

Experimental Climate Monitoring and Prediction

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13 September 2013

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/>

August 15, 2013 PACIFIC SEAS STATE

During July through early August the observed ENSO conditions remained neutral. Most of the ENSO prediction models indicate a continuation of neutral ENSO through the remainder of 2013 & into early 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 some warming towards 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 1st-7th September 2013.

MJO STATE

MJO is at phase 2 and 3 and shall influence Sri Lanka rainfall.

Highlights

Monitoring and Predictions:

Puttalam to Galle districts and Jaffna peninsula are likely to receive heavy rainfall on coming two days (14th & 15th September) and shall persist till 16th September. However, ongoing rainfall is likely to decrease gradually till 24th September. Significant rainfall is note predicted for the entire country, except for Eastern coasts which significant rainfall is likely to observe during 13th-14th September.

Summary

Monitoring

Weekly Monitoring: During 3rd-10th September 2013, rainfall ranged 5-60 mm. Maximum rainfall was observed for small regions at Ampara and Batticaloa districts on 3rd & 5th September. Northern peninsula received more rainfall than the remaining parts of the island.

Monthly Monitoring: Southwestern regions of Sri Lanka received an above average rainfall during the month of July. The entire country received less than 15 mm of daily rainfall, with Colombo and Gampaha districts receiving the highest rainfall during the month (14 mm/day).

Predictions

7-day prediction: Southern 1/3rd of the island shall receive 5-55 mm of rainfall and Northern 1/3rd of the island shall receive 55-105 mm of rainfall during 11th-17th September 2013.

IMD WRF Model Forecast & IRI forecast: For 14th & 15th of September, IMD WRF model predicts less than 65 mm of rainfall for the coastal regions of Puttalam-Galle districts and shall spread to nearby regions (including Jaffna peninsula) in a reducing manner. NOAA model predicts high rainfall (5-75 mm/week) for Colombo-Galle districts and Jaffna peninsula during 11th-16th September.

30 Days Prediction: Overall- Ongoing rainfall is likely to decrease gradually till 24th. No significant rainfall events are expected. **Western Slopes** – The rainfall pattern persisting in the entire country shall be observed in this region, but rainfall is likely to be constant during 19th-25th September. **Western Coast** – The rainfall shall increase till 16th and thereafter it shall reduce till 23rd. **Eastern Slopes**– Rainfall shall decrease till 19th September and rainfall is note predicted thereafter. **Eastern Coast** – Significant rainfall event is likely to be present during 13th-14th September. Thereafter rainfall shall reduce till 21st. **Northern region-** The rainfall pattern persisting in the entire country shall be observed in this region. **Southern Region-** Rainfall is likely to increase during 14th-16th & shall decrease in a same rate till 19th. Rainfall is not predicted during 19th-23rd September.

Seasonal Prediction: As per IRI Multi Model Probability Forecast issued on August 2013; for September 2013 to November 2013, there is a 50-60% 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

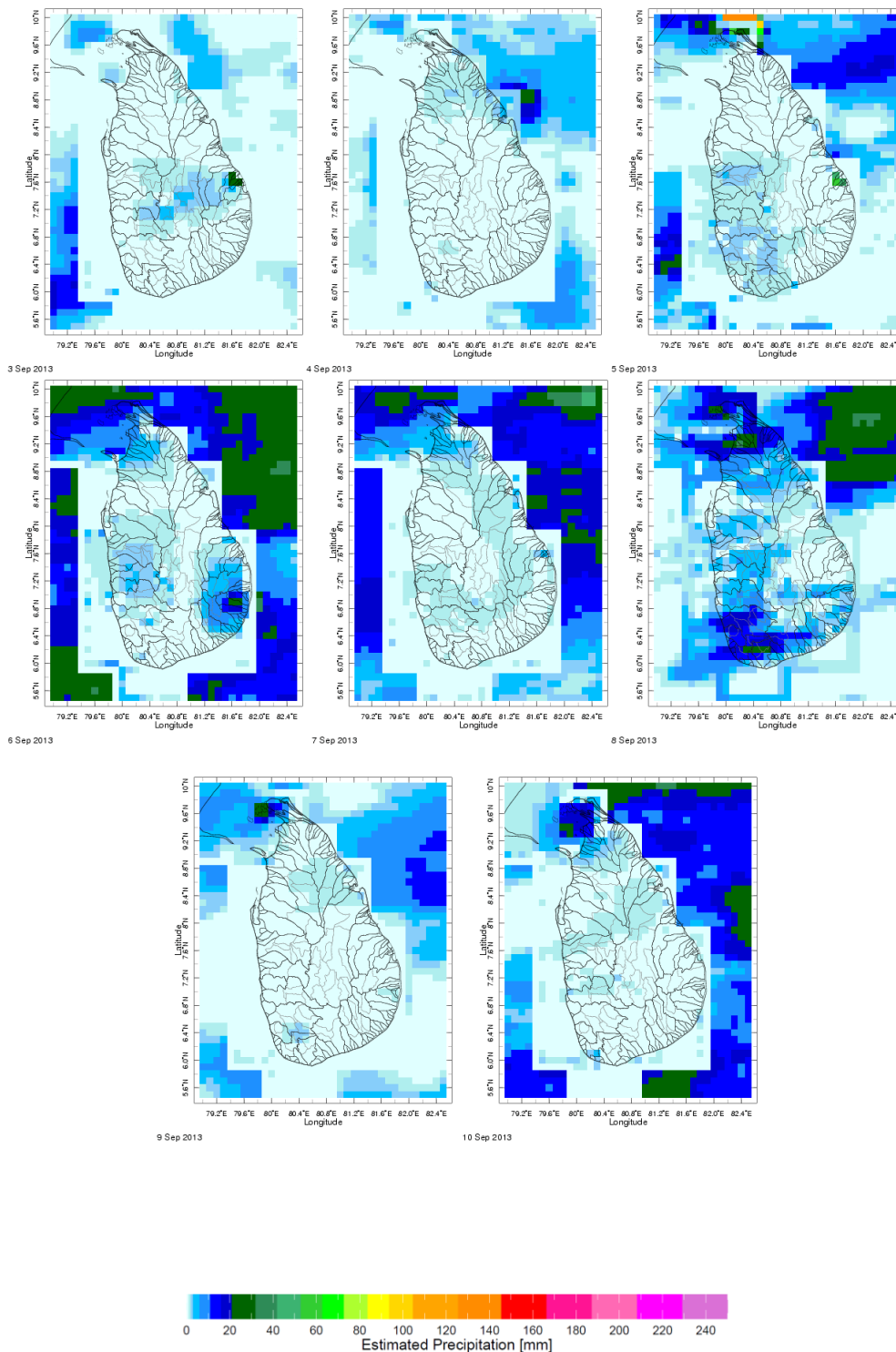
- NCEP GFS Ensemble 1-7 day predictions
- WRF model forecast Regional Meteorological Center, Chennai, Indian Meteorological Department)
- Weekly precipitation forecast (IRI)
- 1 month experimental predictions by Paul Roundy and L. Zubair
- Seasonal Predictions from IRI

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

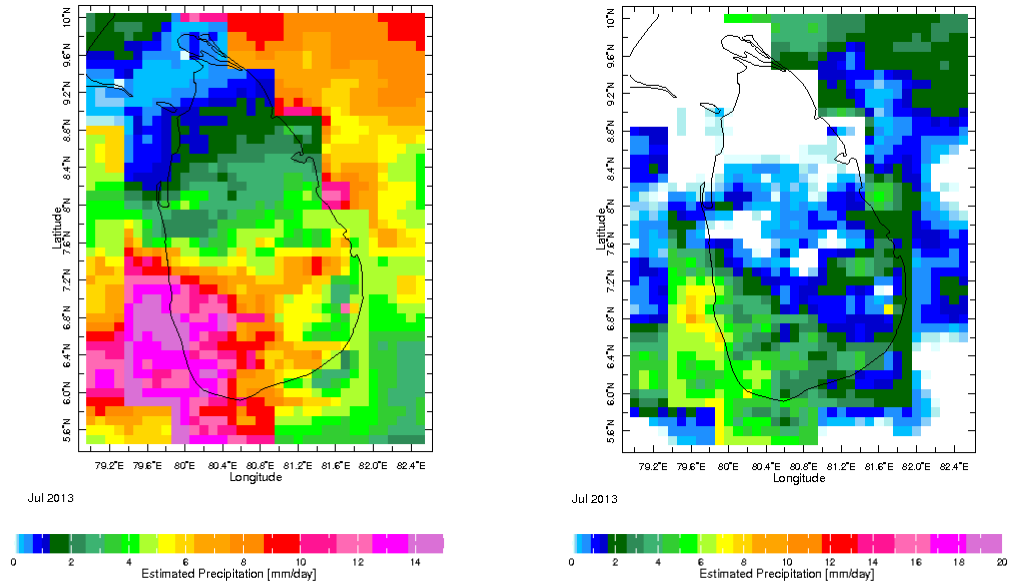
² These interpretations of hydro-meteorological conditions for the Mahaweli basins are provided for the use of the WMS/MASL.

1. Monitoring

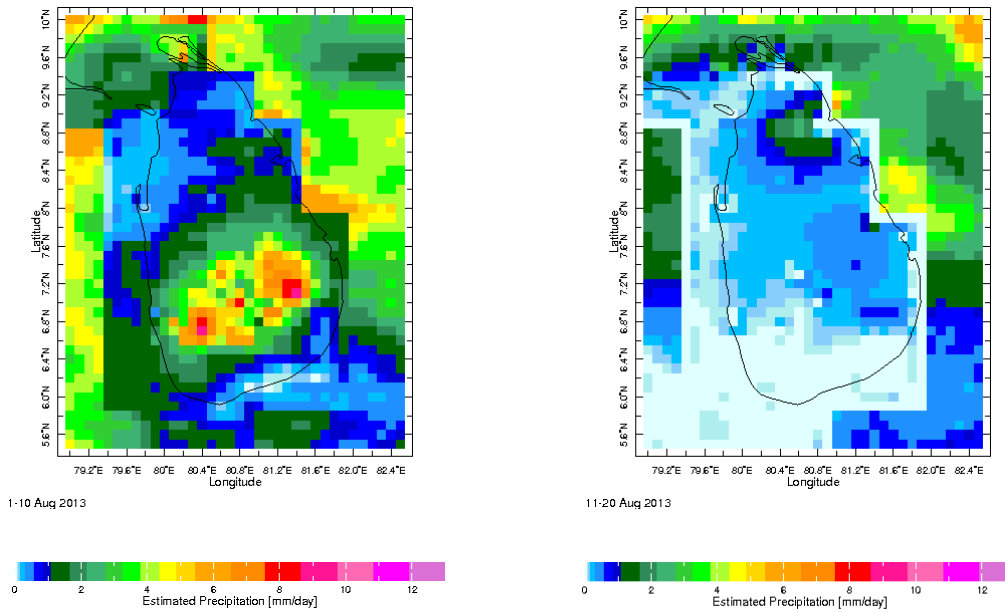
a) Daily Satellite Derived Rainfall Estimate Maps: 3rd-10th September 2013 (Left-Right, Top-Bottom)



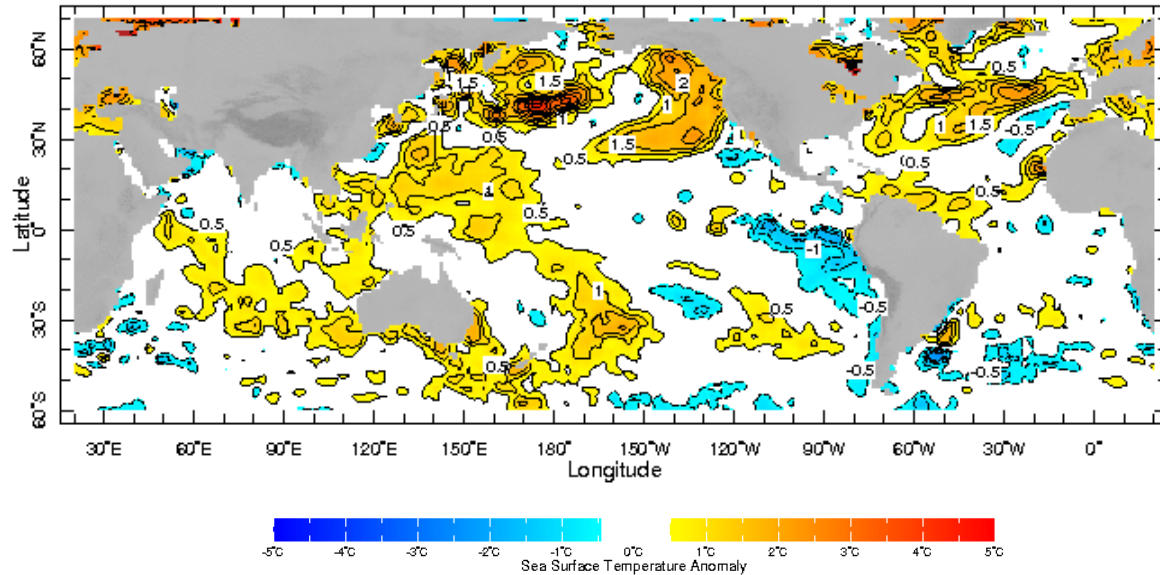
b) Monthly Satellite Derived Rainfall Estimates for July 2013 (Total – Left and Anomaly -Right)



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



b) Weekly Average SST Anomalies

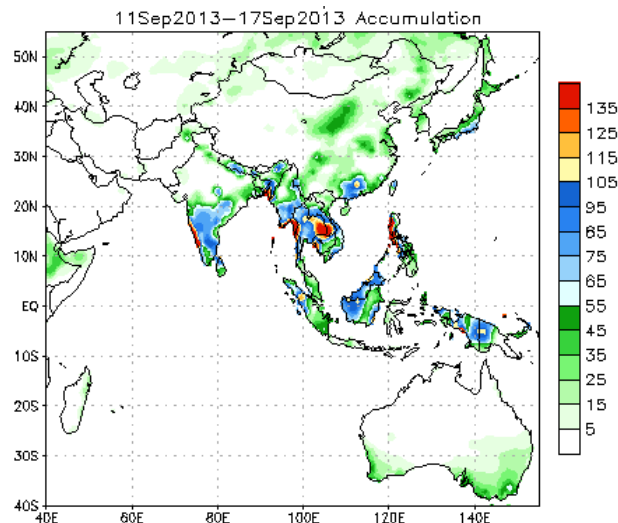


Weekly Average SST Anomalies ($^{\circ}\text{C}$), 1st-7th September, 2013

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

2. Predictions

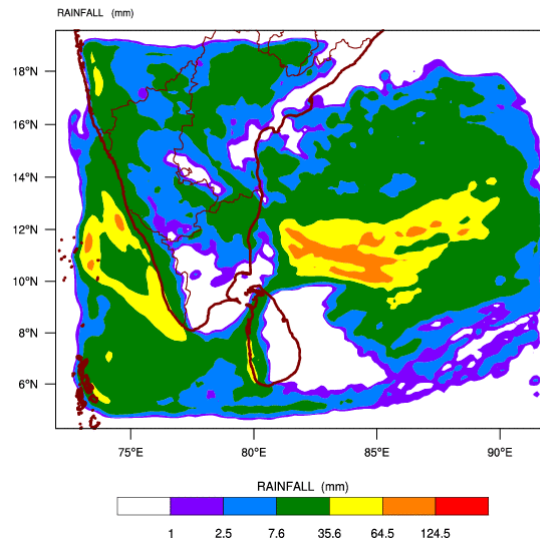
a) NCEP GFS Ensemble 1-7 day predictions, NOAA, Climate Prediction Centre, USA.



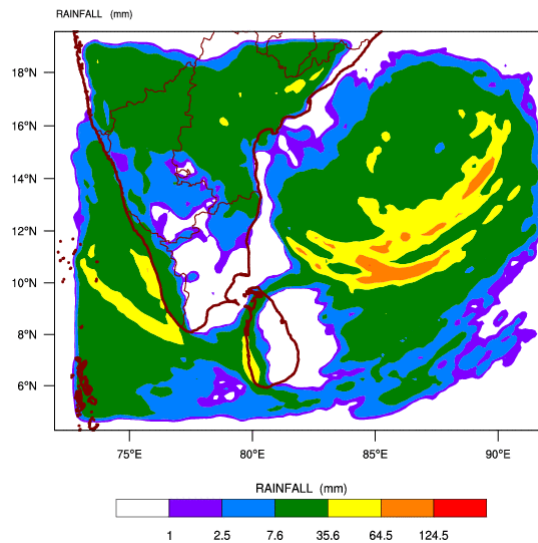
Source – NOAA Climate Prediction Center

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

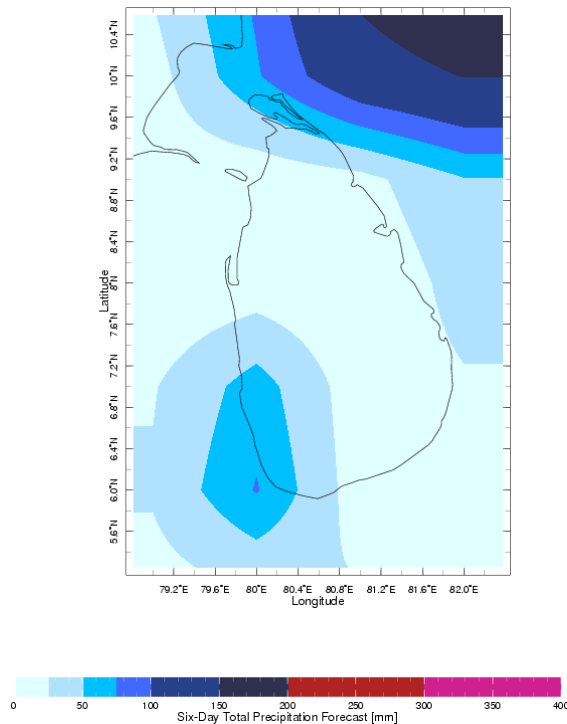
WRF MODEL FORECAST (48 HR.) RAINFALL(mm)
based on 00 UTC of 12-09-2013 valid for 03 UTC of 14-09-2013



WRF MODEL FORECAST (72 HR.) RAINFALL(mm)
based on 00 UTC of 12-09-2013 valid for 03 UTC of 15-09-2013



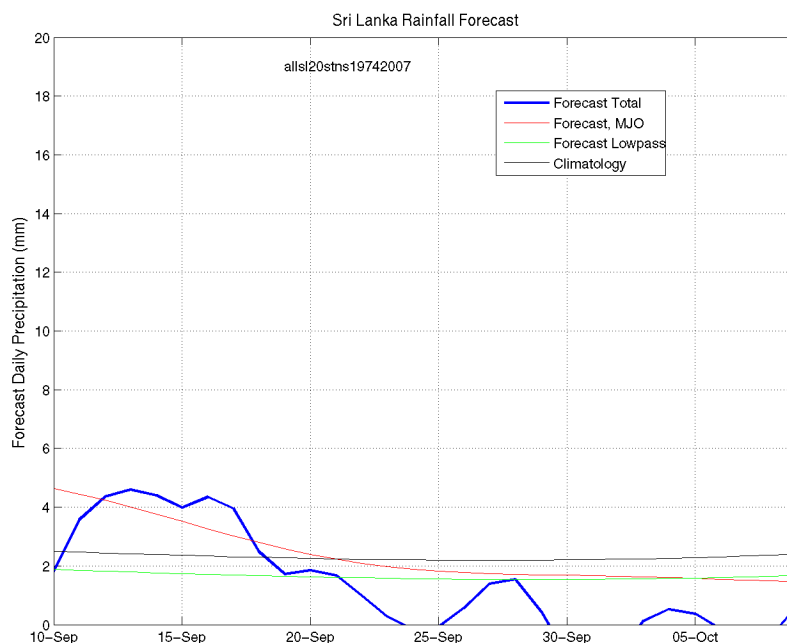
c) Weekly Precipitation Forecast for 11th-16th September 2013 (Precipitation Forecast in Context Map Tool, IRI)



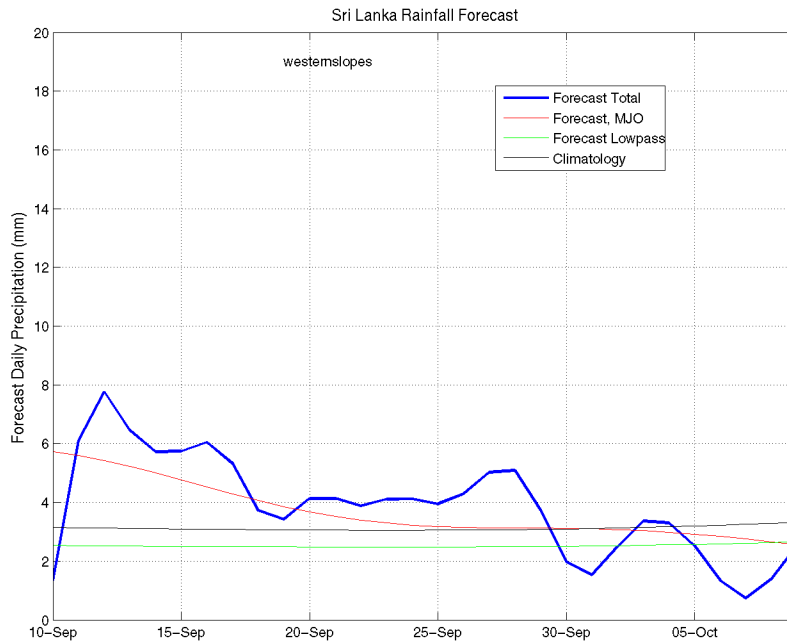
d) 1 month experimental predictions by Paul Roundy and L. Zubair

Predictions based on observed cloud cover and atmospheric waves. Issued 12th September, 2013

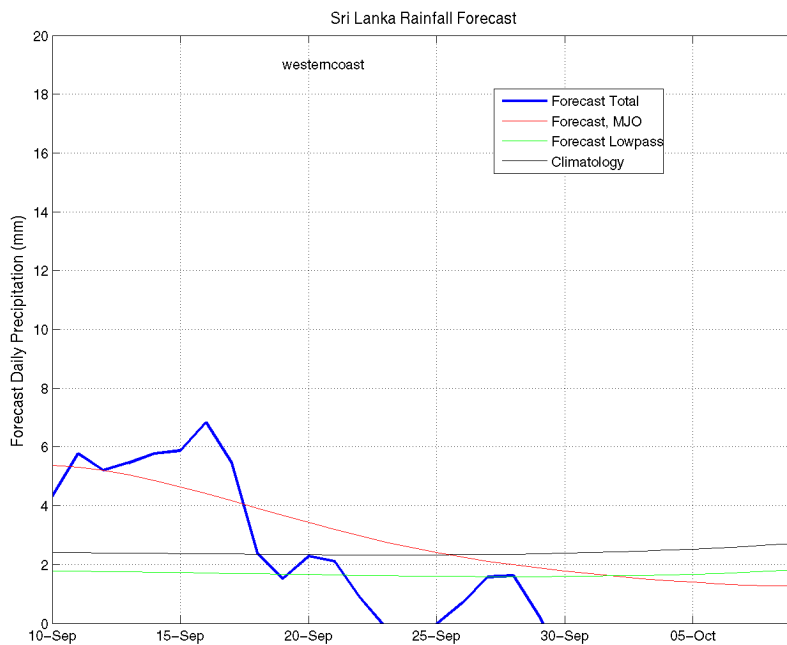
All Sri Lanka (Rainfall Scale from 0-20mm/day)



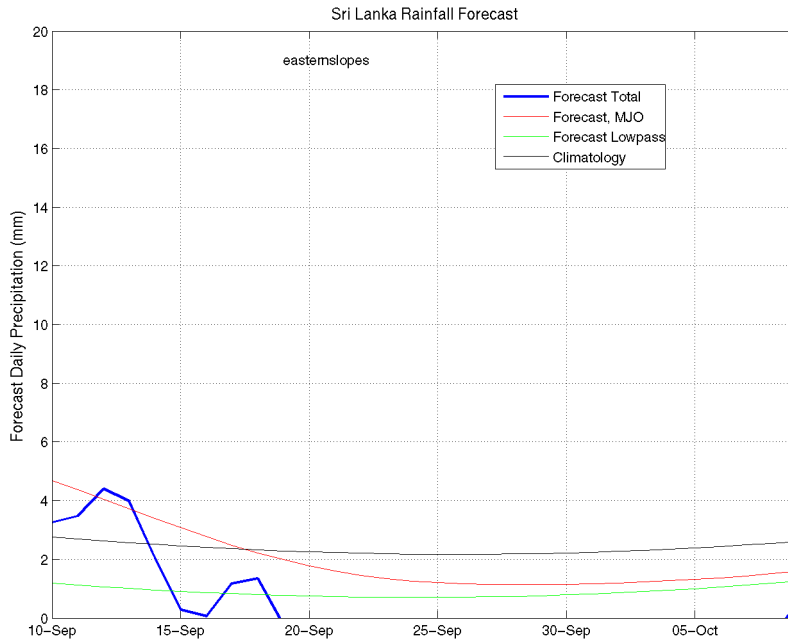
Western Slopes (Rainfall Scale from 0-20 mm/day)



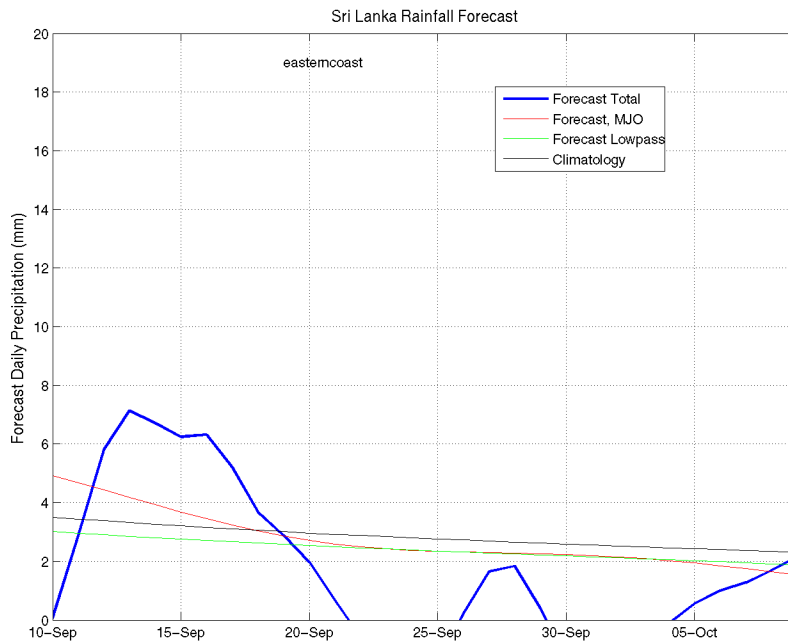
Western Coast (Rainfall Scale from 0-20 mm/day)



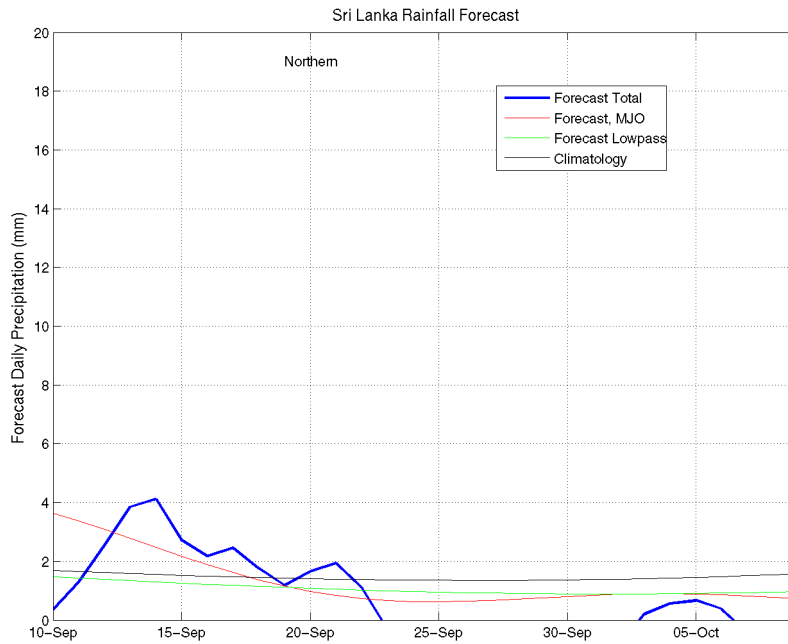
Eastern Slopes (Rainfall Scale- from 0-20 mm/day)



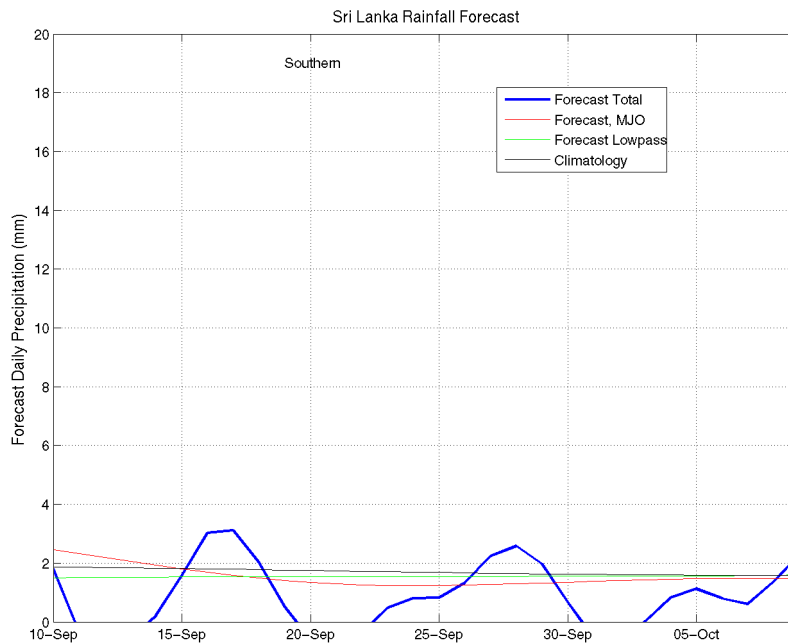
Eastern Coast (Rainfall Scale- from 0-20 mm/day)



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

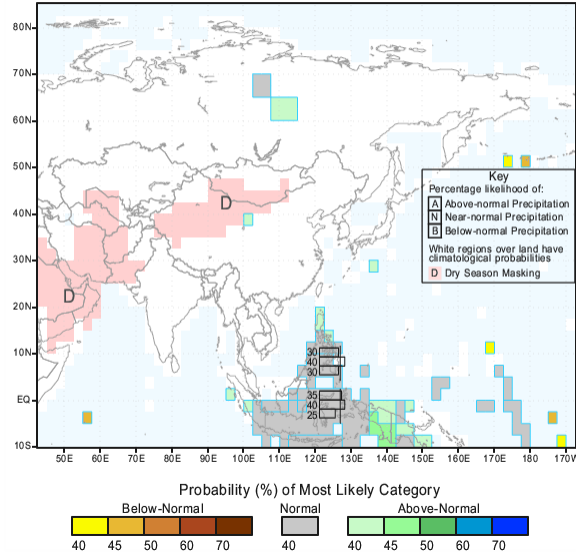


Southern Region (Rainfall Scale- from 0-20 mm/day)



e) Seasonal Rainfall and Temperature Predictions from IRI

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



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

