

## Experimental Climate Monitoring and Prediction

(Prepared for Water Management Secretariat, Mahaweli Authority)

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(FECT and IRI)

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### FECT BLOG

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### ENSO Update

21 July 2011

Since the ending of the moderate to strong La Niña episode in early May 2011, neutral ENSO conditions have prevailed. For the July-September season currently in progress, there is an approximately 10% probability for returning to La Niña conditions, an 82% probability for remaining in neutral conditions, and an 8% probability for the development of El Niño conditions. Although neutral conditions are the most likely scenario throughout the remainder of 2011, development of El Niño conditions or, particularly, the re-emergence of La Niña conditions, cannot be ruled out.

(Text Courtesy IRI)

### Summary<sup>2</sup>

**Weekly Monitoring:** During the previous week (03<sup>rd</sup> to 09<sup>th</sup> August, 2011) rainfall ranged from 0-70mm. Considerable rainfall was experienced on the 3<sup>rd</sup> and the 5<sup>th</sup> August particularly for the Central, Southern, Western, South Western and South Eastern parts of the island. There was no considerable rainfall for the rest of the week.

**Monthly Monitoring:** During July, above average rainfall by up to 50 mm was experienced for the Kalutara, Puttalam and Trincomalee regions while there was below-average rainfall elsewhere with deficits up to 80 mm in the Central Province and Matara District.

**7 Day Prediction:** For the coming week the NCEP Global Forecast System predicts accumulated rainfall below 45mm particularly for the Kalutara and Galle districts.

**1 Month Prediction:** From the 12<sup>th</sup> August a rapid increase of rainfall will be observed till the 16<sup>th</sup>, but not heavy rainfall. Then after it will decrease till 22<sup>nd</sup> August followed by a gradual increase till the 31<sup>st</sup>. Again it will slowly decrease up to the end of the first week of September. Nearly the same pattern will be observed in the Western slopes but high rainfall will be observed after 29<sup>th</sup> August as compared to entire situation. For the eastern slopes more rainfall will be expected after 14<sup>th</sup> August till the 17<sup>th</sup>. Thereafter it will show a decreasing trend till the end of the first week of September. Another peak will be observed on the 31<sup>st</sup> but high rainfall will not be experienced.

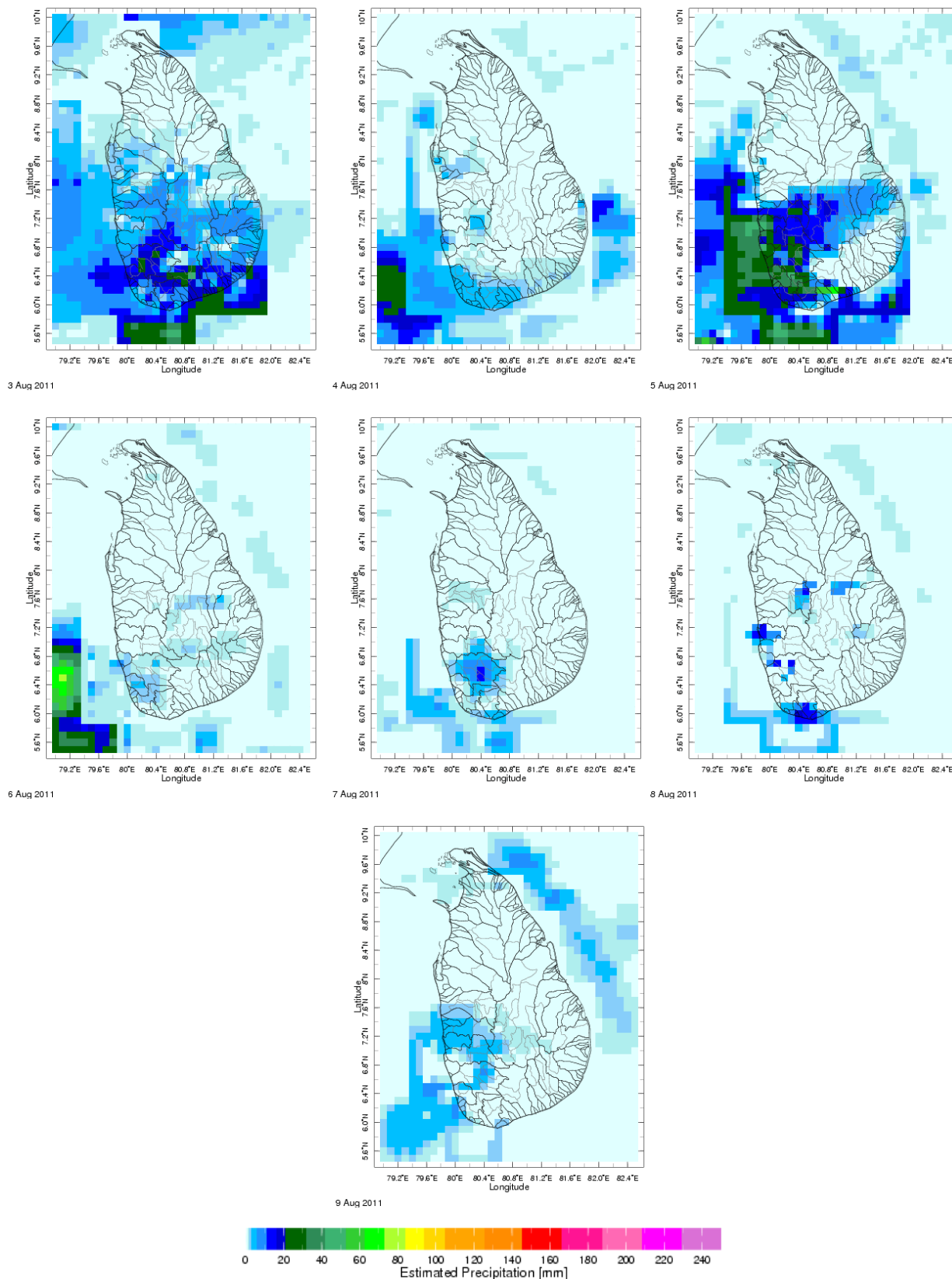
**Seasonal Prediction:** As per IRI Multi Model Probability Forecast for August 2011 to October 2011, issued in July 2011, there is 40% probability for temperature to be above normal while the precipitation is likely to be climatological.

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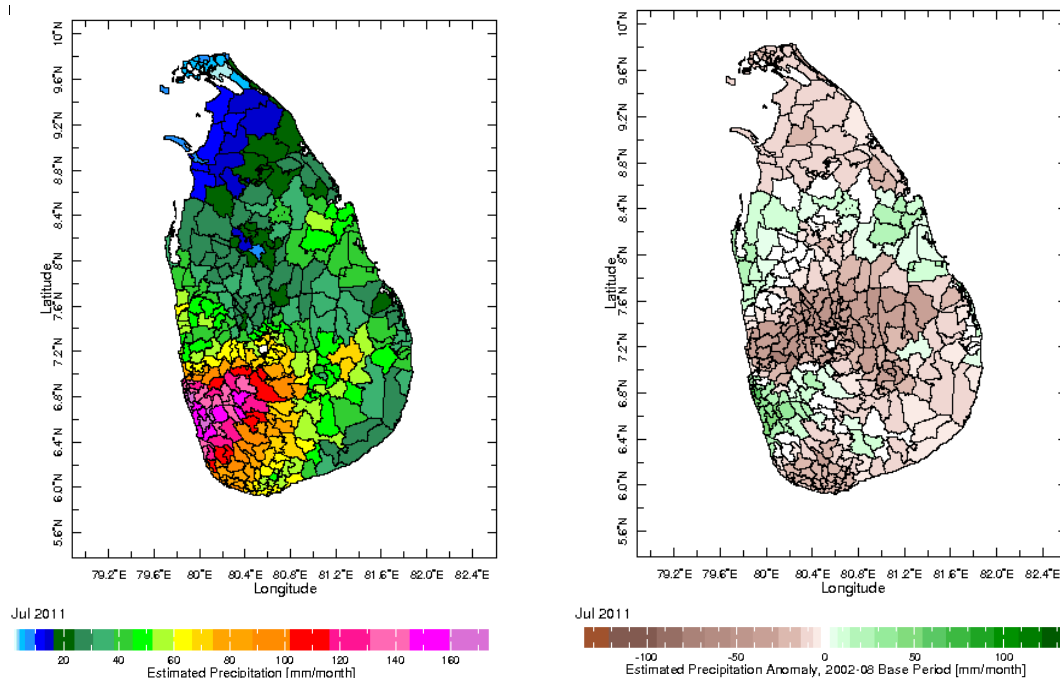
1. Rainfall Monitoring
  - a. Daily Satellite Derived Rain fall Estimates
  - b. Monthly Rain fall Estimates
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2. Rainfall Predictions
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  - b. 1 month experimental predictions by Paul Roundy and L. Zubair
  - c. Seasonal Predictions from IRI

## 1. Rainfall Monitoring

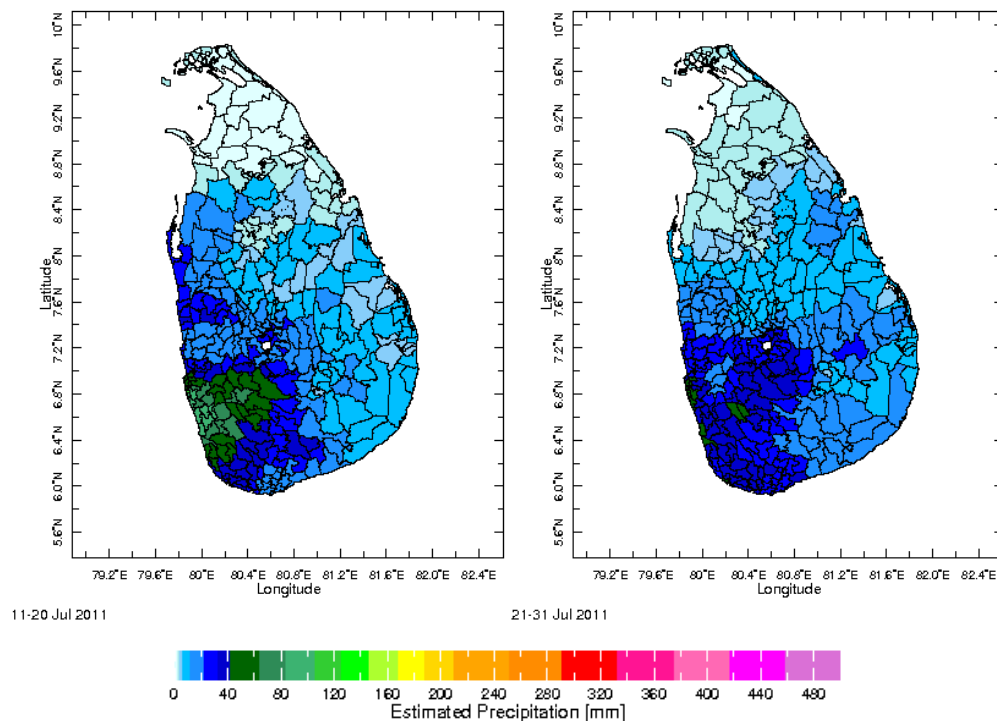
### a) Daily Satellite Derived Rainfall Estimate Maps: 03<sup>rd</sup> August – 09<sup>th</sup> August, 2011 (Left-Right, Top-Bottom)



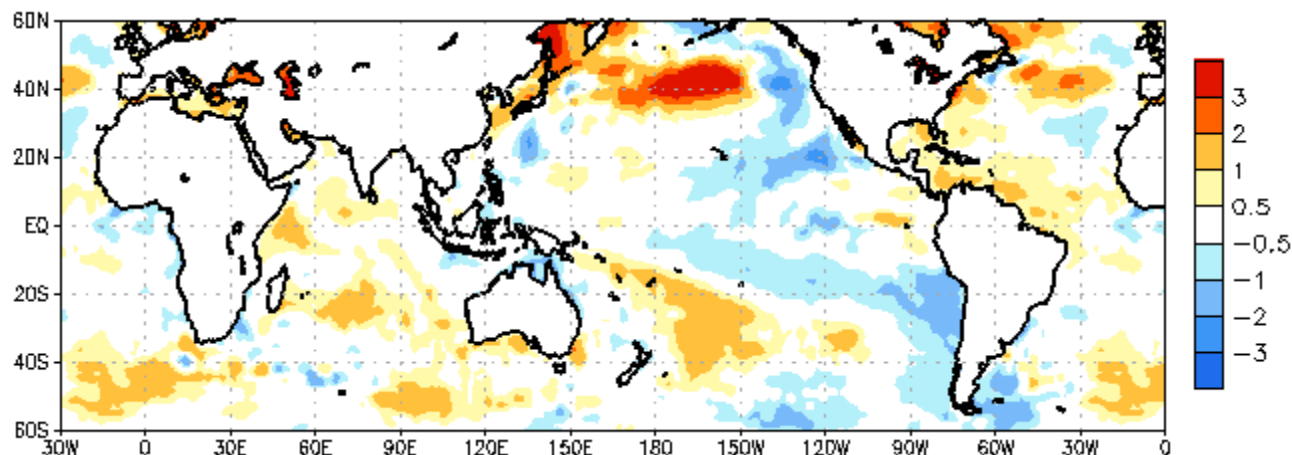
**b) Monthly Satellite Derived Rain fall Estimates for July 2011 (Total – Left and Anomaly -Right)**



**c) Dekadal (10 Day) Satellite Derived Rainfall Estimates (July 11-20 and 21-31, 2011)**



**d) Weekly Average SST Anomalies**

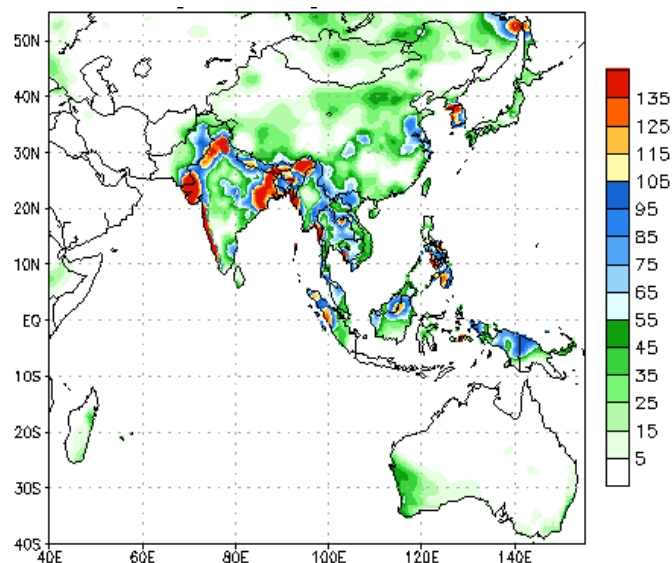


Weekly Average SST Anomalies ( $^{\circ}\text{C}$ ), 03<sup>rd</sup> August, 2011

Data Source: NCEP Global Sea Surface Temperature Analysis (Climatology 1979-1995)

**2. Predictions**

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



During next week, an accumulated rainfall below 35 mm is predicted particularly for the South Western edge.

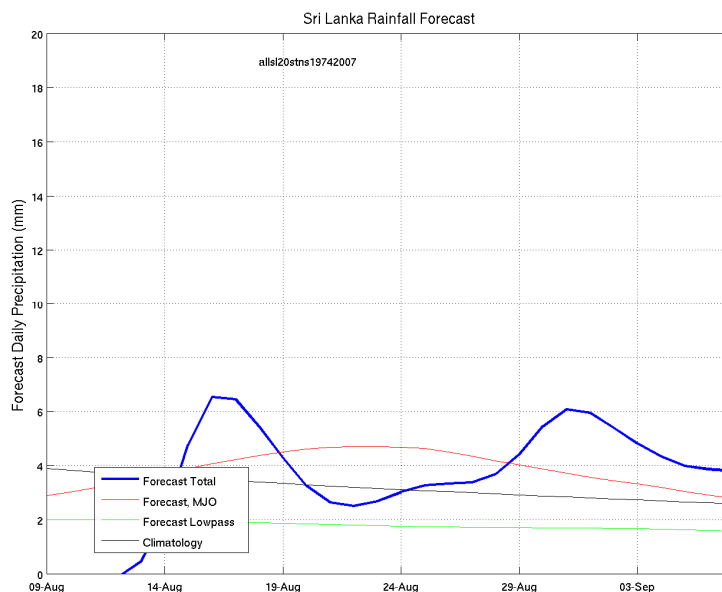
Source – NOAA Climate Prediction Center

Map: Predicted accumulation of rainfall. (10<sup>th</sup> August- 16<sup>th</sup> August, 2011 week)

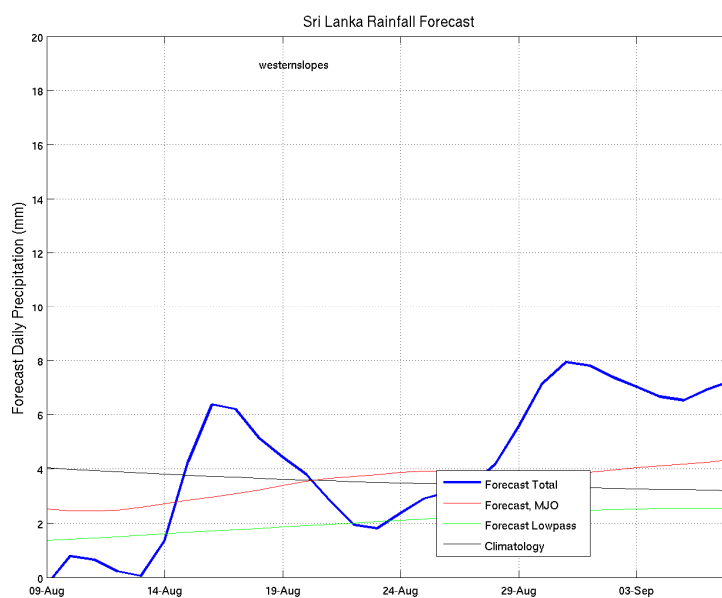
## c) 1 month experimental predictions by Paul Roundy and L. Zubair

Predictions based on observed cloud cover and atmospheric waves. Issued 11<sup>th</sup> August, 2011

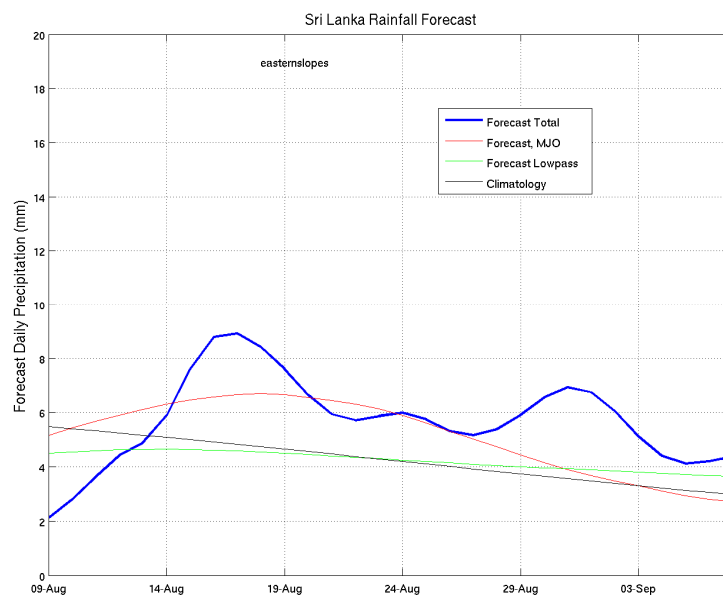
### All Sri Lanka (Rainfall Scale from 0-20 mm/day)



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

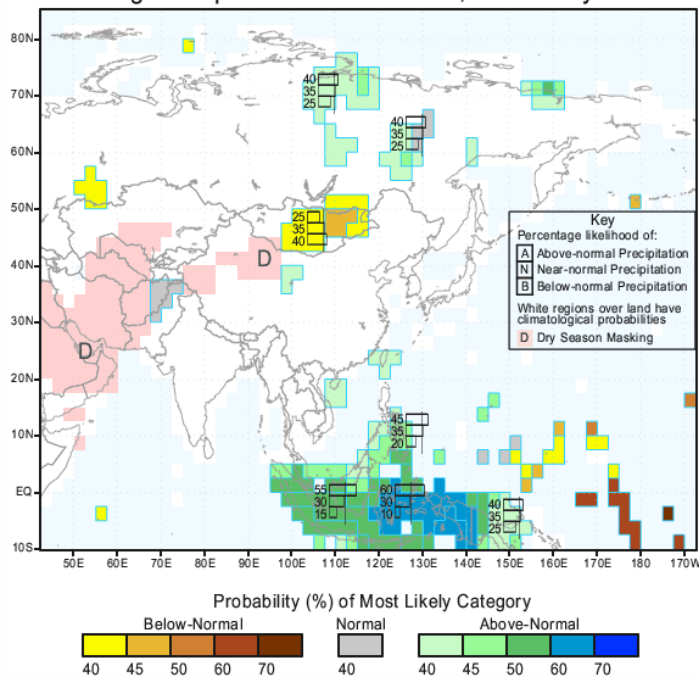


**Eastern Slopes (Rainfall Scale- from 0-20 mm/day)**



## d) Seasonal Rainfall and Temperature Predictions from IRI

IRI Multi-Model Probability Forecast for Precipitation  
for August-September-October 2011, Issued July 2011



IRI Multi-Model Probability Forecast for Temperature  
for August-September-October 2011, Issued July 2011

