

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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<http://www.tropicalclimate.org/>

January 17, 2013 PACIFIC SEAS STATE

Most of the ENSO prediction models predict natural ENSO conditions through the first half of 2013. During early January the observed SST conditions have become below average, but in the neutral range.

(Text Courtesy IRI)

INDIAN OCEAN STATE

In the Pacific, the El Nino state has weakened to neutral although there is weak warming remnant in the El Nino index areas. The unusually warmer sea surfaces of the Arabian Sea/Central Western and South-Eastern Indian Ocean remain.

Highlights

Monitoring and Predictions:

Frequent variation of heavy rainfall is expected for East, & South-eastern regions of Sri Lanka, for the period of 30th January-4th February. However, during the first 2 weeks of February the rainfall shall be comparatively lower than the rainfall observed during month of January.

Summary

Monitoring

Weekly Monitoring: During 22nd-28th January 2013 rainfall ranged between 5-85 mm. Maximum amount of rainfall was observed on the 23rd in the Matale district. During 22nd-25th more or less the entire country received rainfall with variations. But dry conditions prevailed in the entire country from the 26th-28th.

Predictions

7-day prediction: From 30th January-05th February 2013:- 65-95 mm of rainfall is predicted for the Eastern regions of Sri Lanka and rainfall shall spread in a decreasing manner towards the Southwest direction.

IMD WRF Model Forecast & IRI forecast: For the 1st of February 2013, IMD WRF model predicts less than 8 mm of rainfall for Batticaloa and Ampara districts and then spreads towards Kandy, Nuwara Eliya and Badulla with a decreasing pattern. For the 2nd of February IMD WRF model predicts rainfall less than 8 mm for Batticaloa, Ampara and Polonnaruwa and, parts of Kandy, Nuwara Eliya, Badulla and, Monaragala districts shall receive less than 2.5 mm of rainfall. NOAA model predicts heavy rainfall for the North and North-western regions of Sri Lanka, and very heavy rainfall for rest of the island from 30th January – 4th February.

30 Days Prediction: Overall- During first week of February rainfall shall vary between 1-3.5 mm and rainfall shall be comparatively lower than the rainfall observed during the month of January.

Western Slopes- Rainfall shall decrease from 9 mm to 5 mm during 1st-8th February and then rainfall shall decrease further. **Western Coast-** Rainfall shall decrease till 4th February and reach minimum daily rainfall of 1 mm. Thereafter rainfall shall increase after the 4th till 7th. **Eastern slopes-** Daily rainfall shall be below 2 mm during the first week of February and below 1 mm per day after the 3rd till 8th. **Eastern Coast-** Frequent variation of rainfall shall be observed during the first 2 weeks of February. But the daily rainfall shall be less than 3 mm. **Northern region-** Rainfall is not predicted for 1st-2nd and 3rd-10th February. During 3rd of February insignificant amount of rainfall (0.5 mm) shall be observed. **Southern Region-** Rainfall is not predicted till 6th February and thereafter it shall start to increase gradually.

Seasonal Prediction: As per IRI Multi Model Probability Forecast issued on January 2013; for February 2013 to April 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

1. Monitoring

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

2. Predictions

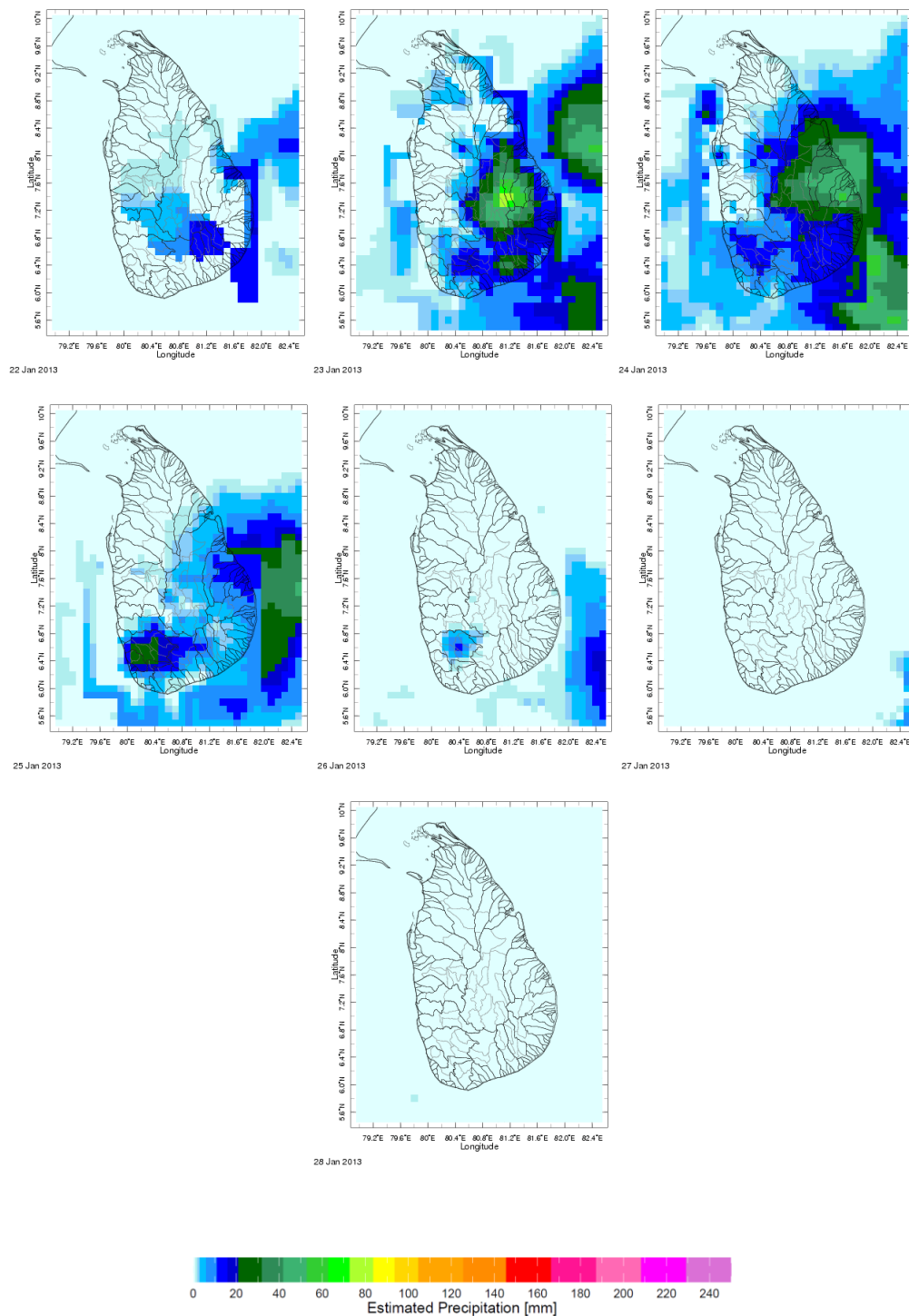
- NCEP GFS Ensemble 1-7 day predictions
- Weekly precipitation forecast (IRI)
- 1 month experimental predictions by Paul Roundy and L. Zubair
- Seasonal Predictions from IRI

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

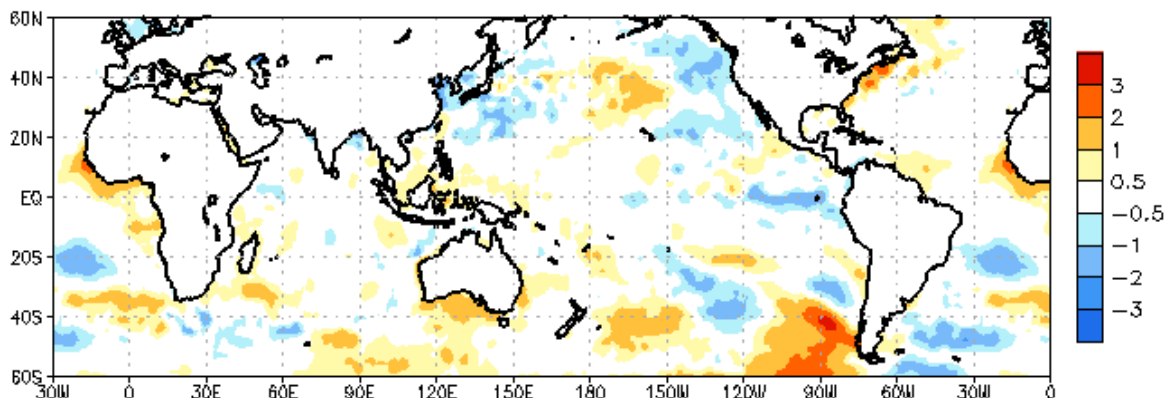
² These interpretations of hydro-meteorological conditions for the Mahaweli basins are provided for the use of the WMS/MASL.

1. Monitoring

a) Daily Satellite Derived Rainfall Estimate Maps: 22nd–28th January 2013 (Left-Right, Top-Bottom)



b) Weekly Average SST Anomalies

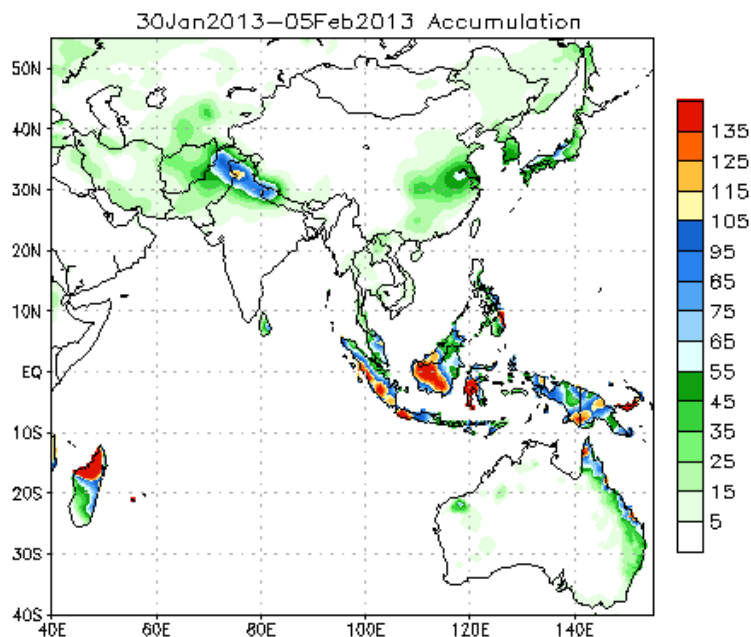


Weekly Average SST Anomalies ($^{\circ}\text{C}$), 23rd January, 2013

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

2. Predictions

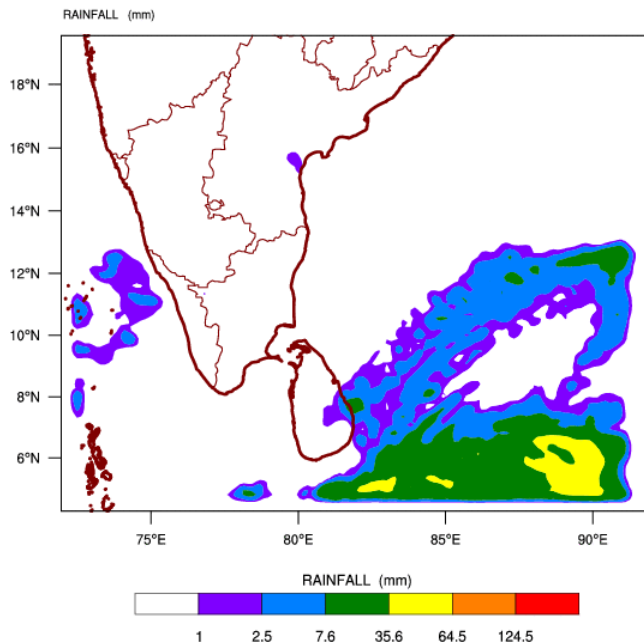
a) NCEP GFS Ensemble 1-7 day predictions, NOAA, Climate Prediction Centre, USA.



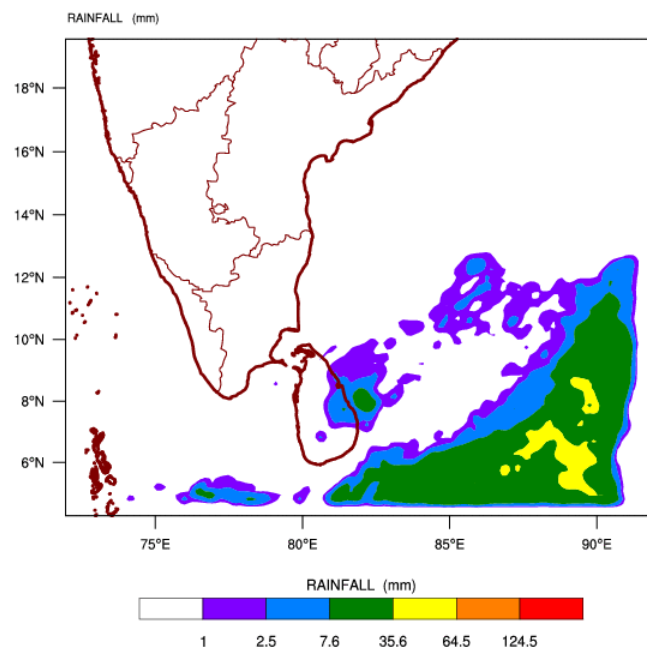
Source – NOAA Climate Prediction Center

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

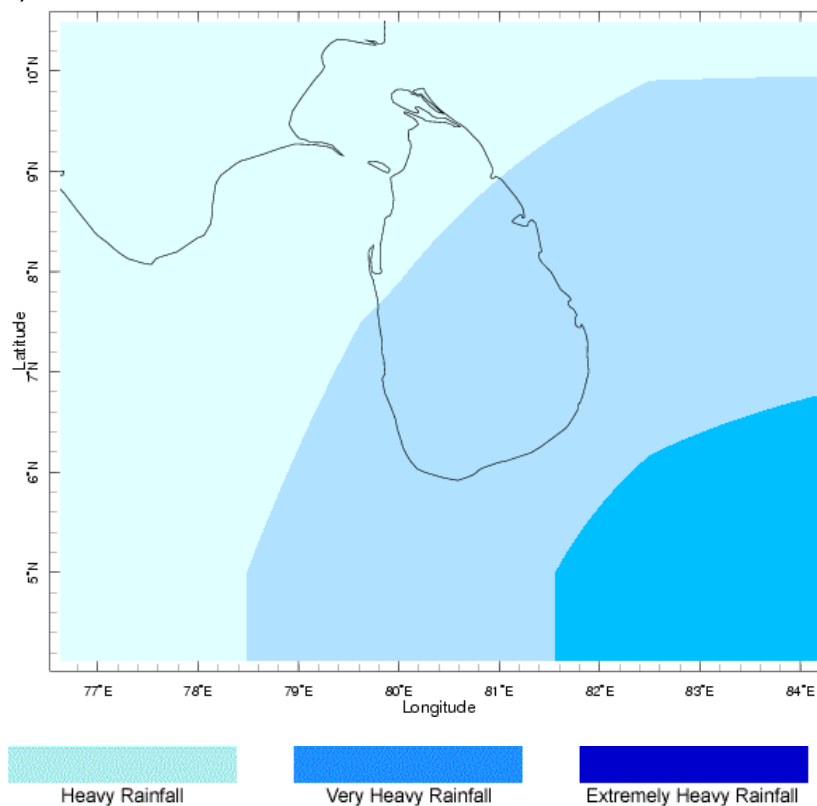
WRF MODEL FORECAST (48 HR.) RAINFALL(mm)\
based on 00 UTC of 30-01-2013 valid for 03 UTC of 01-02-2013



WRF MODEL FORECAST (72 HR.) RAINFALL(mm)\
based on 00 UTC of 30-01-2013 valid for 03 UTC of 02-02-2013



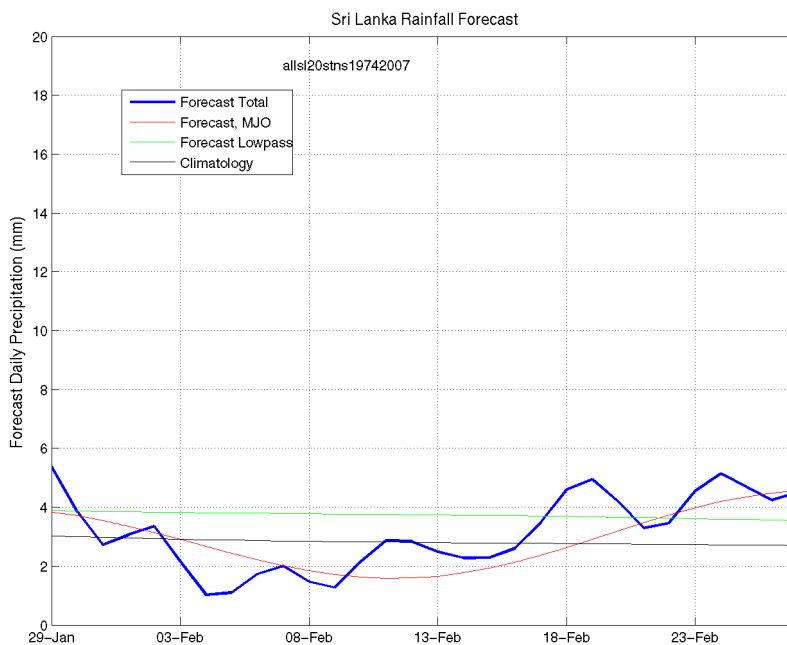
c) Weekly Precipitation Forecast for 30th January-4th February 2013 (Precipitation Forecast in Context Map Tool, IRI)



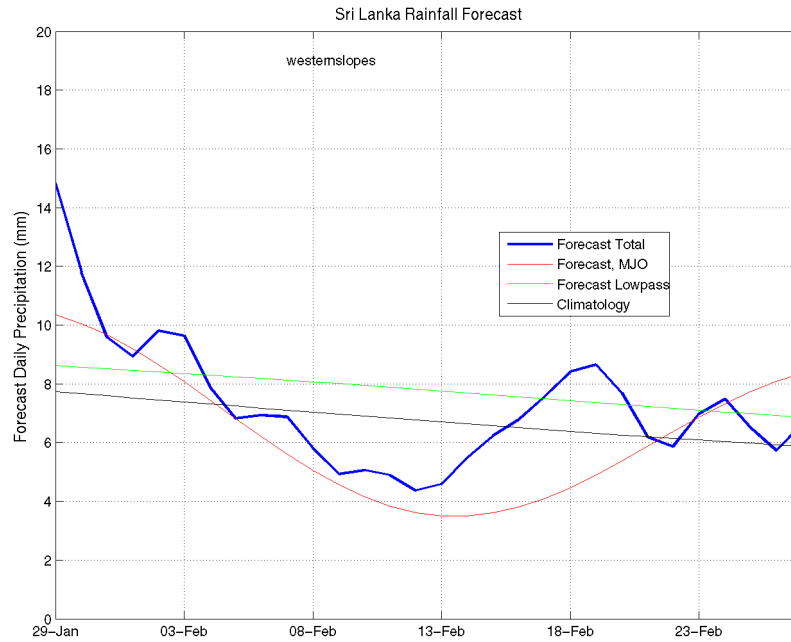
d) 1 month experimental predictions by Paul Roundy and L. Zubair

Predictions based on observed cloud cover and atmospheric waves. Issued 31st January, 2013

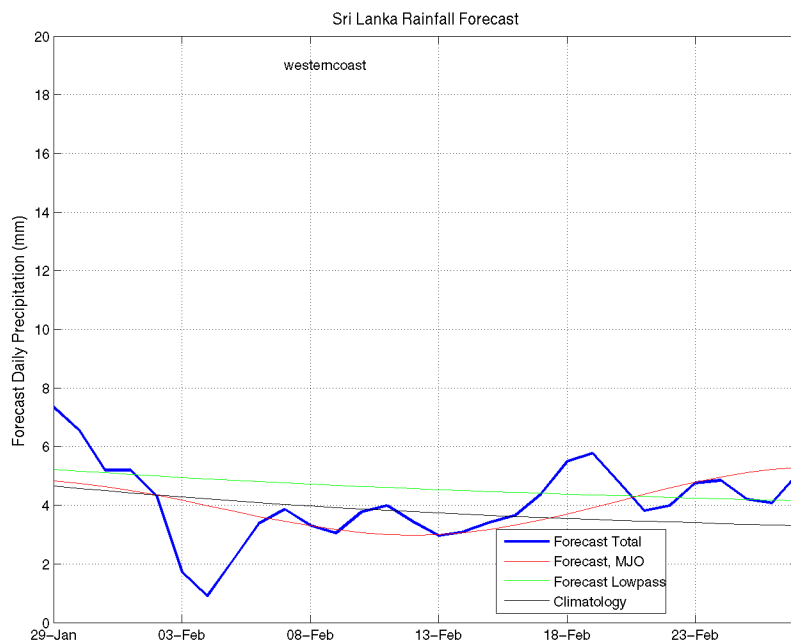
All Sri Lanka (Rainfall Scale from 0-20 mm/day)



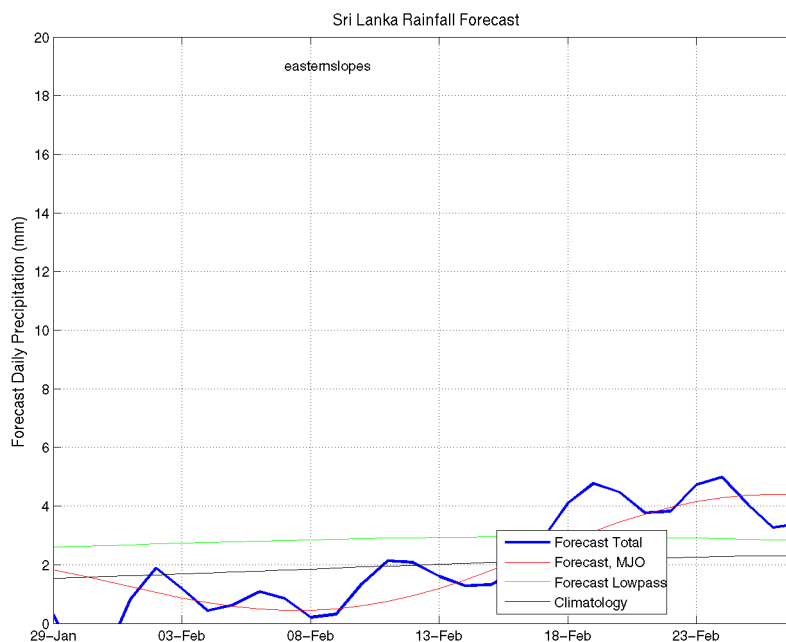
Western Slopes (Rainfall Scale from 0-20 mm/day)



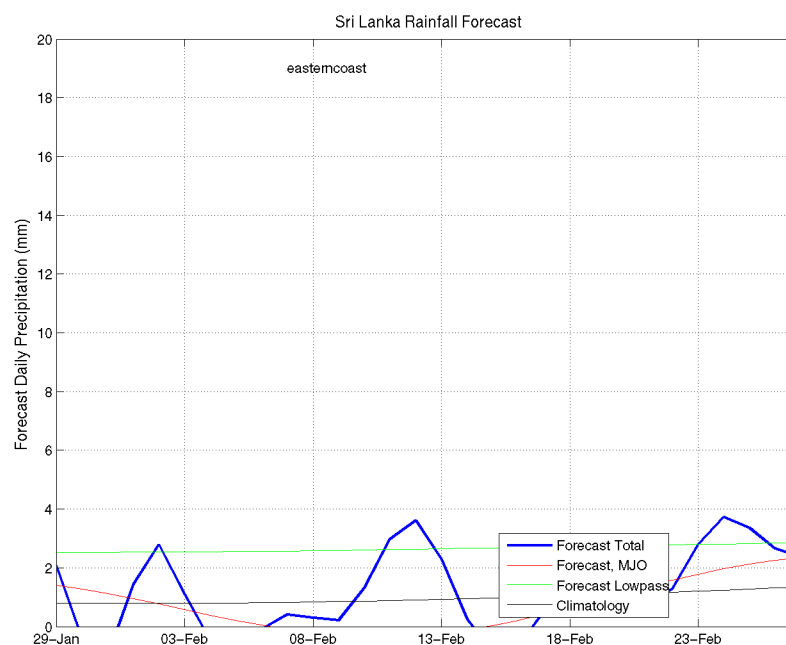
Western Coast (Rainfall Scale from 0-20 mm/day)



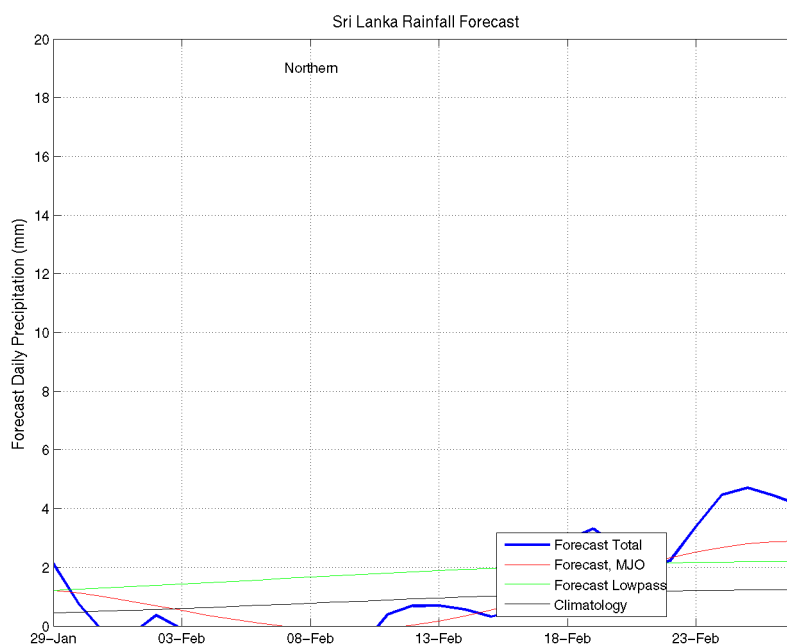
Eastern Slopes (Rainfall Scale- from 0-20 mm/day)



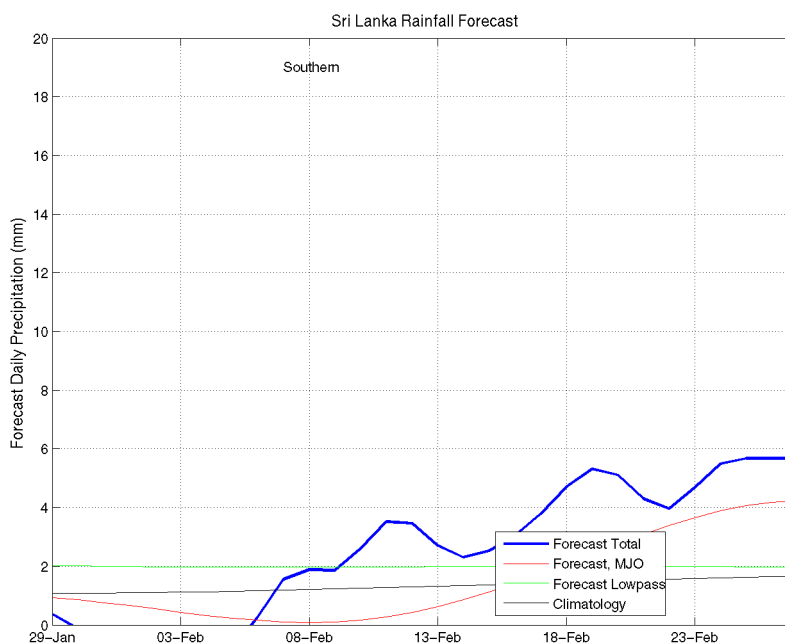
Eastern Coast (Rainfall Scale- from 0-20 mm/day)



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

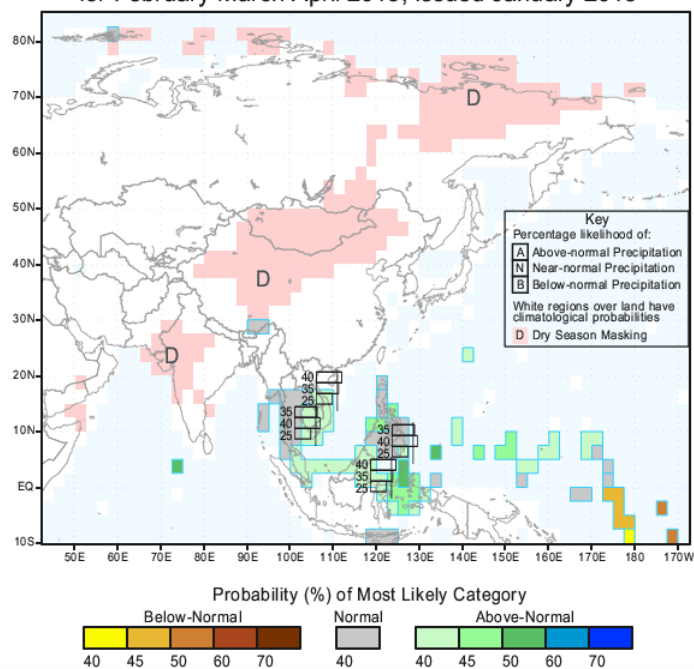


Southern Region (Rainfall Scale- from 0-20 mm/day)



e) Seasonal Rainfall and Temperature Predictions from IRI

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



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

