FECT Foundation for Environment Climate and Technology
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Experimental Climate Monitoring and Prediction

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24 January 2013

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PACIFIC SEAS STATE

January 17, 2013

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

For the period of January to March 2013, there shall be 43% of cumulative probability to have warm SST over tropical Indian Ocean which shall aggravate unusual weather patterns.

Highlights

Monitoring and Predictions:

Very heavy rainfall is expected for East, & South-eastern Sri Lanka, and heavy rainfall shall be experienced in the rest of the country, for the period of 23rd-28th January. The monthly predictions indicate substantial amount of rainfall for the entire country around 28th-30th January. However, prevailing rainfall condition shall start to diminish after 24th January and shall persist during the first two weeks of February.

Summary

Monitoring

***Weekly Monitoring*:** During 15th-21st January 2013 rainfall ranged between 5-10 mm. On 20th January rainfall was observed only in Ratnapura and Nuwara Eliya districts and parts of Galle, Matara, Kalutara, and the Costal belt between Trincomalee and, Ampara.

Predictions

7-day prediction: From 23rd-29th January 2013, a central strip from North to South of Sri Lanka shall receive 15-55 mm of rainfall. For the same period, Ampara shall expect 65-95 mm of rainfall.

IMD WRF Model Forecast & IRI forecast: For the 25th of January 2013, IMD WRF model predicts less than 65 mm of rainfall for few areas of Batticaloa district. For the same day less than 36 mm of rainfall is predicted for Trincomalee, Polonnaruwa, Ampara, Colombo and Matara districts. Except for Hambantota, Monaragala, Badulla, Gampaha and Kegalle rest of the regions shall receive rainfall between 1-8 mm. IMD WRF model predicts rainfall same as 25th January for the 26th of January 2013, for the Batticaloa district and less than 36 mm of rainfall is for fewer regions in Matara, Galle, Kalutara, and rainfall shall decrease and spreads towards central hills. NOAA model predicts very heavy and heavy rainfall respectively for the East, South-eastern and rest of the country for the period of 23rd-28th January.

30 Days Prediction: Overall- Rainfall shall gradually decrease after the 24th January-6th February. However, there shall be a significant rainfall peak around 28th-30th January. After the 6th of February rainfall shall increase again gradually. ***Western Slopes-*** Extreme rainfall shall be observed during 28th-30th January as on the 23rd of January. Rainfall shall be diminished within the first two weeks of February. ***Western Coast-*** The same rainfall pattern as the western slopes shall exist, but there shall be a decreasing pattern of rainfall during the first two weeks of February. ***Eastern slopes-*** There shall not be any extreme event of rainfall after 24th January, but rainfall shall gradually decrease till 10th February and thereafter it shall increase. ***Eastern Coast-*** Extreme amount of rainfall shall be received around 28th-30th January. ***Northern region-*** Significant amount of rainfall shall be received around 28th-30th January and rainfall is not predicted during 2nd-15th February. ***Southern Region-*** Same rainfall pattern as the Northern region shall exist during 31st January-7th February. Thereafter rainfall shall increase again.

***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] 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.

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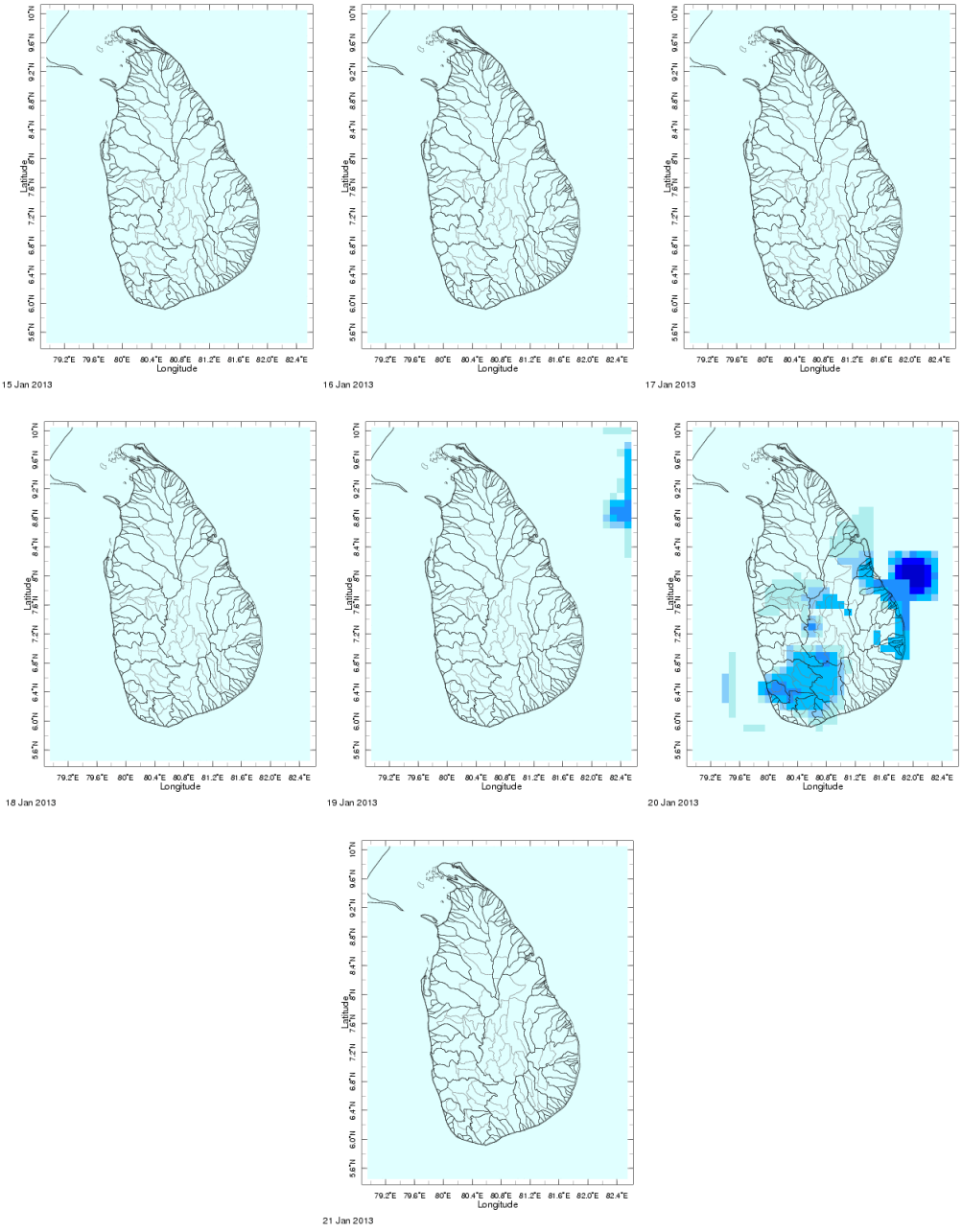
1. Monitoring

a) Daily Satellite Derived Rainfall Estimate Maps: *15th–21st January 2013 (Left-Right, Top-Bottom)*



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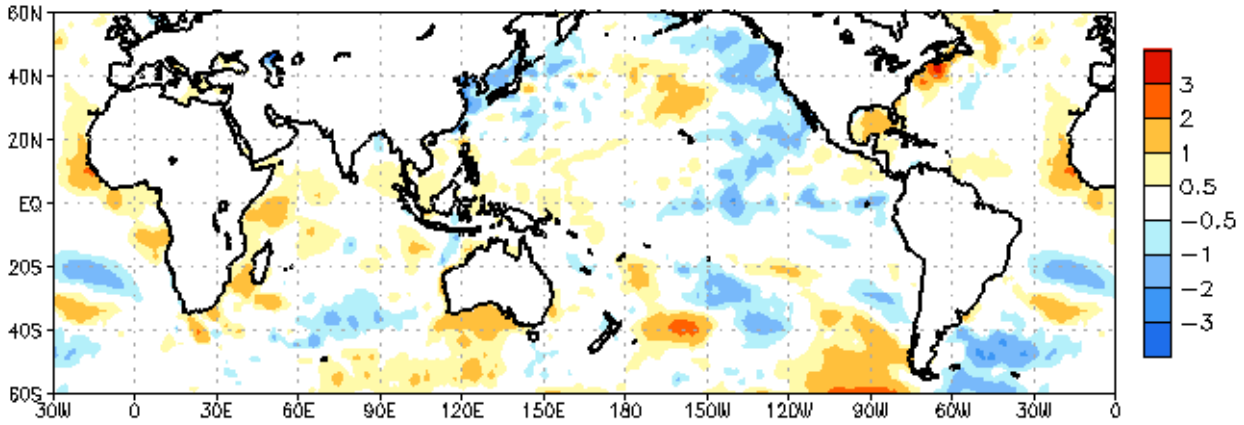
b) Weekly Average SST Anomalies

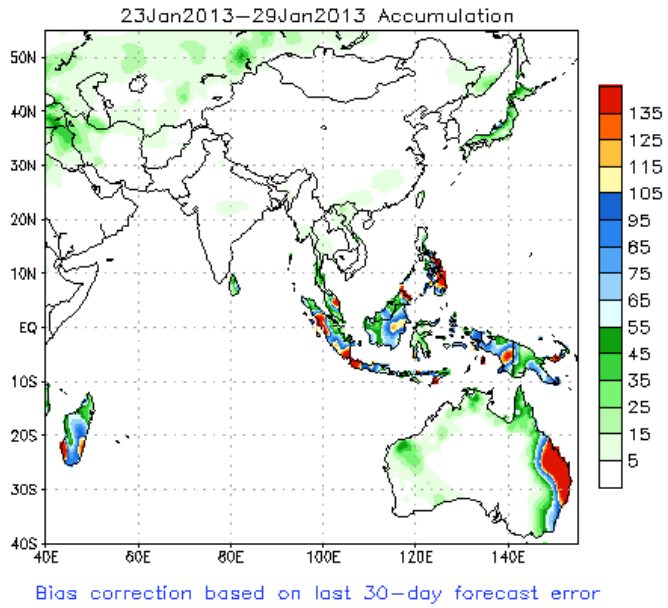


Weekly Average SST Anomalies (^{0}C), 16thJanuary, 2013

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

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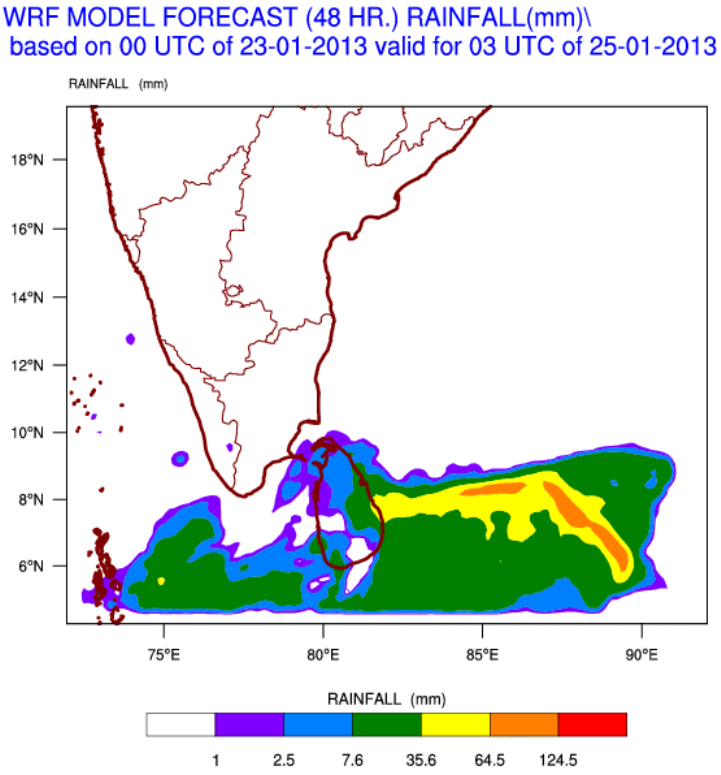
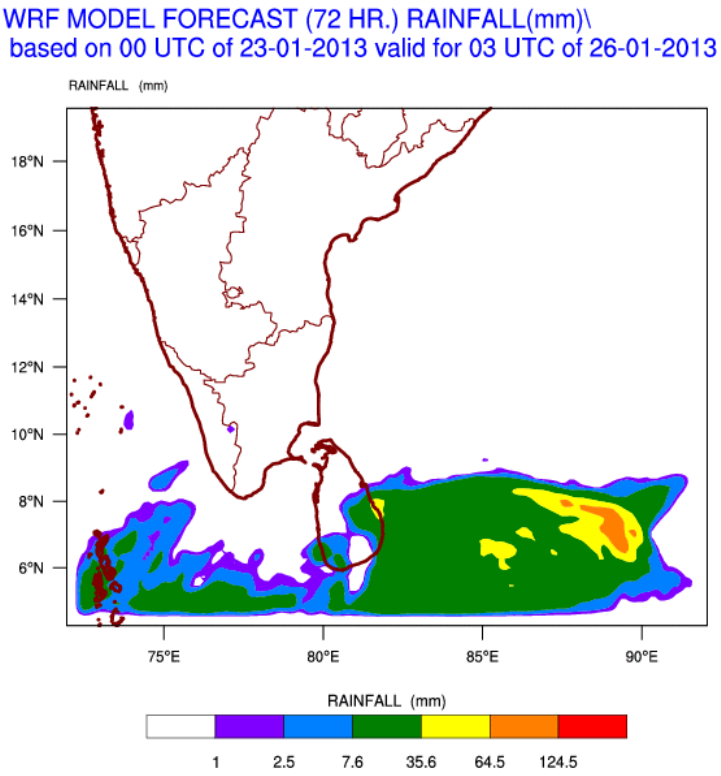
b) *WRF model forecast* Regional Meteorological Center, Chennai, Indian Meteorological Department)





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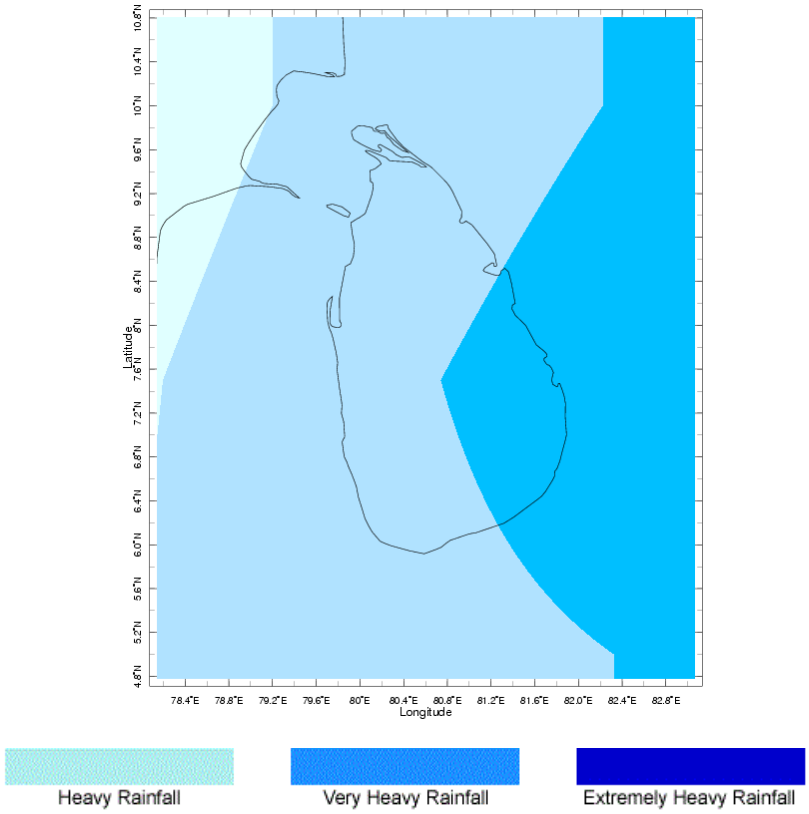
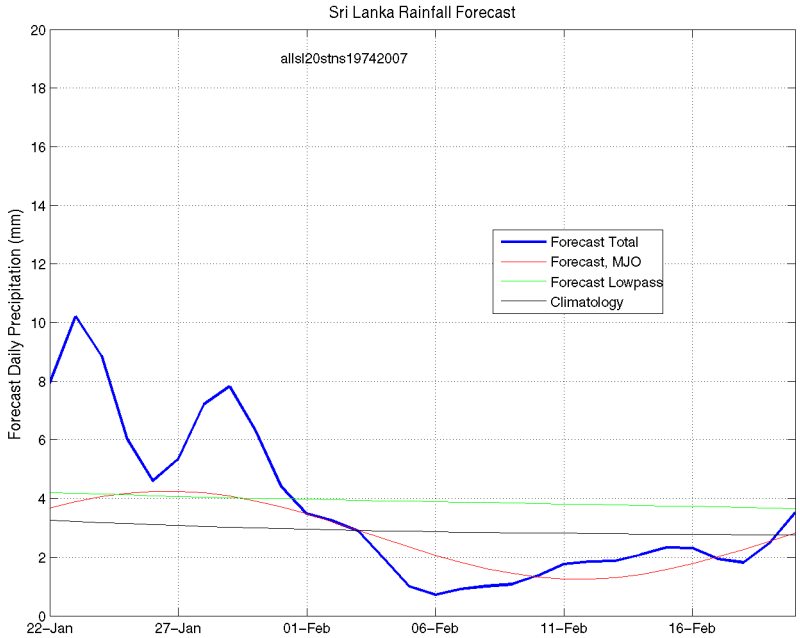
c) *Weekly Precipitation Forecast for 23rd-28th January 2013 (Precipitation Forecast in Context Map Tool, IRI)*



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

Predictions based on observed cloud cover and atmospheric waves. Issued 24th January, 2013

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



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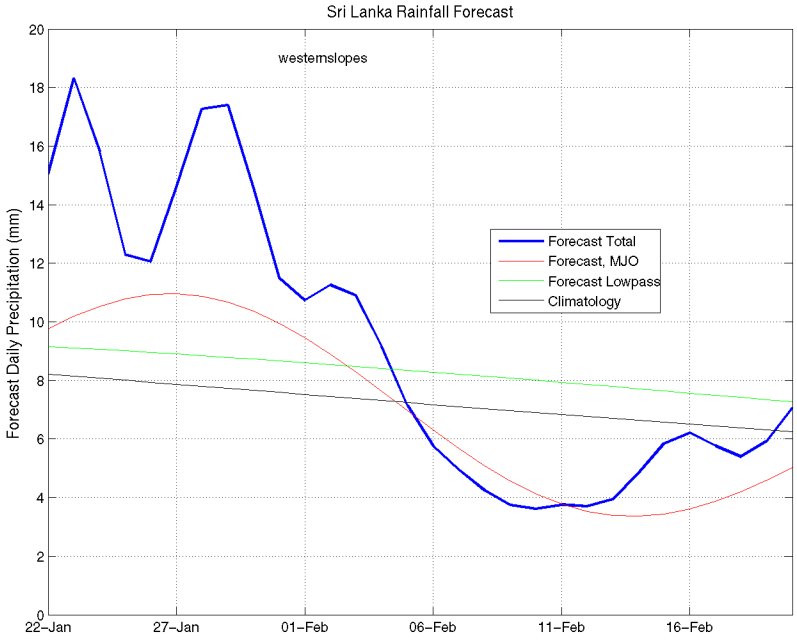
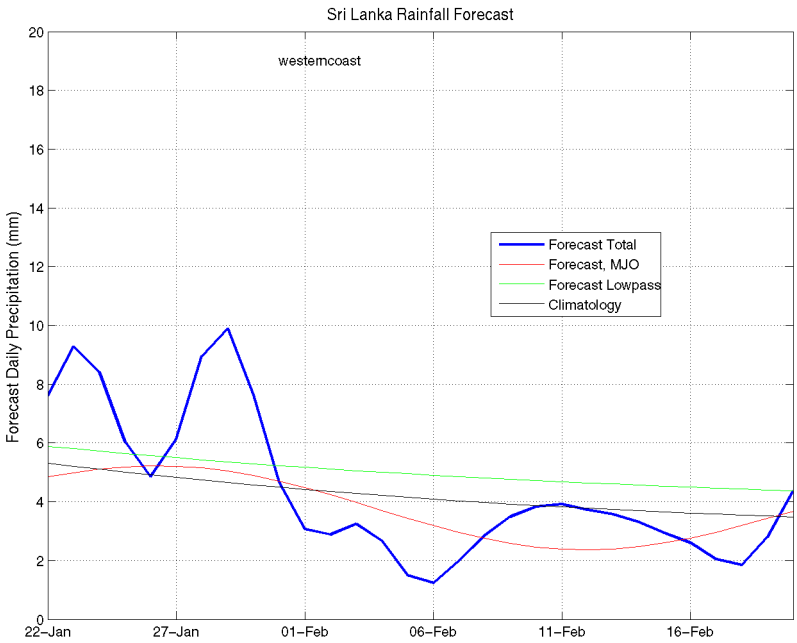
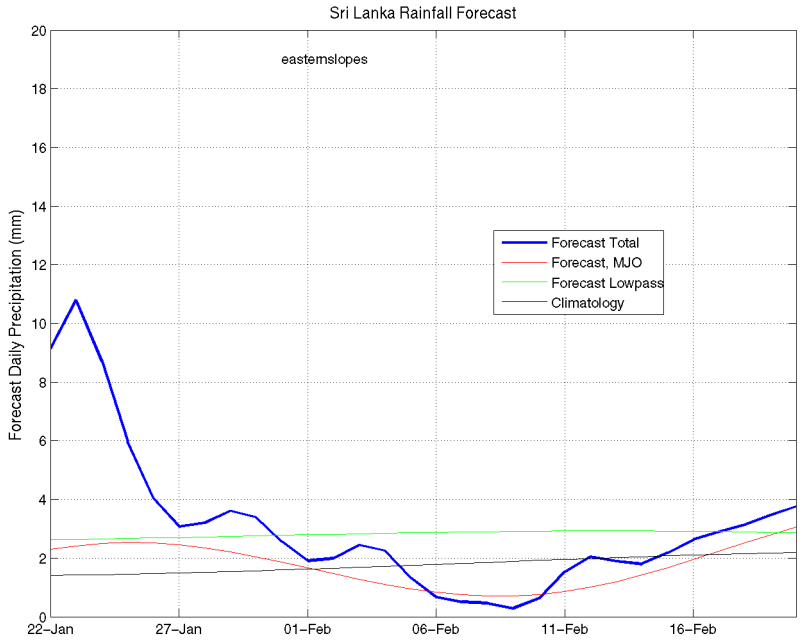
Western Slopes (Rainfall Scale from 0-20 mm/day)



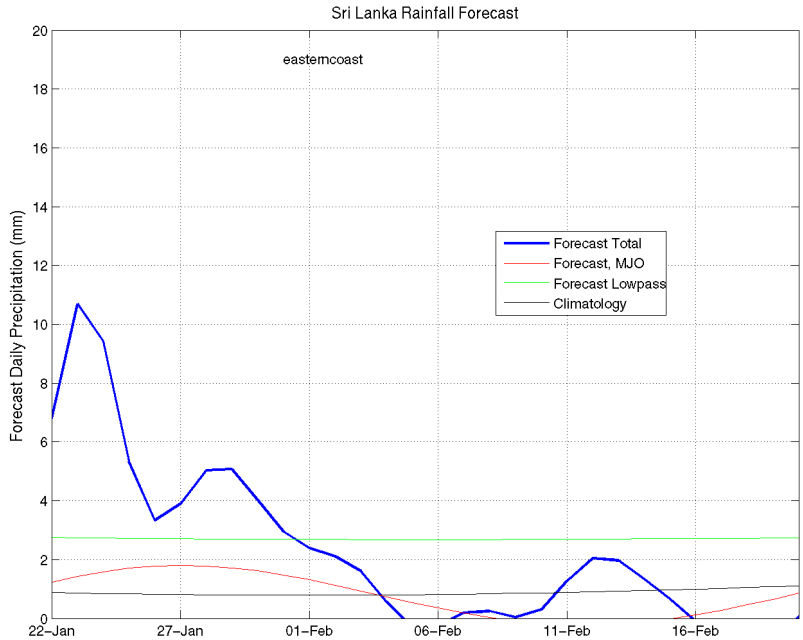
Western Coast (Rainfall Scale from 0-20 mm/day)



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



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



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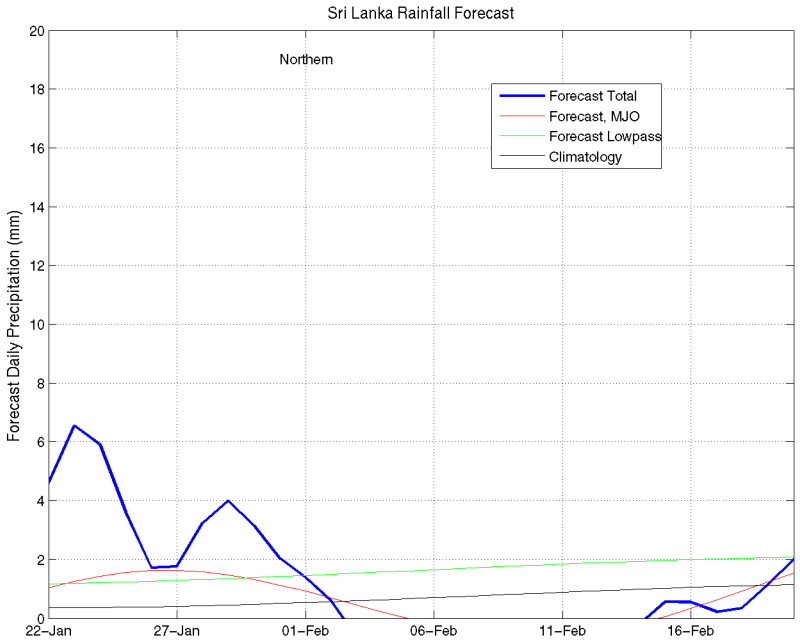
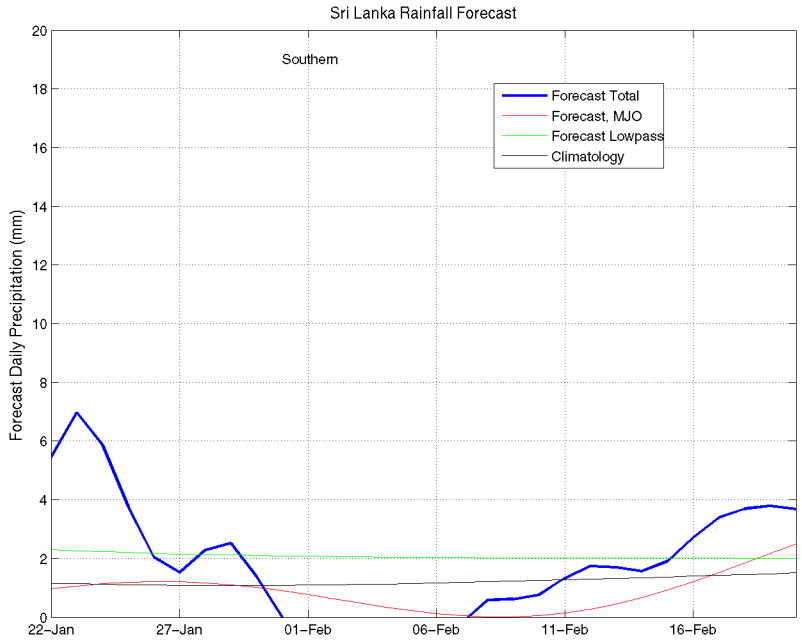
Northern Region (Rainfall Scale- from 0-20 mm/day)



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



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e) Seasonal Rainfall and Temperature Predictions from IRI