

Experimental Climate Monitoring and Prediction

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FECT BLOG

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

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<http://www.climate.lk>

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February 7, 2013 PACIFIC SEAS STATE

During January to 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:

Eastern coastal belt of Sri Lanka, shall receive less than 65 mm of rainfall during 27th February-5th March and rainfall shall spreads in reducing manner towards west direction. More or less entire country shall receive no rainfall condition on the 1st & 2nd of March 2013. However rainfall shall increase gradually during 28th February-1st March and shall gradually decrease thereafter with minor fluctuations.

Summary

Monitoring

Weekly Monitoring: Rainfall ranged between 5-50 mm during 20th-25th February 2013. Maximum rainfall was observed on the 21st February for the western regions of Sri Lanka. For the rest of the days, entire Sri Lanka faced dry condition.

Predictions

7-day prediction: Eastern coastal belt of Sri Lanka shall receive less than 65 mm of rainfall during 27th February-5th March and rainfall shall spreads in reducing manner towards west direction.

IMD WRF Model Forecast & IRI forecast: For 1st of March 2013, IMD WRF model predicts 1-8 mm of rainfall for central regions of Hambantota district and less than 2.5 mm of rainfall for the small patch of North of Ampara. For the 2nd of March, IMD WRF model predicts less than 1-8 mm of rainfall for Matara, Galle, Kalutara and Ratnapura districts. NOAA model predicts low rainfall for Colombo, Gampaha, Puttalam, Kegalle, Kurunegala, Anuradhapura, Vavuniya, Mannar, Mulativu, Kilinochchi and Jaffna districts and, rest of the regions shall receive more wet condition compared to mentioned regions from 27th February-4th March.

30 Days Prediction: Overall- Rainfall shall increase gradually during 28th February-1st of March and shall gradually decrease till 14th March with insignificant fluctuations. There shall not be any significant rainfall incidences during this period. **Western Slopes & Western Coast** – The rainfall pattern existing in the entire country shall be present in these two regions. However, amount of rainfall receive for this regions shall be high compared to rest of the regions. **Eastern slopes & Eastern Coast** – Rainfall shall increase gradually during 28th February-3rd of March and shall gradually decrease with insignificant fluctuations. **Northern region-** The rainfall pattern existing in the entire country shall be present in this region. **Southern Region-** Rainfall shall increase gradually during 28th February-8th of March with negative and positive rates and shall gradually decrease till 13th March.

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.

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

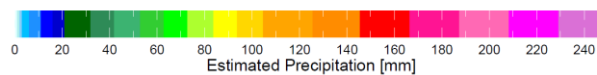
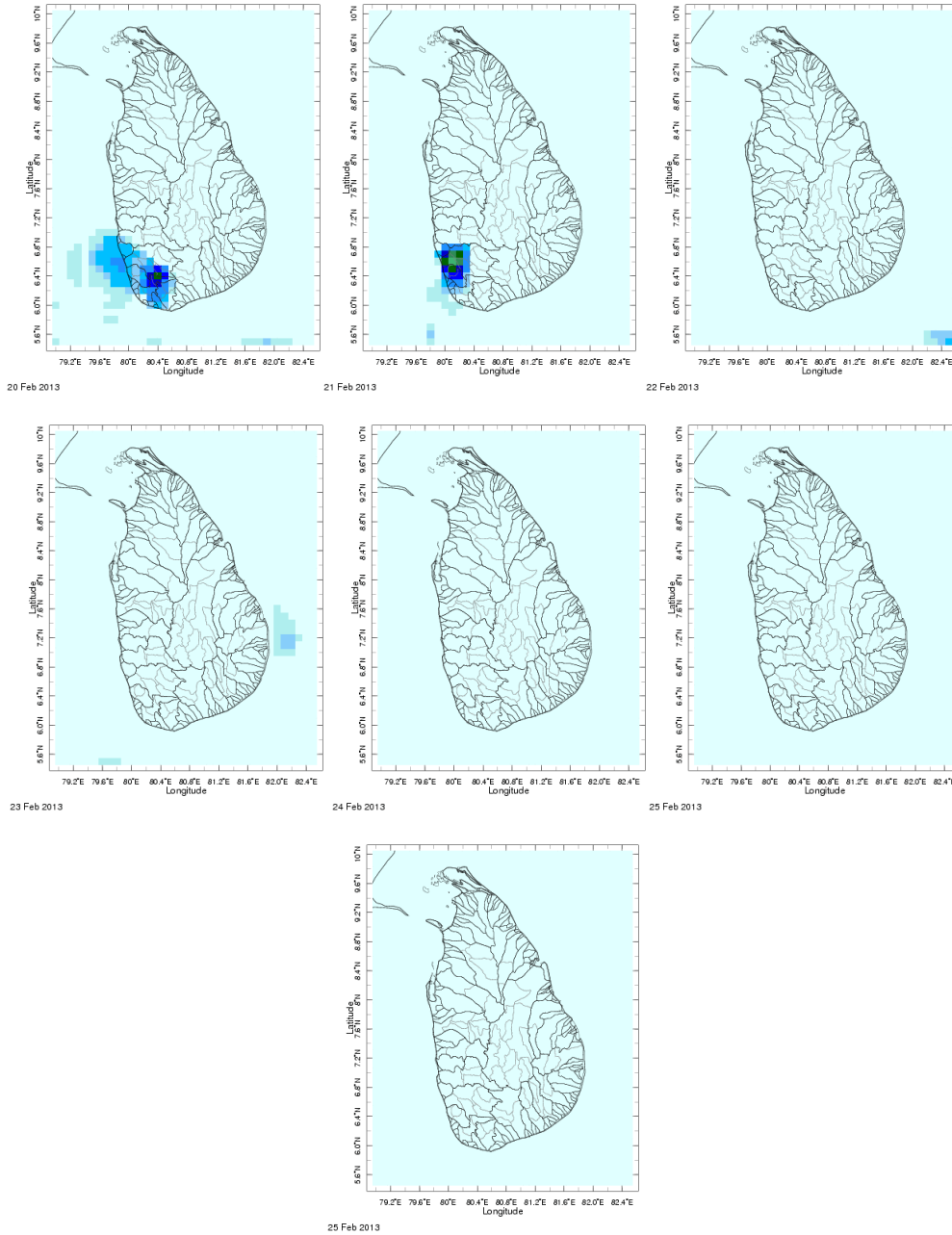
¹ International Research Institute for Climate and Society, Earth Institute at Columbia University, New York.

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

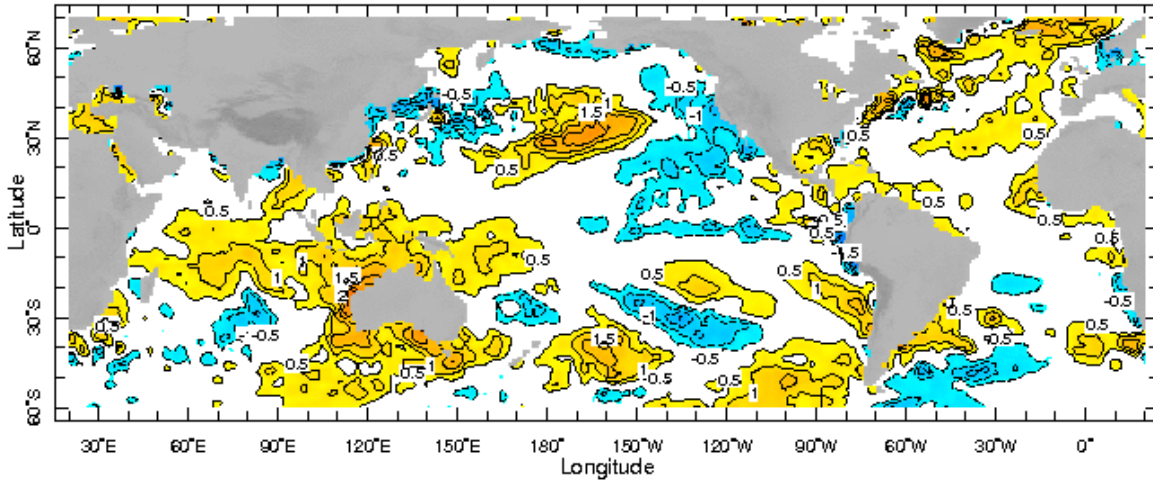
Official hydro-meteorological statements are provided by the Sri Lanka Department of Meteorology and Department of Irrigation.

1. Monitoring

a) Daily Satellite Derived Rainfall Estimate Maps: 20th-25th February 2013 (Left-Right, Top-Bottom)



b) Weekly Average SST Anomalies

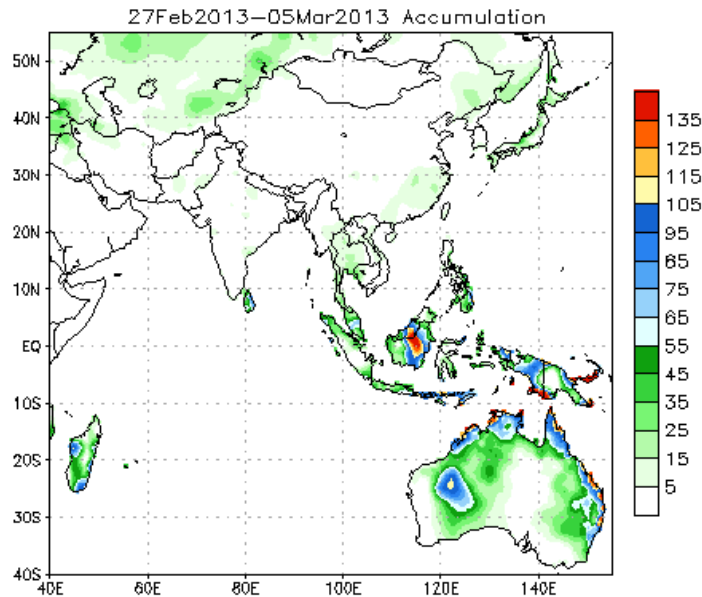


Weekly Average SST Anomalies ($^{\circ}$ C), 17th-23rd February, 2013

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

2. Predictions

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

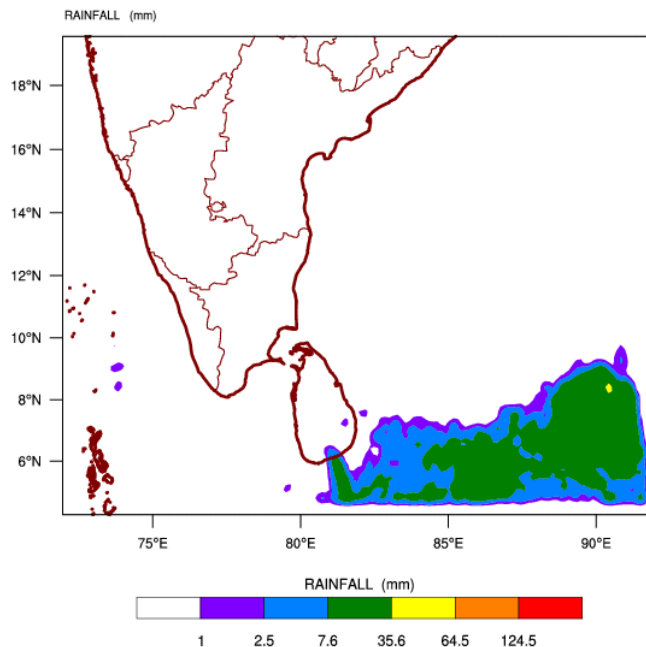


Bias correction based on last 30-day forecast error

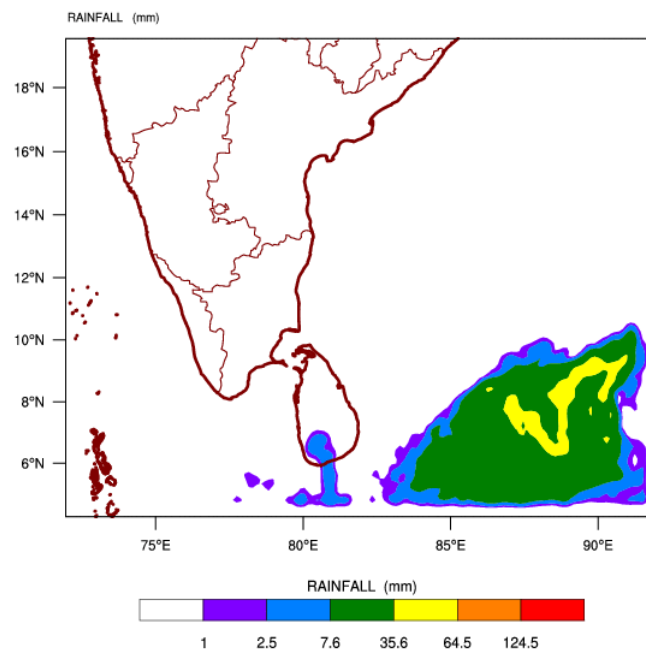
Source – NOAA Climate Prediction Center

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

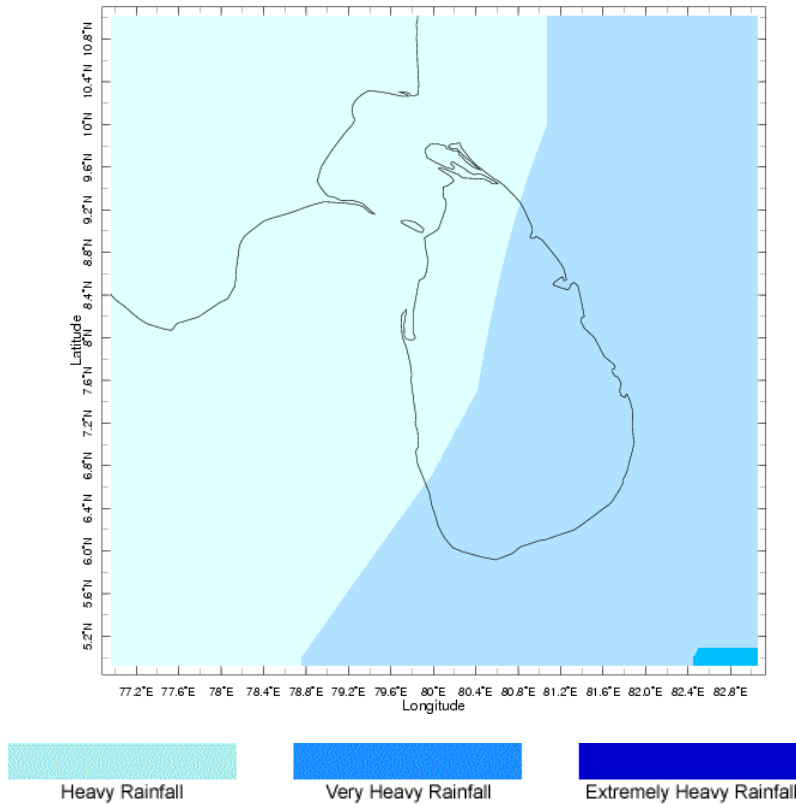
WRF MODEL FORECAST (48 HR.) RAINFALL(mm)
based on 00 UTC of 27-02-2013 valid for 03 UTC of 01-03-2013



WRF MODEL FORECAST (72 HR.) RAINFALL(mm)
based on 00 UTC of 27-02-2013 valid for 03 UTC of 02-03-2013



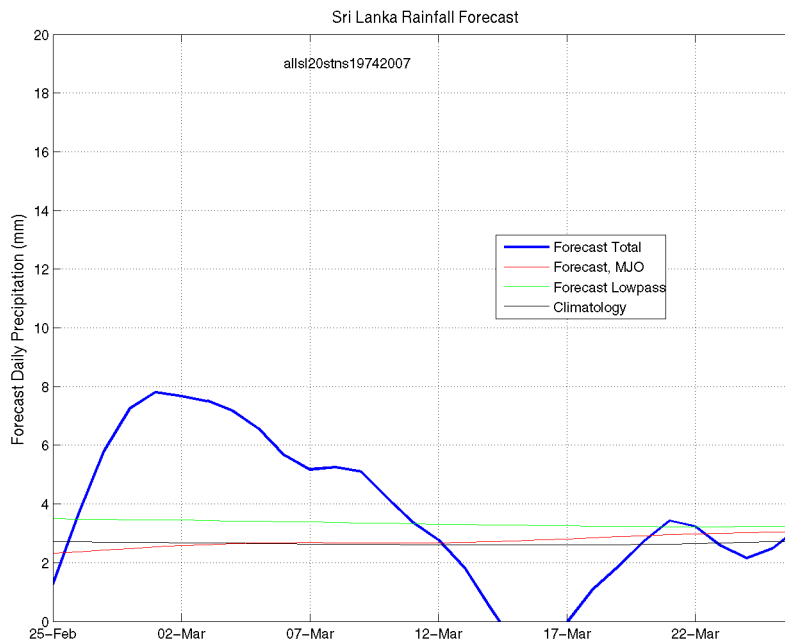
c) Weekly Precipitation Forecast for 27th February-04th March 2013 (Precipitation Forecast in Context Map Tool, IRI)



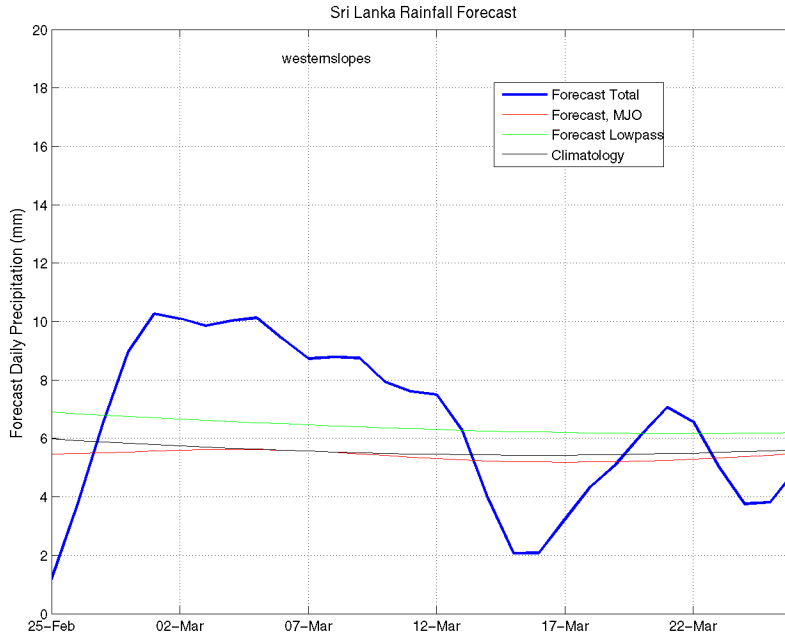
d) 1 month experimental predictions by Paul Roundy and L. Zubair

Predictions based on observed cloud cover and atmospheric waves. Issued 27th February, 2013

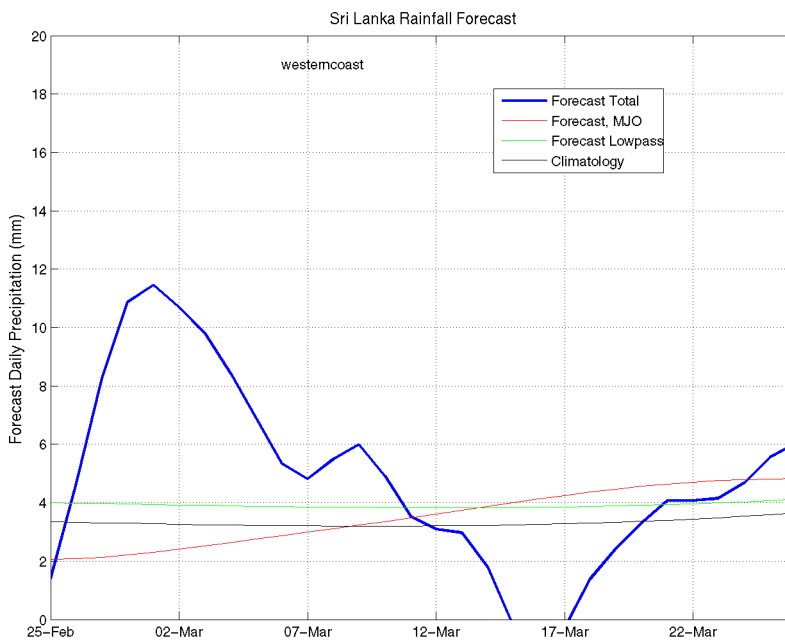
All Sri Lanka (Rainfall Scale from 0-20 mm/day)



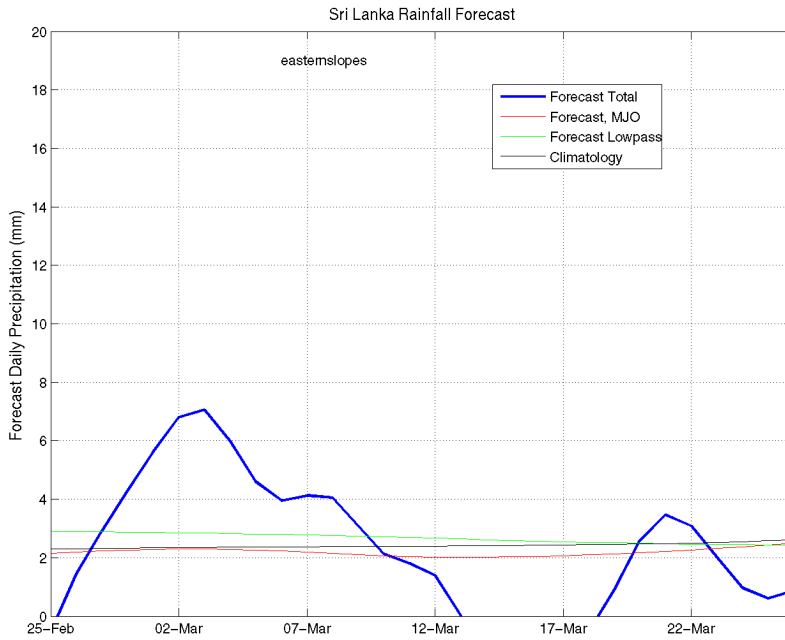
Western Slopes (Rainfall Scale from 0-20 mm/day)



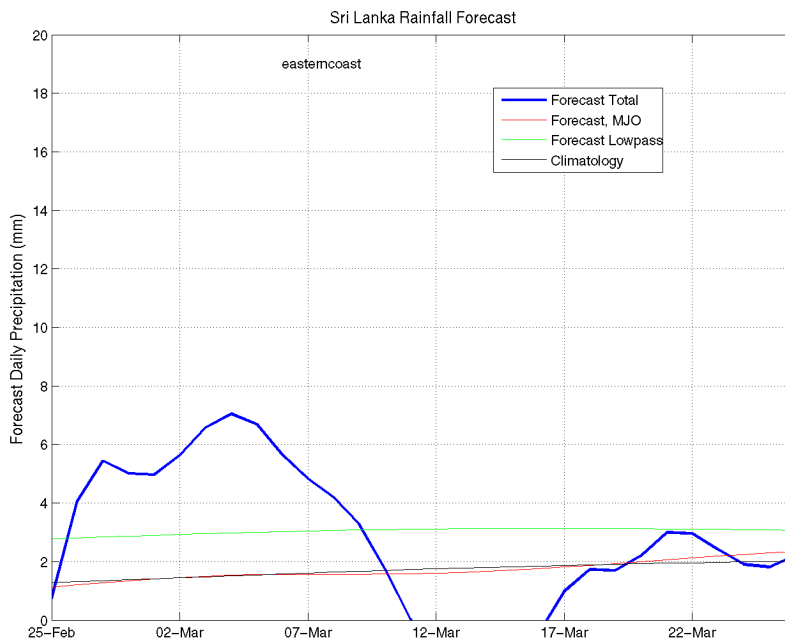
Western Coast (Rainfall Scale from 0-20 mm/day)



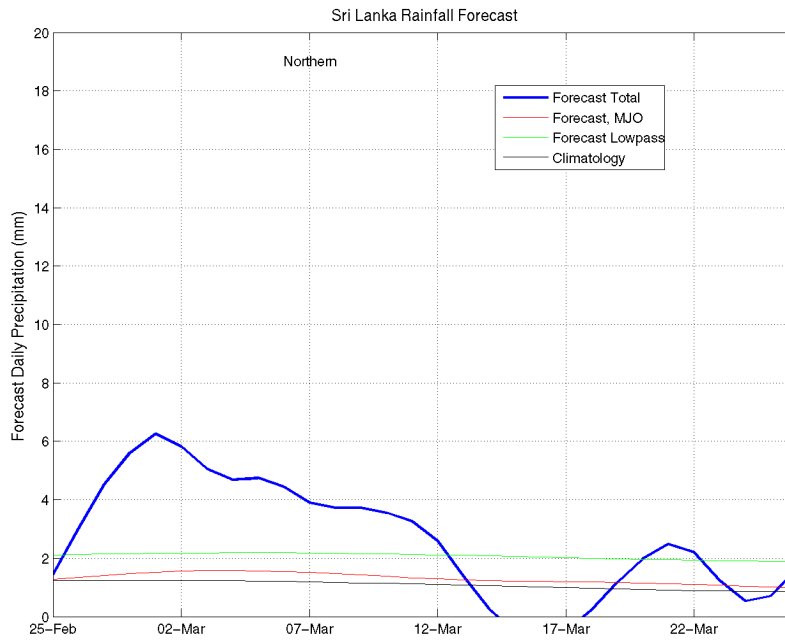
Eastern Slopes (Rainfall Scale- from 0-20 mm/day)



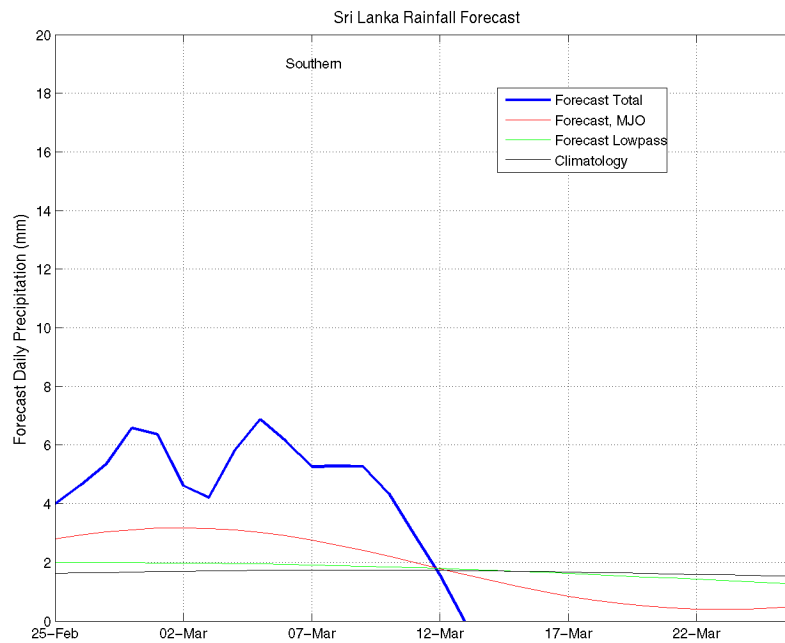
Eastern Coast (Rainfall Scale- from 0-20 mm/day)



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

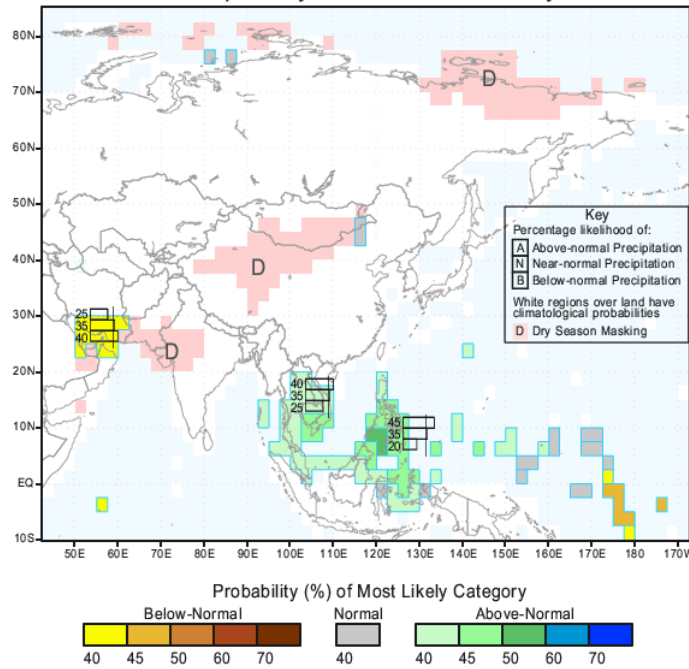


Southern Region (Rainfall Scale- from 0-20 mm/day)



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

