

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/>

**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 29th September-5th October 2013.

MJO STATE

MJO is at phase 6 and shall not influence Sri Lanka rainfall.

Highlights

Monitoring and Predictions:

Heavy rainfall is likely to observe for Matara to Jaffna during coming two days (11th & 12th October). South-western regions shall receive more rainfall during 9th-15th October 2013. For the entire country, rainfall shall increase gradually after 11th of October.

Summary

Monitoring

Weekly Monitoring: During 1st-7th October 2013, rainfall ranged less than 5 mm/day. Entire week was dry.

Monthly Monitoring: Jaffna and Batticaloa districts received an above average rainfall during the month of September.

Predictions

7-day prediction: South-western regions shall receive 15-75 mm of rainfall during 9th-15th October 2013.

IMD WRF Model Forecast & IRI forecast: For 11th of October, IMD WRF model predicts less than 36 mm of rainfall for Matara-Jaffna coastal districts and shall spread towards central axis of Sri Lanka. For 12th of October, model predicts more amount of rainfall (65 mm) for the same regions covered by previous day. However, NOAA model prediction is suspended this week due to the U.S. Government shutdown.

30 Days Prediction: Overall- Rainfall is not predicted during 8th-12th October. Thereafter rainfall shall increase gradually. **Western Slopes** – The rainfall pattern persisting in the entire country shall be observed in this region. **Western Coast** – Rainfall is not predicted till 15th of October 2013. Thereafter rainfall shall increase gradually. **Eastern Slopes**– Rainfall shall increase gradually after 11th of October 2013. **Eastern Coast** – Rainfall shall vary below 4 mm/day till the end of October 2013. **Northern region-** The rainfall is not predicted during 10th-16th and shall increase gradually thereafter. **Southern Region-** The rainfall shall increase gradually starting from 11th October.

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.

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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

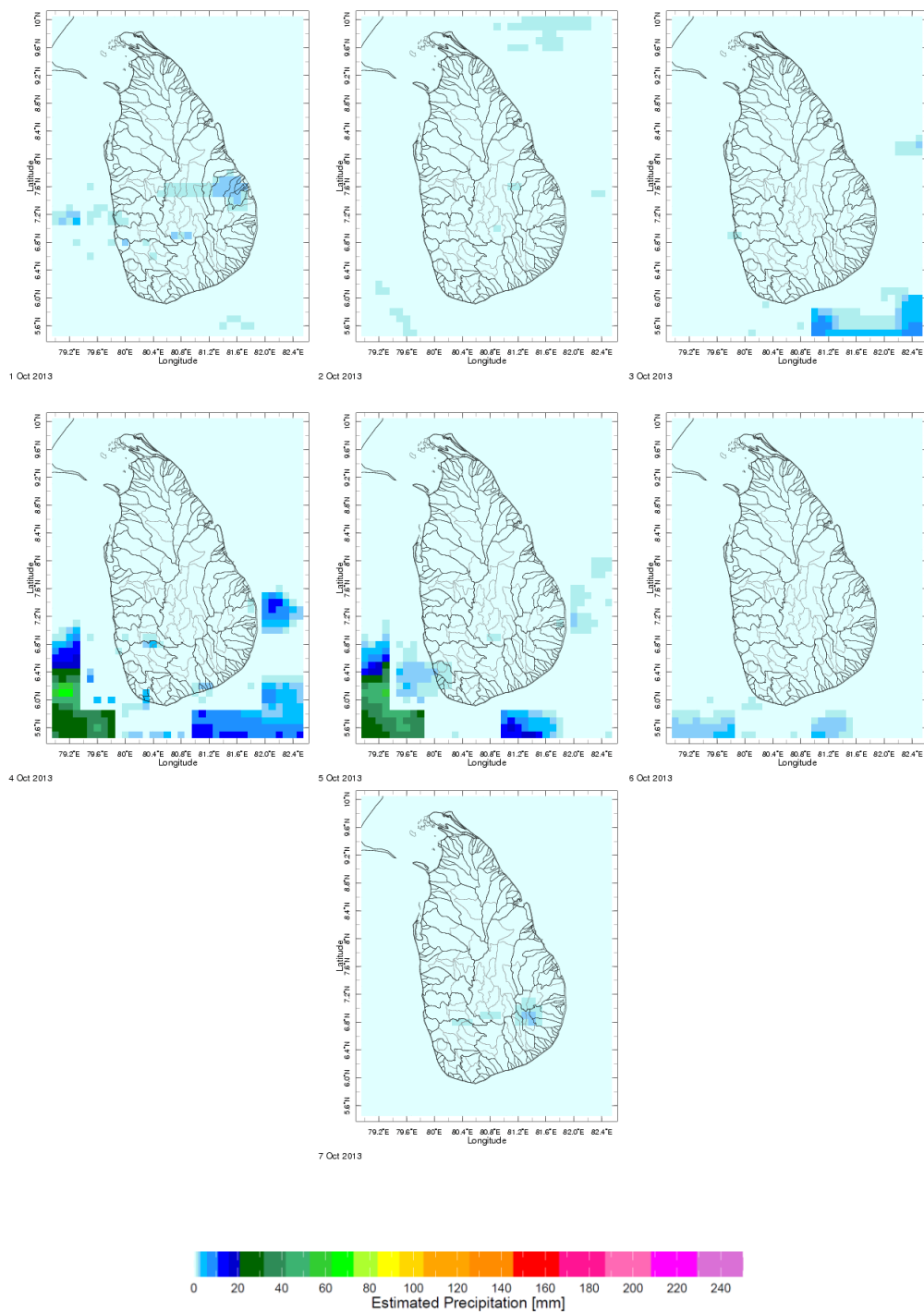
¹ International Research Institute for Climate and Society, Earth Institute at Columbia University, New York.

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

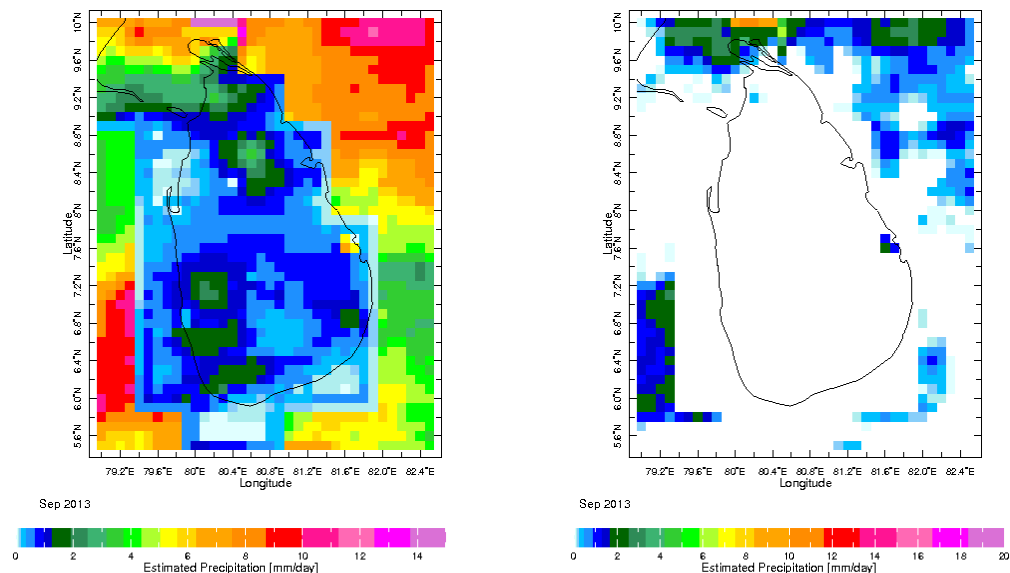
Official hydro-meteorological statements are provided by the Sri Lanka Department of Meteorology and Department of Irrigation.

1. Monitoring

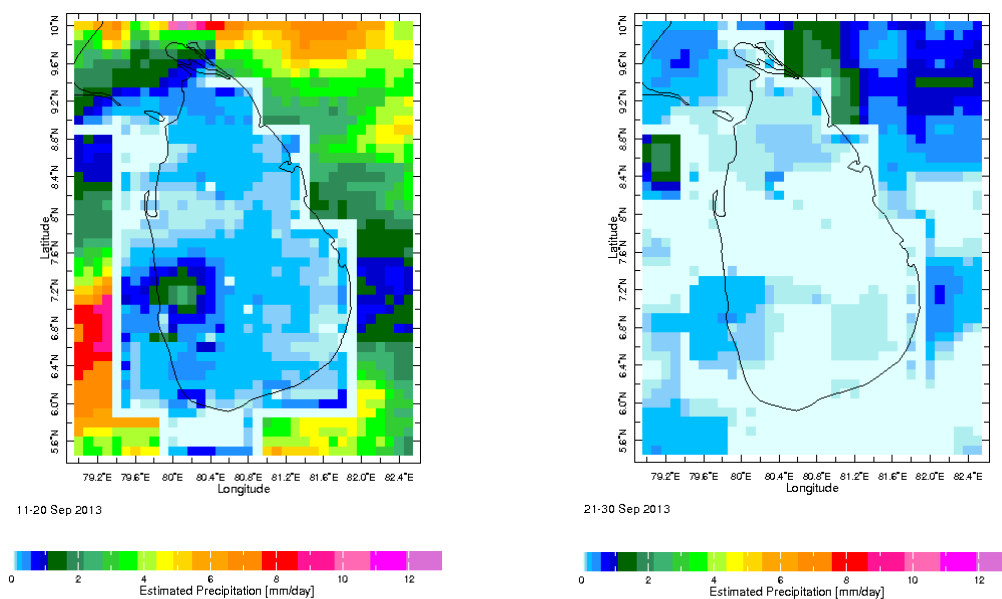
a) Daily Satellite Derived Rainfall Estimate Maps: 1st-7th October 2013 (Left-Right, Top-Bottom)



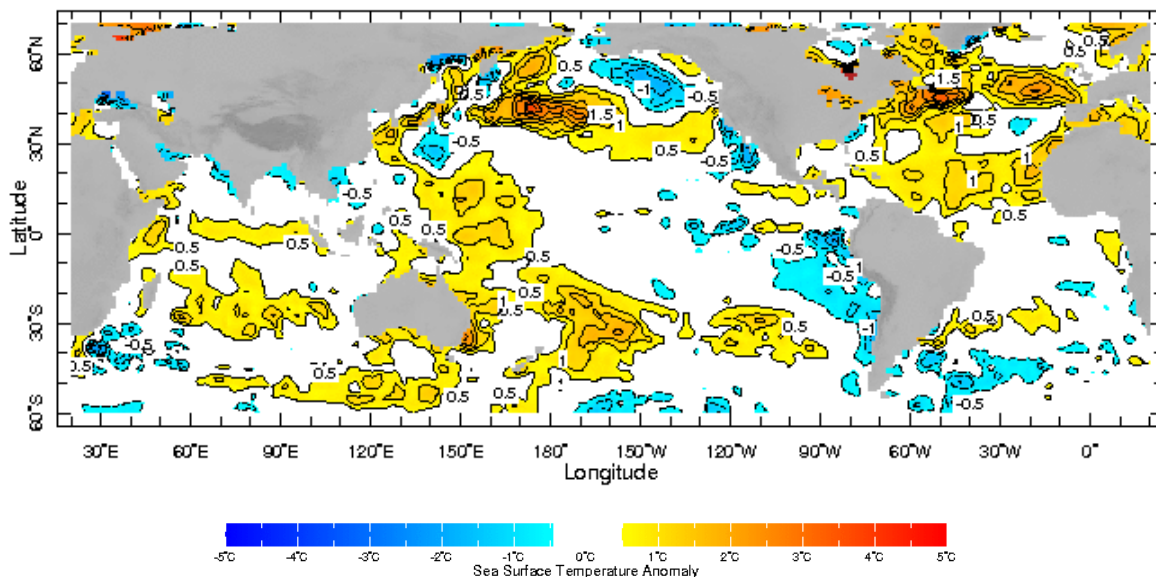
b) Monthly Satellite Derived Rainfall Estimates for September 2013 (Total – Left and Anomaly - Right)



c) Dekadal (10 Day) Satellite Derived Rainfall Estimates (11-20 September & 21-30 September, 2013)



b) Weekly Average SST Anomalies

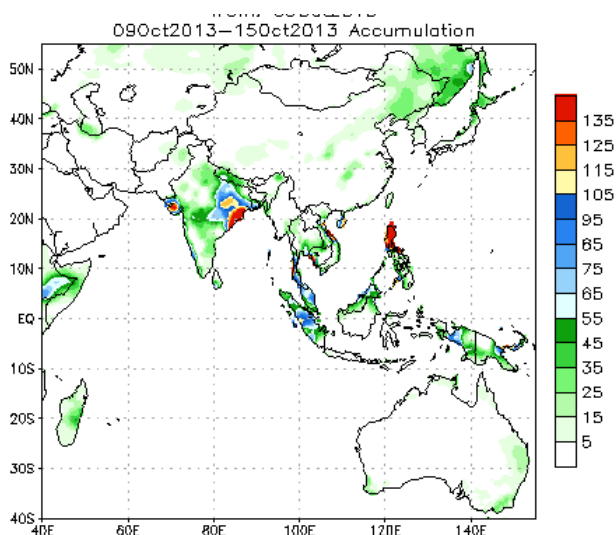


Weekly Average SST Anomalies ($^{\circ}\text{C}$), 29th September -5th October, 2013

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

2. Predictions

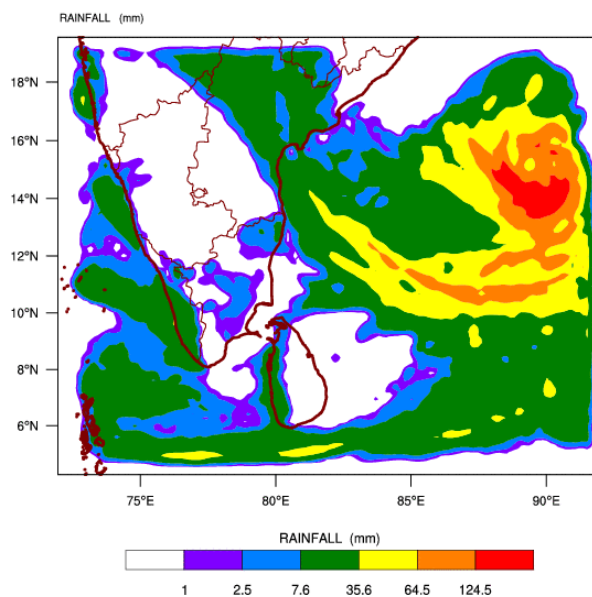
a) NCEP GFS Ensemble 1-7 day predictions, NOAA, Climate Prediction Centre, USA.



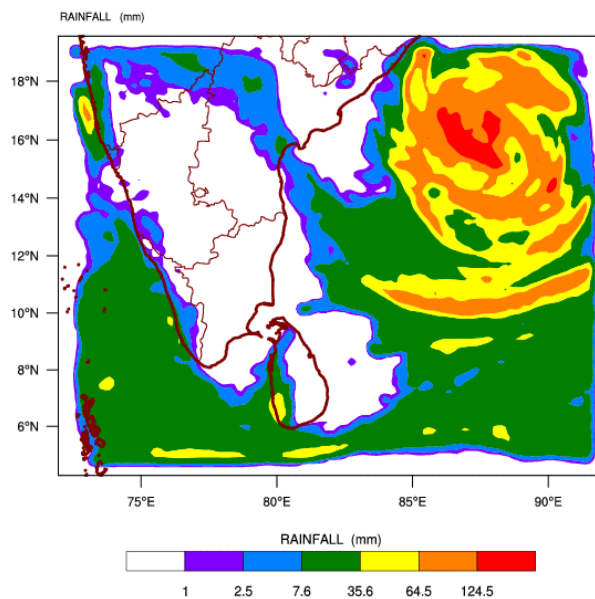
Source – NOAA Climate Prediction Center

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

WRF MODEL FORECAST (48 HR.) RAINFALL(mm)\
based on 00 UTC of 09-10-2013 valid for 03 UTC of 11-10-2013



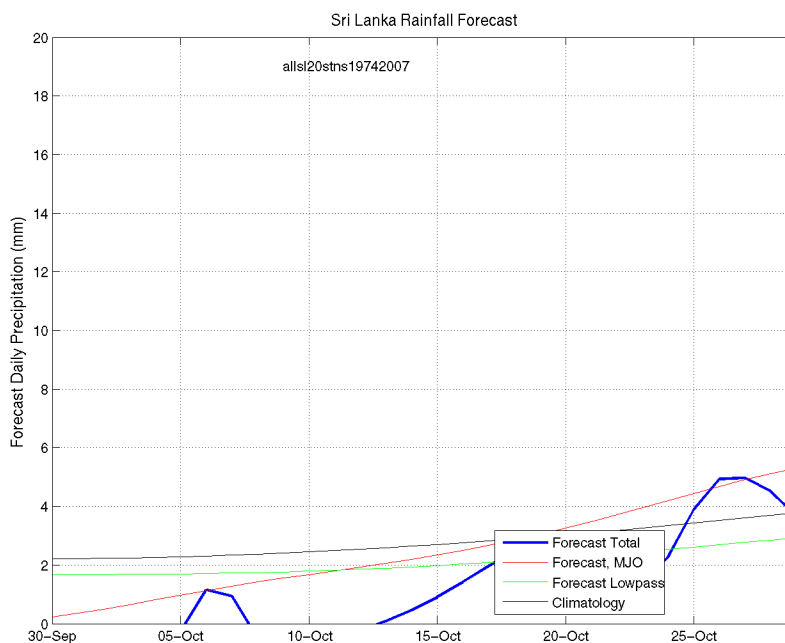
WRF MODEL FORECAST (72 HR.) RAINFALL(mm)\
based on 00 UTC of 09-10-2013 valid for 03 UTC of 12-10-2013



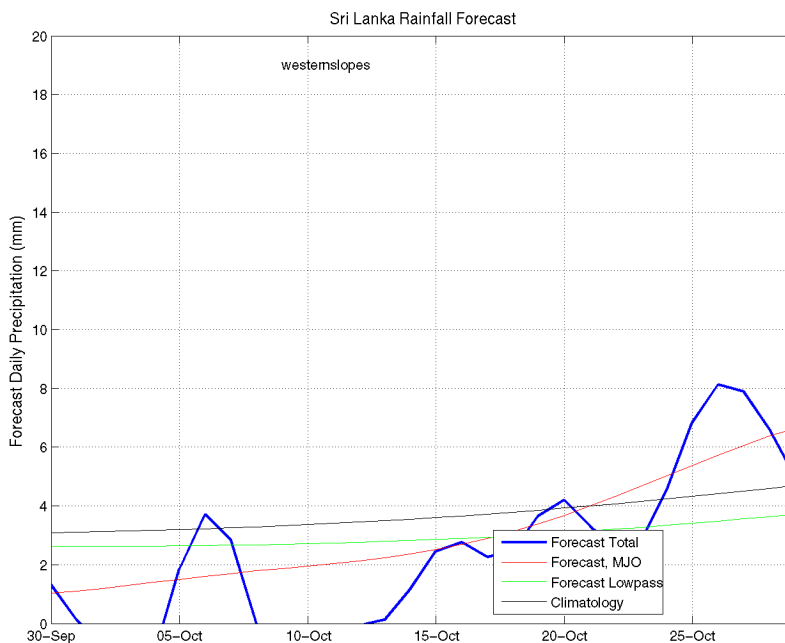
d) 1 month experimental predictions by Paul Roundy and L. Zubair

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

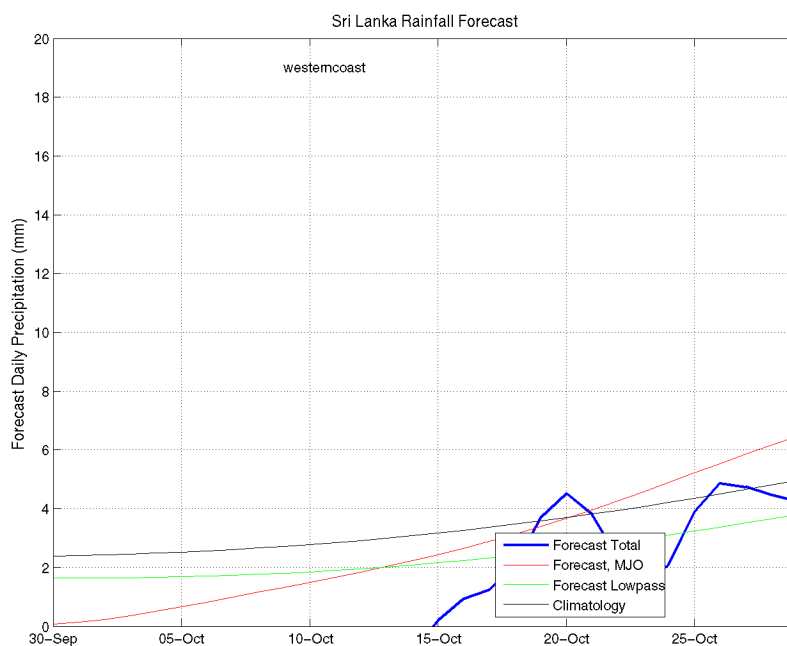
All Sri Lanka (Rainfall Scale from 0-20mm/day)



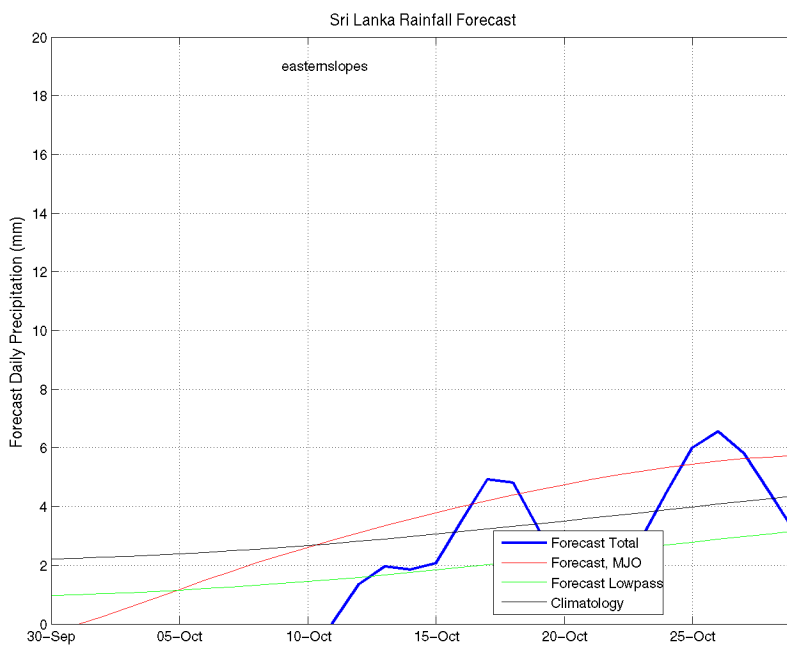
Western Slopes (Rainfall Scale from 0-20 mm/day)



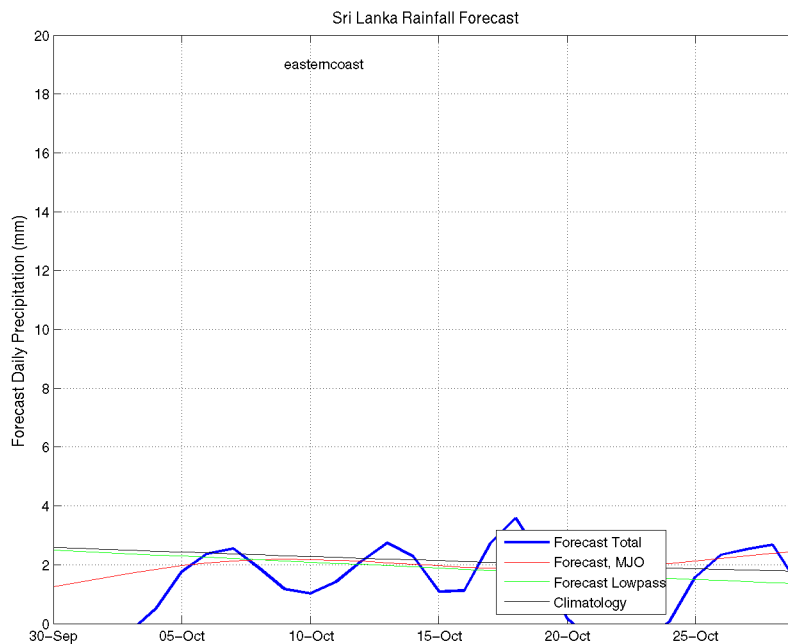
Western Coast (Rainfall Scale from 0-20 mm/day)



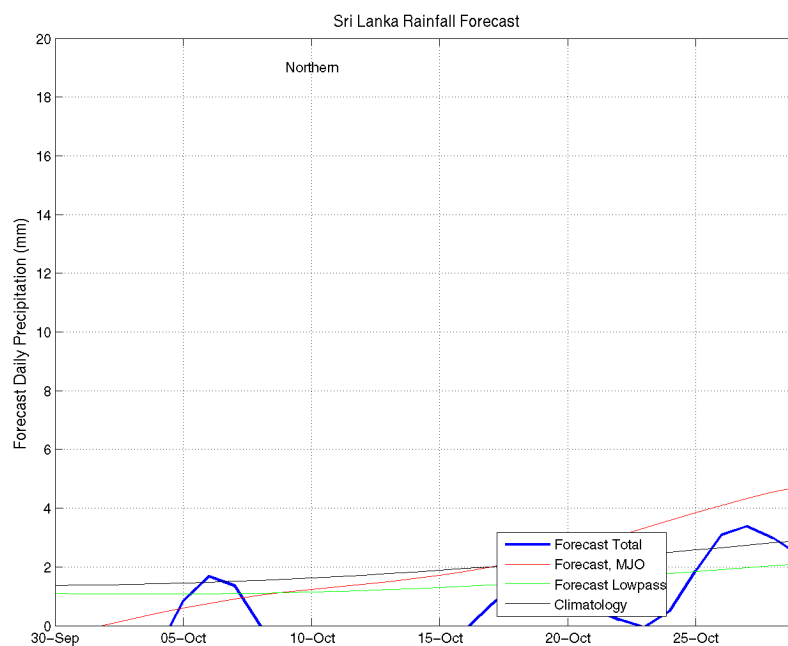
Eastern Slopes (Rainfall Scale- from 0-20 mm/day)



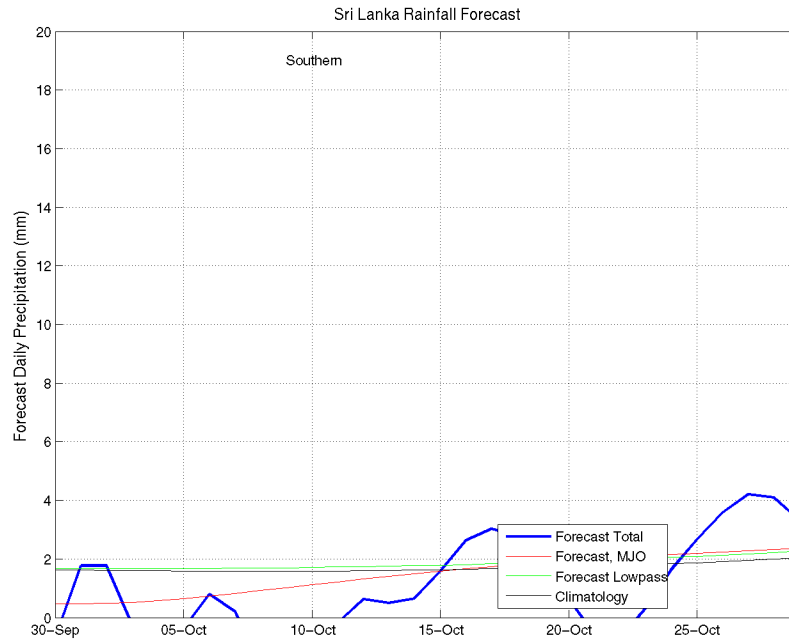
Eastern Coast (Rainfall Scale- from 0-20 mm/day)



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

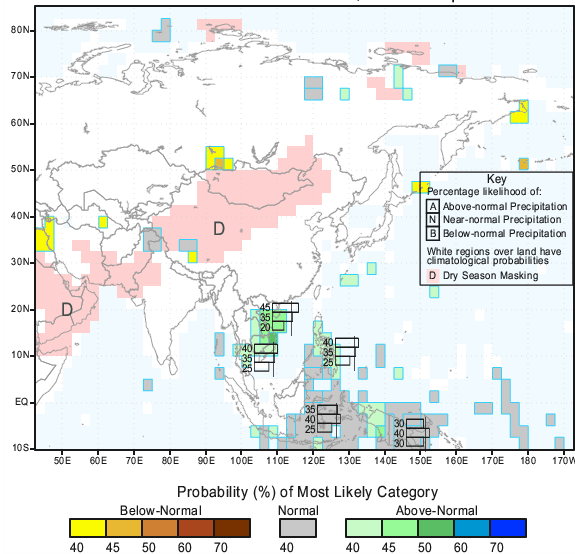


Southern Region (Rainfall Scale- from 0-20 mm/day)



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

