

Experimental Climate Monitoring and Prediction

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FECT BLOG

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

FECT WEBSITES

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

4th December, 2014 PACIFIC SEAS STATE

During October through 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

Around 0.5°C below average sea surface temperature was observed towards the northern coast.

MJO STATE

MJO is in Phase 7 in Western Pacific and shall slightly enhance the rainfall in Sri Lanka.

Highlights

Monitoring and Predictions:

Light rainfall was observed throughout the country in the previous week with highest rainfall in the Ampara, Batticaloa and Ratnapura. 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 northern sea region of Sri Lanka shows a below average sea surface temperature.

Summary

Monitoring

Weekly Monitoring: On 2nd of December Central province has received around 30 mm rainfall. From 3rd to 7th of December comparatively dry conditions were observed throughout the country with the exceptions of Ampara, Batticaloa, Galle and Matara districts that has received around 60 mm rainfall in average. On 8th of December slight rainfall was observed in the entire country in general while Ratnapura district has received high rainfall above 140 mm. Ampara, Batticaloa and Ratnapura have received the highest rainfalls 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 65 mm during 10th to 16th December. Rainfall shall decrease throughout the country averaging around 25 mm during the week of 17th to 23rd of December.

IMD WRF & IRI Model Forecast: According to the IMD WRF model the entire country shall receive average rainfall up to 7.6 mm on 12th of December. Rainfall is expected to remain the same throughout the country on 13th of December as well while the Western region shall have an increased rainfall up to 64.5 mm.

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.

Inside this Issue

1. Monitoring

- 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

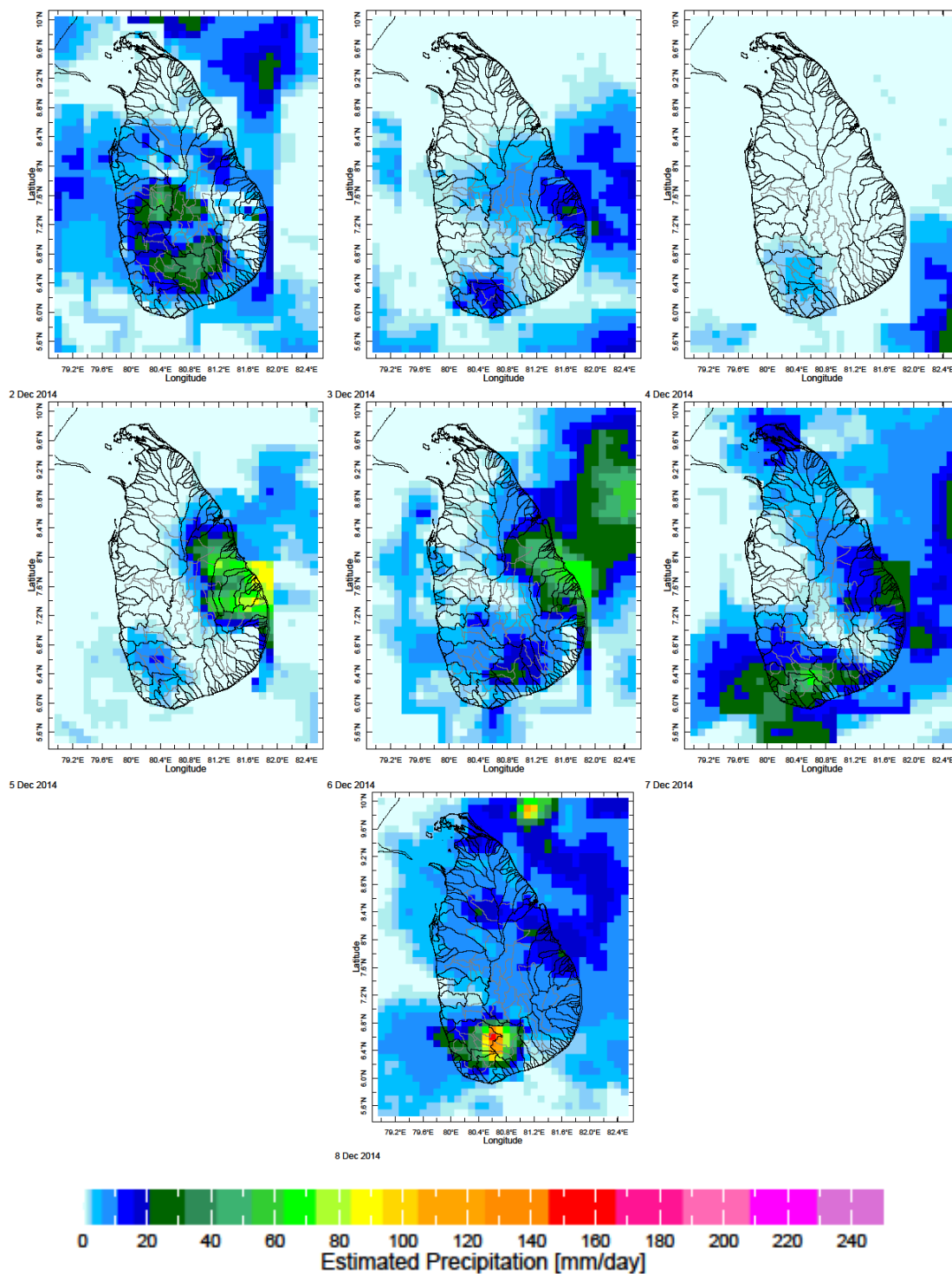
¹ International Research Institute for Climate and Society, Earth Institute at Columbia University, New York.

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

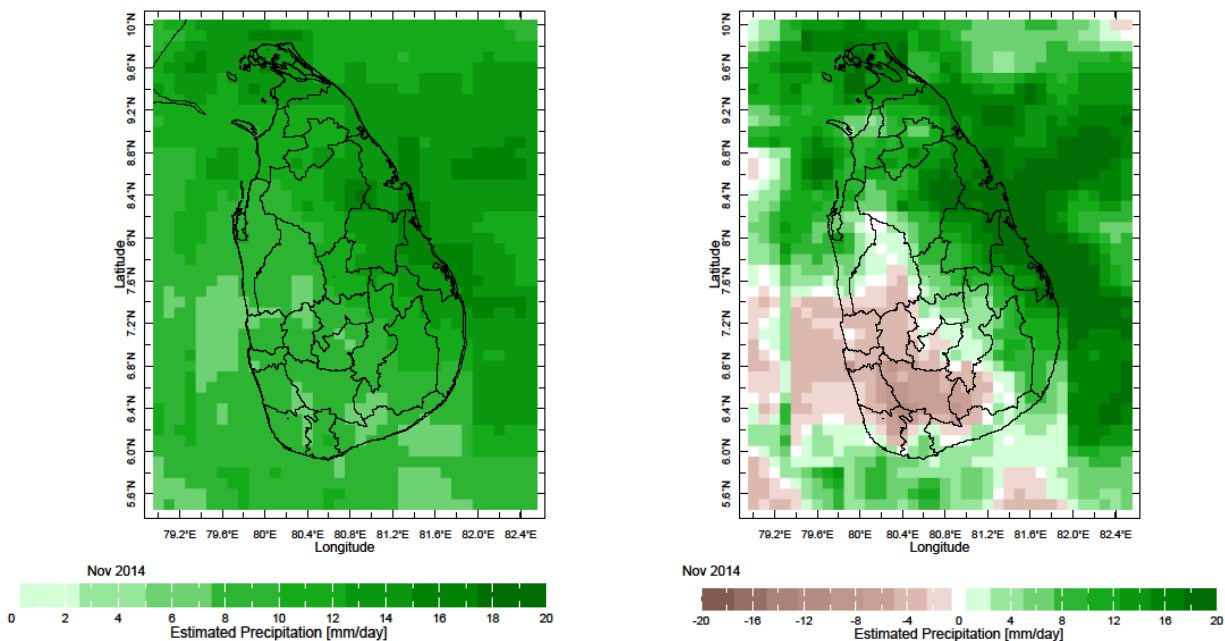
Official hydro-meteorological statements are provided by the Sri Lanka Department of Meteorology and Department of Irrigation.

1. Monitoring

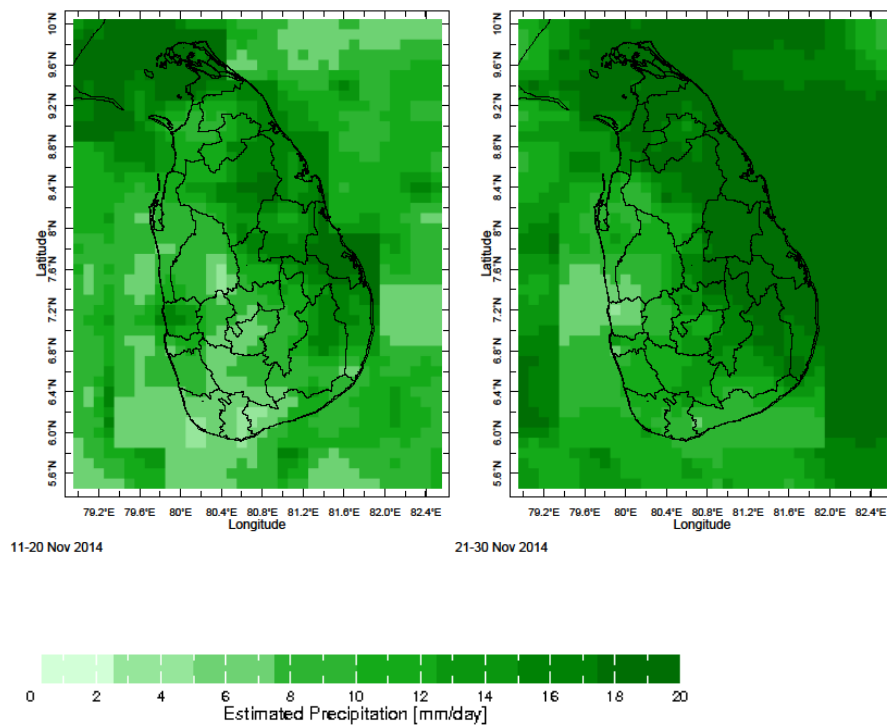
a) Daily Satellite Derived Rainfall Estimate Maps: 2nd December- 8th December 2014 (Left-Right, Top-Bottom)



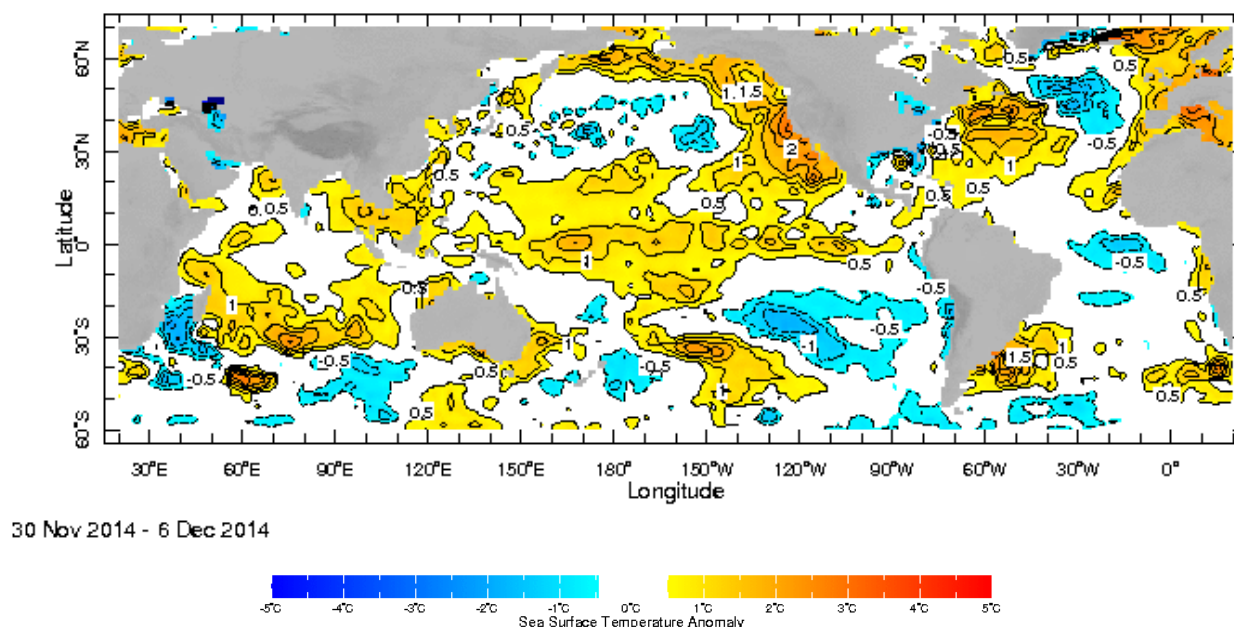
b) Monthly Satellite Derived Rainfall Estimates for November 2014 (Average – Left and Anomaly - Right)



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



d) Weekly Average SST Anomalies

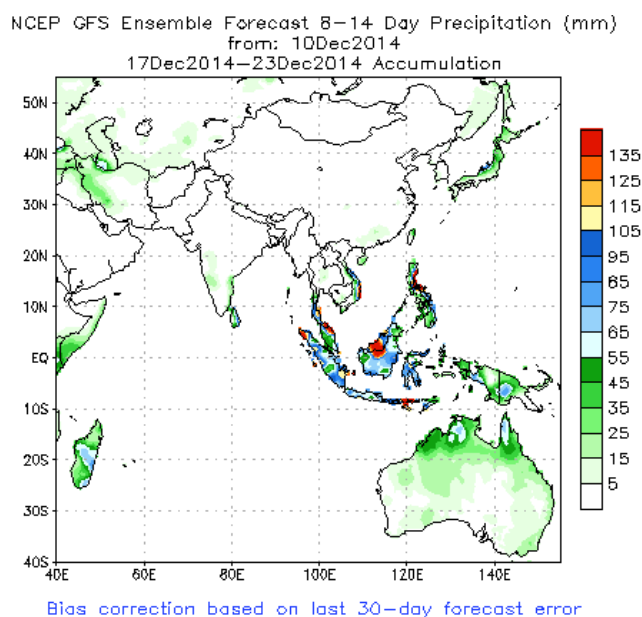
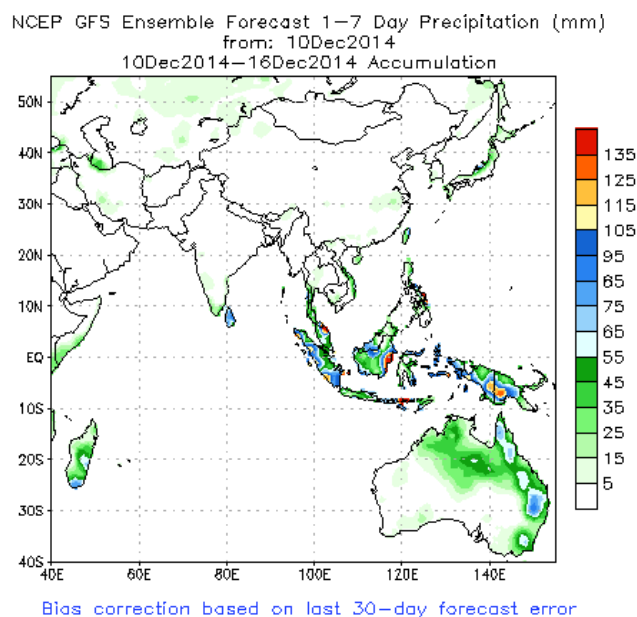


Weekly Average SST Anomalies ($^{\circ}\text{C}$), 30th November – 6th December, 2014

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

2. Predictions

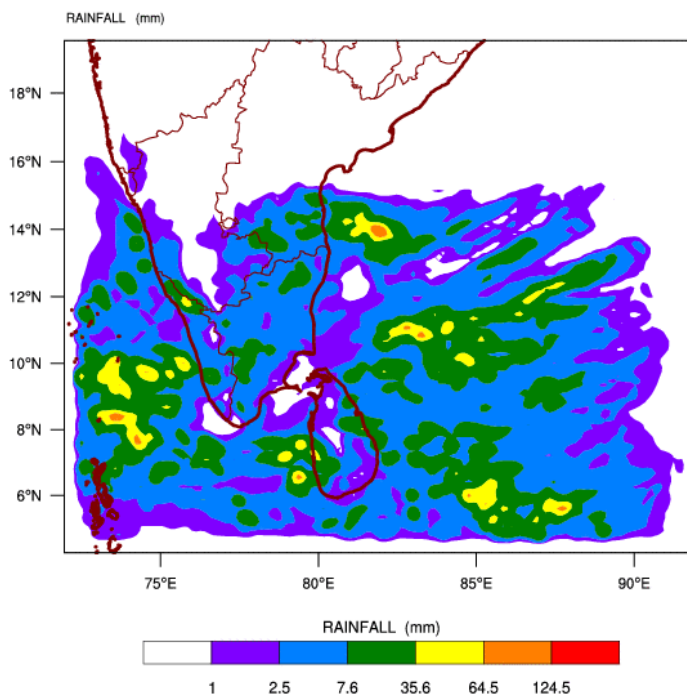
a) NCEP GFS Ensemble 1-14 day predictions, NOAA, Climate Prediction Centre, USA.



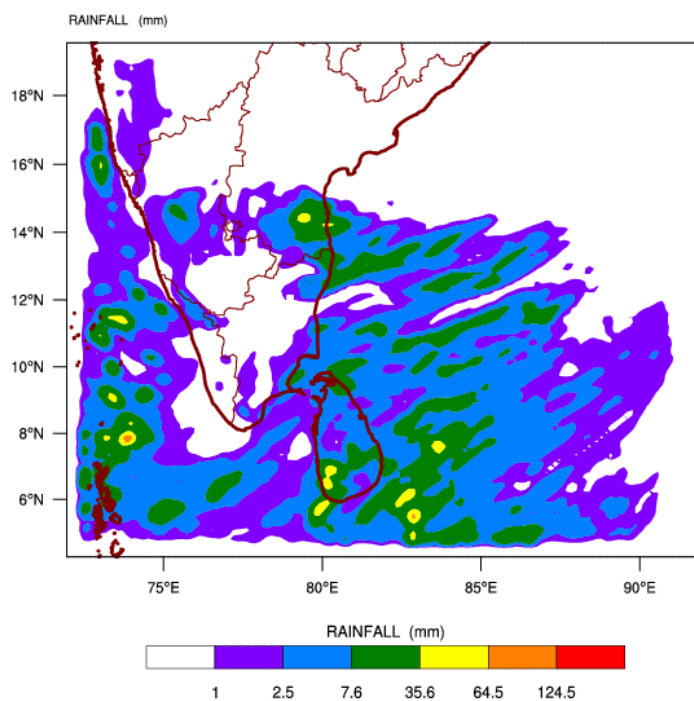
Source – NOAA Climate Prediction Center

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

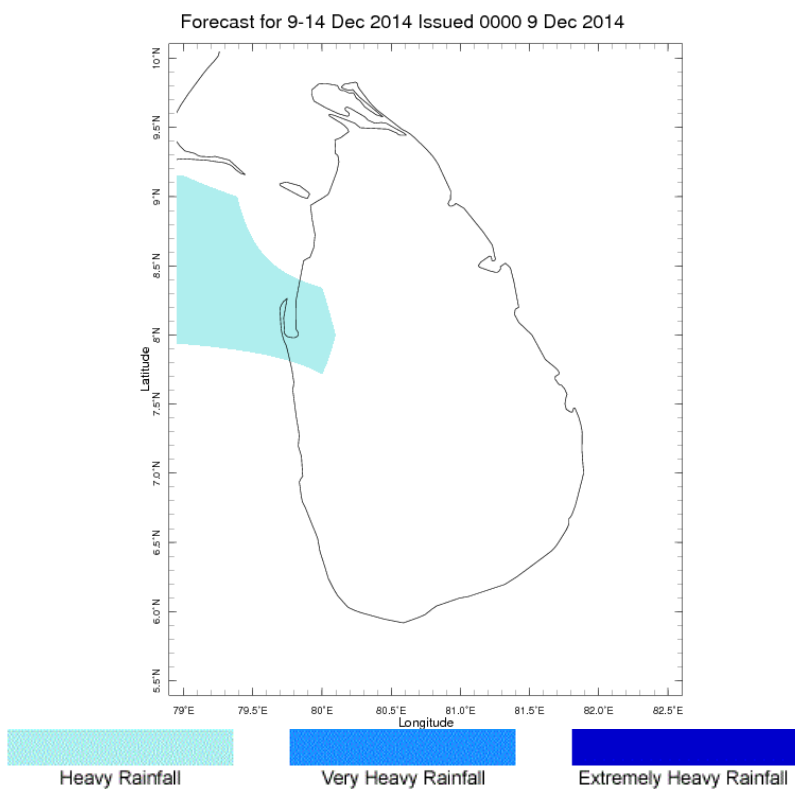
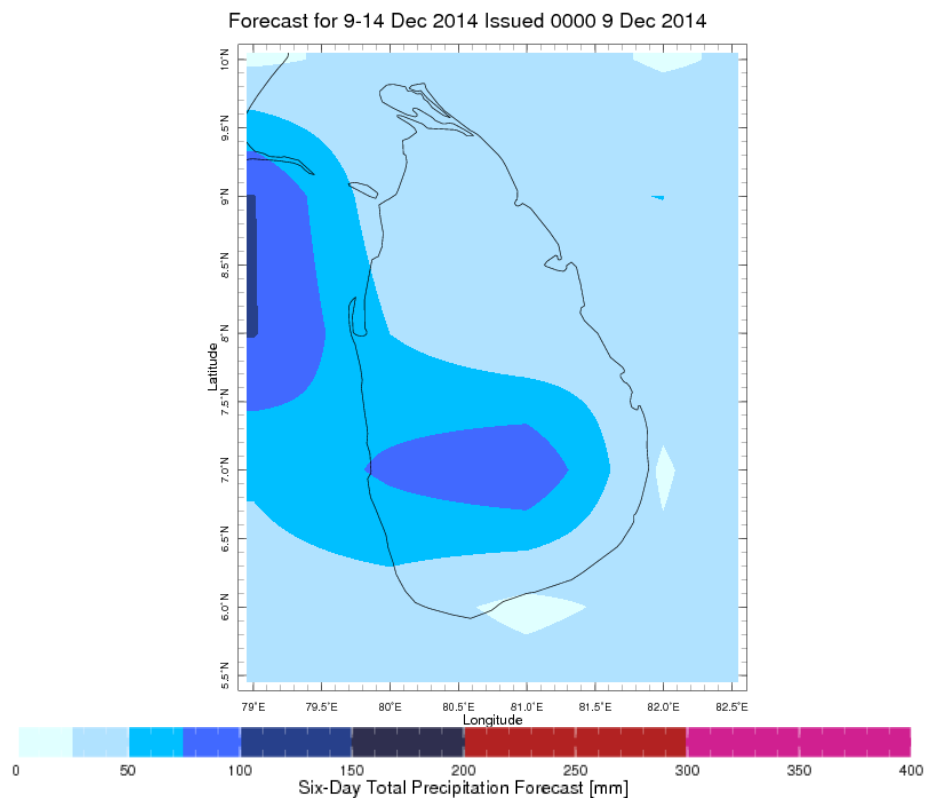
WRF MODEL FORECAST (48 HR.) RAINFALL(mm)\
based on 00 UTC of 10-12-2014 valid for 03 UTC of 12-12-2014



WRF MODEL FORECAST (72 HR.) RAINFALL(mm)\
based on 00 UTC of 10-12-2014 valid for 03 UTC of 13-12-2014

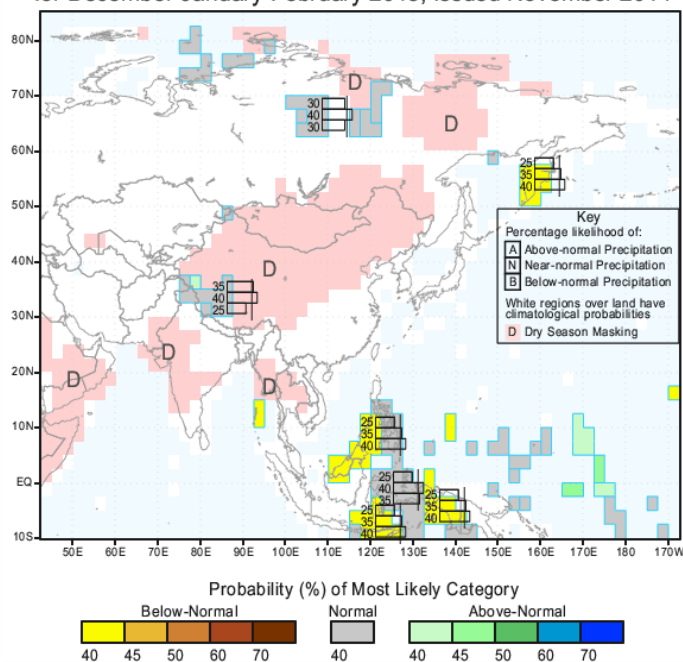


c) Weekly Precipitation Forecast for 9th December – 14th December (Precipitation Forecast in Context Map Tool, IRI)



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

