

Experimental Climate Monitoring and Prediction

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28 November 2013

FECT BLOG

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

FECT WEBSITES

<http://www.climate.lk> and
<http://www.tropicalclimate.org/>

October 17, 2013 PACIFIC SEAS STATE

During October through mid-November the observed ENSO conditions remained neutral. Most of the ENSO prediction models indicate a continuation of neutral ENSO into the first quarter of 2014.

During northern spring and summer a warming tendency is seen in both dynamical and statistical models.

(Text Courtesy IRI)

INDIAN OCEAN STATE

Southern sea of Sri Lanka showed +1°C anomaly and rest of the seas around Sri Lanka showed neutral seas surface temperature during 3rd-9th November 2013.

MJO STATE

MJO is neutral and shall not influence Sri Lanka rainfall.

Highlights

Monitoring and Predictions:

Rainfall shall decrease gradually till 3rd of December and shall increase gradually thereafter. However, significant rainfall shall not observe for the coming week (29th November-5th December 2013). For coming two days (29th & 30th December), Ratnapura district shall receive more rainfall compared to the rest of the island. Heavy rainfall is likely to observe for parts of Badulla, Moneragala, Nuwara Eliya and Ratnapura districts during 26th November-1st December 2013.

Summary

Monitoring

Weekly Monitoring: During 19th-25th November 2013, rainfall ranged 5-125 mm/day. Entire country received rainfall on 19th & 23rd November. Maximum rainfall observed on 25th November for Moneragala district.

Monthly Monitoring: Kurunegala district received highest average rainfall during the month of October 2013.

Predictions

7-day prediction: During 26th November-2nd December 2013, southern half of the island shall experience 5-75 mm of rainfall.

IMD WRF Model Forecast & IRI forecast: For 29th of November, IMD WRF model predicts less 8 mm of rainfall for Ratnapura district and on 30th rainfall is likely to spread towards Galle district in same amount. NOAA model predicts heavy rainfall for parts of Badulla, Moneragala, Nuwara Eliya and Ratnapura districts during 26th November-1st December 2013.

30 Days Prediction: Overall- Rainfall shall decrease gradually till 3rd of December and shall increase gradually thereafter. **Western Slopes** – The rainfall pattern persisting in the entire country shall be observed in this region with more amount of rainfall. **Western Coast** – Rainfall shall decrease gradually till 5th of December and shall increase gradually thereafter. **Eastern Slopes**– Rainfall shall decrease gradually till 1st of December and rainfall is not predicted thereafter (till 8th of December). **Eastern Coast** – The rainfall is not predicted till 11th December 2013. **Northern region-** Rainfall shall decrease gradually till 1st of December and shall increase after 4th December. Rainfall is not predicted during 1st-4th December. **Southern Region-** The rainfall shall decrease drastically till 1st of December and shall remain constant between 1-6 mm/day thereafter.

Seasonal Prediction: As per IRI Multi Model Probability Forecast issued on November 2013; for December 2013 to February 2014, 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
- Monthly Rain fall Estimates
- Decadal (10 Day) Satellite Derived Rainfall Estimates
- Weekly Average SST Anomalies

2. Predictions

- NCEP GFS Ensemble 1-7 day predictions
- WRF model forecast Regional Meteorological Center, Chennai, Indian Meteorological Department)
- Weekly precipitation forecast (IRI)
- 1 month experimental predictions by Paul Roundy and L. Zubair
- Seasonal Predictions from IRI

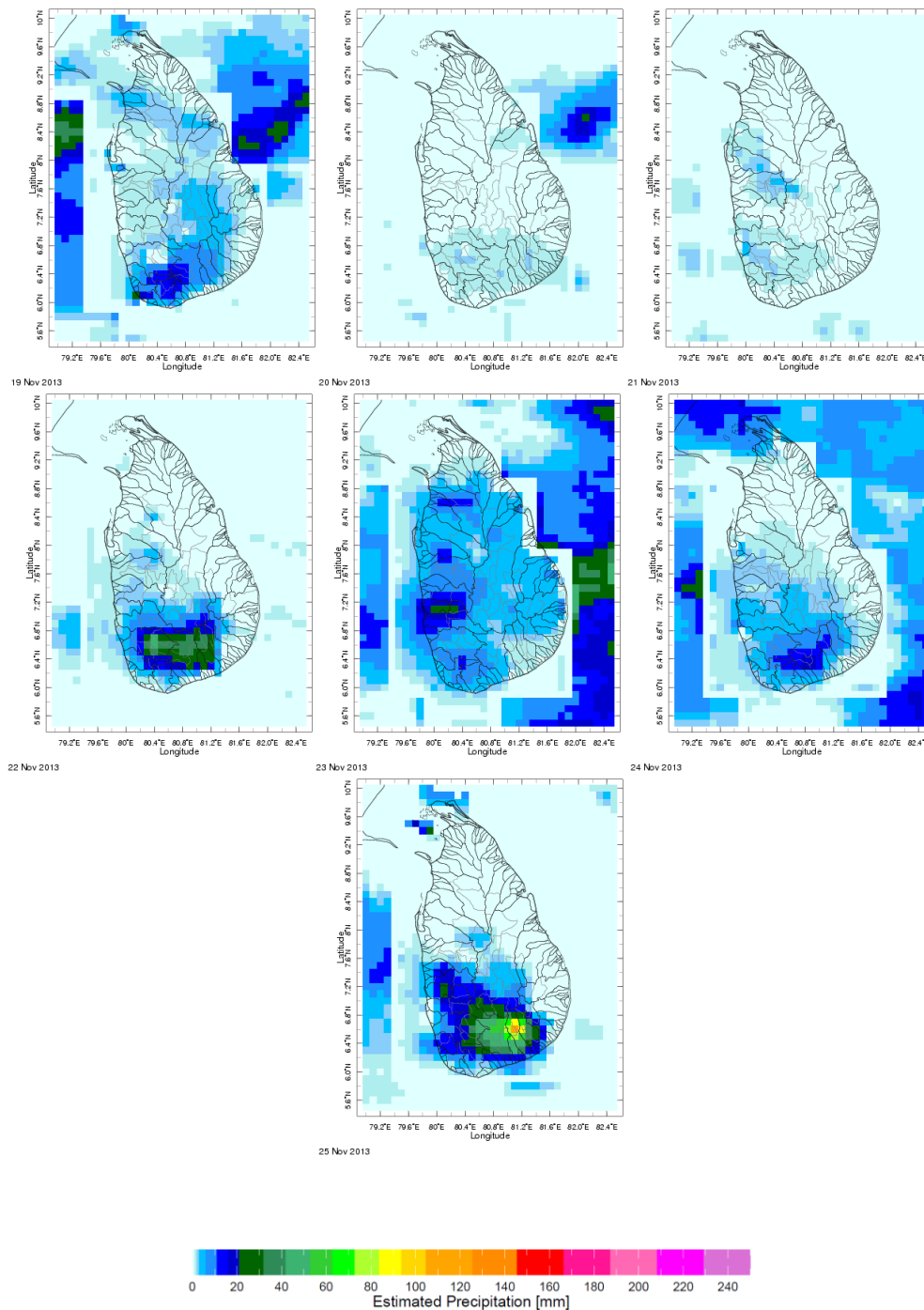
¹ International Research Institute for Climate and Society, Earth Institute at Columbia University, New York.

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

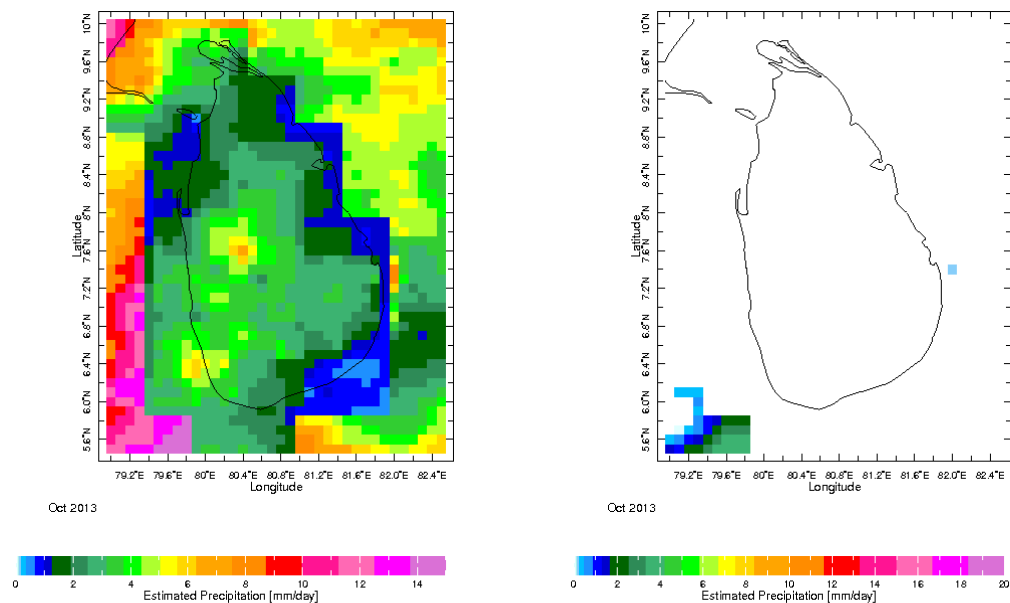
Official hydro-meteorological statements are provided by the Sri Lanka Department of Meteorology and Department of Irrigation.

1. Monitoring

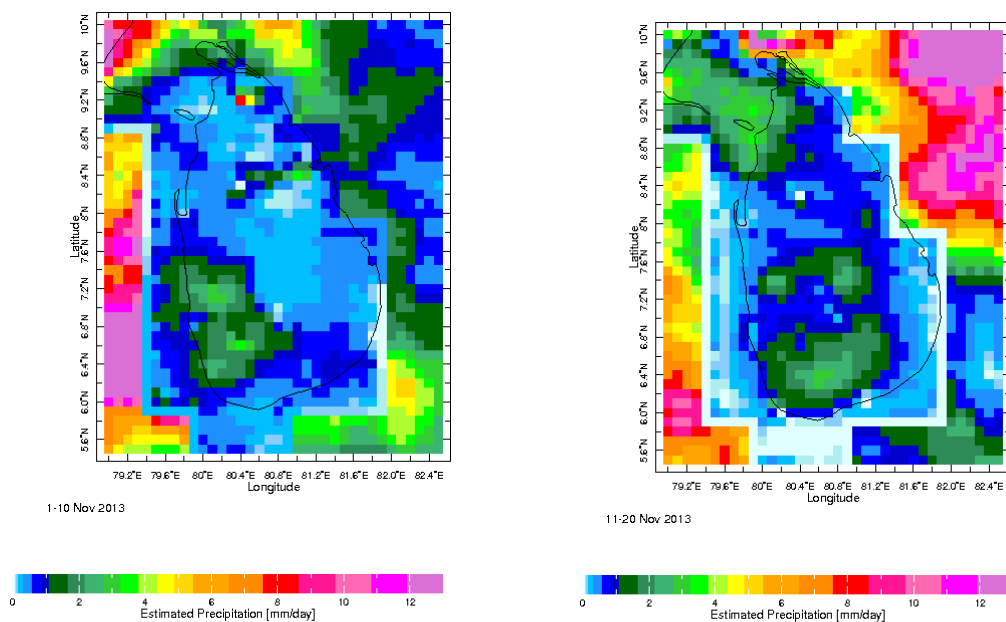
a) Daily Satellite Derived Rainfall Estimate Maps: 19th-25th November 2013 (Left-Right, Top-Bottom)



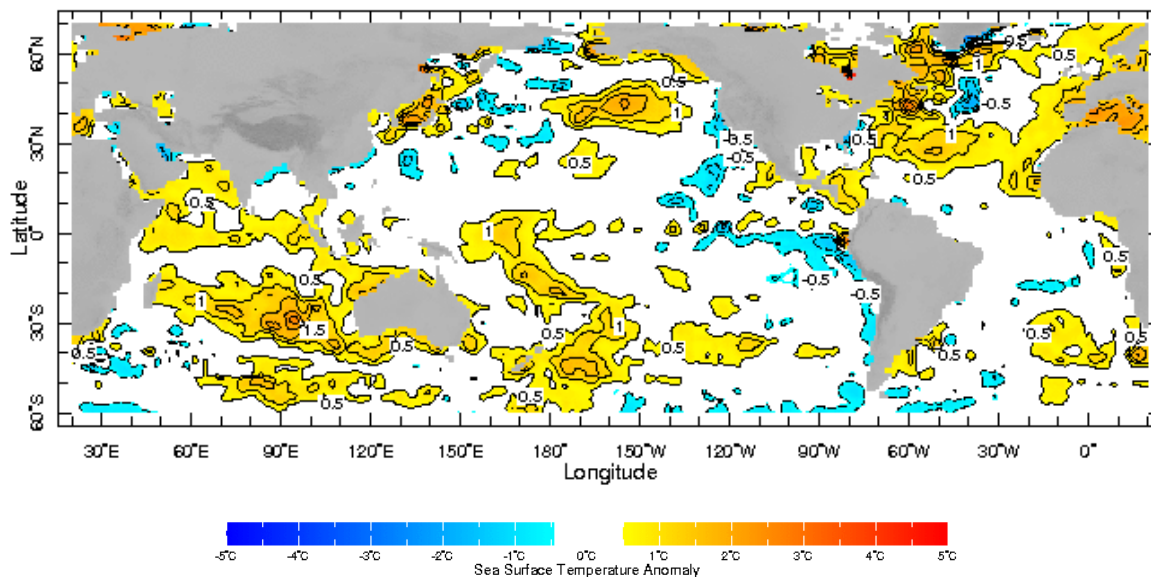
b) Monthly Satellite Derived Rainfall Estimates for October 2013 (Total – Left and Anomaly - Right)



c) Dekadal (10 Day) Satellite Derived Rainfall Estimates (01-10 November & 11-20 November, 2013)



b) Weekly Average SST Anomalies

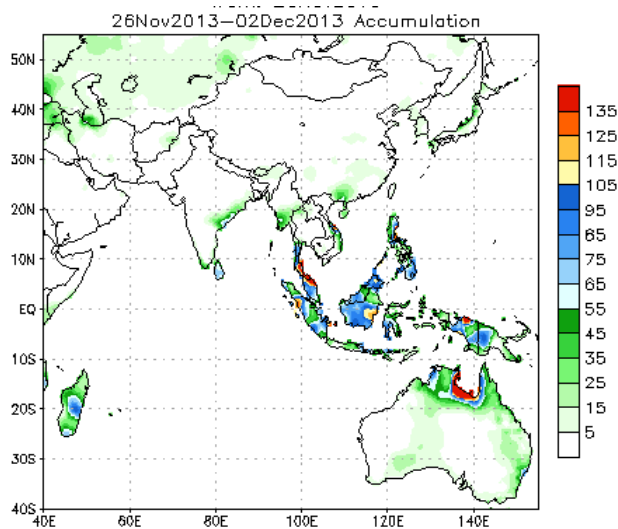


Weekly Average SST Anomalies ($^{\circ}\text{C}$), 3rd-9th November, 2013

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

2. Predictions

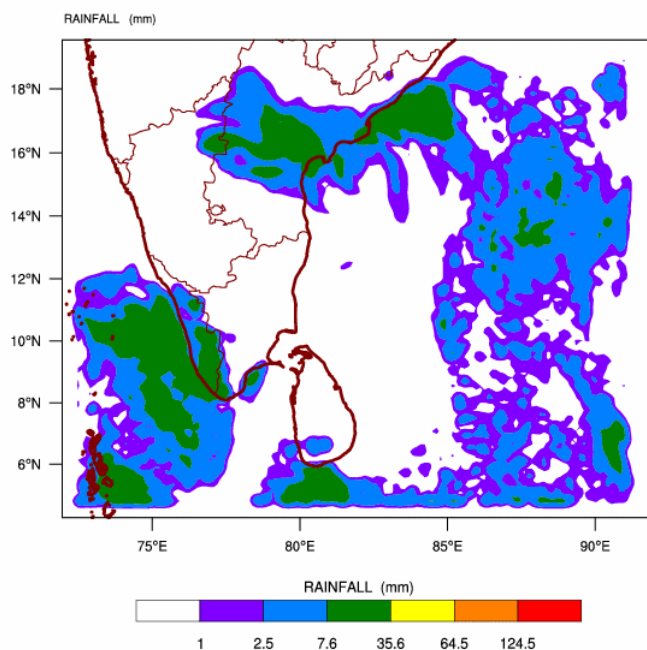
a) NCEP GFS Ensemble 1-7 day predictions, NOAA, Climate Prediction Centre, USA.



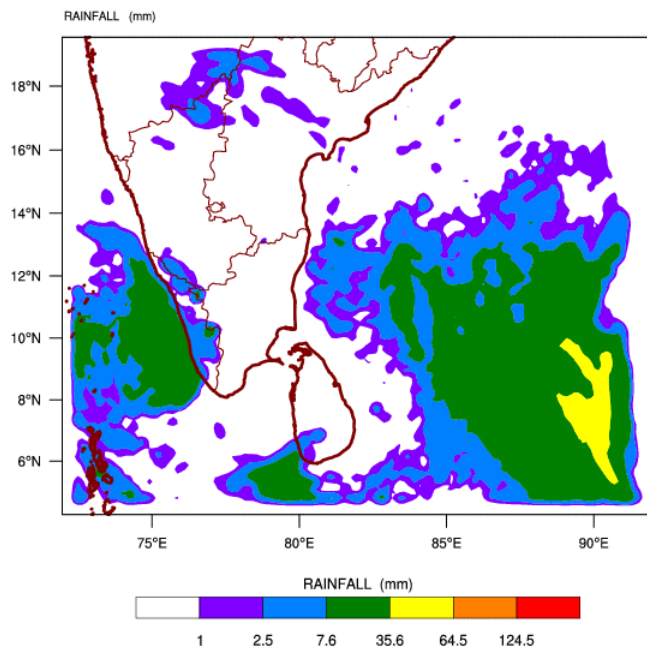
Source – NOAA Climate Prediction Center

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

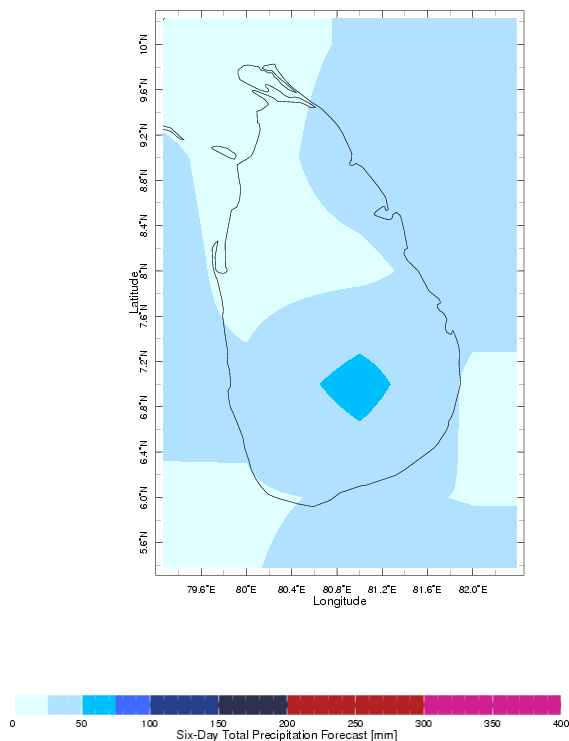
WRF MODEL FORECAST (48 HR.) RAINFALL(mm)\
based on 00 UTC of 27-11-2013 valid for 03 UTC of 29-11-2013



WRF MODEL FORECAST (72 HR.) RAINFALL(mm)\
based on 00 UTC of 27-11-2013 valid for 03 UTC of 30-11-2013



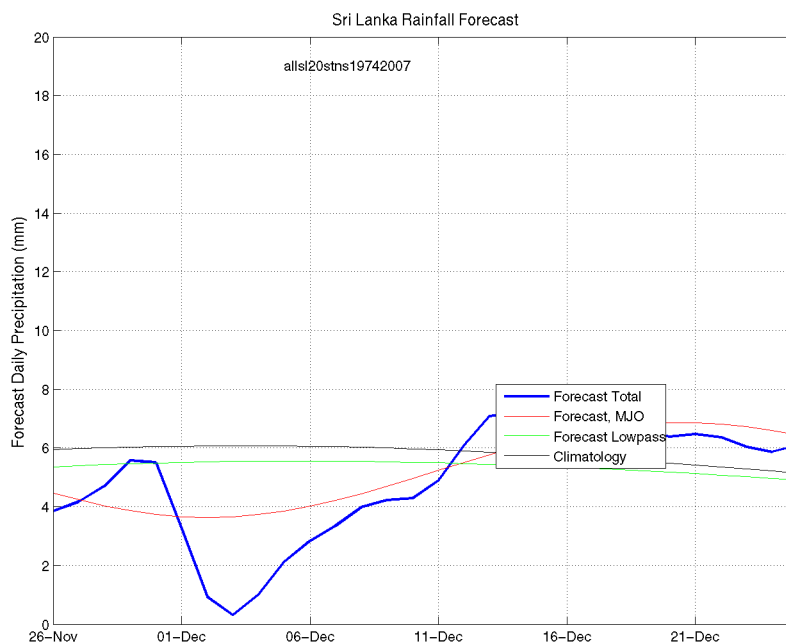
c) Weekly Precipitation Forecast for 26th November-1st December 2013 (Precipitation Forecast in Context Map Tool, IRI)



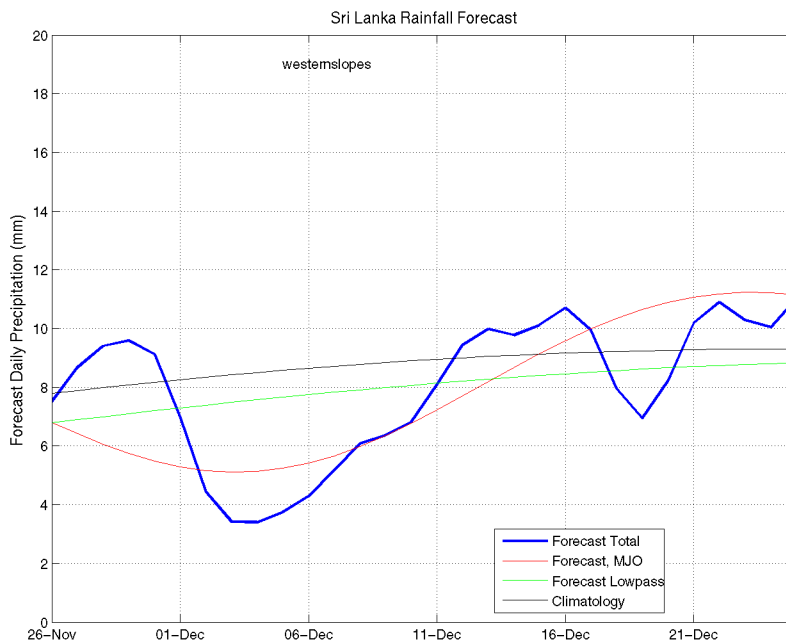
d) 1 month experimental predictions by Paul Roundy and L. Zubair

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

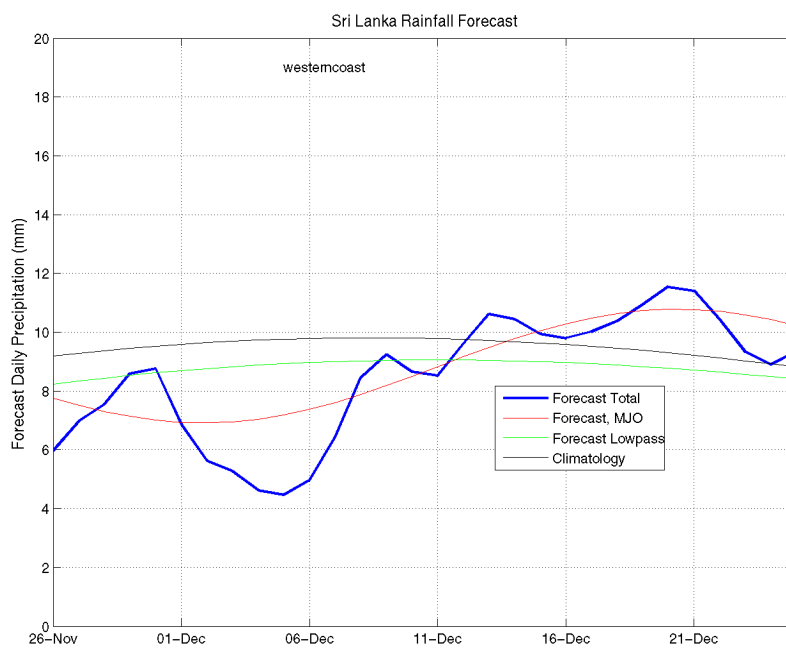
All Sri Lanka (Rainfall Scale from 0-20mm/day)



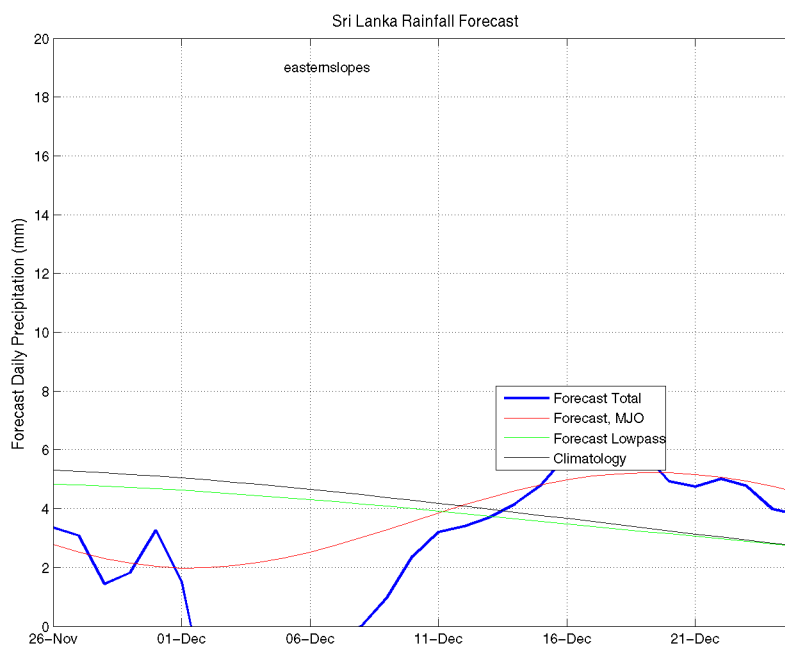
Western Slopes (Rainfall Scale from 0-20 mm/day)



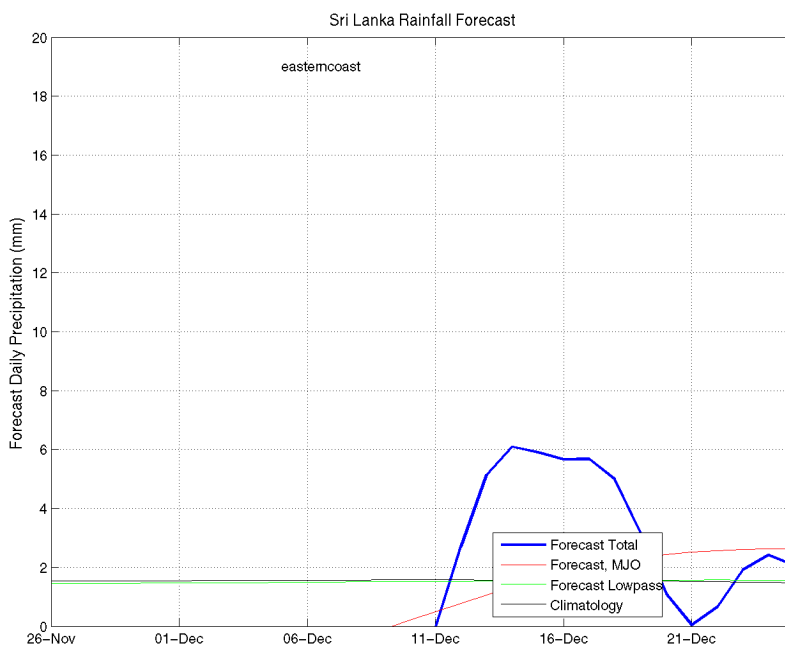
Western Coast (Rainfall Scale from 0-20 mm/day)



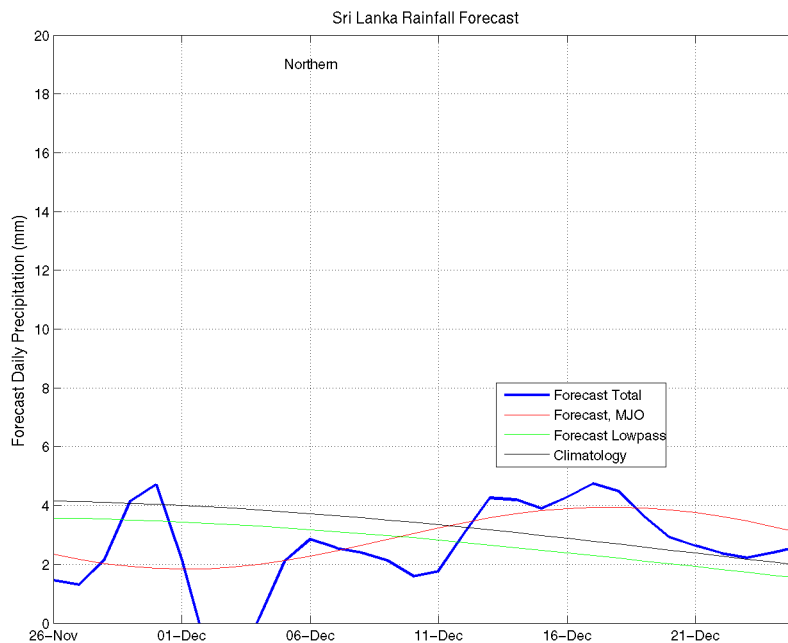
Eastern Slopes (Rainfall Scale- from 0-20 mm/day)



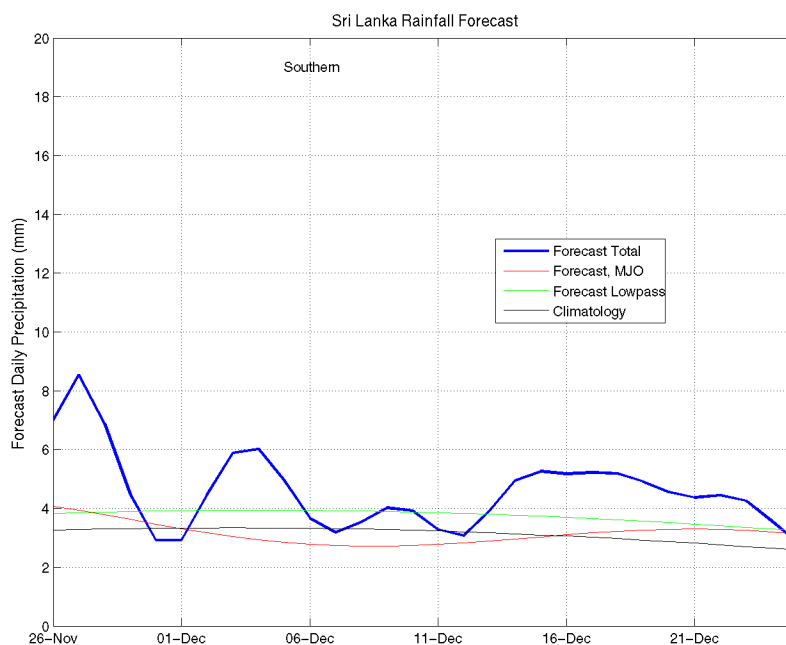
Eastern Coast (Rainfall Scale- from 0-20 mm/day)



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

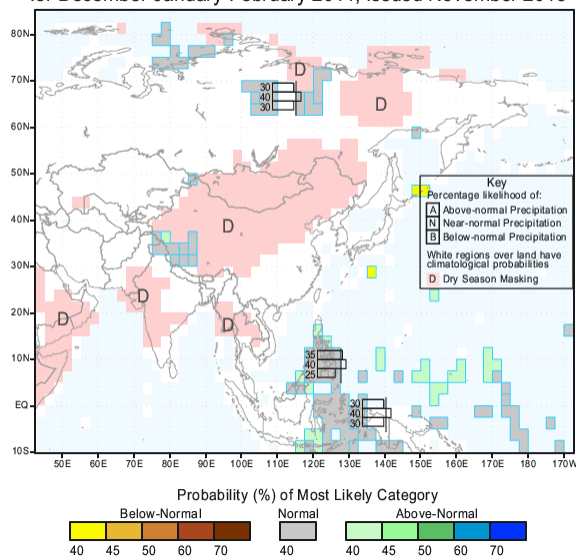


Southern Region (Rainfall Scale- from 0-20 mm/day)



e) Seasonal Rainfall and Temperature Predictions from IRI

IRI Multi-Model Probability Forecast for Precipitation
for December-January-February 2014, Issued November 2013



IRI Multi-Model Probability Forecast for Temperature
for December-January-February 2014, Issued November 2013

