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

by: Sewwandhi Chandrasekara, Prabodha Agalawatte, Zeenas Yahiya, LareefZubair and Michael Bell (FECT and IRI[1])

24 April 2014

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http://www.climate.lkand
http://www.tropicalclimate.org/

17 April, 2014

PACIFIC SEAS STATE

During March through mid-April the observed ENSO conditions moved from cool-neutral to warm-neutral. All of the ENSO prediction models indicate a warming trend, with neutral ENSO during northern spring 2014 transitioning to El Niño conditions by the middle of northern summer.

(Text Courtesy IRI)

INDIAN OCEAN STATE

The seas around Sri Lanka showed neutral sea surface temperature during 13th-19th April 2014.

MJO STATE

MJO is neutral.

Highlights

Monitoring and Predictions:

Existing rainfall condition shall persist till 27th April & shall decrease gradually till 29th. Thereafter rainfall shall increase gradually till the mid of May 2014. However, significant rainfall events are likely to experience during 3rd-5th May for Eastern slopes and coasts. For the coming two days (25th & 26th April), the border regions of Kegalle and Ratnapura districts is likely to expect heavy rainfall compared to other regions of Sri Lanka.

Summary

Monitoring

***Weekly Monitoring*:** During 16th-22nd April 2014, Sri Lanka received rainfall ranged 5-40 mm. The maximum amount of rainfall observed for Kurunegala and Mannar districts on 10th April 2014. However, end of the week received less rainfall compared to beginning of the week.

***Monthly Monitoring*:** Southwest regions of Sri Lanka received more average rainfall compared to the rest of the regions during March 2014. However during February 2014, entire country experienced below normal rainfall and highest negative anomaly recorded at Ratnapura district.

Predictions

14 day prediction: During 23rd-29th April 2014, western coastal districts shall receive 55-65 mm/day of rainfall. However, during 30th April-6th May 2014, entire country shall receive less than 5 mm/day of rainfall.

IMD WRF &IRI Model Forecast: For 25th of April, IMD WRF model predicts significant (65-125 mm/day) of rainfall for the border regions of Kegalle and Ratnapura districts & shall spread towards nearby districts in a reducing manner. For the same day, model predicts no rainfall for Batticaloa, Puttalam, Mannar, Killinochchi, and Jaffna districts. For 26th of April, same rainfall pattern is expected, with low amount of rainfall. IRI model predicts 100-150 mm/6 days of rainfall for the small patch in Monaragala district and shall spread towards nearby districts in a reducing manner (22nd-27th April 2014).

30 Days Prediction: Overall- Existing rainfall condition shall persist till 27th April & shall decrease gradually till 29th. Thereafter rainfall shall increase gradually till the mid of May 2014. No significant rainfall events are expected during coming week (25th April-2nd May). ***Western Slopes and Coast***- The rainfall pattern persisting in the entire country shall be observed in this region. ***Eastern Slopes and Coast***- Existing rainfall shall decrease further till 28th & thereafter it shall increase. Significant rainfall events are expected during 3rd-5th May. ***Northern***- The rainfall is likely to observe less than 1 mm/day till 30th April. Thereafter it shall increase gradually. ***Southern Region***- The rainfall shall increase graudlly till 27th & remain constant (below 3 mm/day) till 6th May.

***Seasonal Prediction*:** As per IRI Multi Model Probability Forecast issued on April 2014; for May 2014 to July 2014, there is a 45-55% 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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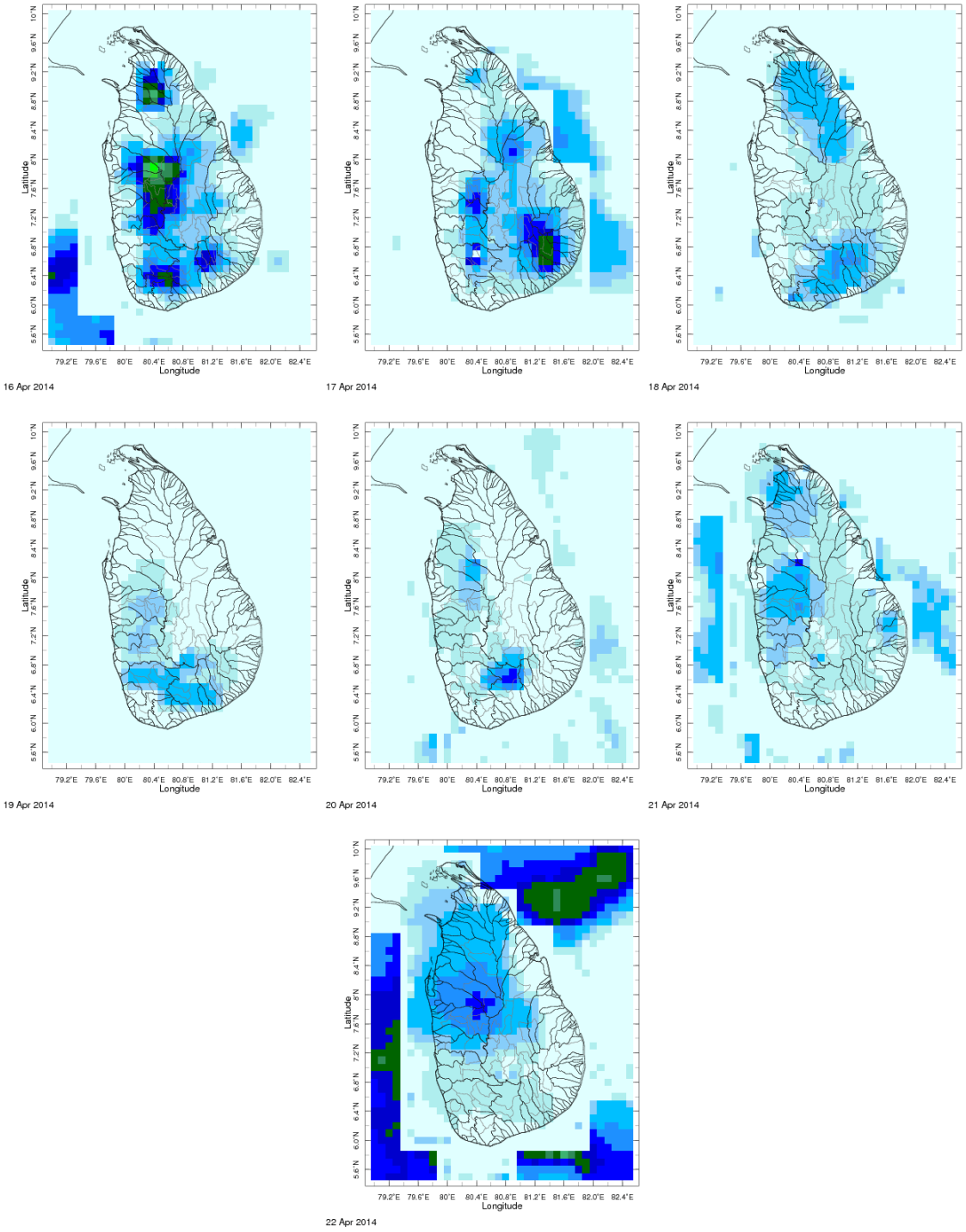
1. Monitoring

a) Daily Satellite Derived Rainfall Estimate **Maps: 16th April-22nd April *2014 (Left-Right, Top-Bottom)***



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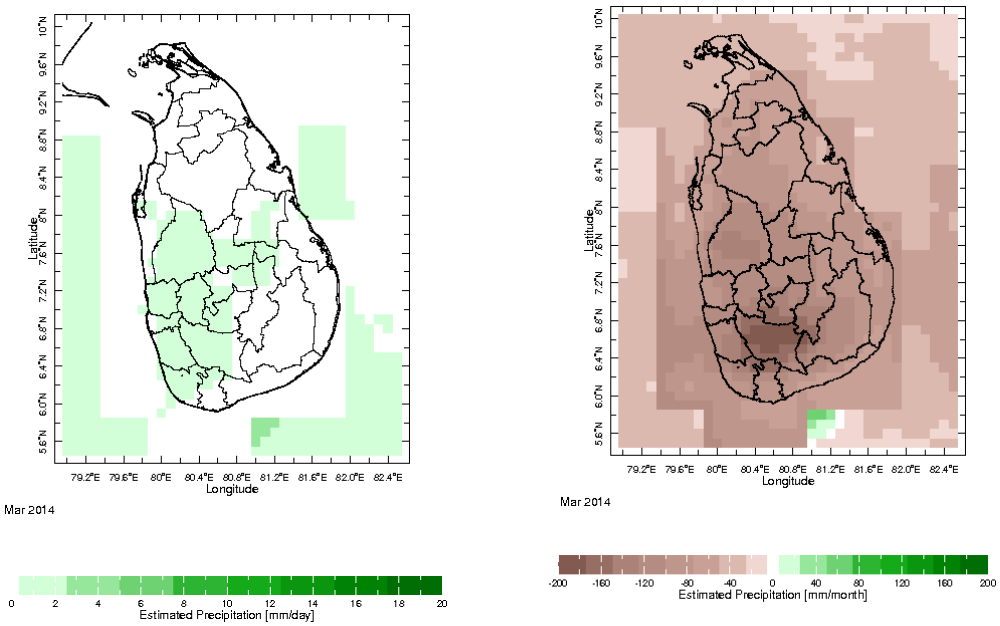
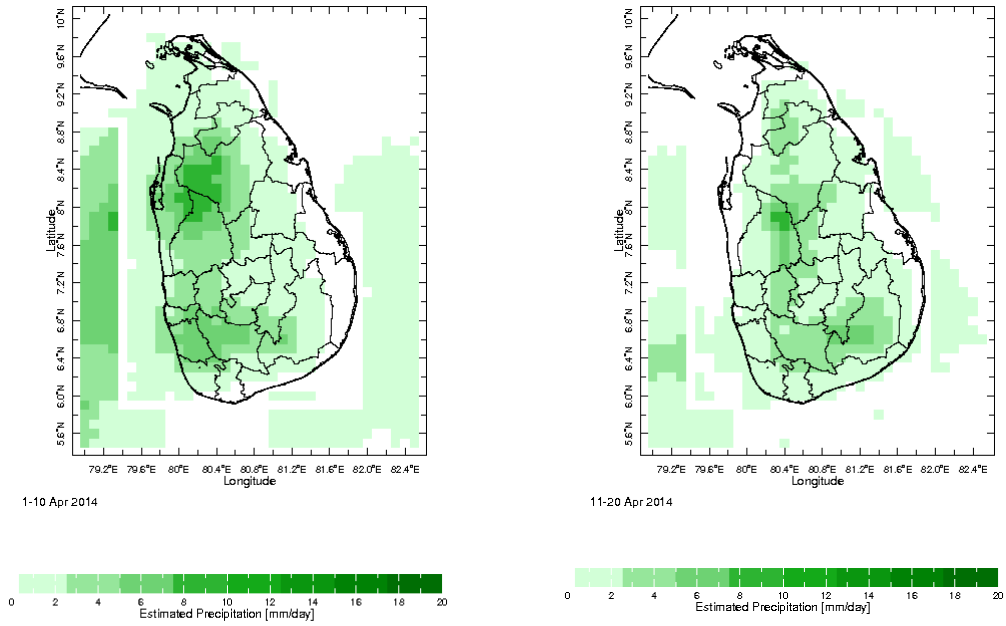
b) Monthly Satellite Derived Rainfall Estimates for March 2014 (Average – Left and Anomaly - Right)



c) Dekadal (10 Day) Satellite Derived Rainfall Estimates (01-10 April & 11-20 April, 2014)



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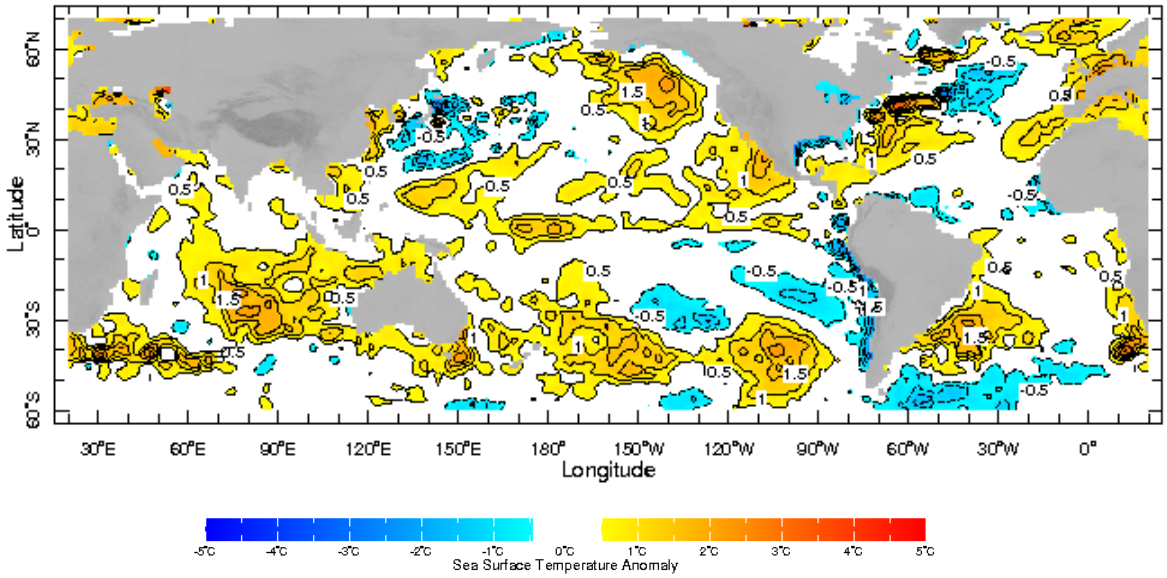
d) Weekly Average SST Anomalies



Weekly Average SST Anomalies (^{0}C), 13th-19th April, 2014

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

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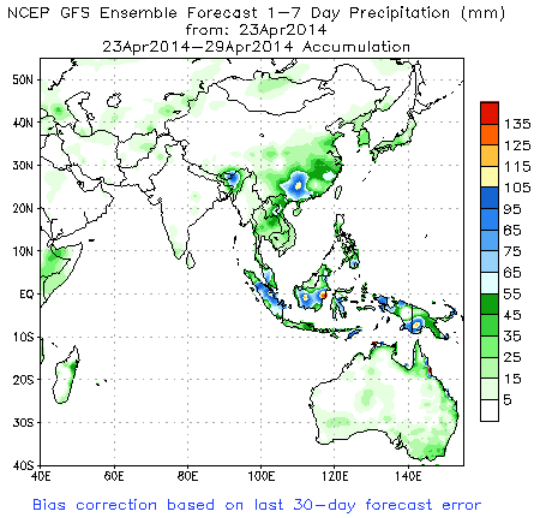
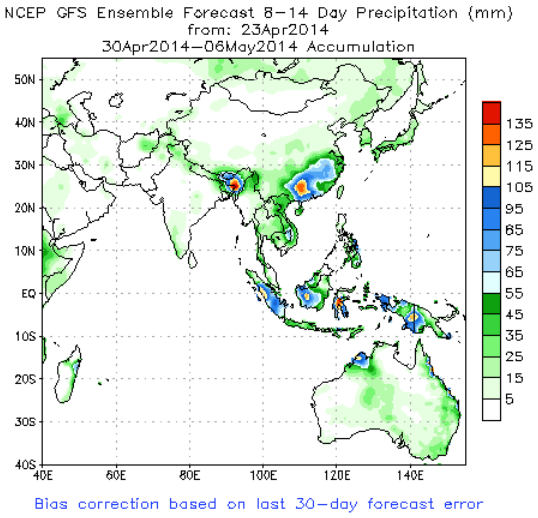
2. Predictions

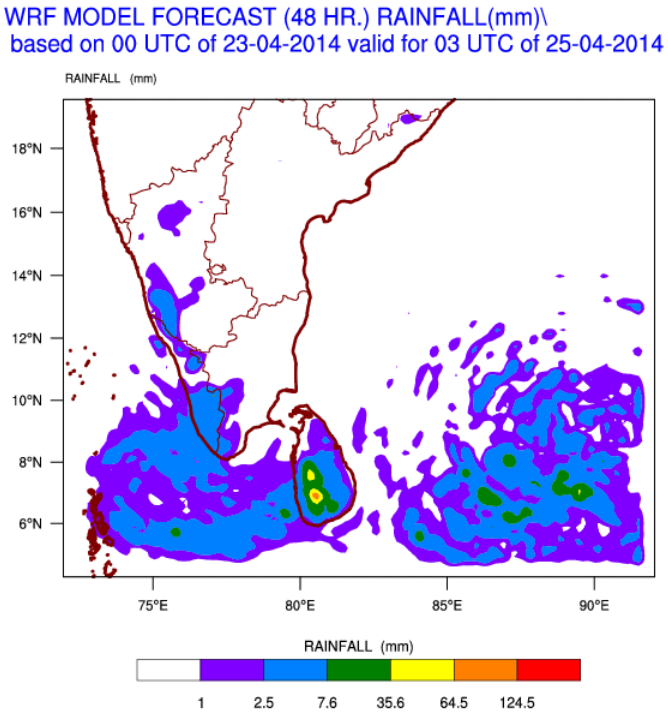
a) NCEP GFS Ensemble 1-14 day predictions, NOAA, Climate Prediction Centre, USA.

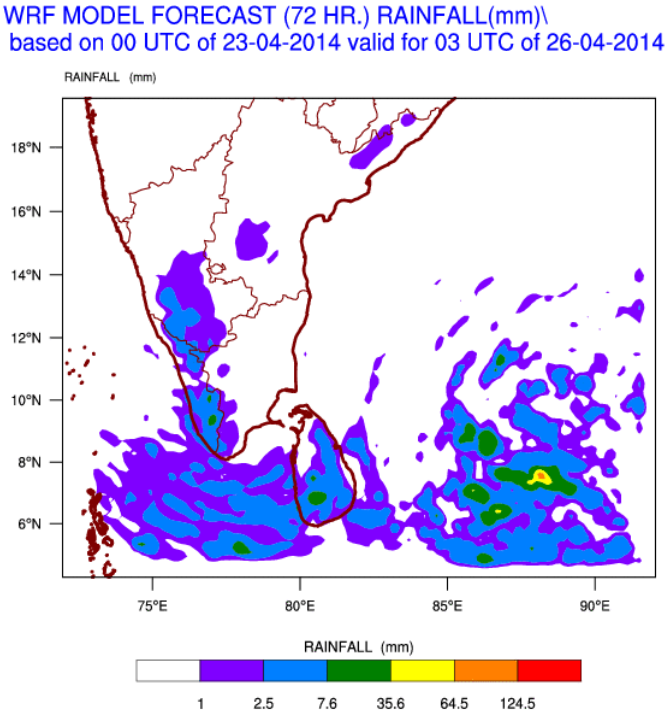




Source – NOAA Climate Prediction Center

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





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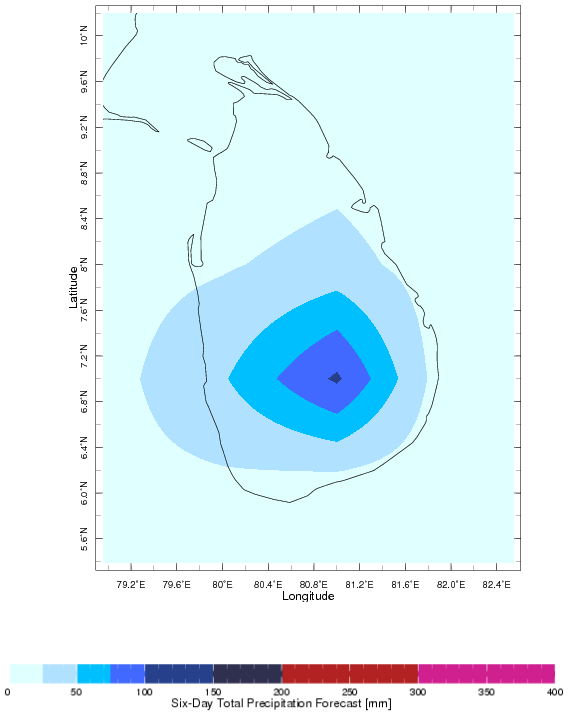
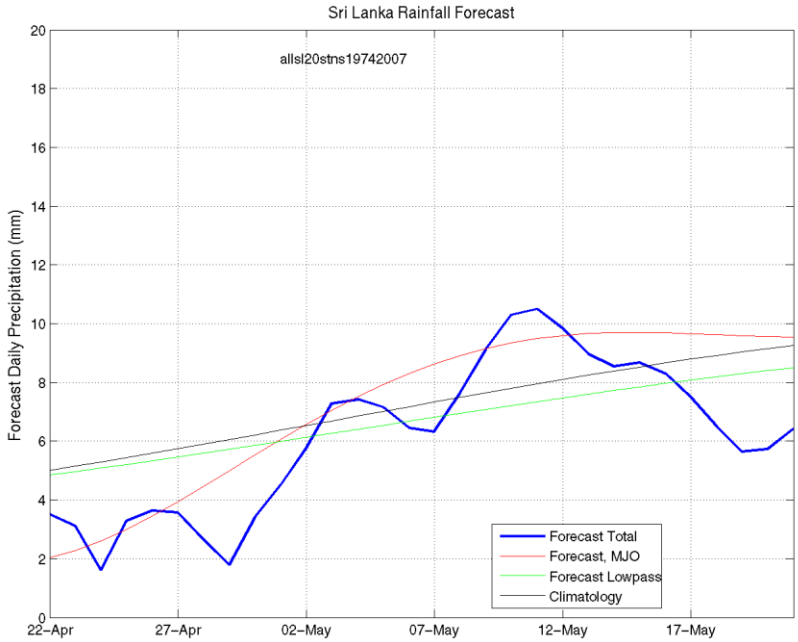
c) Weekly Precipitation Forecast for 22nd-27th April 2014 (Precipitation Forecast in Context Map Tool, IRI)



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

Predictions based on observed cloud cover and atmospheric waves. Issued 23rd April, 2014



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

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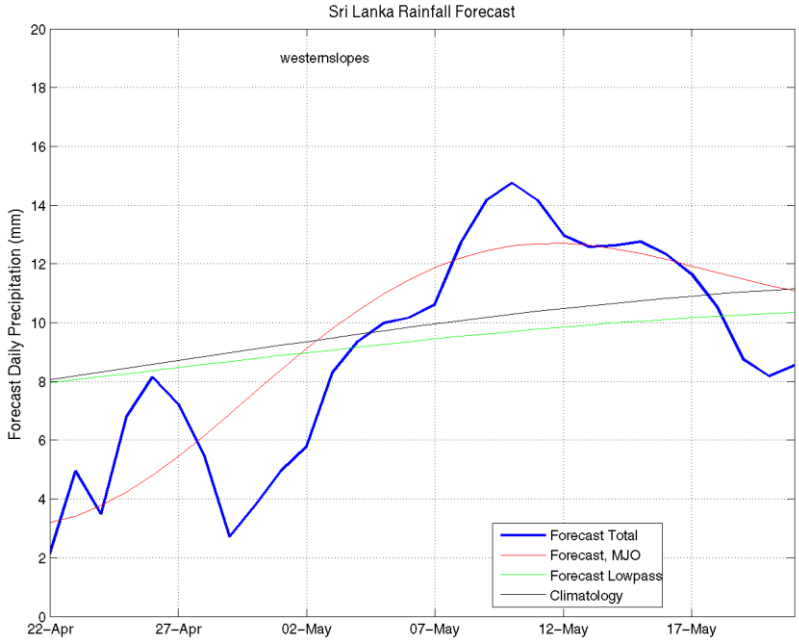
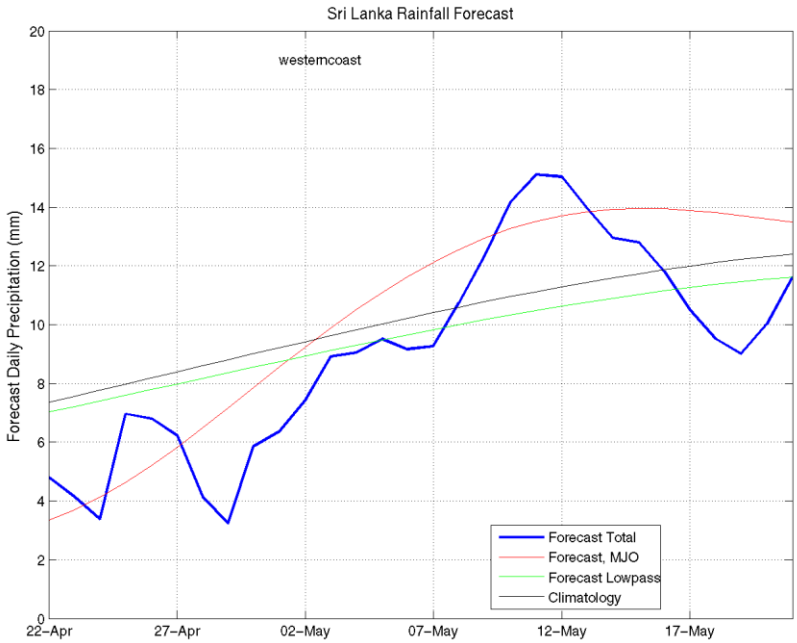
Western Slopes (Rainfall Scale from 0-20 mm/day)



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



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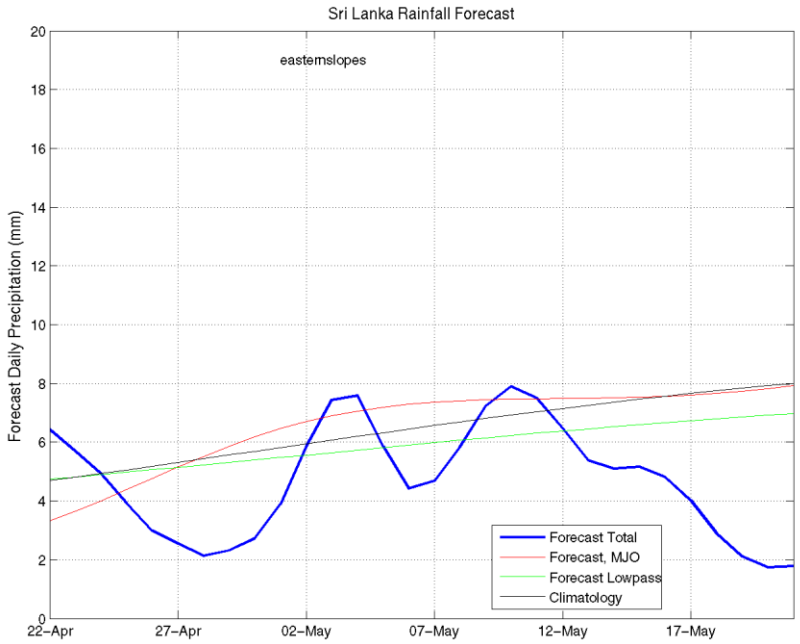
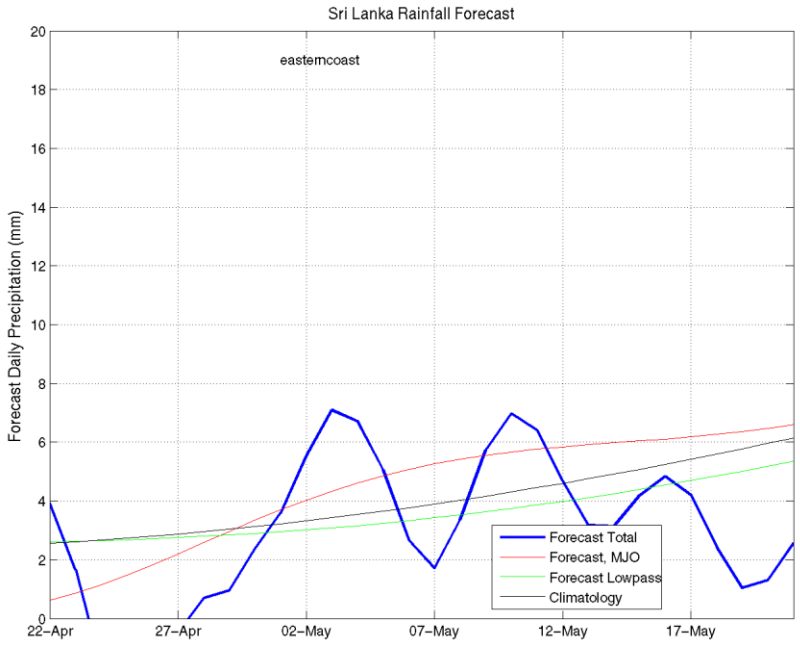
Eastern Slopes (Rainfall Scale- from 0-20 mm/day)



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



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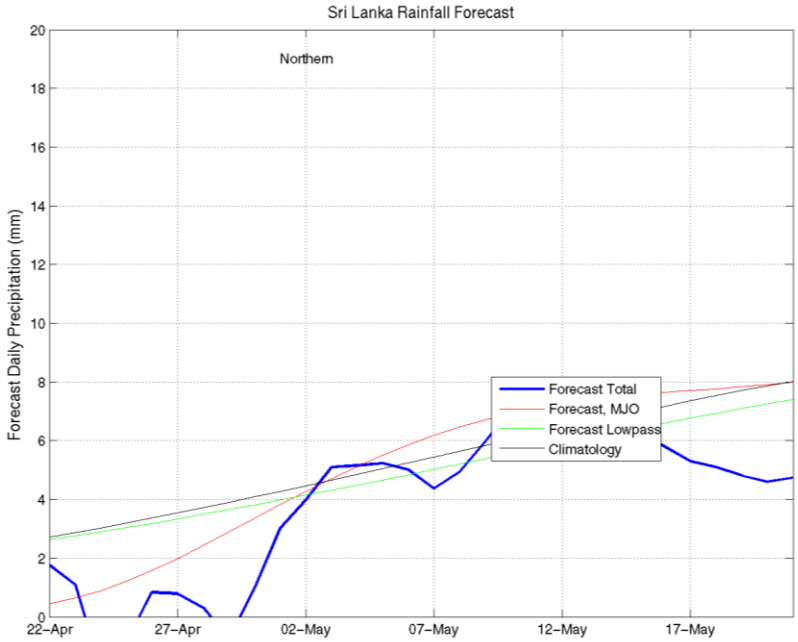
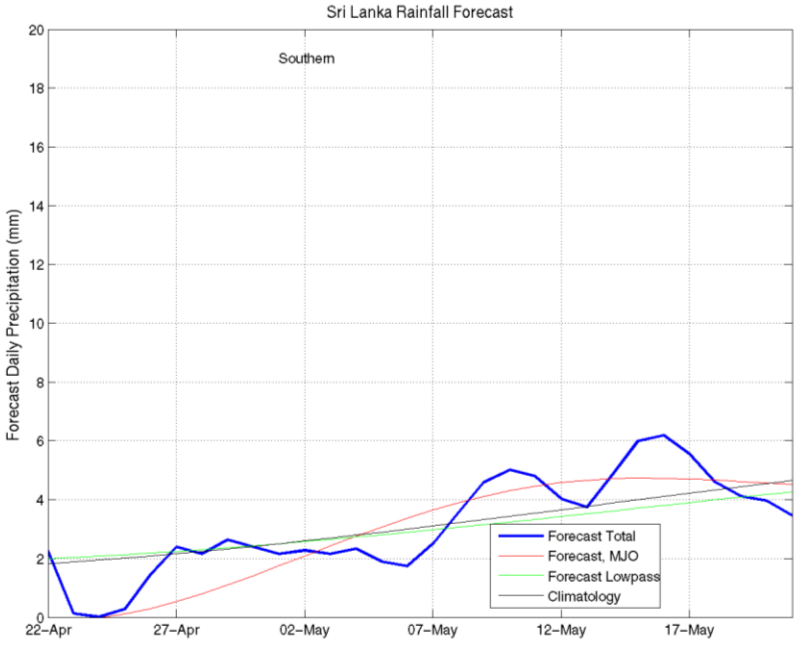
Northern Region (Rainfall Scale- from 0-20 mm/day)



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



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e) Seasonal Rainfall and Temperature Predictions from IRI