

Experimental Climate Monitoring and Prediction

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FECT BLOG

Past reports available at
<http://fects.blogspot.com/> and
<http://fectsl.wordpress.com/>

FECT WEBSITES

<http://www.climate.lk> and
<http://www.tropicalclimate.org/>

20 November, 2014 PACIFIC SEAS STATE

During late October through early November the SST exceeded thresholds for weak Niño conditions, although only some of the atmospheric variables indicate an El Niño pattern. Most of the ENSO prediction models indicate weak El Niño conditions during the November-January season in progress, continuing well into the northern spring 2015.

(Text Courtesy IRI)

INDIAN OCEAN STATE

Sea surface temperature was neutral in the entire region around Sri Lanka.

MJO STATE

MJO is in Phase 5 in Maritime Continent and shall slightly enhance the rainfall in Sri Lanka.

Highlights

Monitoring and Predictions:

Heavy rainfall was observed throughout the country in the previous week with highest rainfall in the northern region. Northern and north-eastern regions received highly above average rainfall during November while below climatological average rainfall was observed in the rest of the country. Rainfall shall decrease during next week in the entire country but not in a significant level. The entire sea region of Sri Lanka shows a neutral sea surface temperature

Summary

Monitoring

Weekly Monitoring: On 26th and 27th November high rainfall was observed throughout the country averaging up to 60 mm. Highest amount of rainfall observed was in northern and north-eastern regions of the country which reached up to 100 mm. From 28th to 30th of November about 20 mm average rainfall was observed only around the northern and south-east regions in general. Up to 100 mm rainfall was observed in northern and western areas on 1st of December while Central province has received around 30 mm rainfall on 2nd of December. Northern peninsula has received the highest rainfall during the week.

Monthly Monitoring: An average rainfall of 16 mm-18 mm was observed throughout the country with higher precipitation observed in the north-eastern regions of Sri Lanka during November. Highest rainfall during this month was observed in Northern and Eastern provinces. Also the decadal rainfall average was increased from 14 mm to 18 mm within a week.

Predictions

14 day prediction: NOAA NCEP models predict a decrease in rainfall in the next two weeks compared to previous weeks. The entire country shall receive rainfall around 75 mm during 3rd to 9th December. Rainfall shall decrease throughout the country averaging around 35 mm during the week of 10th to 16th of December.

IMD WRF & IRI Model Forecast: According to the IMD WRF model the southern region (around Galle and Matara) of the country shall receive average rainfall up to 35 mm on 05th of December while light rainfall is expected in the Jaffna peninsula on the same day. Rainfall shall increase again on the 6th of December with the area around Batticaloa expected to receive up to 65 mm rain and the rest of the country expected to receive up to 35 mm rainfall.

Seasonal Prediction: As per IRI Multi Model Probability Forecast issued in November for the season December 2014 to February 2015, Rainfall shall remain climatological while the temperature shall be above normal with about 70% probability.

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- Daily Satellite Derived Rain fall Estimates
- Monthly Rain fall Estimates
- Decadal (10 Day) Satellite Derived Rainfall Estimates
- Weekly Average SST Anomalies

2. Predictions

- NCEP GFS Ensemble 1-14 day predictions
- WRF model forecast Regional Meteorological Center, Chennai, Indian Meteorological Department)
- Weekly precipitation forecast (IRI)
- Seasonal Predictions from IRI

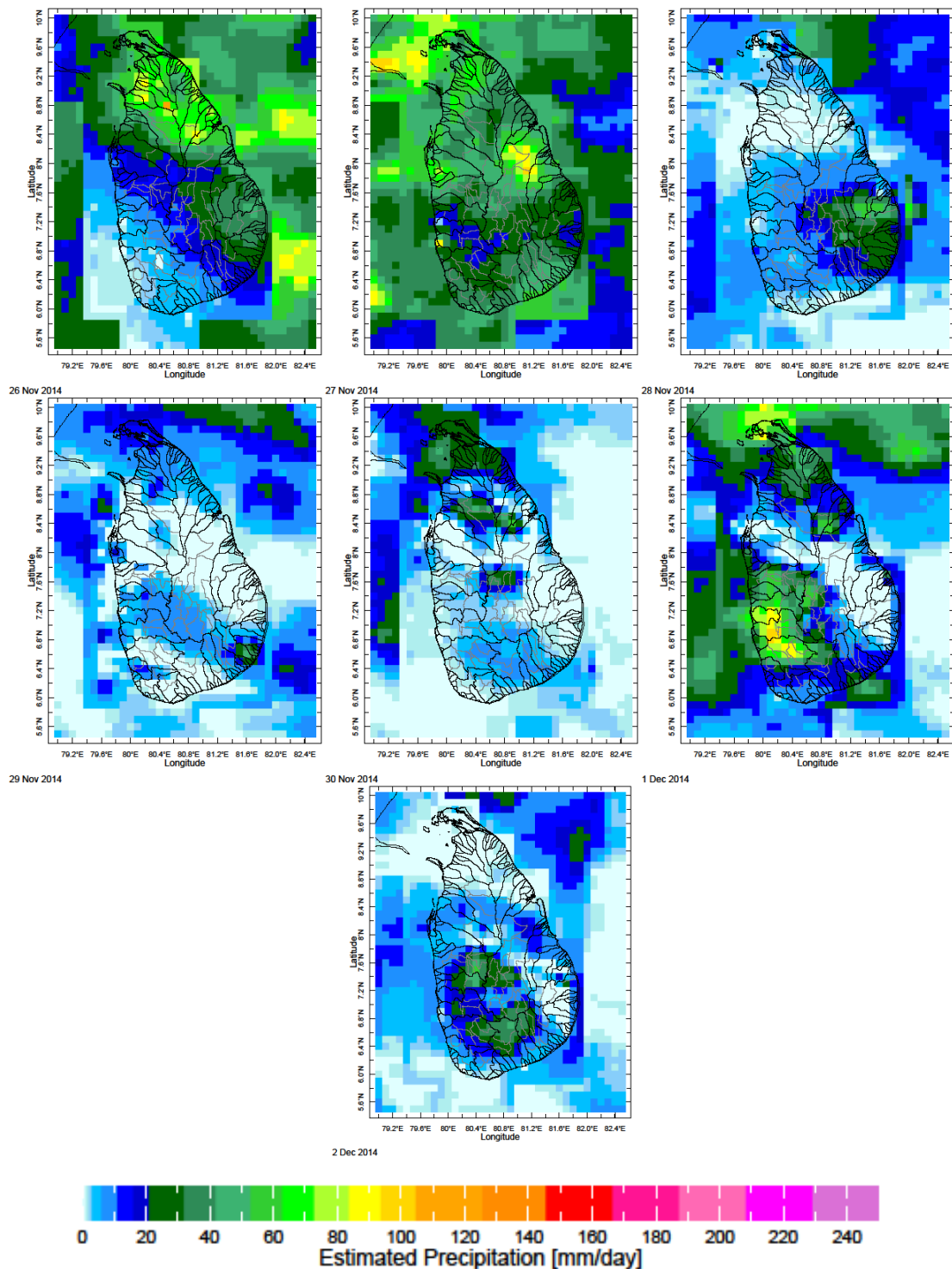
¹ International Research Institute for Climate and Society, Earth Institute at Columbia University, New York.

² These interpretations of hydro-meteorological conditions for the Mahaweli basins are provided for the use of the WMS/MASL.

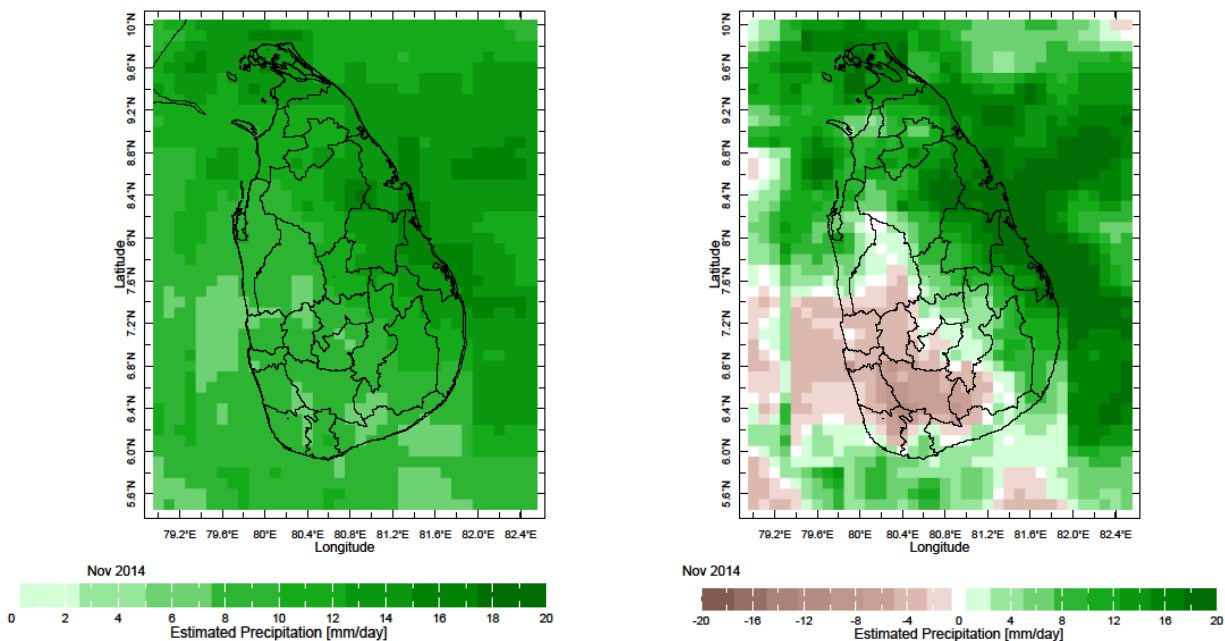
Official hydro-meteorological statements are provided by the Sri Lanka Department of Meteorology and Department of Irrigation.

1. Monitoring

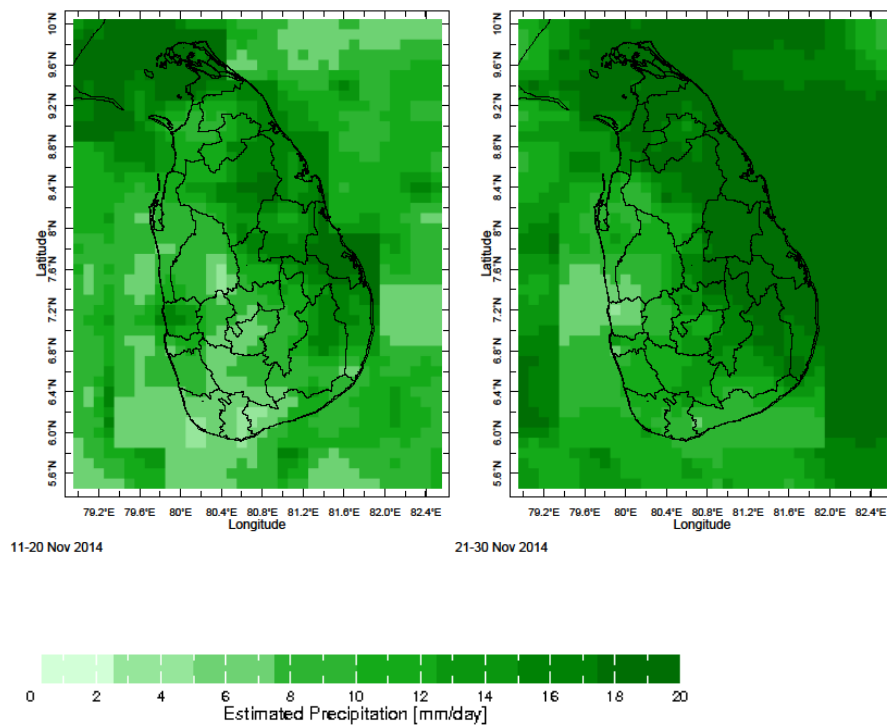
a) Daily Satellite Derived Rainfall Estimate Maps: 26th November-2nd December 2014 (Left-Right, Top-Bottom)



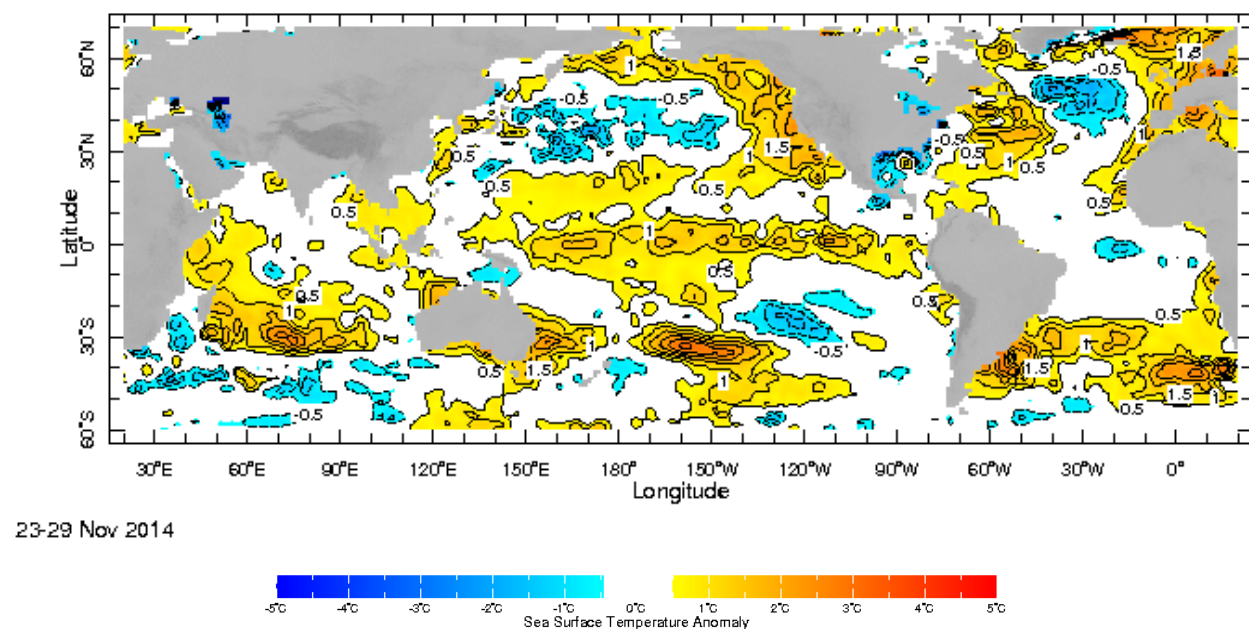
b) Monthly Satellite Derived Rainfall Estimates for November 2014 (Average – Left and Anomaly - Right)



c) Dekadal (10 Day) Satellite Derived Rainfall Estimates (11-20 Nov and 21-30 Nov, 2014)



d) Weekly Average SST Anomalies

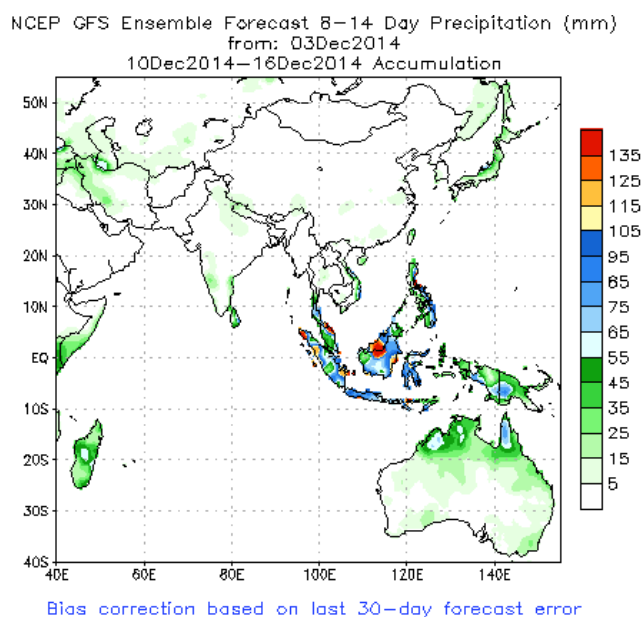
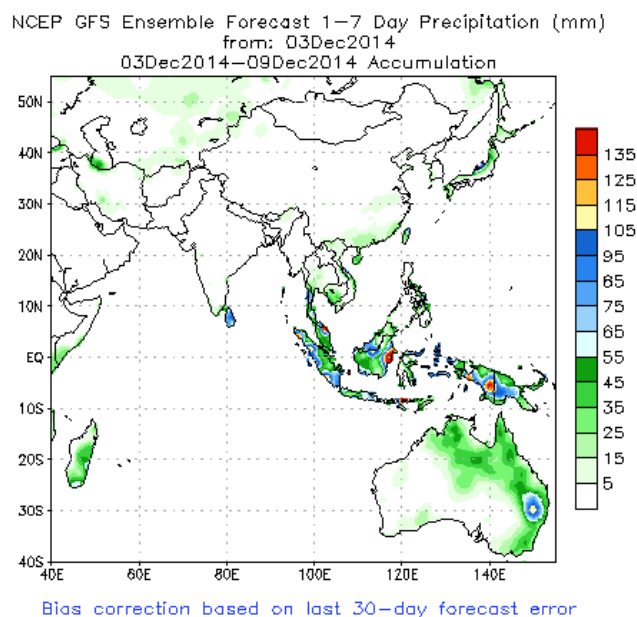


Weekly Average SST Anomalies ($^{\circ}\text{C}$), 23rd November-29th November, 2014

Data Source: NCEP Environmental monitoring center (Climatology 1971-2000)

2. Predictions

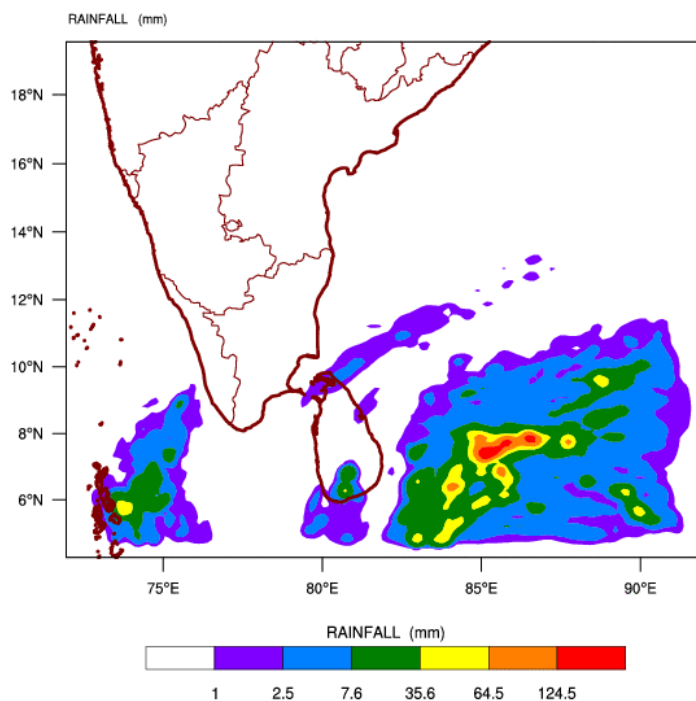
a) NCEP GFS Ensemble 1-14 day predictions, NOAA, Climate Prediction Centre, USA.



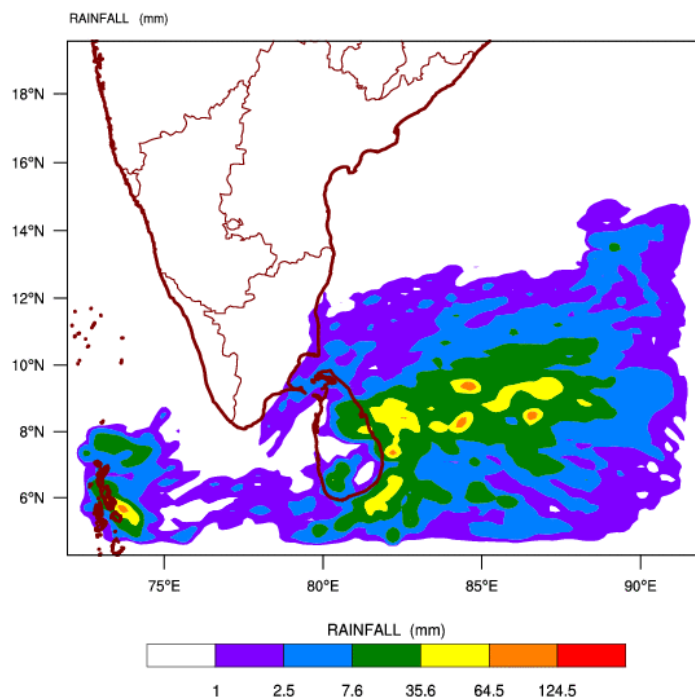
Source – NOAA Climate Prediction Center

b) WRF model forecast from Regional Meteorological Center, Chennai of Indian Meteorological Department

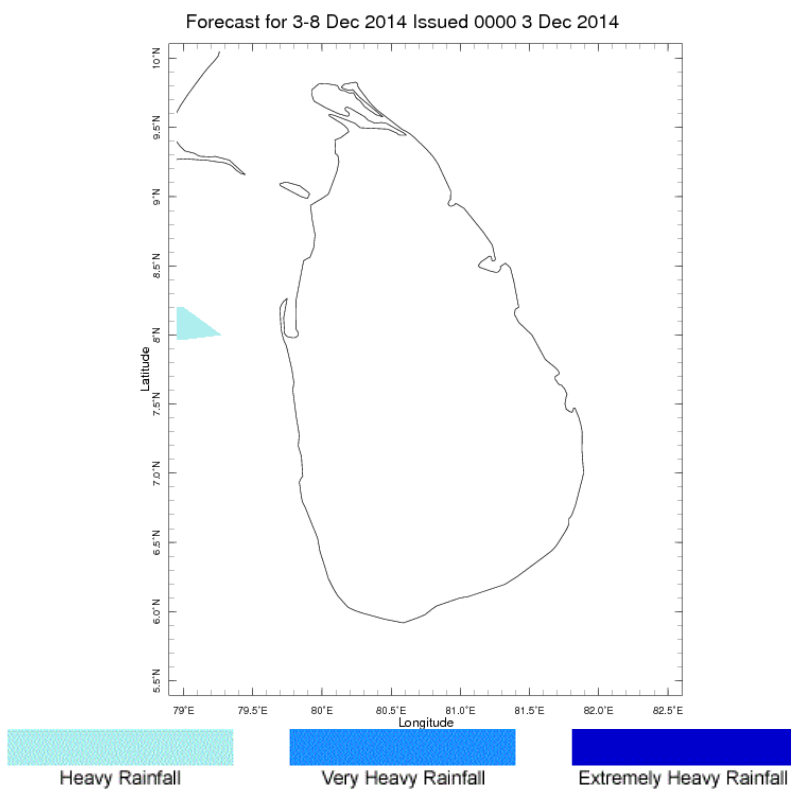
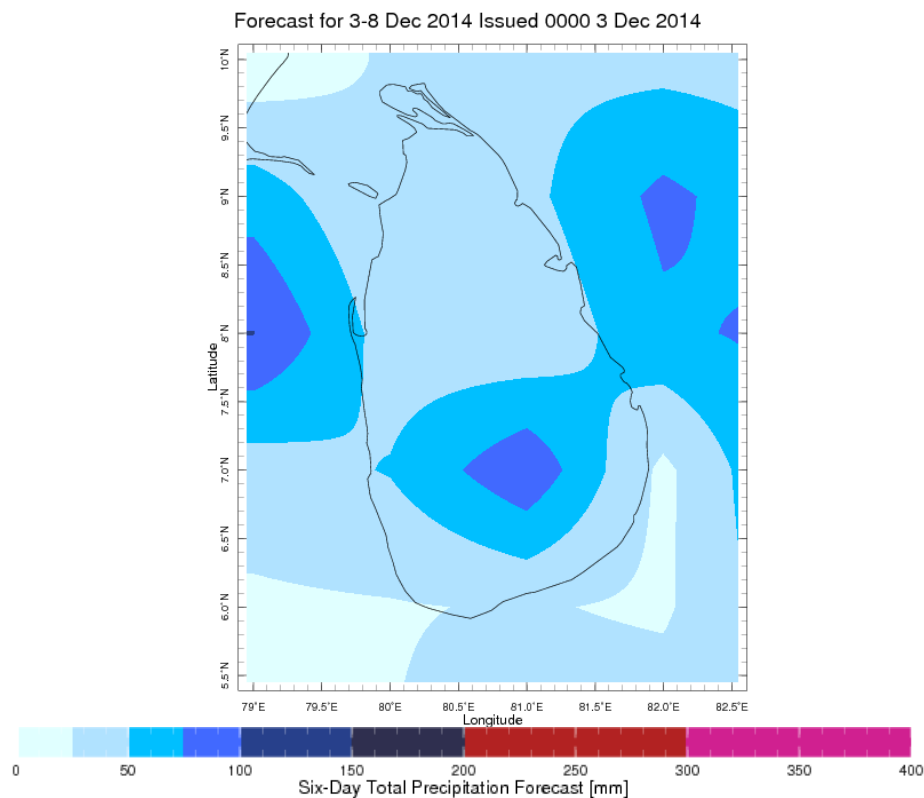
WRF MODEL FORECAST (48 HR.) RAINFALL(mm)\
based on 00 UTC of 03-12-2014 valid for 03 UTC of 05-12-2014



WRF MODEL FORECAST (72 HR.) RAINFALL(mm)\
based on 00 UTC of 03-12-2014 valid for 03 UTC of 06-12-2014

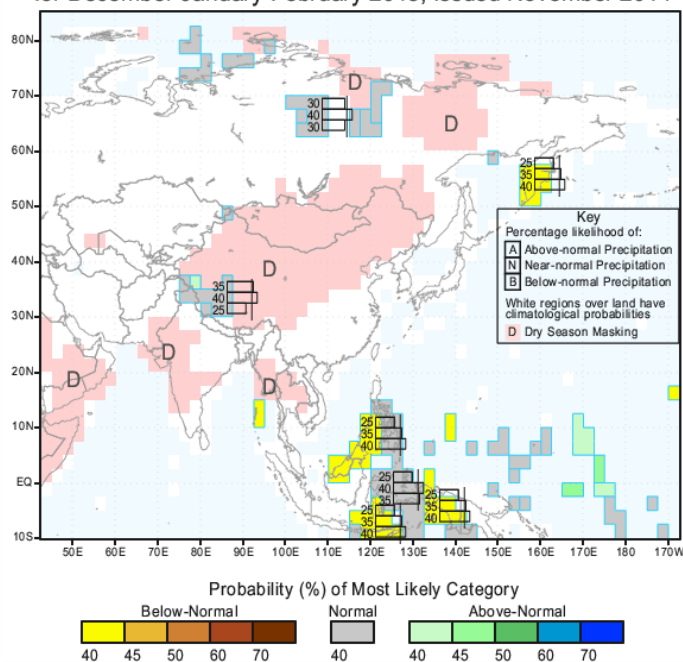


c) Weekly Precipitation Forecast for 3rd December – 8th December (Precipitation Forecast in Context Map Tool, IRI)



e) Seasonal Rainfall and Temperature Predictions from IRI

IRI Multi-Model Probability Forecast for Precipitation
for December-January-February 2015, Issued November 2014



IRI Multi-Model Probability Forecast for Temperature
for December-January-February 2015, Issued November 2014

