

Experimental Climate Monitoring and Prediction

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FECT BLOG

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

and

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March 7, 2013 PACIFIC SEAS STATE

During January and February the observed ENSO conditions have leaned towards La-Nina, but remained in the neutral range. Most of the ENSO prediction models call for neutral ENSO conditions through most of the second quarter of 2013, beyond which there is great uncertainty due to the time of year.
(Text Courtesy IRI)

INDIAN OCEAN STATE

The Indian Ocean around Maldives particular to the South continues to have a warm anomaly.

Highlights

Monitoring and Predictions:

Western Slopes shall receive much higher rainfall compared to the rest of the country. Western coastal regions also receive high amounts of rainfall until the start of April. Northern and Southern regions shall receive relatively low rainfall.

Summary

Monitoring

Weekly Monitoring: Rainfall upto 140 mm was observed in South Western region of the country on the 11th of March. Then during the next two days, rainfall diminished in this region while spreading towards South East and Eastern regions of the country. On the 15th the entire country received rainfall with the western half of the island along with North and Uva Provinces receiving more rainfall than the rest of the island. A reduction in rainfall was observed on the 16th and 17th with rainfall diminishing towards the South Western direction of the country.

Predictions

7-day prediction: Entire country shall receive 5-55mm of rainfall during 13th-19th March.

IMD WRF Model Forecast & IRI forecast: Upto 35 mm rainfall is expected in South Western regions of the country. NOAA model predicts less than 40 mm of total rainfall for entire Sri Lanka from 19th-24th March.

30 Days Prediction: Overall- Rainfall shall fluctuate around 4 mm throughout the 30 day period (17th March- 17th April). *Western Slopes* – Peaks of rainfall are expected around 20th & 29th of March as well as 3rd of April 2013. *Western Coast* –Peaks are expected around 19th and 31st of March. Rainfall shall be relatively less in the first half of April. *Eastern slopes* – Only a few millimeters of rainfall is expected in this region. *Eastern Coast* –Highest rainfall events is expected around 29th of March which shall be followed by a drastical declination in rainfall in the next couple of days. *Northern region*- Rainfall shall fluctuate around 2 mm with a decreasing trend. *Southern Region*- No rainfall is predicted until 27th of March and it shall fluctuate for the rest of the 30 day period.

Seasonal Prediction: As per IRI Multi Model Probability Forecast issued on February 2013; for March 2013 to May 2013, there is a 40% probability for temperature to be above normal in the country while the rainfall is to be climatological.

Inside this Issue

1. Monitoring

- Daily Satellite Derived Rain fall Estimates
- Weekly Average SST Anomalies

2. Predictions

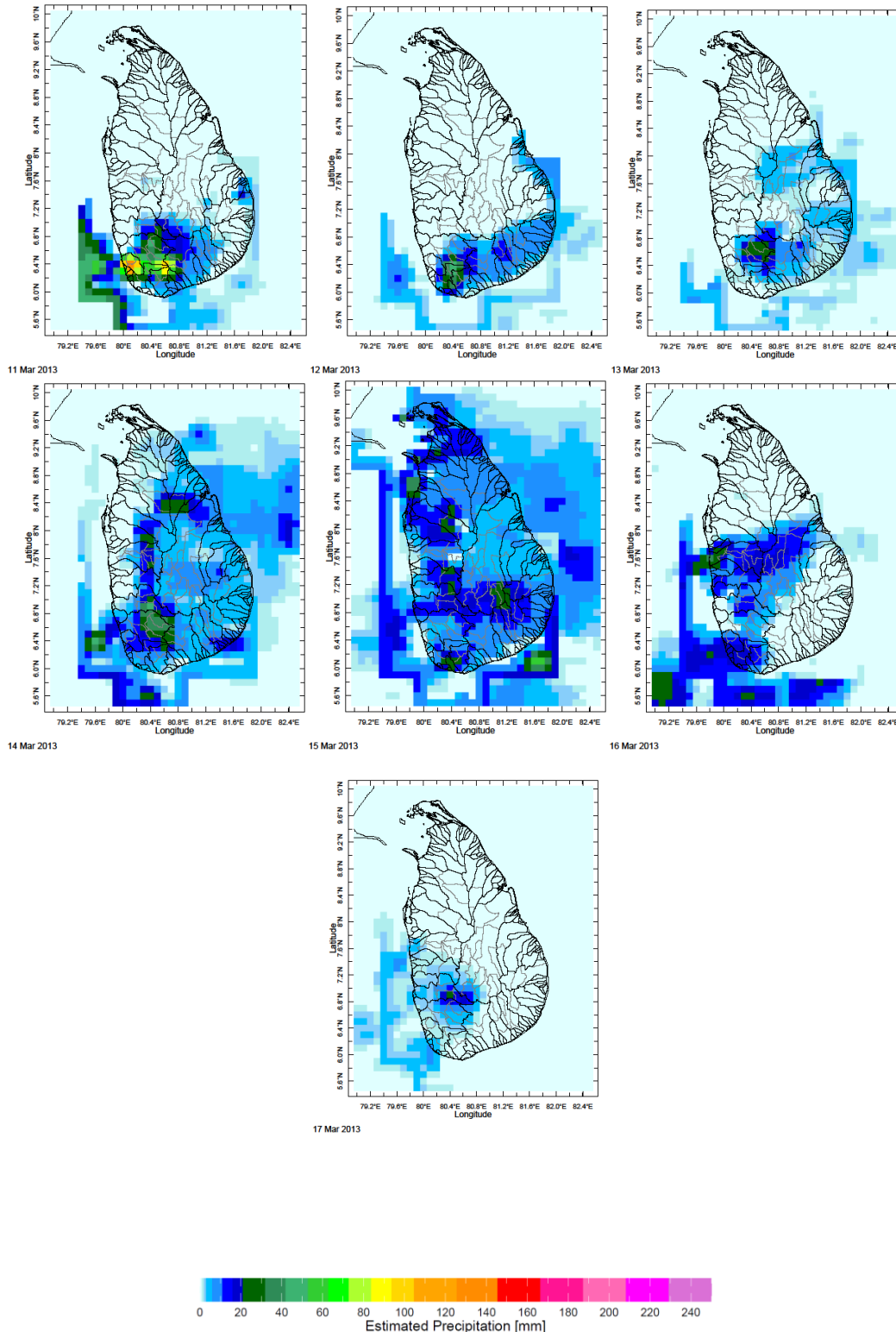
- NCEP GFS Ensemble 1-7 day predictions
- Weekly precipitation forecast (IRI)
- 1 month experimental predictions by Paul Roundy and L. Zubair
- Seasonal Predictions from IRI

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

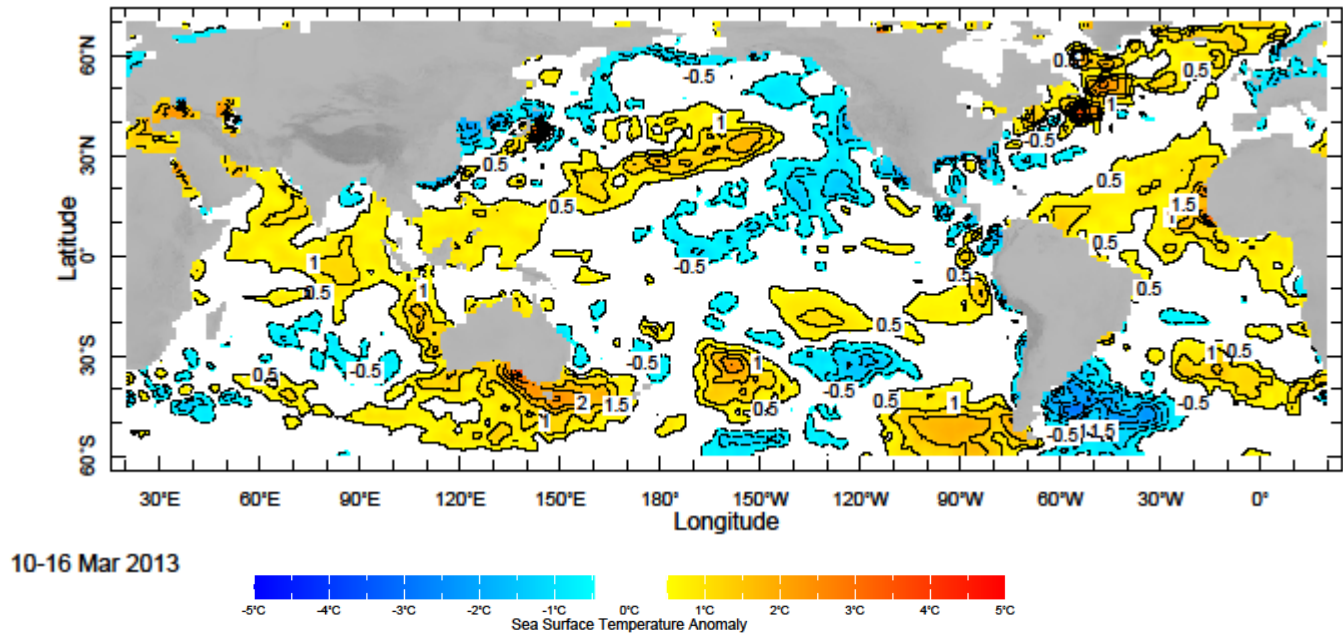
² These interpretations of hydro-meteorological conditions for the Mahaweli basins are provided for the use of the WMS/MASL.

1. Monitoring

a) Daily Satellite Derived Rainfall Estimate Maps: 11th-17th March 2013 (Left-Right, Top-Bottom)



b) Weekly Average SST Anomalies



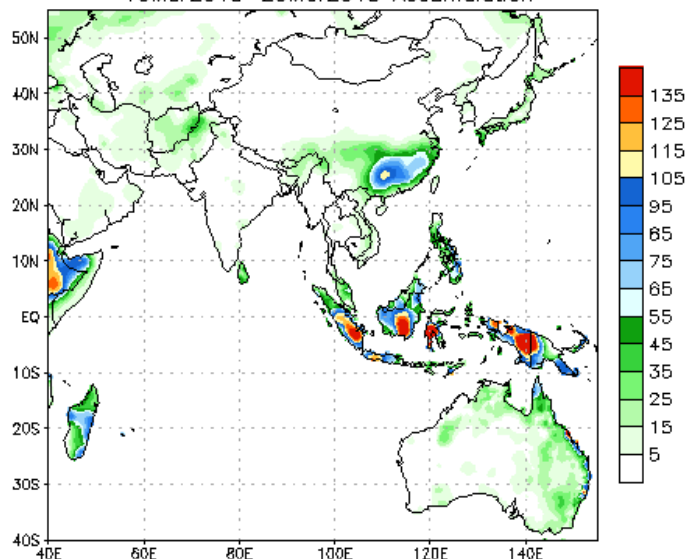
Weekly Average SST Anomalies ($^{\circ}$ C), 10th -16th March, 2013

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

2. Predictions

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

NCEP GFS Ensemble Forecast 1-7 Day Precipitation (mm)
from: 19Mar2013
19Mar2013-25Mar2013 Accumulation

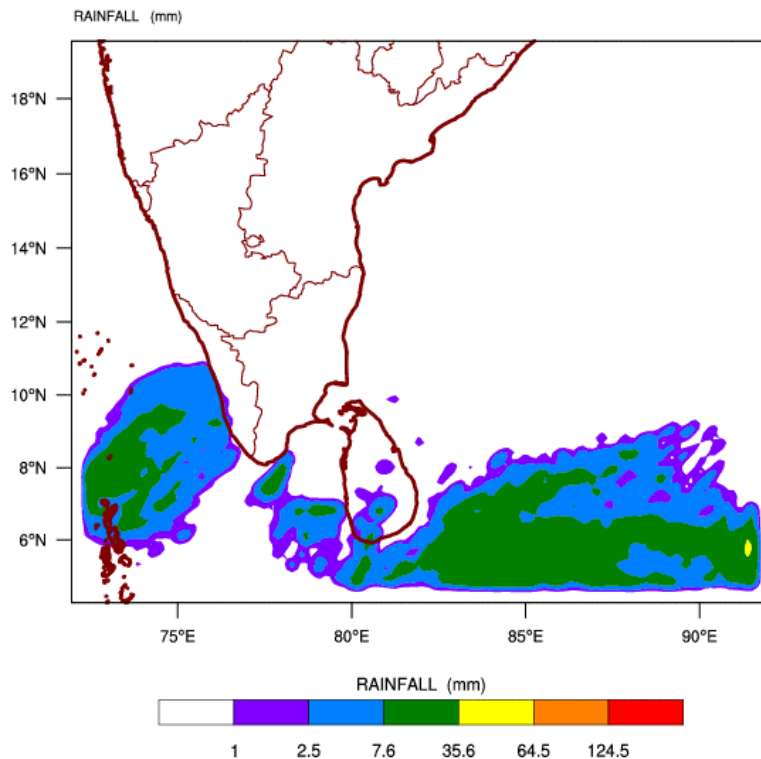


Bias correction based on last 30-day forecast error

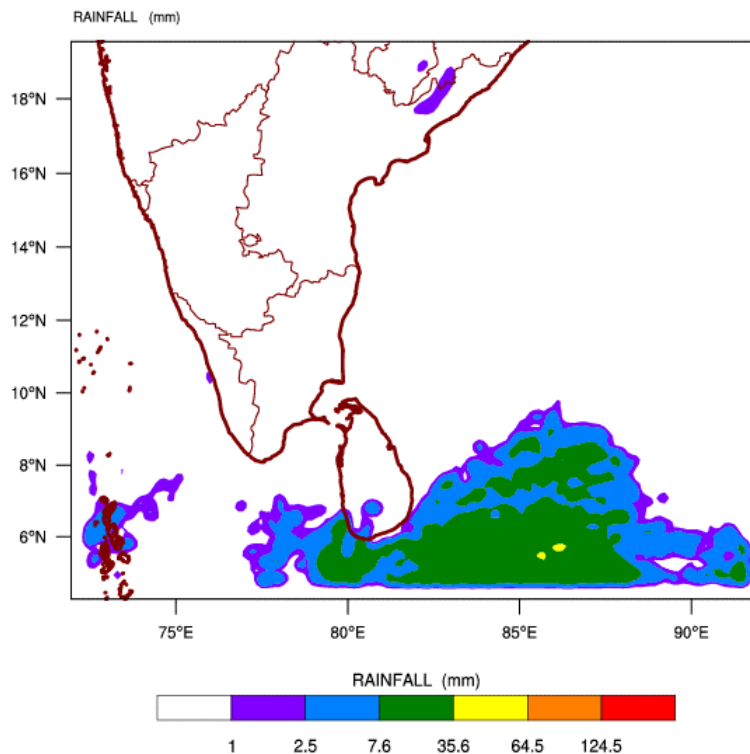
Source – NOAA Climate Prediction Center

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

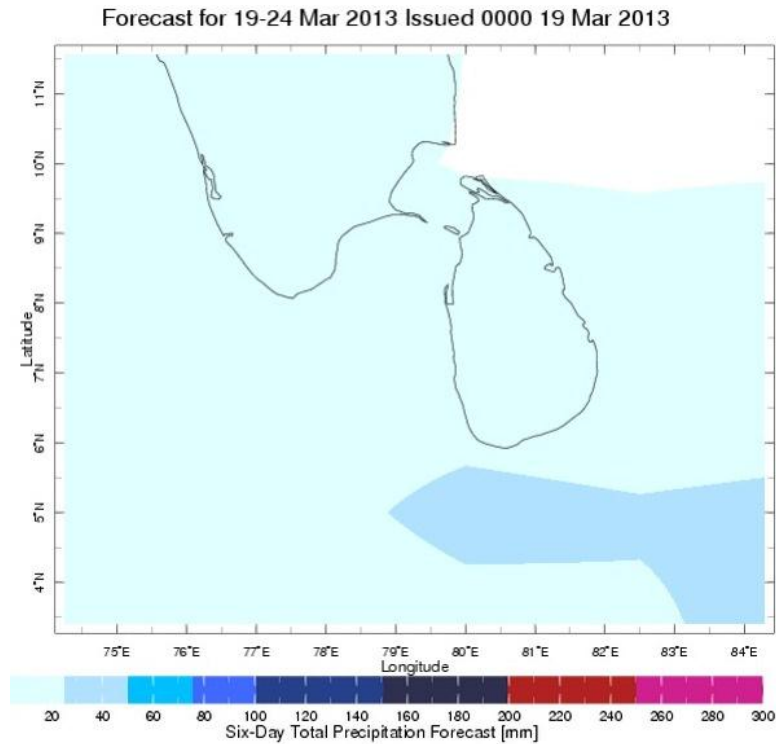
WRF MODEL FORECAST (48 HR.) RAINFALL(mm)
based on 00 UTC of 19-03-2013 valid for 03 UTC of 21-03-2013



WRF MODEL FORECAST (72 HR.) RAINFALL(mm)
based on 00 UTC of 19-03-2013 valid for 03 UTC of 22-03-2013



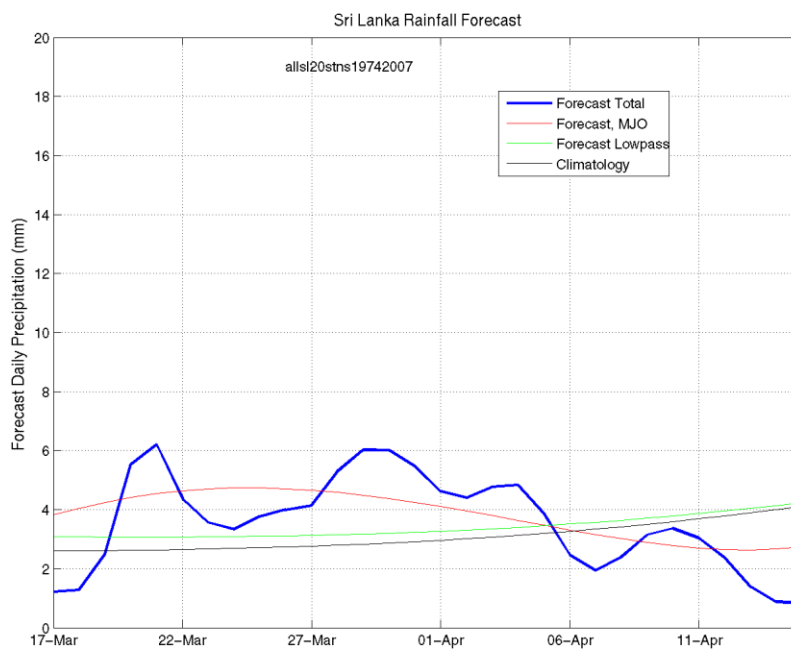
c) Weekly Precipitation Forecast for 19th-24th March 2013 (Precipitation Forecast in Context Map Tool, IRI)



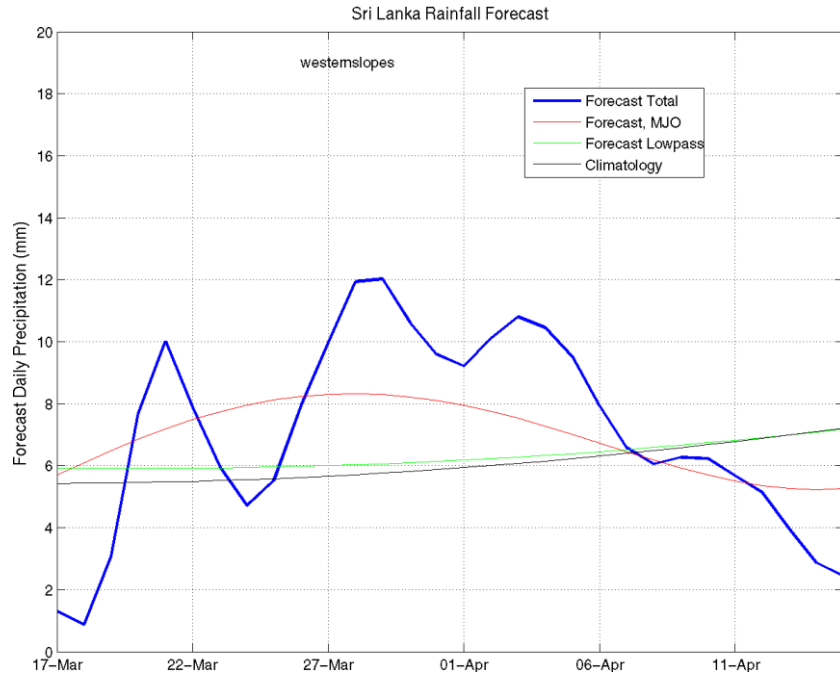
d) 1 month experimental predictions by Paul Roundy and L. Zubair

Predictions based on observed cloud cover and atmospheric waves. Issued 19th March, 2013

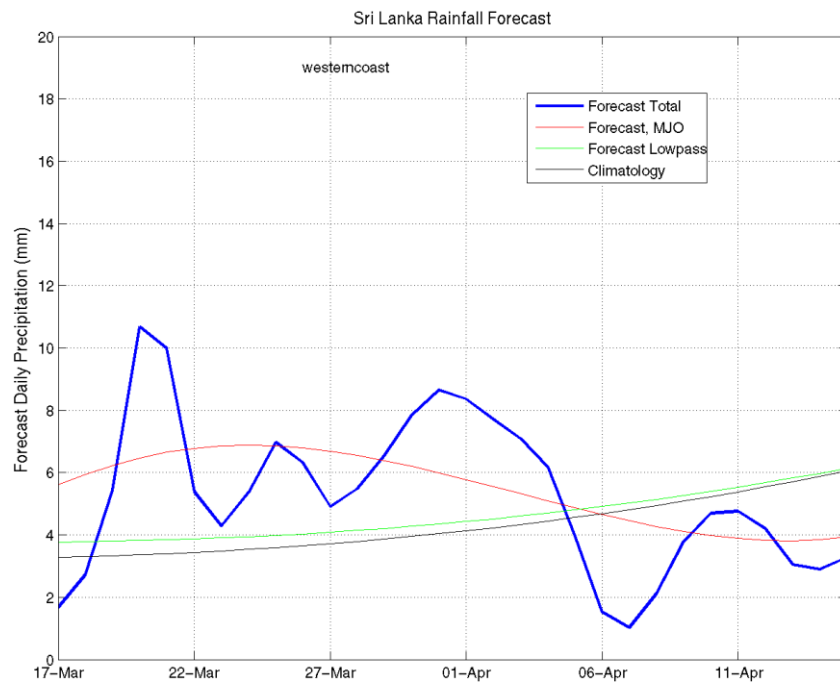
All Sri Lanka (Rainfall Scale from 0-20 mm/day)



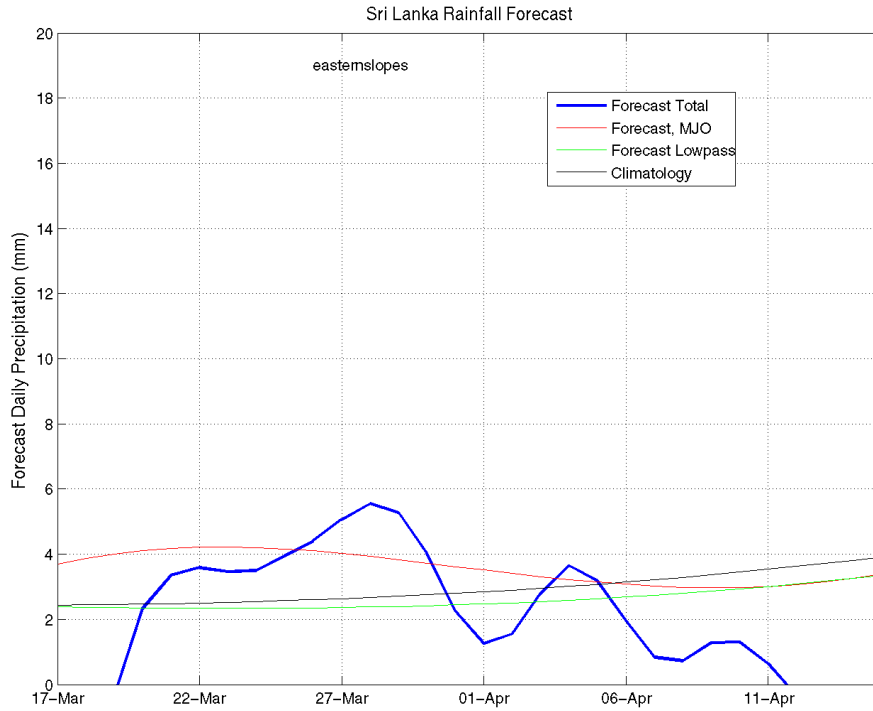
Western Slopes (Rainfall Scale from 0-20 mm/day)



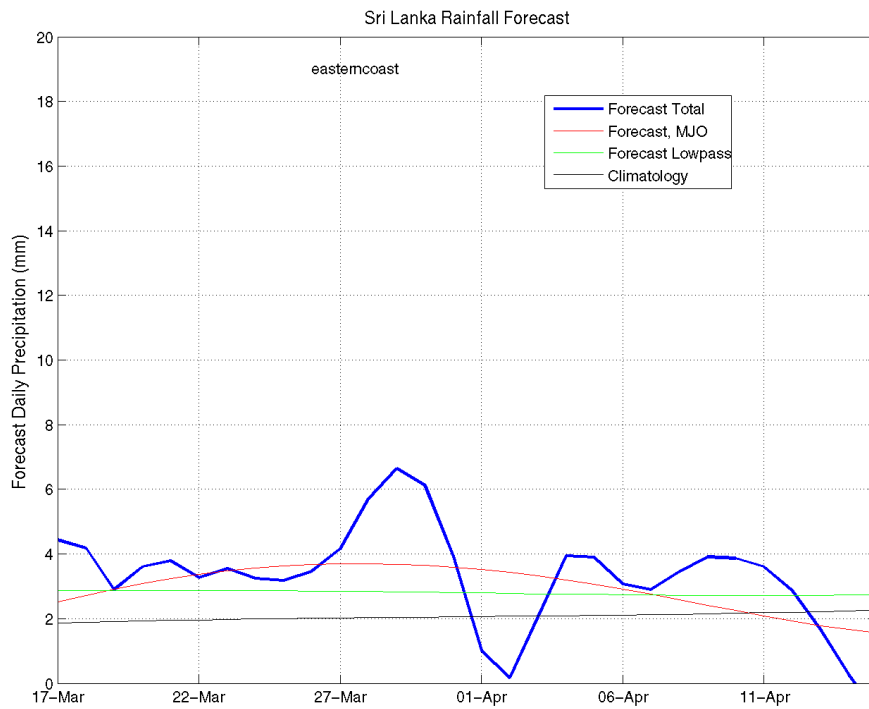
Western Coast (Rainfall Scale from 0-20 mm/day)



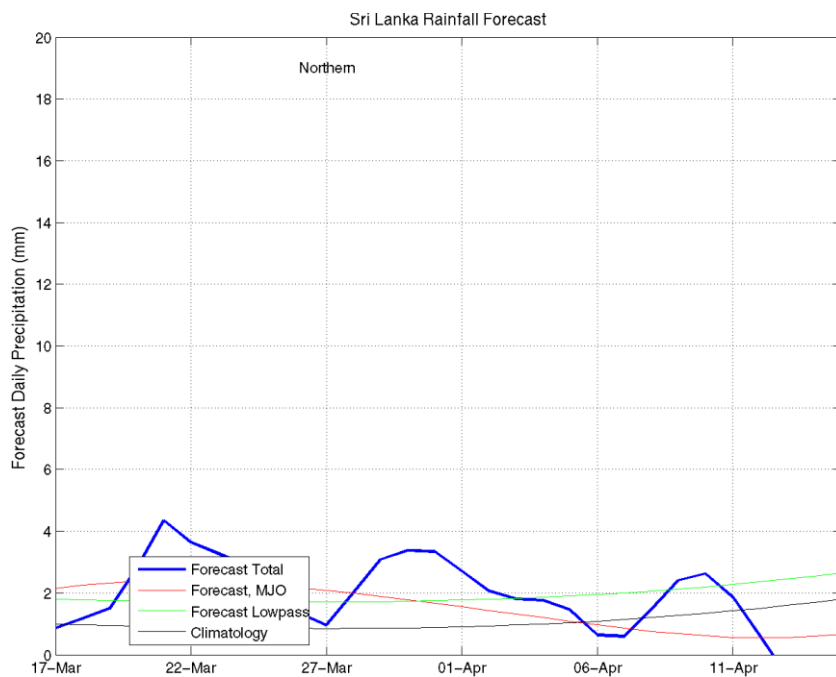
Eastern Slopes (Rainfall Scale- from 0-20 mm/day)



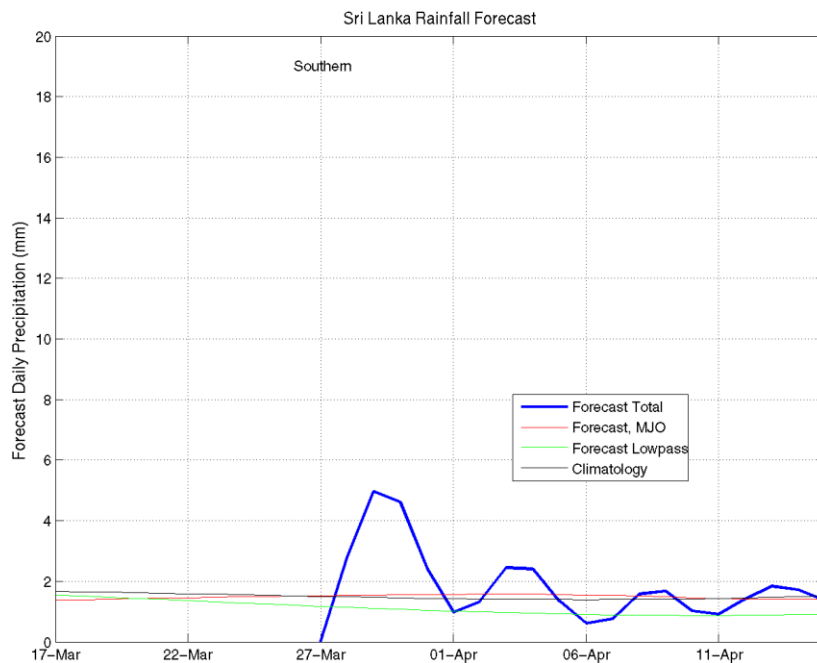
Eastern Coast (Rainfall Scale- from 0-20 mm/day)



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

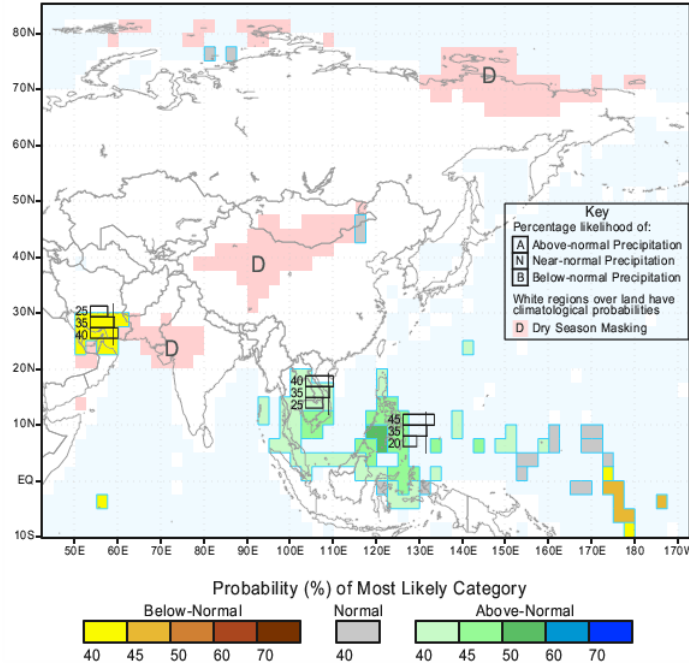


Southern Region (Rainfall Scale- from 0-20 mm/day)



e) Seasonal Rainfall and Temperature Predictions from IRI

IRI Multi-Model Probability Forecast for Precipitation
for March-April-May 2013, Issued February 2013



IRI Multi-Model Probability Forecast for Temperature
for March-April-May 2013, Issued February 2013

