

## Experimental Climate Monitoring and Prediction

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16 May 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/>

### May 9, 2013 PACIFIC SEAS STATE

During March through April the observed ENSO conditions remained in the neutral ENSO conditions. Most of the ENSO prediction models indicate a continues of neutral ENSO into northern autumn, but a few statistical models call for cooling towards weak La-Nina conditions & even smallest set of dynamical models predict warming toward borderline El-Nino conditions.  
(Text Courtesy IRI)

### INDIAN OCEAN STATE

The Indian Ocean around Sri Lanka particular to the Bay of Bengal continues to have a warm anomaly up to 0.5°C.

### Highlights

#### Monitoring and Predictions:

For the most of the parts in Sri Lanka, existing rainfall shall decrease till 18<sup>th</sup> and it shall increase thereafter. However, there shall not be any significant rainfall events. However, southern 1/3<sup>rd</sup> shall receive more rainfall compared to the rest of the regions in the island. Jaffna peninsula shall receive low amount of rainfall on 18<sup>th</sup> May 2013.

### Summary

#### Monitoring

**Weekly Monitoring:** Rainfall ranged between 5-145 mm during 6<sup>th</sup>-13<sup>th</sup> May 2013. Maximum rainfall was observed on the 6<sup>th</sup> May and 13<sup>th</sup> May in Gampaha and Ratnapura districts, respectively. During this period, more or less the entire country experienced rainfall and heavy rainfall concentrated on 12<sup>th</sup> and 13<sup>th</sup> May.

#### Predictions

**7-day prediction:** South-western regions shall receive 5-55 mm of rainfall during 15<sup>th</sup>-21<sup>st</sup> May 2013.

**IMD WRF Model Forecast & IRI forecast:** For 17<sup>th</sup> of May 2013, IMD WRF model predicts less than 1 mm of rainfall for the northern half of the island. For 18<sup>th</sup> of May 2013, IMD WRF model predicts less than 8 mm of rainfall for the Northern Province of the island. For the both days rainfall is not predicted for the southern half of the island. NOAA model predicts higher rainfall for the Southern 1/3<sup>rd</sup> of the country than the Northern 2/3<sup>rd</sup> of the country 15<sup>th</sup>-20<sup>th</sup> May.

**30 Days Prediction: Overall-** Existing rainfall condition shall decrease till 18<sup>th</sup> and thereafter it shall increase with different rates. For the prediction period, there shall not be any significant rainfall events. **Western Slopes** – The rainfall pattern existing in the entire country shall be present in this region. **Western Coast** – The rainfall pattern existing in the entire country shall be present in this region. **Eastern slopes** – The rainfall is not predicted till 18<sup>th</sup> May and thereafter the rainfall pattern existing in the entire country shall be observed. **Eastern Coast** – Existing rainfall shall continue constantly till 20<sup>th</sup> May and it shall increase in different rates. **Northern region-** The rainfall pattern existing in the entire country shall be present in this region. **Southern Region-** The rainfall is not predicted during 15<sup>th</sup>-23<sup>rd</sup> and the pattern existing in the entire country shall be present thereafter.

**Seasonal Prediction:** As per IRI Multi Model Probability Forecast issued on April 2013; for May 2013 to July 2013, there is a 45-50% 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
- Weekly Average SST Anomalies

#### 2. Predictions

- NCEP GFS Ensemble 1-7 day predictions
- Weekly precipitation forecast (IRI)
- 1 month experimental predictions by Paul Roundy and L. Zubair
- Seasonal Predictions from IRI

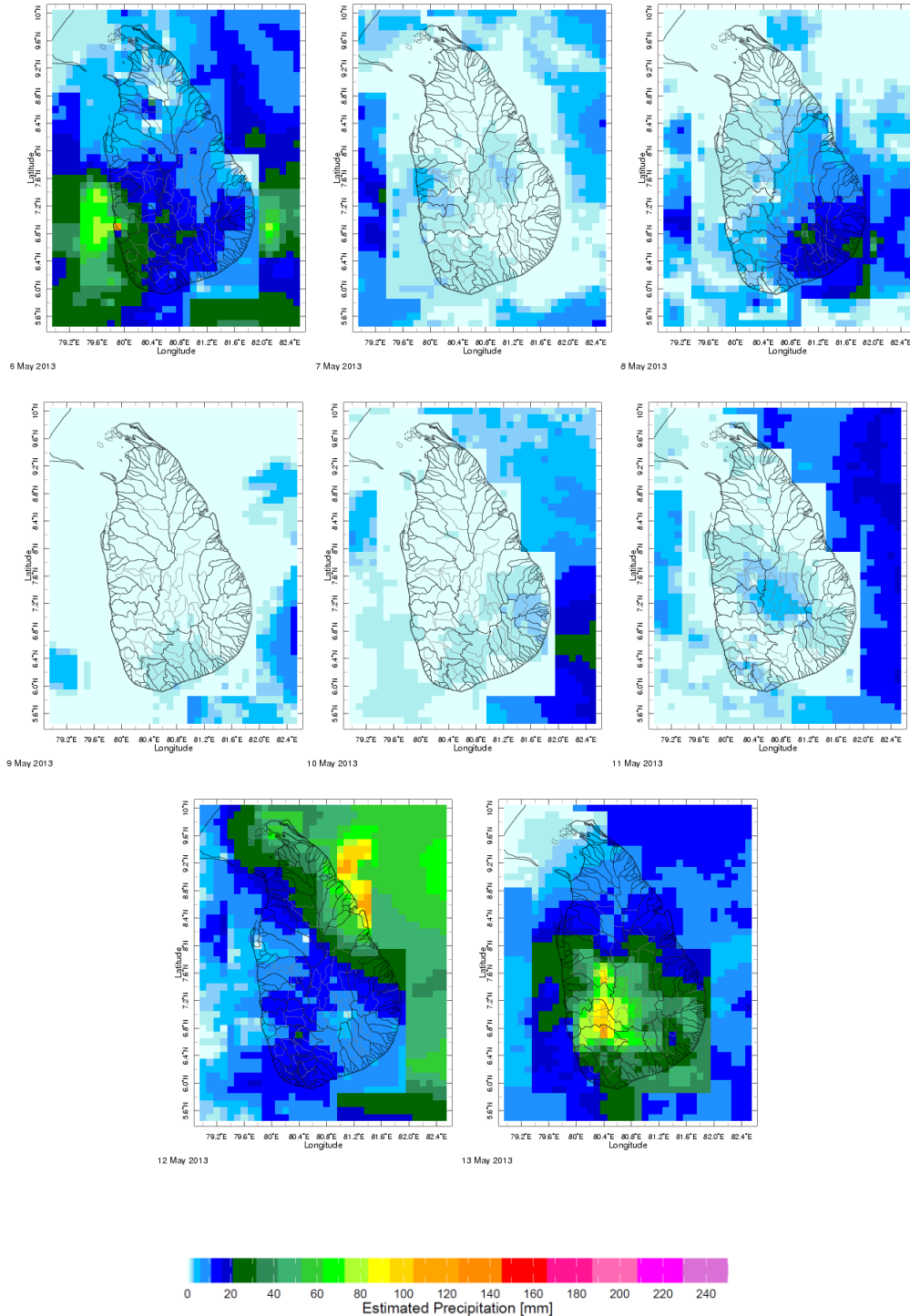
<sup>1</sup> International Research Institute for Climate and Society, Earth Institute at Columbia University, New York.

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

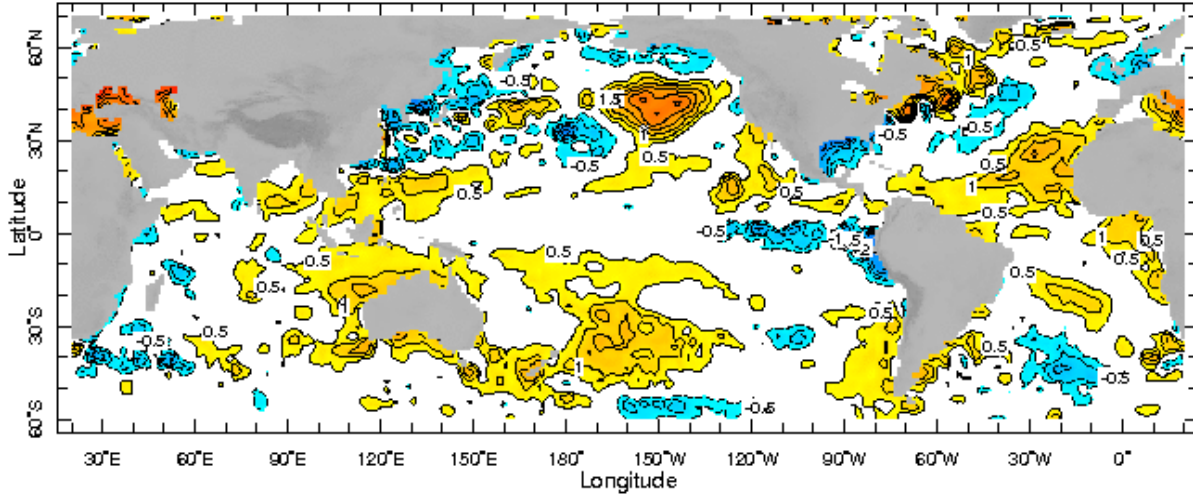
Official hydro-meteorological statements are provided by the Sri Lanka Department of Meteorology and Department of Irrigation.

## 1. Monitoring

### a) Daily Satellite Derived Rainfall Estimate Maps: 6<sup>th</sup> May–13<sup>th</sup> May 2013 (Left-Right, Top-Bottom)



**b) Weekly Average SST Anomalies**

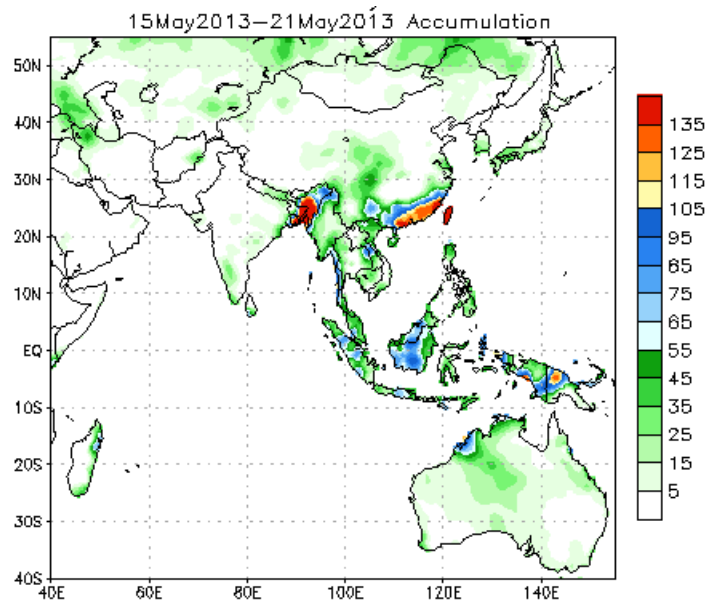


Weekly Average SST Anomalies ( $^{\circ}$ C), 5<sup>th</sup>-11<sup>th</sup> May, 2013

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

**2. Predictions**

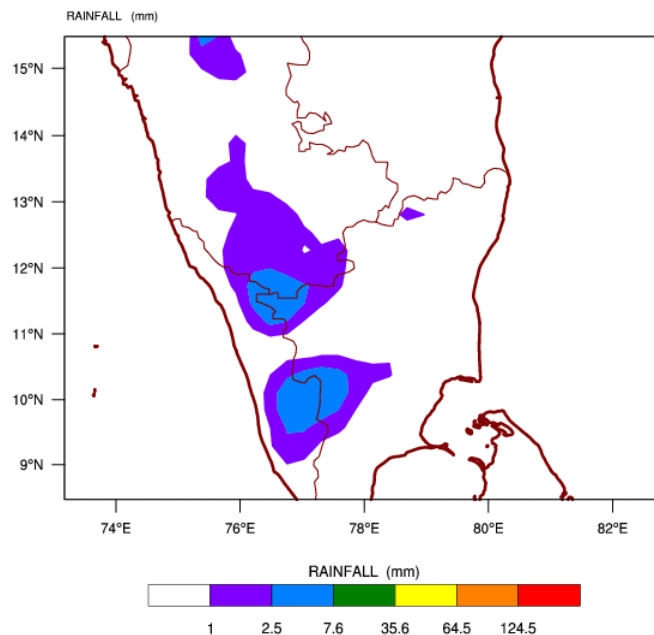
**a) NCEP GFS Ensemble 1-7 day predictions, NOAA, Climate Prediction Centre, USA.**



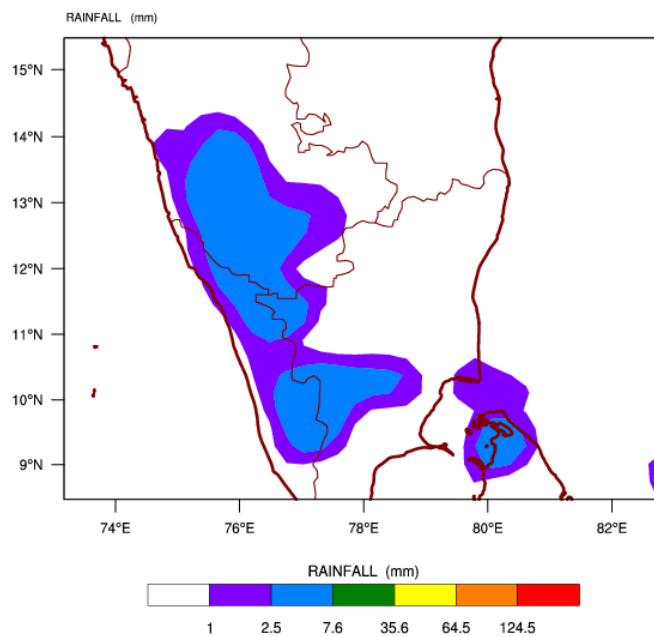
Source – NOAA Climate Prediction Center

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

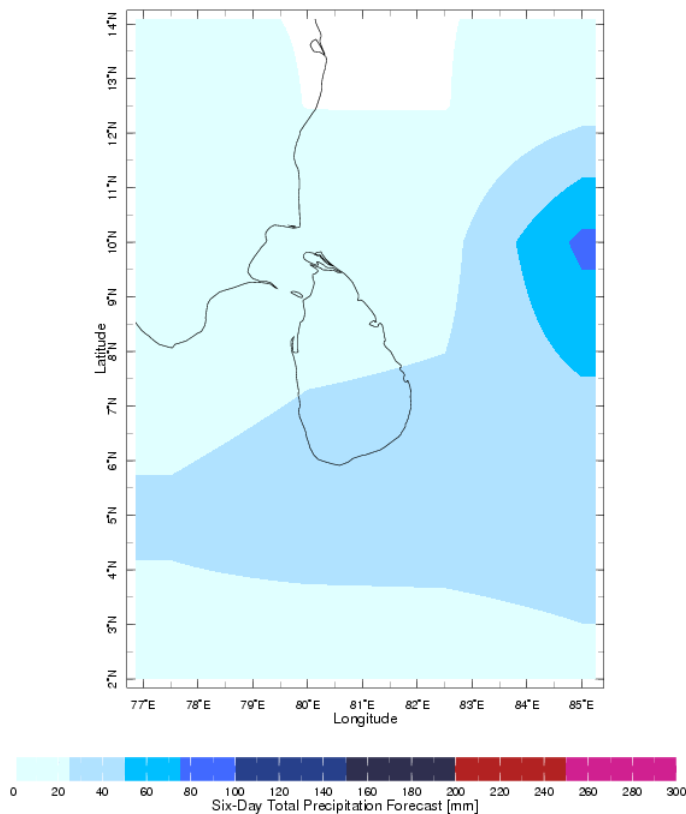
WRF MODEL FORECAST (48 HR.) RAINFALL(mm)  
based on 00 UTC of 15-05-2013 valid for 03 UTC of 17-05-2013



WRF MODEL FORECAST (72 HR.) RAINFALL(mm)  
based on 00 UTC of 15-05-2013 valid for 03 UTC of 18-05-2013



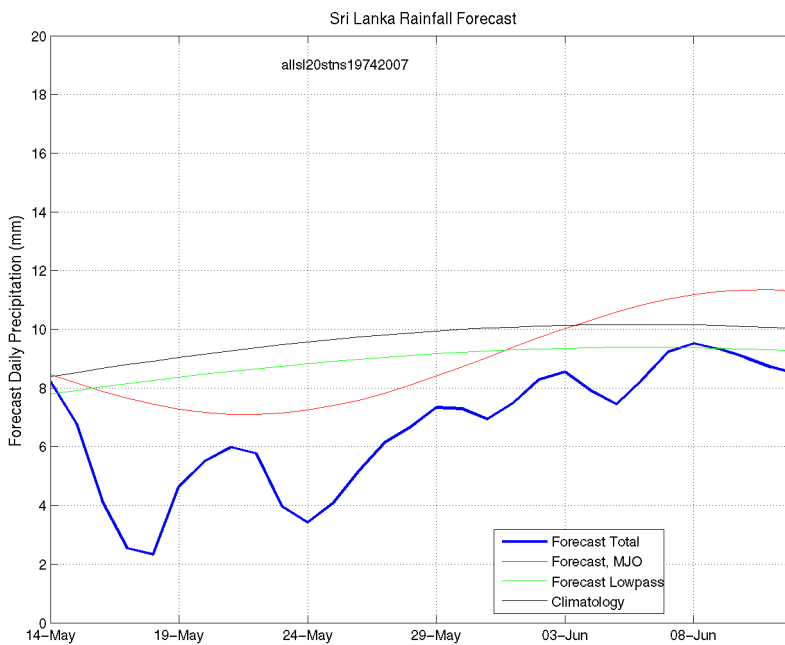
**c) Weekly Precipitation Forecast for 15<sup>th</sup> -20<sup>th</sup> May 2013 (Precipitation Forecast in Context Map Tool, IRI)**



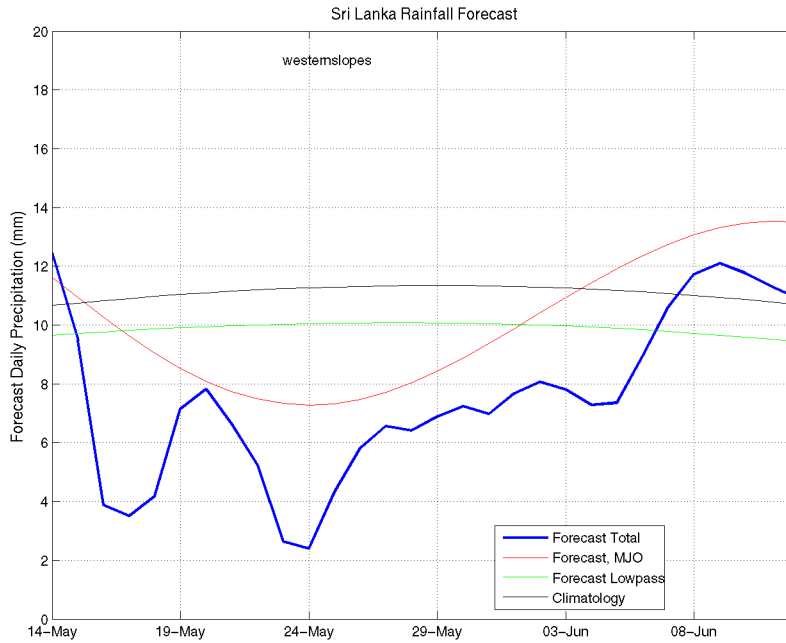
**d) 1 month experimental predictions by Paul Roundy and L. Zubair**

Predictions based on observed cloud cover and atmospheric waves. Issued 16<sup>th</sup> May, 2013

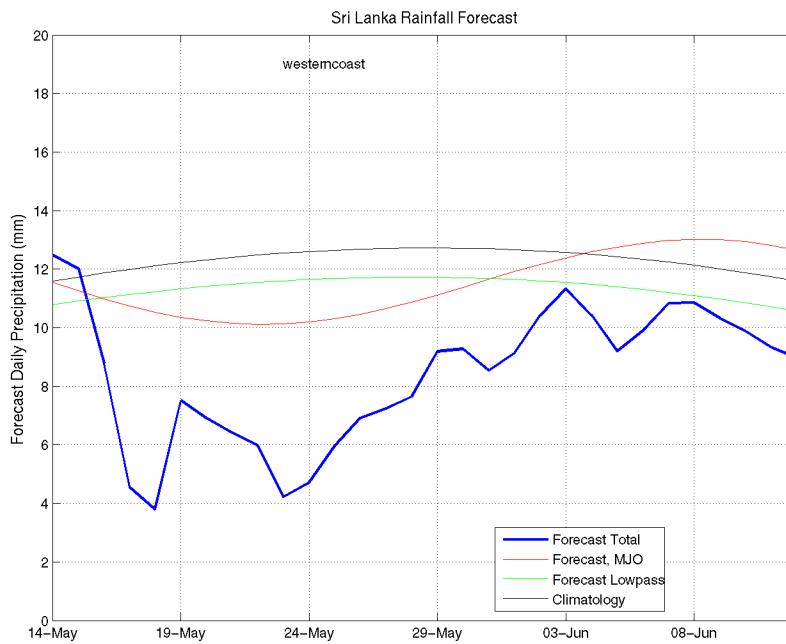
**All Sri Lanka (Rainfall Scale from 0-20 mm/day)**



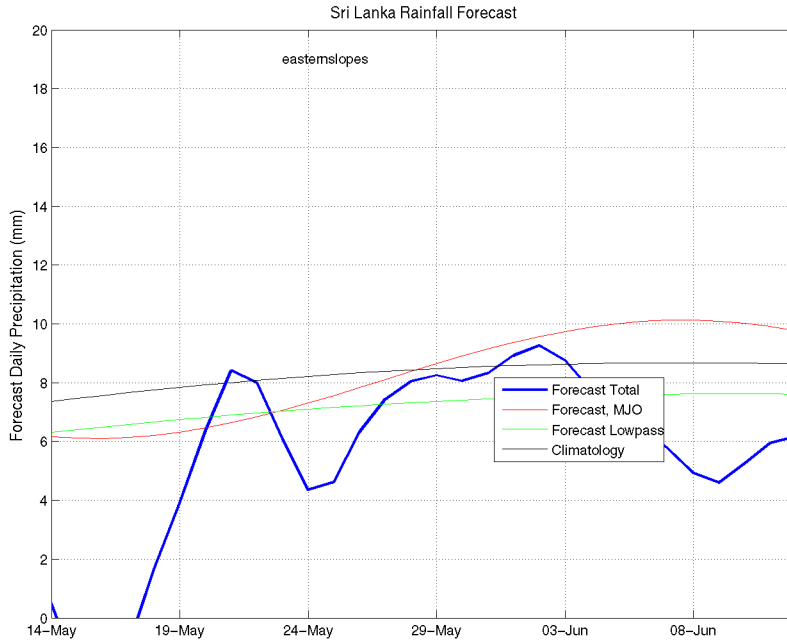
**Western Slopes (Rainfall Scale from 0-20 mm/day)**



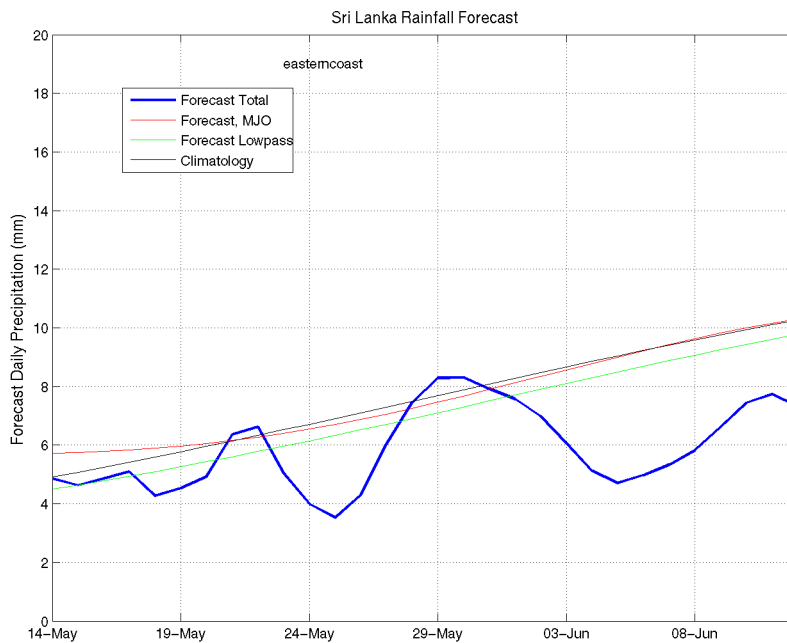
**Western Coast (Rainfall Scale from 0-20 mm/day)**



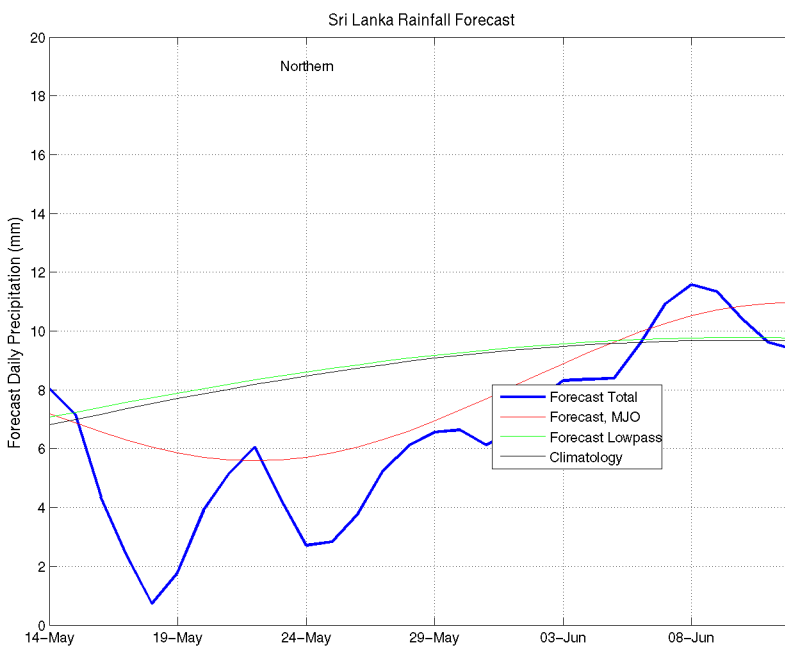
**Eastern Slopes (Rainfall Scale- from 0-20 mm/day)**



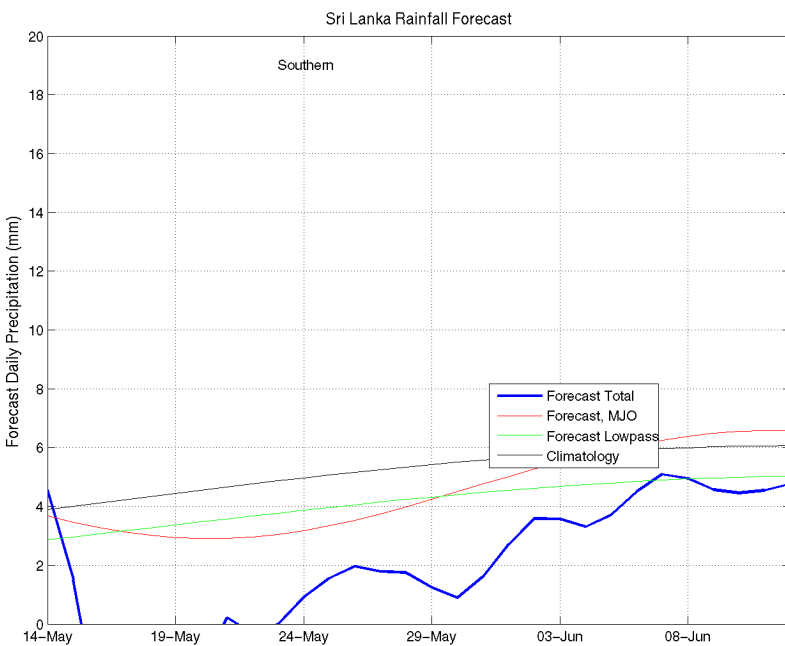
**Eastern Coast (Rainfall Scale- from 0-20 mm/day)**



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



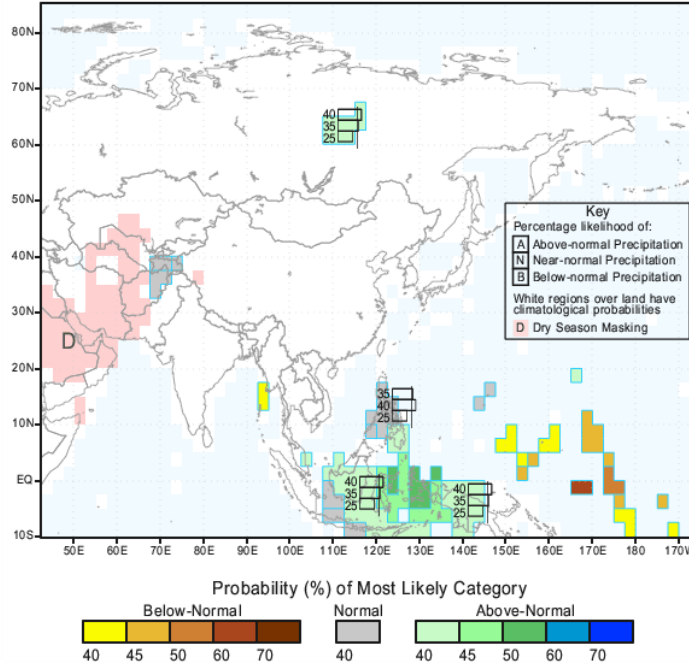
**Southern Region (Rainfall Scale- from 0-20 mm/day)**





**e) Seasonal Rainfall and Temperature Predictions from IRI**

IRI Multi-Model Probability Forecast for Precipitation  
for May-June-July 2013, Issued April 2013



IRI Multi-Model Probability Forecast for Temperature  
for May-June-July 2013, Issued April 2013

