

Experimental Climate Monitoring and Prediction

(Prepared for the Water Management Secretariat of the Mahaweli Authority)

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(FECT and IRI)

13 October 2011

FECT BLOG

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ENSO Update

12 September
2011

For the September - November season, there is approximately 52% of probability of continuing La-Nina conditions, a 48% of probability for returning to neutral conditions, and virtually no chance to development of El-Nino conditions. Although weak La-Nina conditions are the most likely scenario for the remainder of 2011, a return to neutral conditions is also possible.

(Text Courtesy IRI)

Summary²

Weekly Monitoring: During the previous week (5th to 10th October, 2011) rainfall ranged between 0-70 mm. On the 5th the entire country received rains ranging between 0-30 mm except for Kalutara & Colombo districts. On the 9th Colombo district received the highest rainfall (70mm). Between the 6th & 9th October North-eastern regions received rainfall of 5-30 mm.

Monthly Monitoring: During September, below-average rainfall experienced high regional variation with deficits up to 100 mm in the Northern, North-central and Southern provinces while there was above average rainfall more than 100 mm for some parts of Kegalle and Ratnapura district.

7 Day Prediction: For the coming week the NCEP Global Forecast System predicts accumulated rainfall between 5-15 mm particularly for the entire Sri Lanka and 35-45 mm for the South-western regions.

1 Month Prediction: Rainfall shall decrease during 12th-15th October, & thereafter it shall increase drastically till the 20th. Rainfall shall remain constant till 22nd and then gradually decrease till 31st, thereafter rainfall shall gradually increase. For the western slopes same pattern shall exist, except during 16th-23rd rainfall shall increase drastically & reach a maximum daily rainfall of 13mm. Eastern slopes & coast show more or less a similar pattern, but the amount of rainfall expected for the slopes shall be higher than the coast. However during 13th-16th there shall be no rainfall for the mentioned regions. For the eastern slopes during 14th-21st rainfall shall increase & thereon rainfall shall decrease till 25th October. Thereafter rainfall shows minor fluctuations.

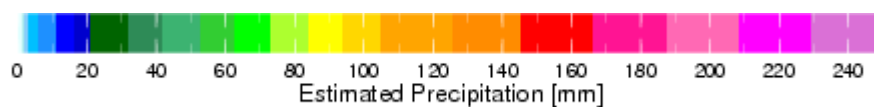
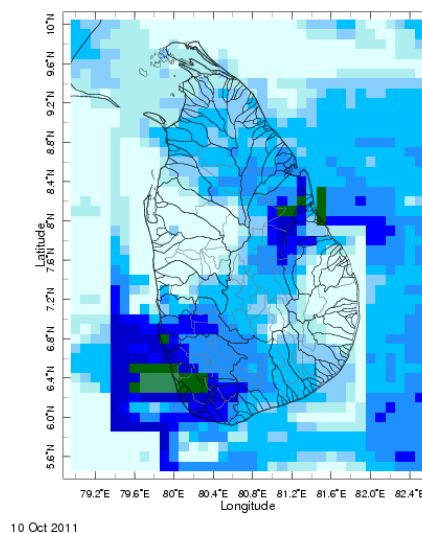
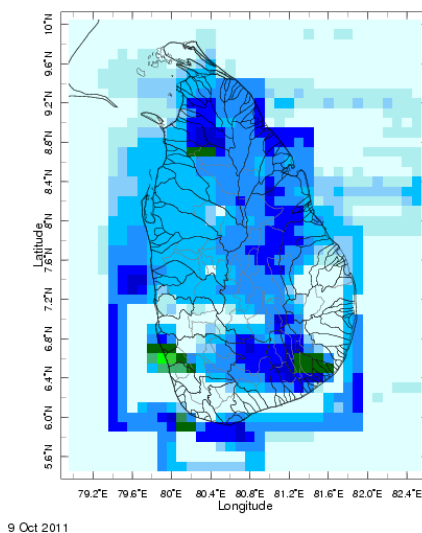
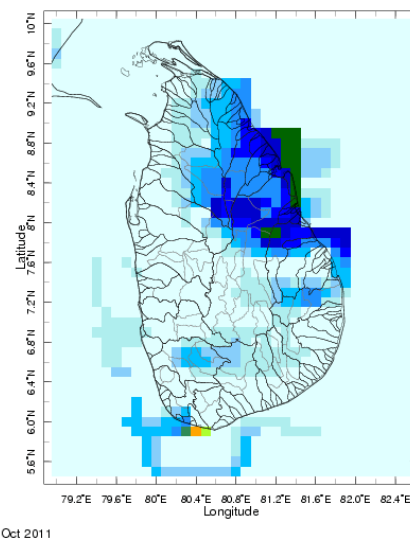
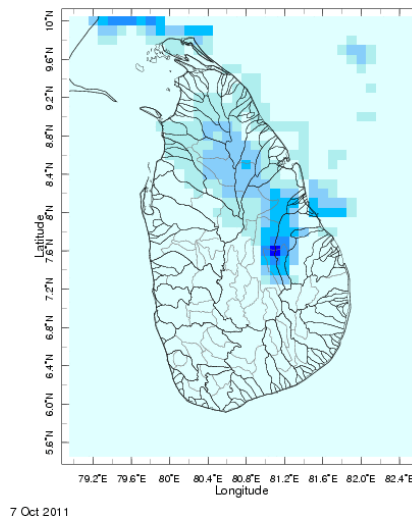
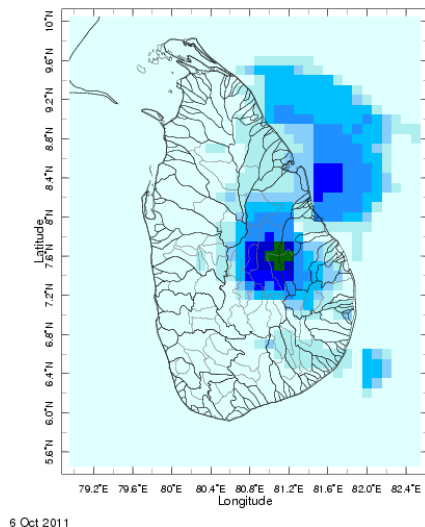
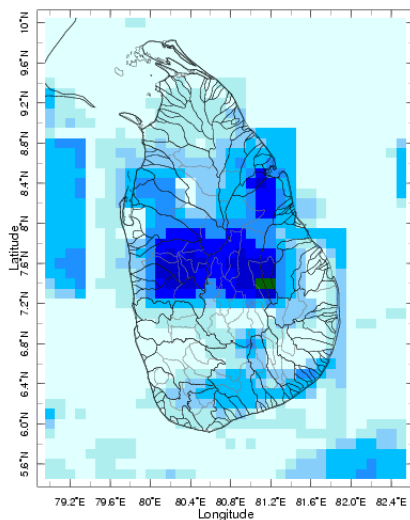
Seasonal Prediction: As per IRI Multi Model Probability Forecast for October 2011 to December 2011, issued in September 2011, there is 40%-45% probability for temperature to be below normal for entire Sri Lanka, while the precipitation is likely to be climatological.

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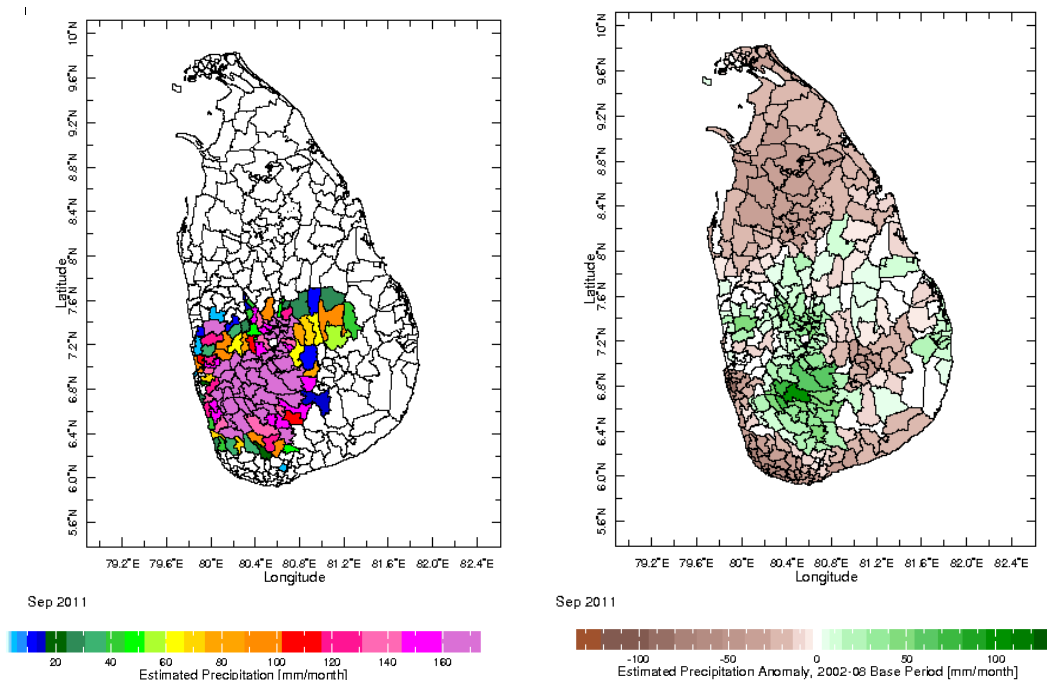
1. Rainfall Monitoring
 - a. Daily Satellite Derived Rain fall Estimates
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 - c. Decadal (10 Day) Satellite Derived Rainfall Estimates
 - d. Weekly Average SST Anomalies
2. Rainfall Predictions
 - a. NCEP GFS Ensemble 1-7 day predictions, NOAA, CPC, USA
 - b. 1 month experimental predictions by Paul Roundy and L. Zubair
 - c. Seasonal Predictions from IRI

1. Rainfall Monitoring

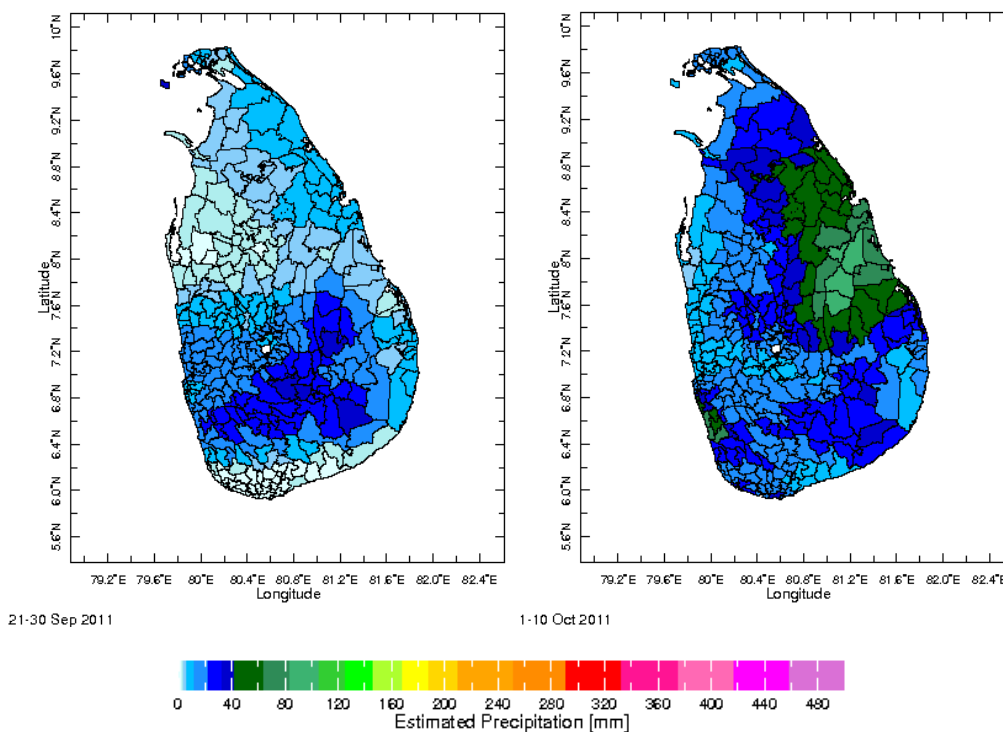
a) Daily Satellite Derived Rainfall Estimate Maps: 05th – 10th October, 2011 (Left-Right, Top-Bottom)



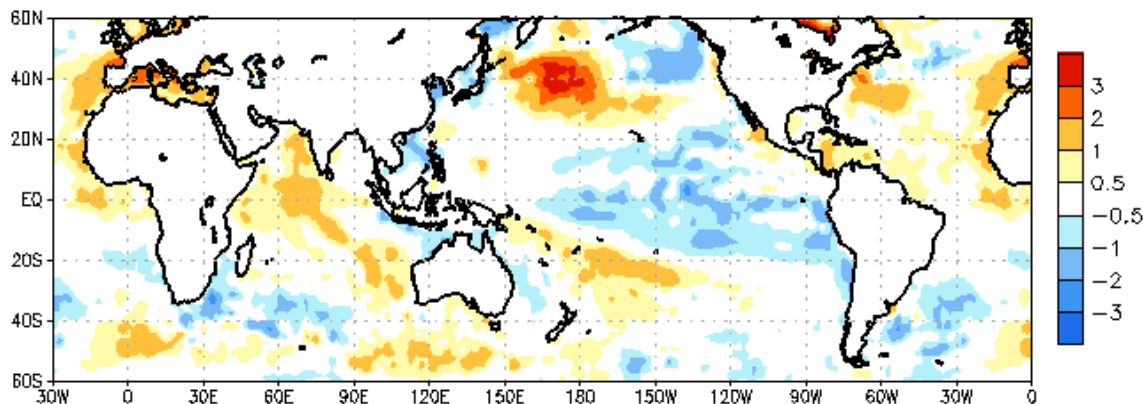
b) Monthly Satellite Derived Rain fall Estimates for September 2011 (Total – Left and Anomaly -Right)



c) Dekadal (10 Day) Satellite Derived Rainfall Estimates (September 21-30, 2011 and October 1-10, 2011)



d) Weekly Average SST Anomalies

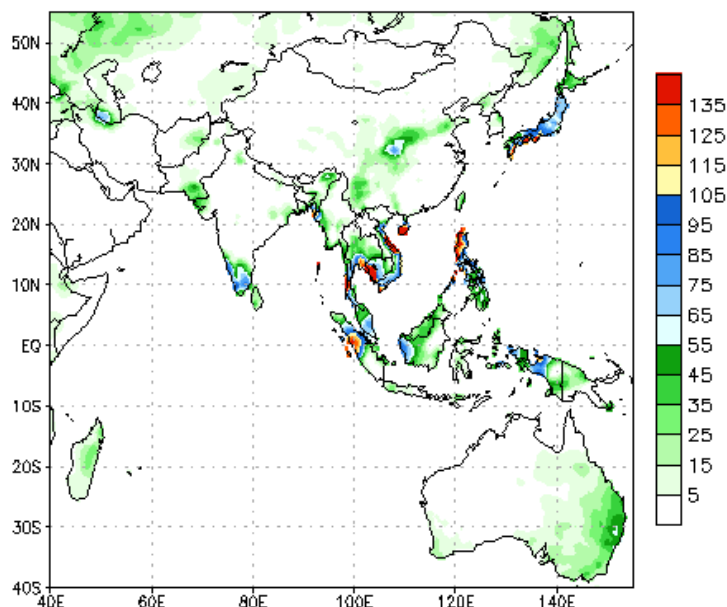


Weekly Average SST Anomalies ($^{\circ}\text{C}$), 05th September, 2011

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 between 5-15 mm is predicted particularly for the entire Sri Lanka and 35-45 mm is for the south-western regions.

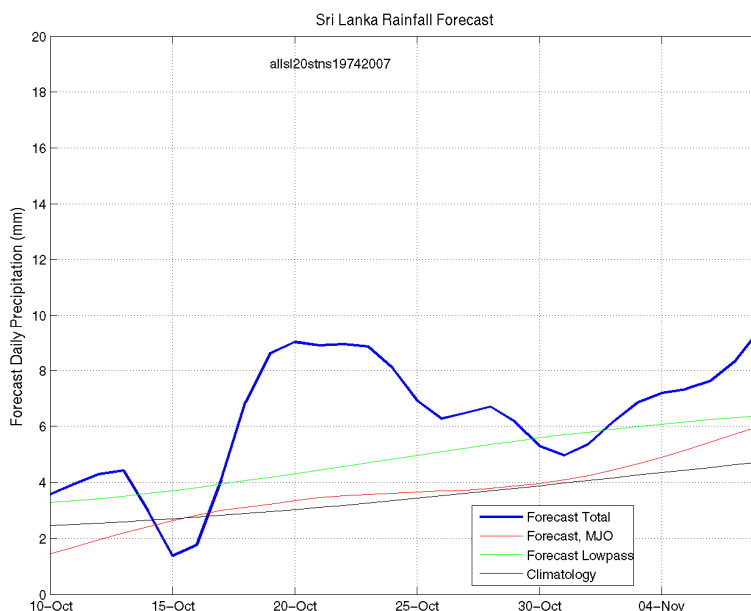
Source – NOAA Climate Prediction Center

Map: Predicted accumulation of rainfall. (14th - 20th October, 2011 week)

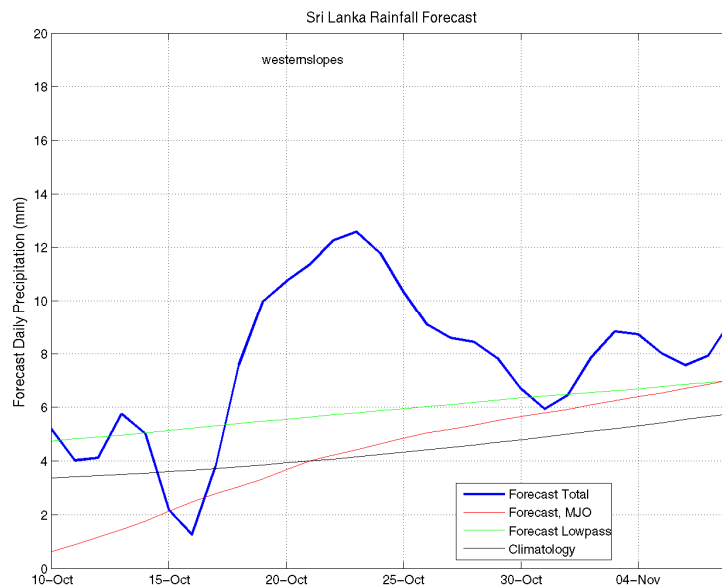
c) 1 month experimental predictions by Paul Roundy and L. Zubair

Predictions based on observed cloud cover and atmospheric waves. Issued 12th October, 2011

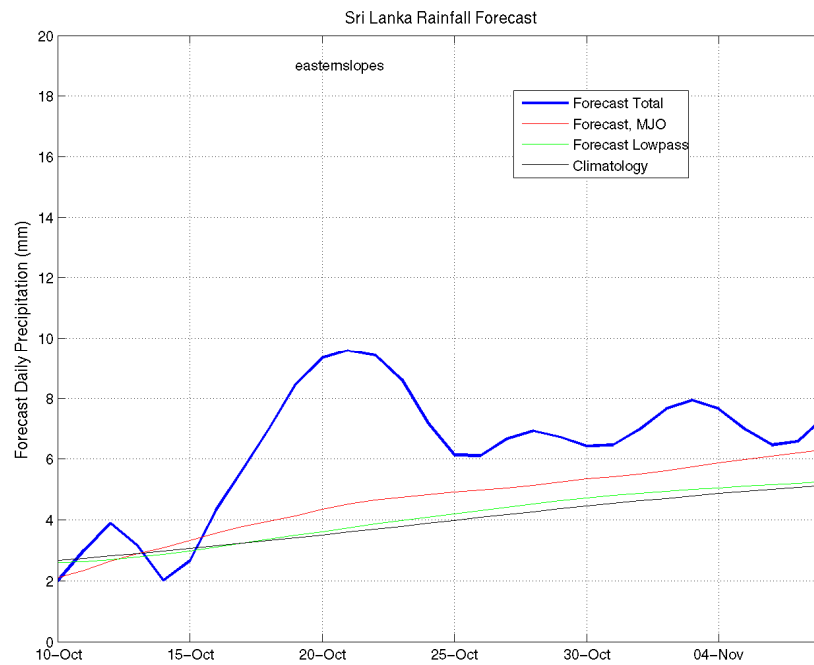
All Sri Lanka (Rainfall Scale from 0-20 mm/day)



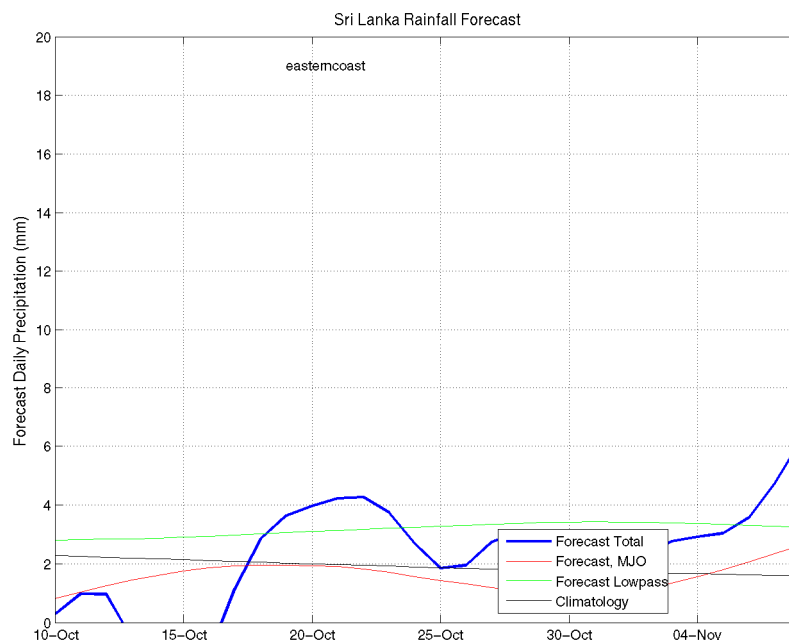
Western Slopes (Rainfall Scale from 0-20 mm/day)



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

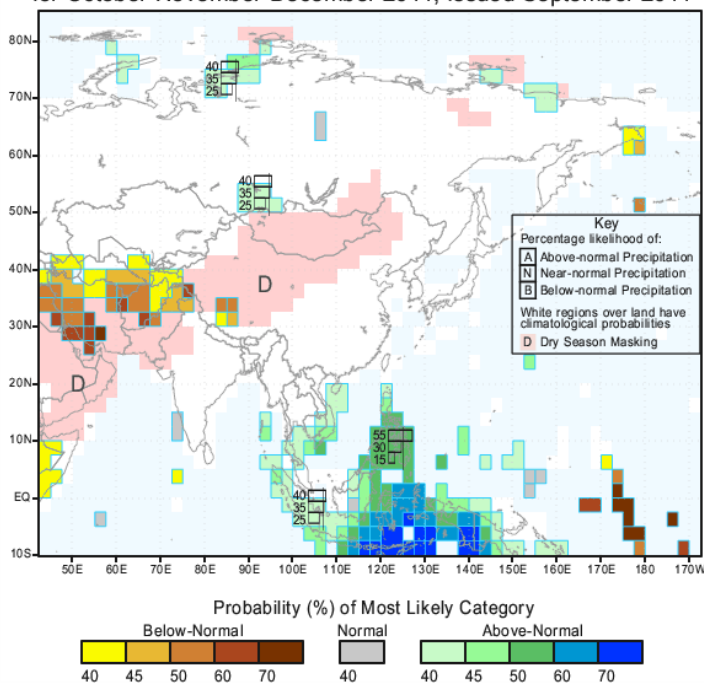


Eastern Coasts (Rainfall Scale- from 0-20 mm/day)



d) Seasonal Rainfall and Temperature Predictions from IRI

IRI Multi-Model Probability Forecast for Precipitation
for October-November-December 2011, Issued September 2011



IRI Multi-Model Probability Forecast for Temperature
for October-November-December 2011, Issued September 2011

