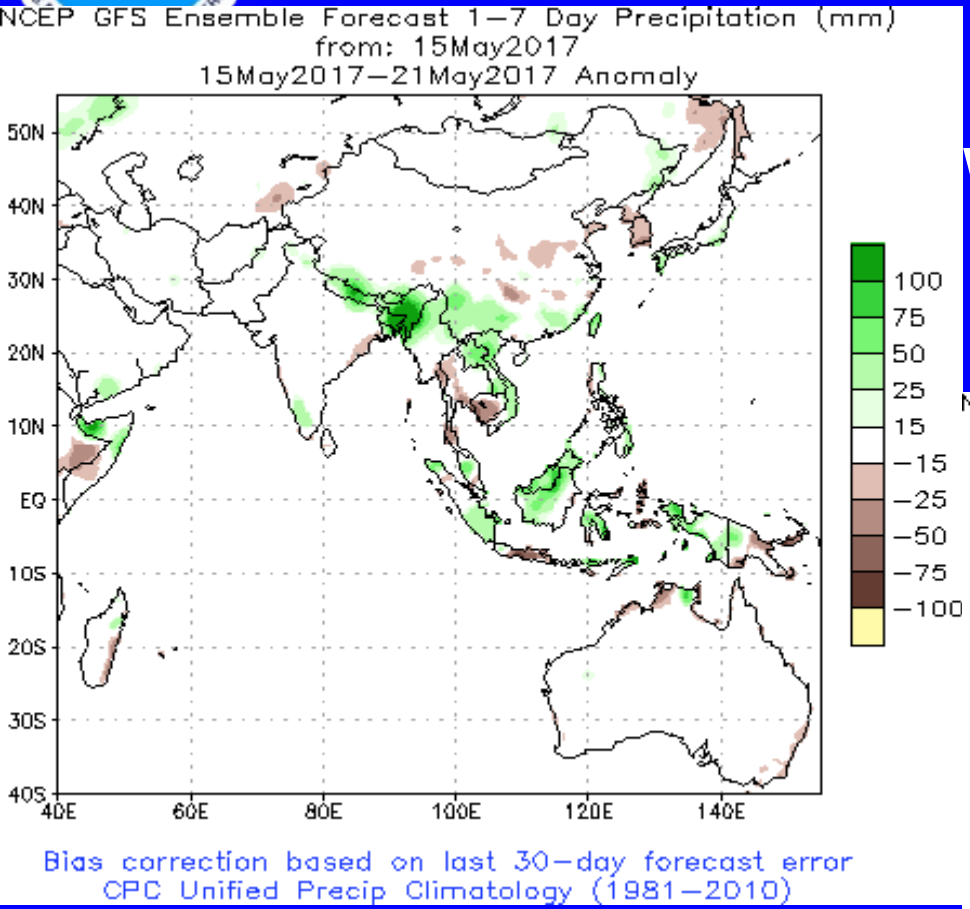
Week-1

Week-2



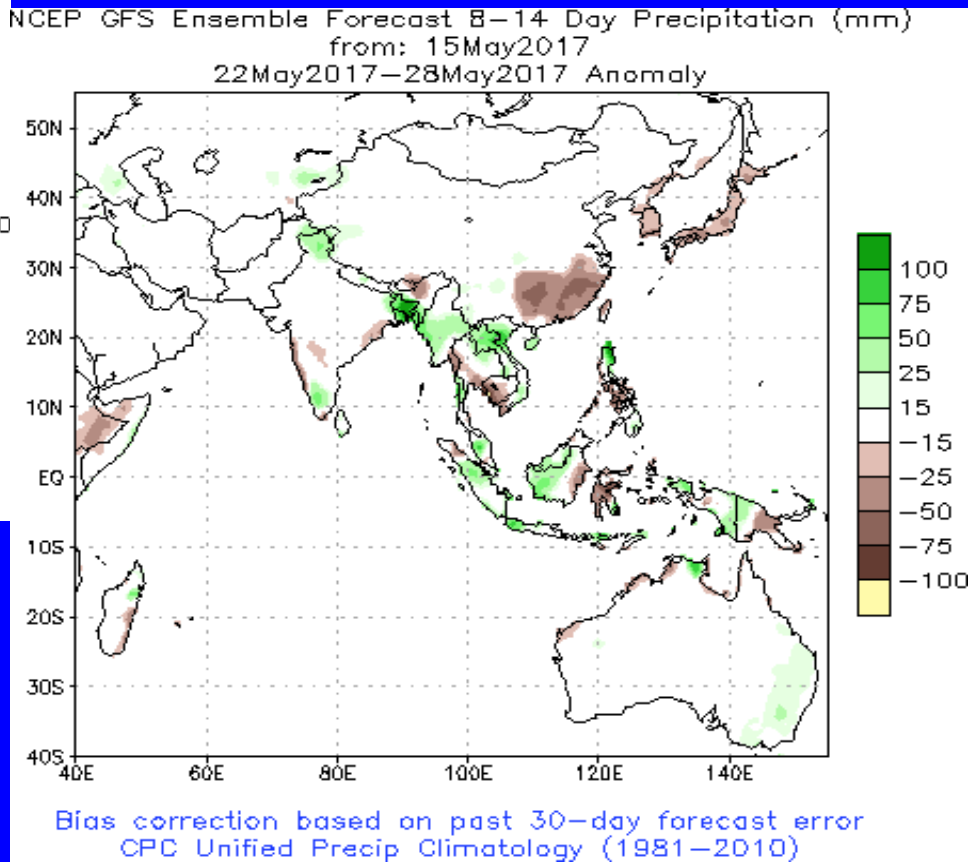
NCEP/GFS Model Forecasts

Bias-Corrected Precip. Anom. for Week 1 & Week 2



Week-1

Week-2

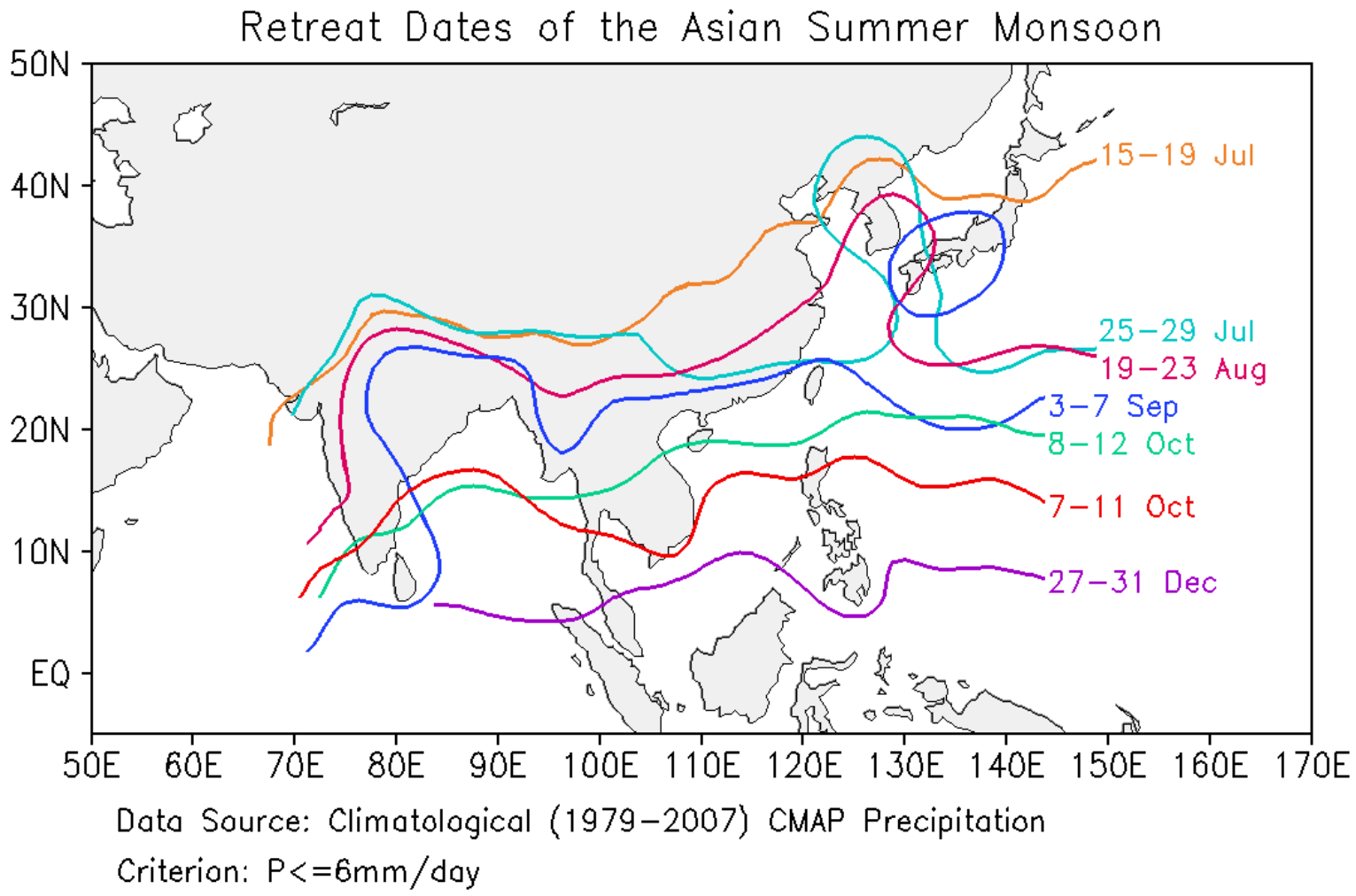


Summary

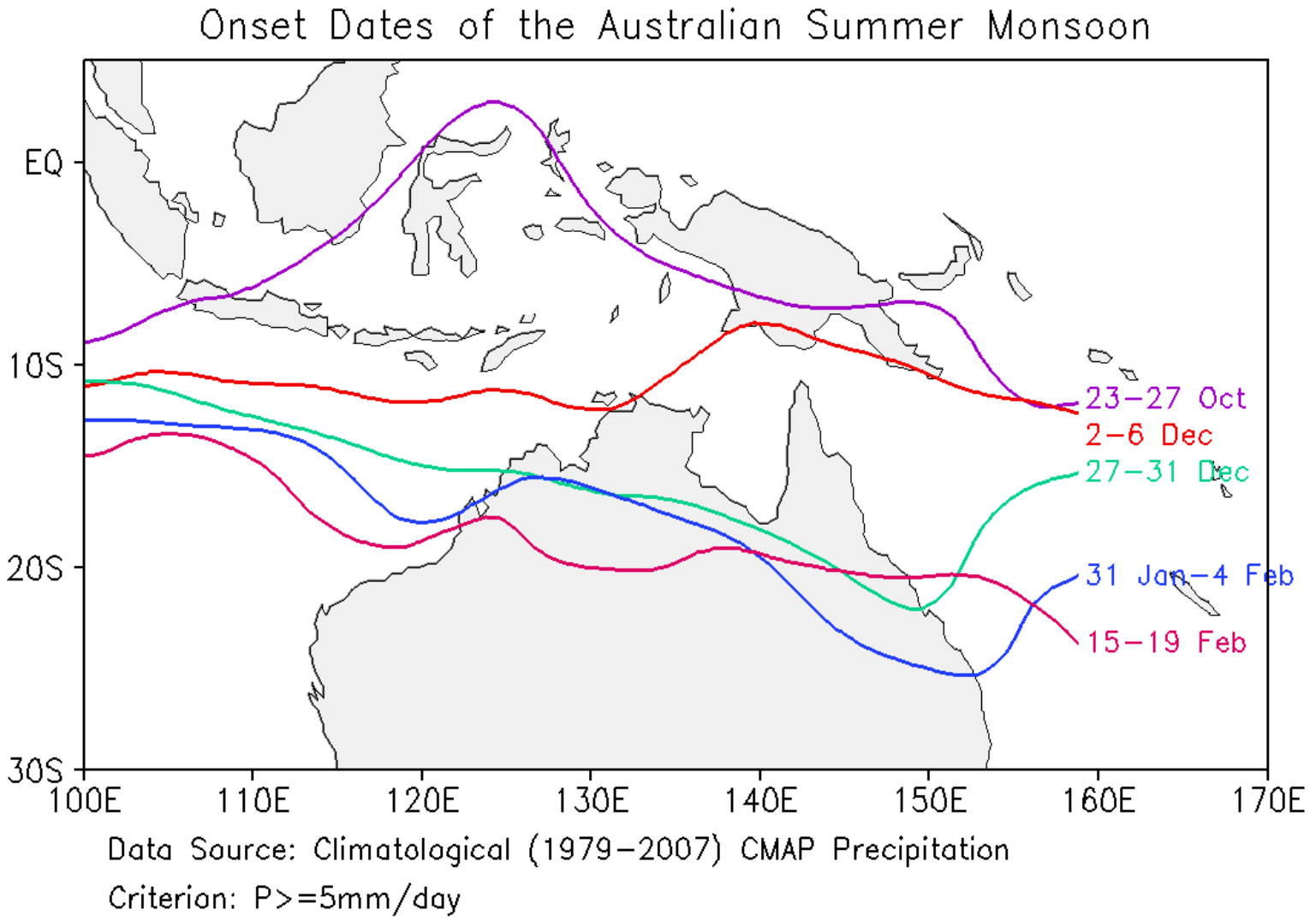
For the past 90 days, normal to slightly below normal rainfall deficits remain in general over most parts of India, except over northeastern India and Bangladesh where the rainfall was excess. Large rainfall deficits are noted over large parts of Australia, except along its east coast. Elsewhere , the rainfall was generally near to above normal, except over Papa New Guinea where it was below. For the past 30 days rainfall deficits are found over Papa New Guinea and along the east coast of Australia. Small deficits are also noted along coastal southern India, South Korea and some parts of Japan. Large excess precipitation is noted over northeastern India. Elsewhere, the rainfall is generally above to near normal.

In this past week, the observed rainfall amounts have generally been sporadic, and are slightly above normal in some places. In the next couple of weeks the NCEP GFS model is predicting above normal rainfall over northeastern India in the first week, and below normal rainfall over southeastern China in the second week.

Demise of the Asian Monsoon



Onset of the Australian Monsoon



Climatology