

Experimental Climate Monitoring and Prediction

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3 October 2013

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/>

**September 19,
2013**

PACIFIC SEAS STATE

During August through early September the observed ENSO conditions remained neutral. Most of the ENSO prediction models indicate a continuation of neutral ENSO through 2013 & the first quarter of 2014. However, a few (mainly statistical) models call for cooling towards borderline or weak La-Nina conditions for northern autumn into winter, while a few others (mainly dynamical) forecast a warming toward borderline or weak El-Nino conditions for this same time frame.

(Text Courtesy IRI)

INDIAN OCEAN STATE

The sea surface temperature around Sri Lanka was neutral during 22nd-28th September 2013.

MJO STATE

MJO is at phase 5 and shall not influence Sri Lanka rainfall.

Highlights

Monitoring and Predictions:

Galle district shall receive higher rainfall than the other regions on tomorrow (4th October 2013) and rainfall shall decrease thereafter. However, rainfall is not predicted till 5th of October and 8th-12th October 2013. During 5th-8th low amount of rainfall is likely to observe. After 12th October rainfall shall increase gradually.

Summary

Monitoring

Weekly Monitoring: During 24th-30th September 2013, rainfall ranged 5-20 mm. More rainfall observed on 28th for Northern regions of the Island. Rest of the days was dry.

Monthly Monitoring: Central and Northern provinces received an above average rainfall during the month of August.

Predictions

7-day prediction: South-western regions shall receive 5-35 mm of rainfall. However, Galle-Matara shall receive less than 5 mm of rainfall during 2nd-8th October 2013.

IMD WRF Model Forecast & IRI forecast: For 4th of October, IMD WRF model predicts less than 65 mm of rainfall for Galle district and shall spread in a reducing manner toward the coastal regions of Puttalam-Matara and central highlands. For 5th of October, the model predicts less than 3 mm of rainfall only for Galle-Colombo. NOAA model predicts low rainfall (less than 25 mm/week) for entire country during 30th September-5th October.

30 Days Prediction: Overall- Rainfall is not predicted till 5th of October and 8th-12th October 2013. During 5th-8th low amount of rainfall is likely to observe. After 12th October rainfall shall increase gradually. **Western Slopes** – The rainfall pattern persisting in the entire country shall be observed in this region. But amount of rainfall during 5th-8th shall higher than the rainfall observe for the entire country. **Western Coast** – Rainfall is not predicted till 15th of October 2013. **Eastern Slopes**– Rainfall is not predicted till 11th of October 2013. **Eastern Coast** – Rainfall shall vary below 3 mm/day till 17th October. **Northern region-** The rainfall pattern persisting in the entire country shall be observed in this region. **Southern Region-** The rainfall pattern persisting in the entire country shall be observed in this region.

Seasonal Prediction: As per IRI Multi Model Probability Forecast issued on September 2013; for October 2013 to December 2013, there is a 60-70% probability for temperature to be above normal in the country while the rainfall is to be climatological.

Inside this Issue

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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

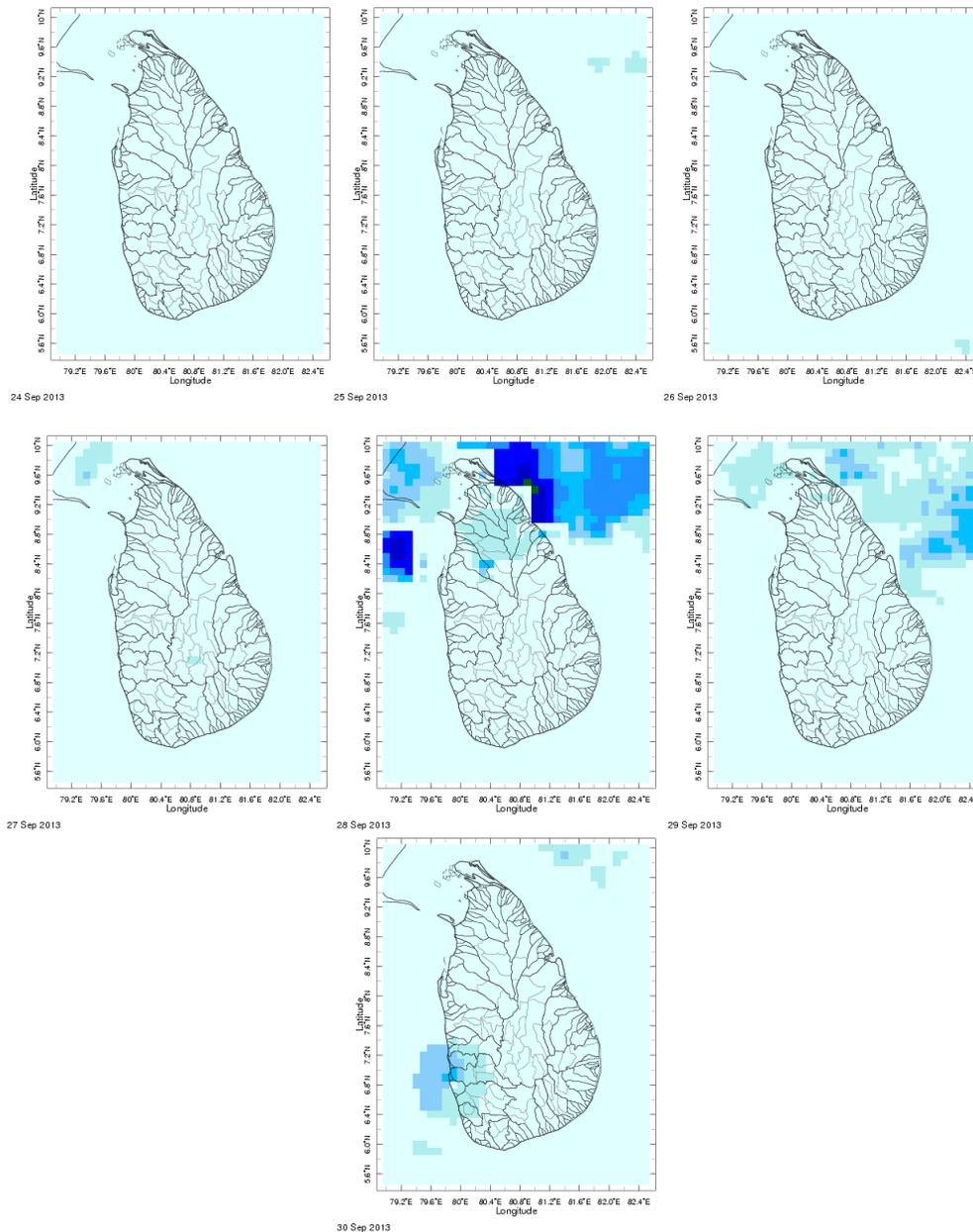
- NCEP GFS Ensemble 1-7 day predictions
- WRF model forecast Regional Meteorological Center, Chennai, Indian Meteorological Department)
- Weekly precipitation forecast (IRI)
- 1 month experimental predictions by Paul Roundy and L. Zubair
- Seasonal Predictions from IRI

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

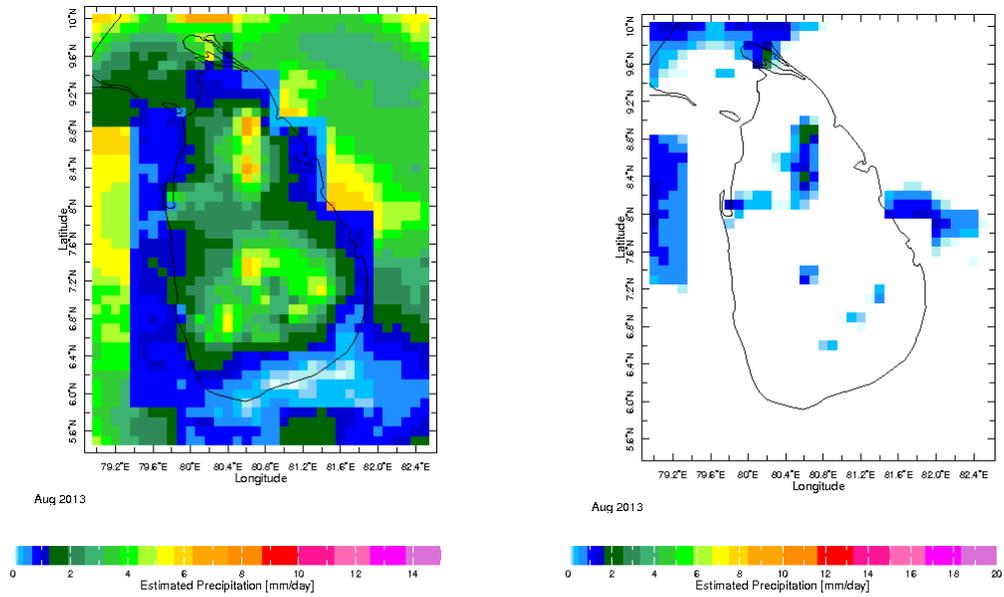
² These interpretations of hydro-meteorological conditions for the Mahaweli basins are provided for the use of the WMS/MASL.

1. Monitoring

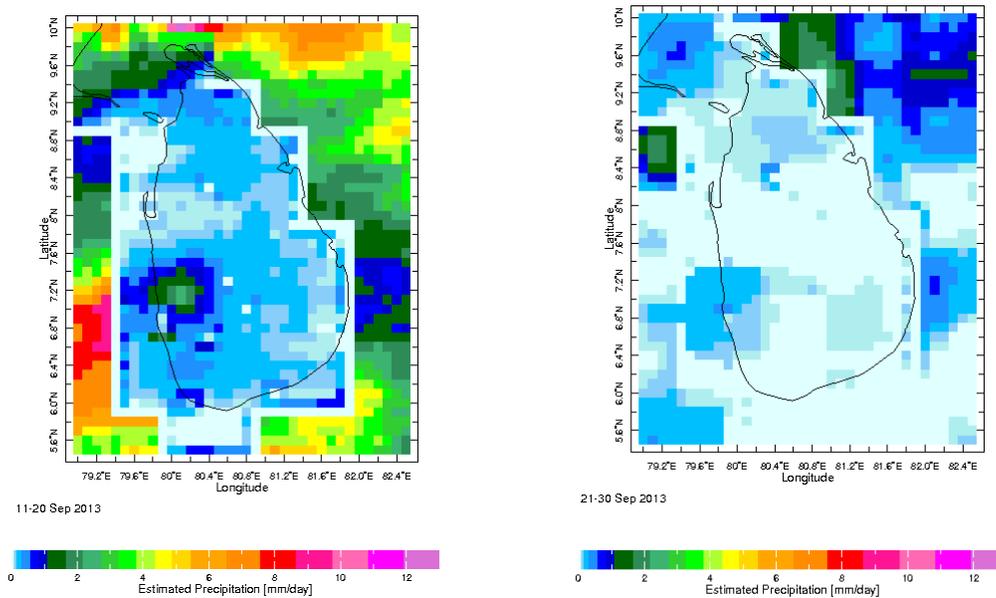
a) Daily Satellite Derived Rainfall Estimate Maps: 24th - 30th September 2013 (Left-Right, Top-Bottom)



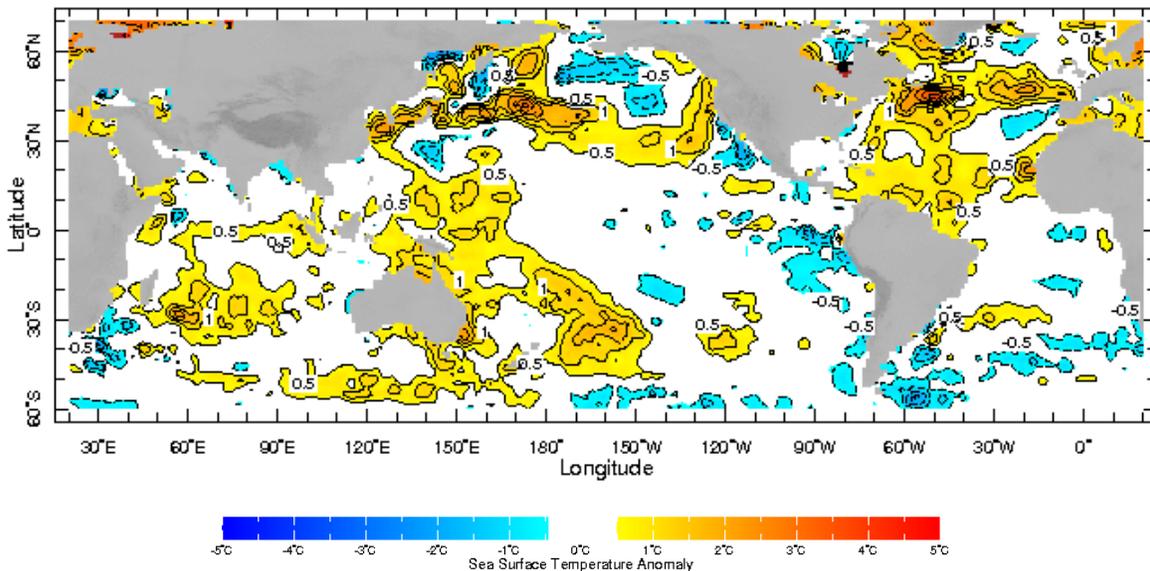
b) Monthly Satellite Derived Rainfall Estimates for August 2013 (Total – Left and Anomaly - Right)



c) Dekadal (10 Day) Satellite Derived Rainfall Estimates (01-10 September & 11-20 September, 2013)



b) Weekly Average SST Anomalies

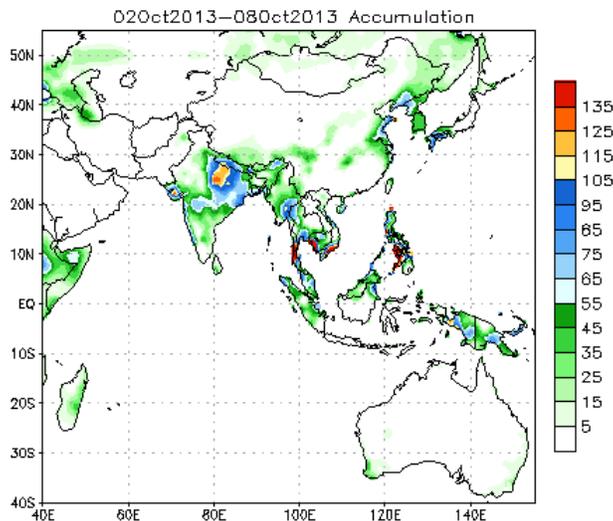


Weekly Average SST Anomalies ($^{\circ}$ C), 22nd -28th September, 2013

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

2. Predictions

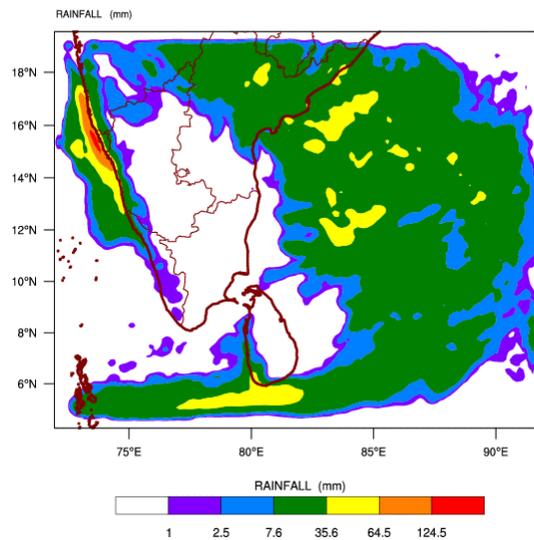
a) NCEP GFS Ensemble 1-7 day predictions, NOAA, Climate Prediction Centre, USA.



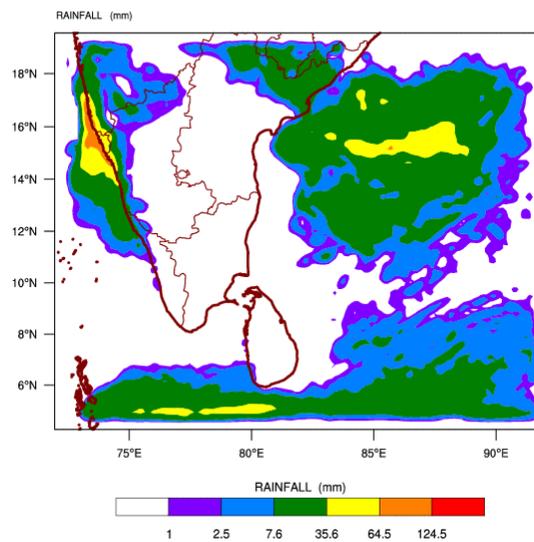
Source – NOAA Climate Prediction Center

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

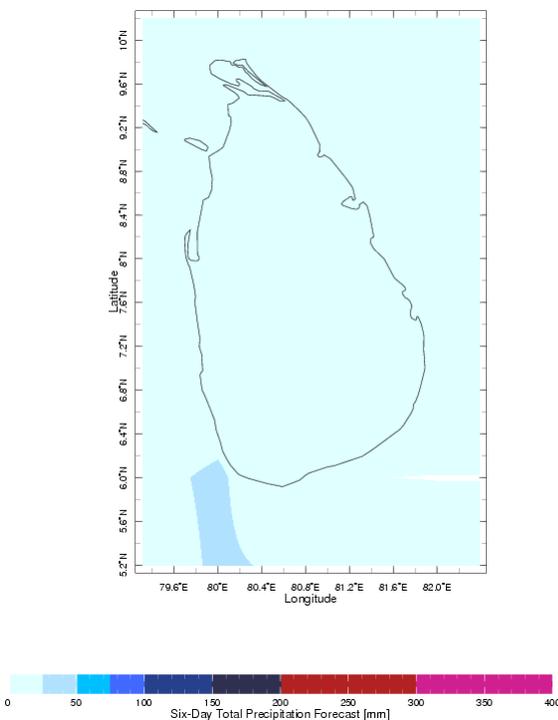
WRF MODEL FORECAST (48 HR.) RAINFALL(mm)
based on 00 UTC of 02-10-2013 valid for 03 UTC of 04-10-2013



WRF MODEL FORECAST (72 HR.) RAINFALL(mm)
based on 00 UTC of 02-10-2013 valid for 03 UTC of 05-10-2013



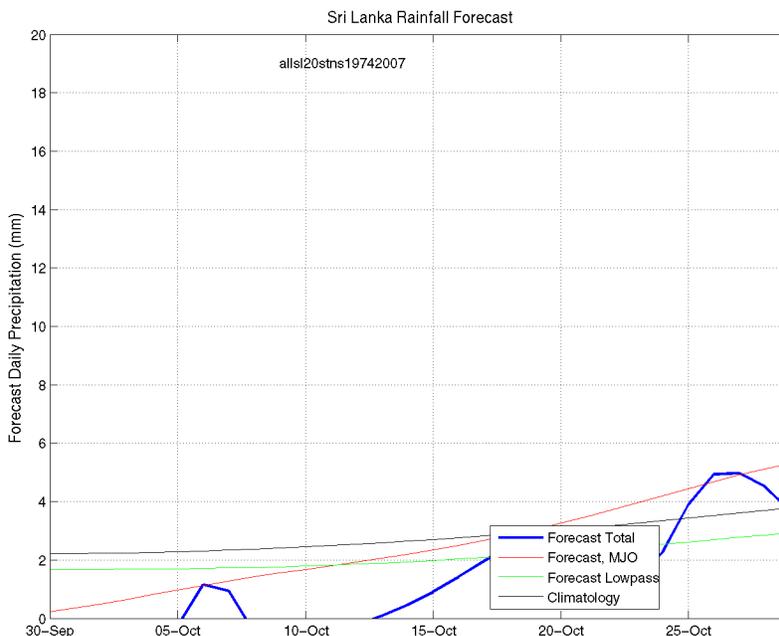
c) Weekly Precipitation Forecast for 30th September-5th October 2013 (Precipitation Forecast in Context Map Tool, IRI)



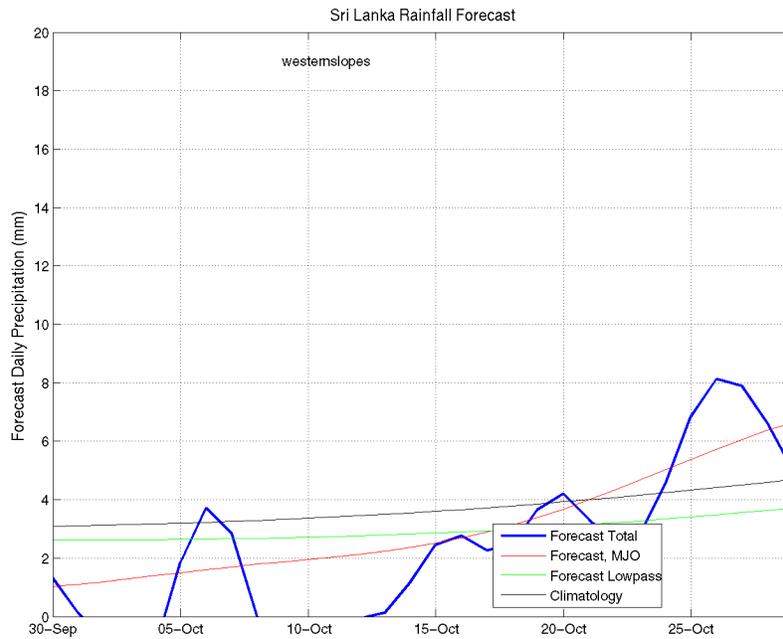
d) 1 month experimental predictions by Paul Roundy and L. Zubair

Predictions based on observed cloud cover and atmospheric waves. Issued 1st October, 2013

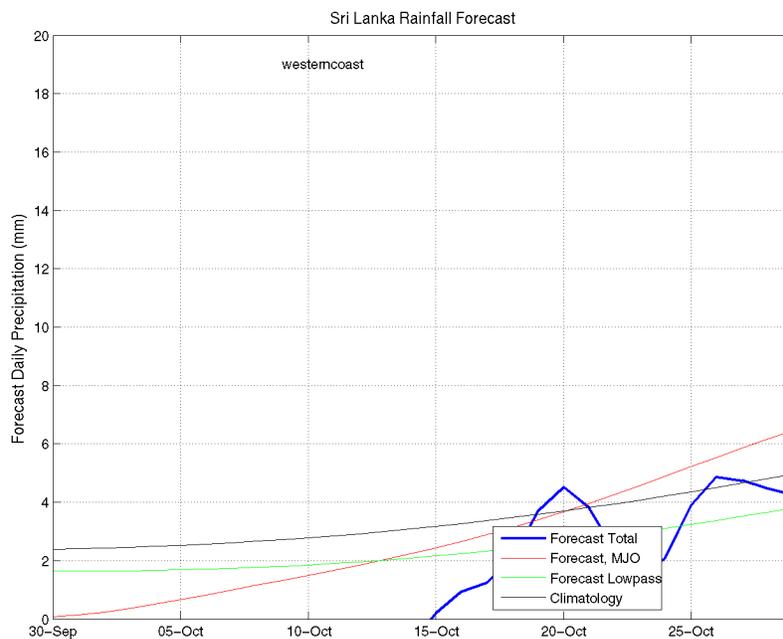
All Sri Lanka (Rainfall Scale from 0-20mm/day)



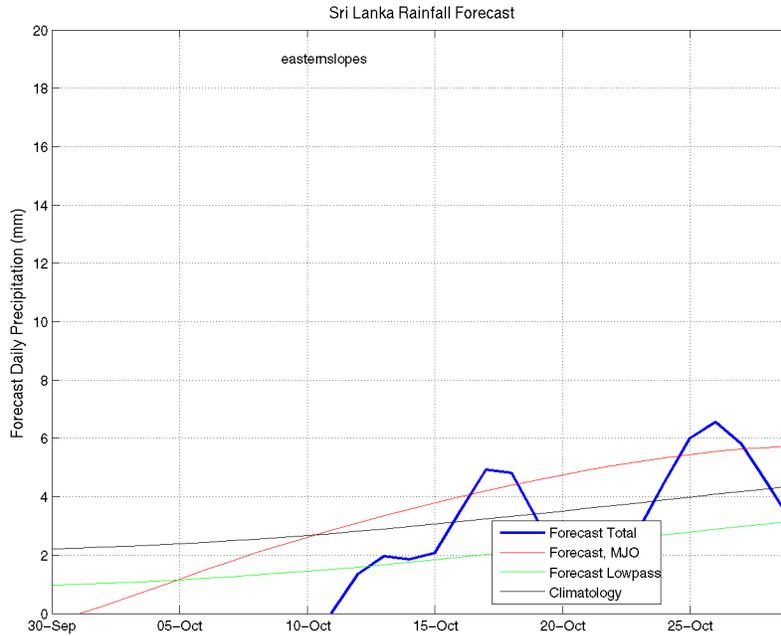
Western Slopes (Rainfall Scale from 0-20 mm/day)



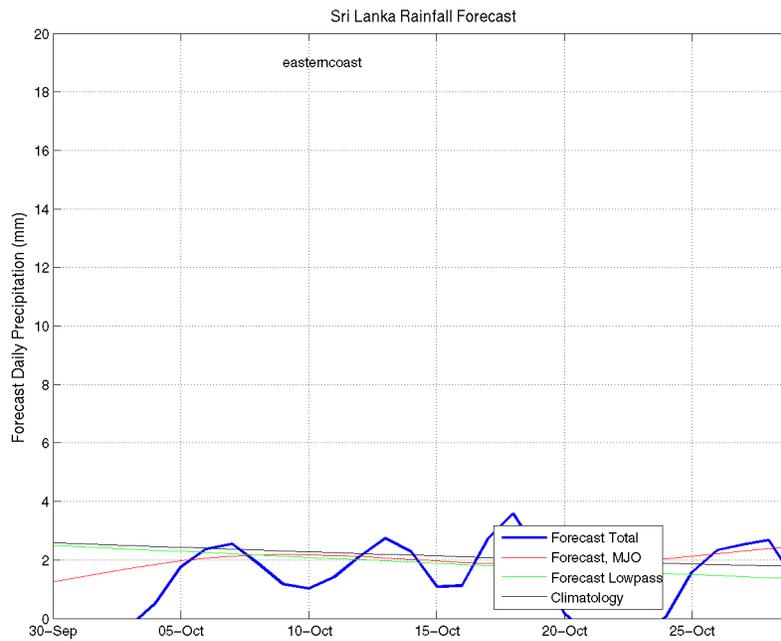
Western Coast (Rainfall Scale from 0-20 mm/day)



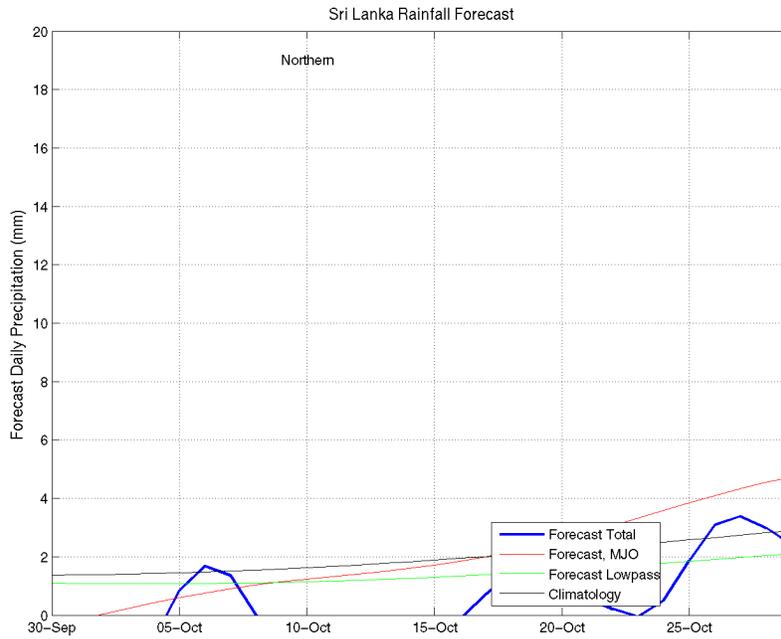
Eastern Slopes (Rainfall Scale- from 0-20 mm/day)



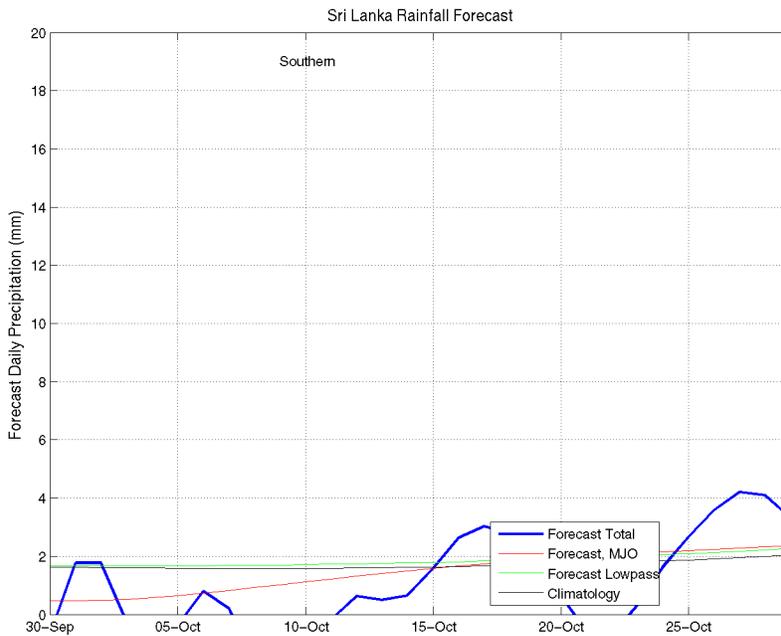
Eastern Coast (Rainfall Scale- from 0-20 mm/day)



Northern Region (Rainfall Scale- from 0-20 mm/day)

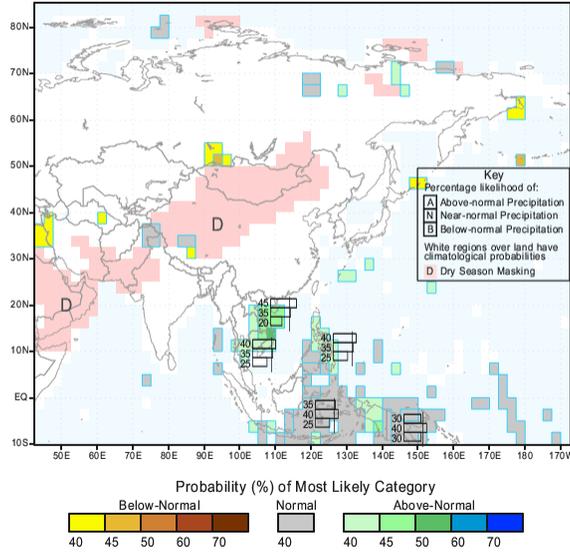


Southern Region (Rainfall Scale- from 0-20 mm/day)



e) Seasonal Rainfall and Temperature Predictions from IRI

IRI Multi-Model Probability Forecast for Precipitation
for October-November-December 2013, Issued September 2013



IRI Multi-Model Probability Forecast for Temperature
for October-November-December 2013, Issued September 2013

