

Experimental Climate Monitoring and Prediction

(Prepared for Water Management Secretariat, Mahaweli Authority)

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7 July 2011

FECT BLOG

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ENSO Update

16 June 2011

Since the ending of the moderate to strong La Niña episode in early May, neutral conditions have prevailed. For the June-August season currently in progress, there is an approximately 9% probability for returning to La Niña conditions, a 84% probability for remaining in neutral conditions, and a 7% probability for the development of El Niño conditions. Neutral conditions are the most likely scenario throughout the remainder of 2011, although development of El Niño conditions or re-emergence of La Niña conditions cannot be ruled out.

(Text Courtesy IRI)

Summary²

Weekly Monitoring: During the previous week (29th June to 04th July, 2011) dry conditions prevailed almost all over the island. Southern part of the island received 5-10mm rainfall on the 01st July.

Monthly Monitoring: During June, above average rainfall was experienced most parts of the western province while the most of the other parts below the average.

7 Day Prediction: For the coming week the NCEP Global Forecast System predicts accumulated rainfall below 55 mm particularly for the Western and South western regions while below 45mm for the rest of the island. The NCEP forecast as served through IRI predicts below 20 mm rainfall for the entire island.

1 Month Prediction: Overall Rainfall will decrease dramatically till the 9th July. Then after it will increase dramatically till the 14th July followed by a decreasing trend with minor fluctuations till the first week of the August. Western slopes will follow nearly the same pattern with increased rainfall. It will experience quite wet conditions after 13th July for 2-3 days and then after rainfall decrease dramatically till the 18th July. Again it will increase slowly and similar wet conditions will prevail for about 3 days after 21st July. Latter part of the month will show a decrease of rainfall with few fluctuations. For the eastern slopes it will also show a decreasing trend with few fluctuatons, but quite wet conditions will be observed till the 8th July.

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

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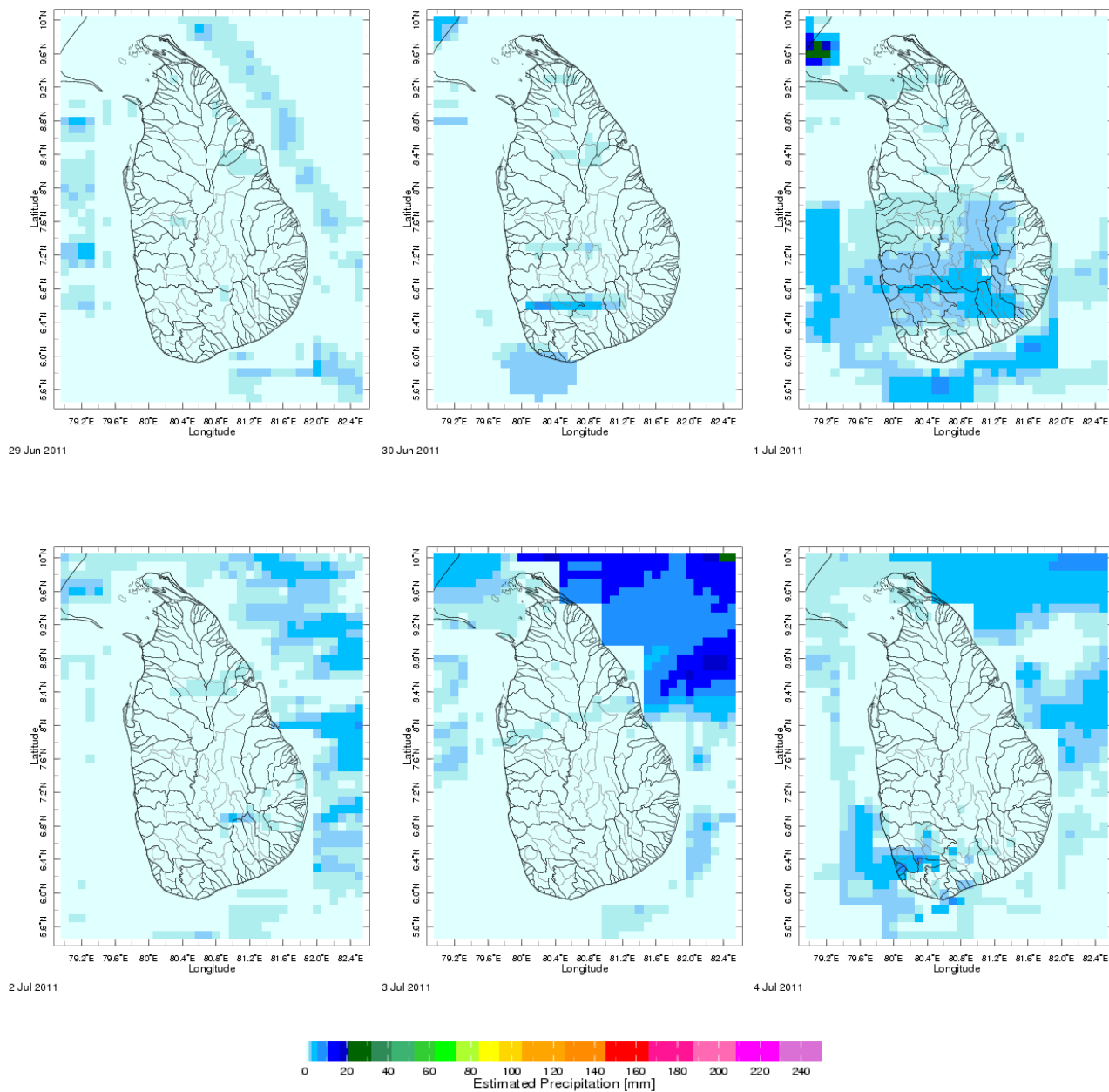
International Research Institute for Climate and Society.

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

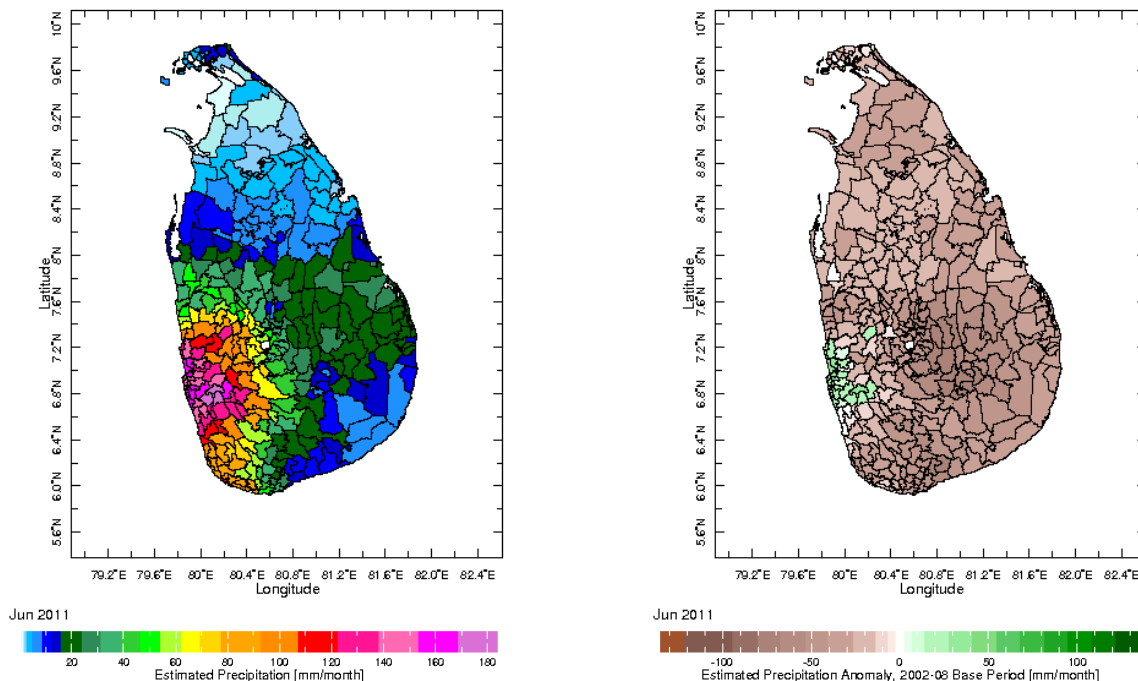
Official hydro-meteorological statements are provided by the Sri Lanka Department of Meteorology and Department of Irrigation.

1. Rainfall Monitoring

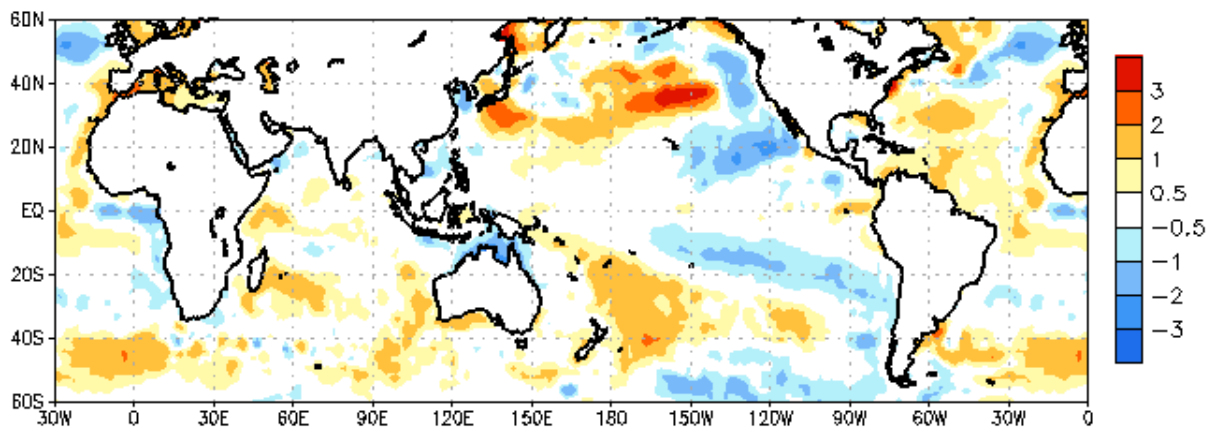
a) Daily Satellite Derived Rainfall Estimate Maps: 29th June – 04th July, 2011 (Left-Right, Top-Bottom)



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



c) Weekly Average SST Anomalies

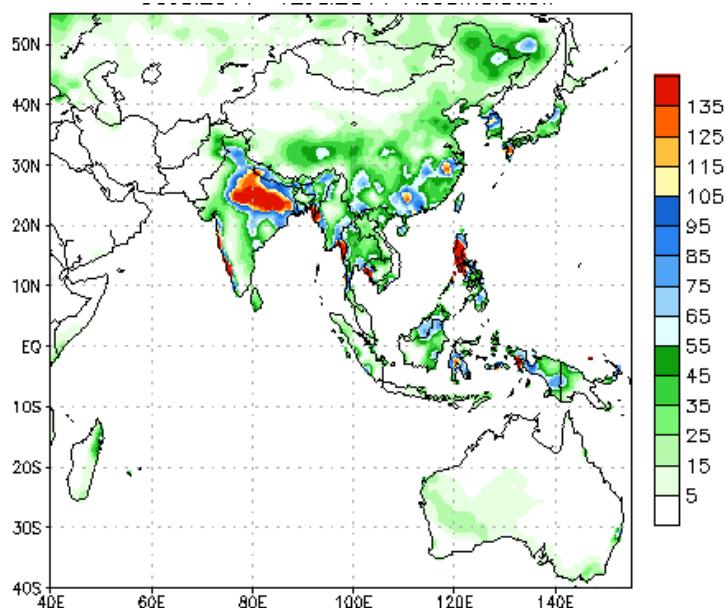


Weekly Average SST Anomalies ($^{\circ}\text{C}$), 29th June, 2011

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.

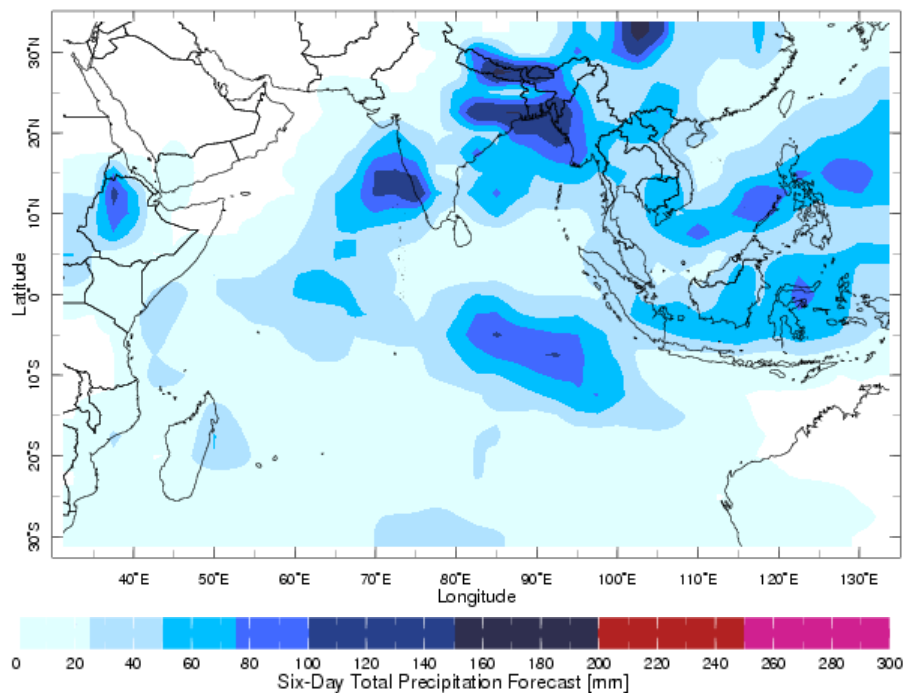


During next week, an accumulated rainfall below 55 mm is predicted particularly for the South Western and western regions.

Source – NOAA Climate Prediction Center

Map: Predicted accumulation of rainfall. (06th July- 12th July, 2011 week)

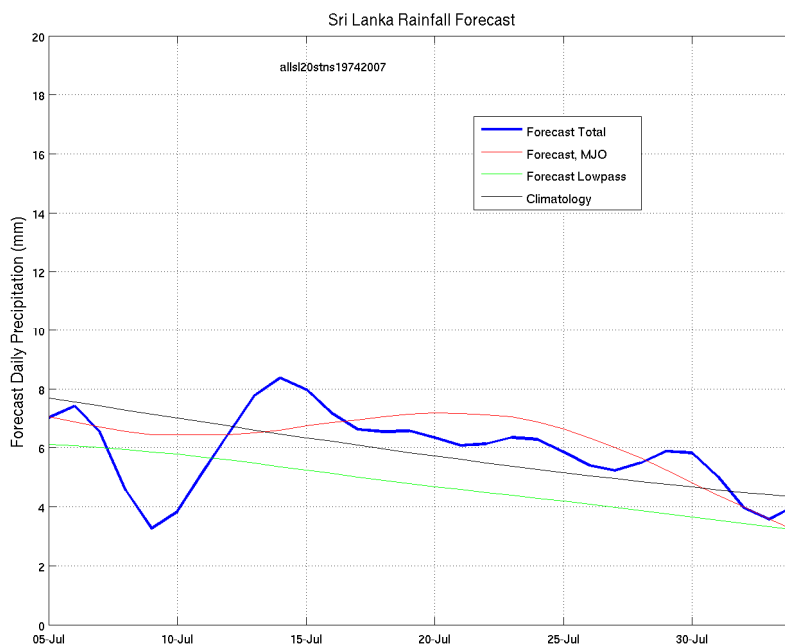
b) Precipitation Forecast for 05th-10th July, 2011- NOAA-(issued 05th July)



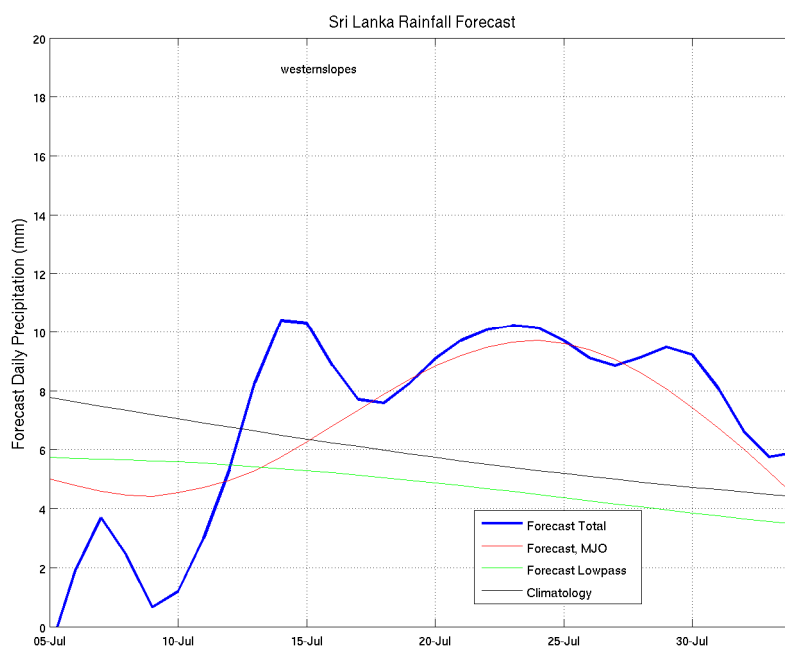
c) 1 month experimental predictions by Paul Roundy and L. Zubair

Predictions based on observed cloud cover and atmospheric waves. Issued 07th July, 2011

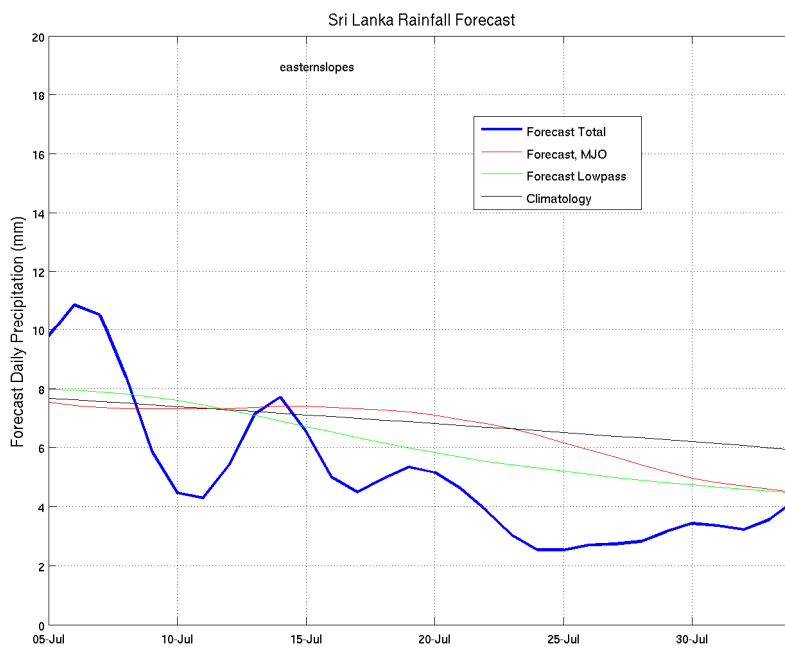
All Sri Lanka (Rainfall Scale from 0-20 mm/day)



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

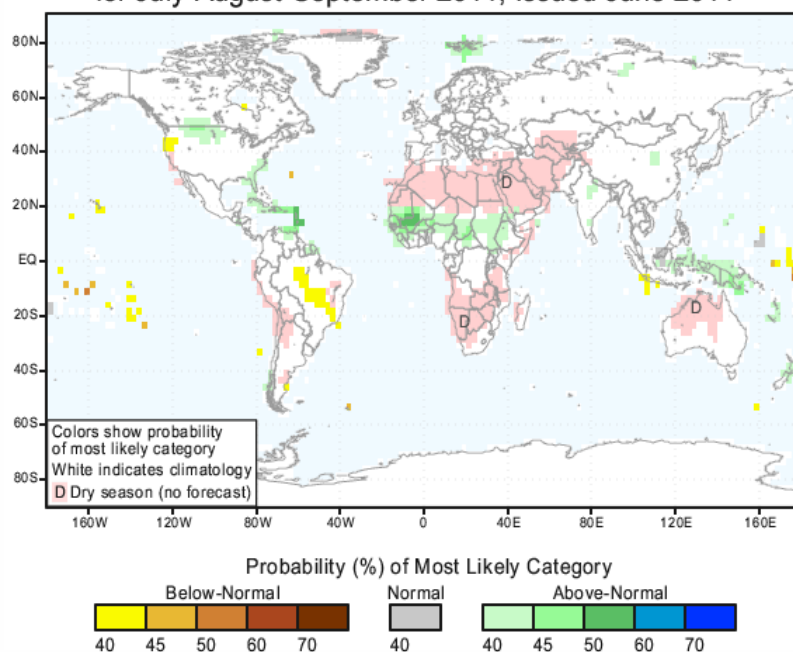


Eastern Slopes (Rainfall Scale- from 0-20 mm/day)



d) Seasonal Rainfall and Temperature Predictions from IRI

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



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

