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

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

3 July 2014

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

19 June, 2014

PACIFIC SEAS STATE

During May through mid-June the observed ENSO conditions remained near the borderline of a weak El Niño condition in the ocean, but the atmosphere so far has shown little involvement. Most of the ENSO prediction models indicate more warming coming in the months ahead, leading to sustained El Niño conditions by the middle of northern summer.

(Text Courtesy IRI)

INDIAN OCEAN STATE

Seas around Sri Lanka showed 0,5 °C higher than average sea surface temperature.

MJO STATE

MJO is at phase 8 in the Western Hemisphere and Africa. Still the MJO is weak and therefore this shall not have an impact on the rainfall in Sri Lanka

Highlights

Monitoring and Predictions:

The southeast monsoon is active. Therefore south east region of the country received high amounts of rainfall during June. More than 200 mm of excess monthly rainfall compared to past years was observed in this region during this month. During the next two weeks this condition is predicted to continue but heavy rainfall events are not likely to happen during the next six days. The sea surface temperature remains to be warmer than average.

Summary

Monitoring

***Weekly Monitoring*:** From 25th of June onwards until the 28th only light rainfall was observed in various parts of the country. On the 29th, sea further west of Colombo as well as some parts of the Western province received rainfall up to 50 mm. The rainfall expanded on the next day (30th) into the whole immediate south western sea and Colombo, Kalutara, Ratnapura, Galle, Matara, Kegalle and Kurunegala districts. Light rainfall was observed in the central region of the country on the same day. The south western sea continued to receive high rainfall up to 50 mm on the 1st of July while inland rainfall diminished.

***Monthly Monitoring*:** The southwest monsoon was active during the month of June. Due to this the south western region received higher rainfall than rest of the country. The entire southern half of the island received rainfall during this month but except for Colombo, Kaluthara, Galle, Matara, Ratnapura, Kegalle, western areas of Nuwara-Eliya and southern areas of Gampaha districts, rainfall received in the country was below-average. In the above mentioned districts up to 200 mm of excess rainfall, compared to the average rainfall received in the past during June, was observed.

Predictions

14 day prediction: More rainfall is expected (up to 55 mm) during the fortnight starting from 2nd July 2014.

IMD WRF &IRI Model Forecast: According to the IMD WRF model and IRI forecasts South Western to western regions of the country shall continue to receive rainfall. No heavy rainfall events are expected during 2nd to 7th July 2014.

***Seasonal Prediction*:** As per IRI Multi Model Probability Forecast issued on June 2014; for July 2014 to September 2014, the precipitation shall be climatological while there is a 70% chance that temperature shall be above normal.

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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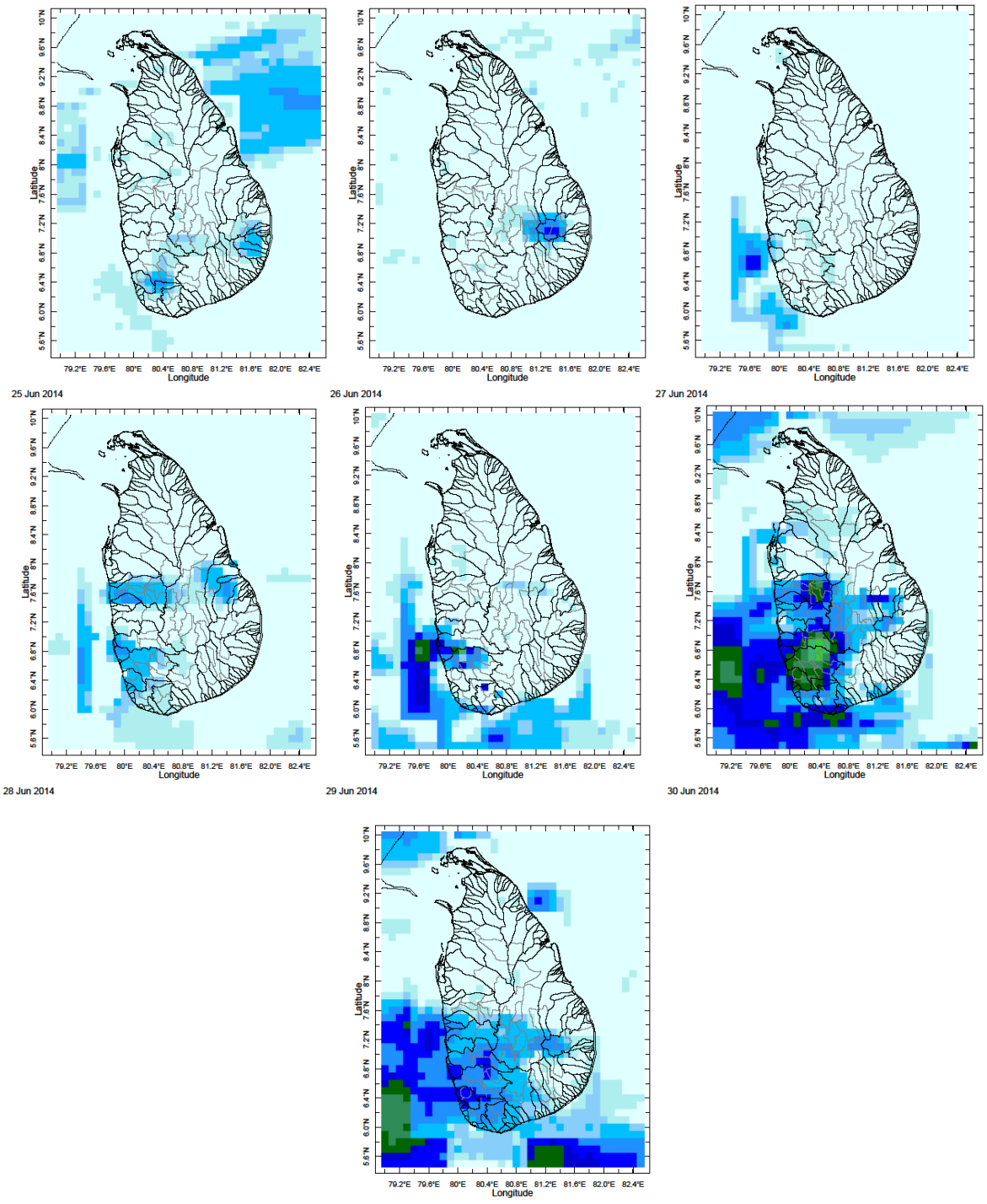
1. Monitoring

a) Daily Satellite Derived Rainfall Estimate Maps: 25th June- 1st July *2014 (Left-Right, Top-Bottom)*



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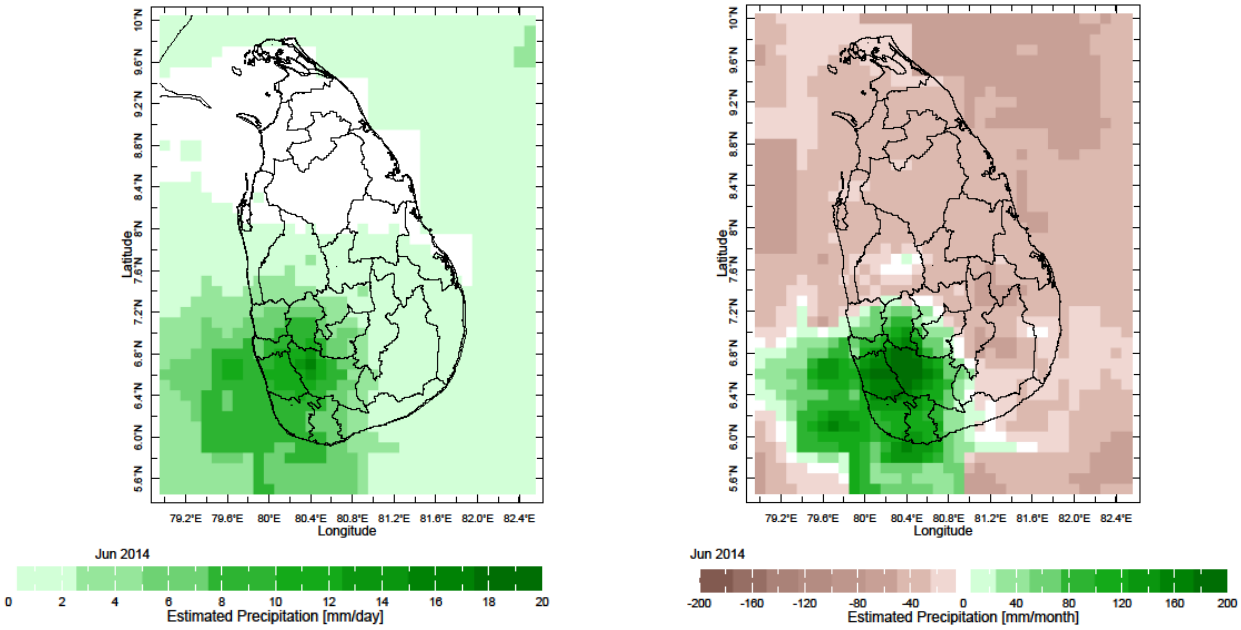
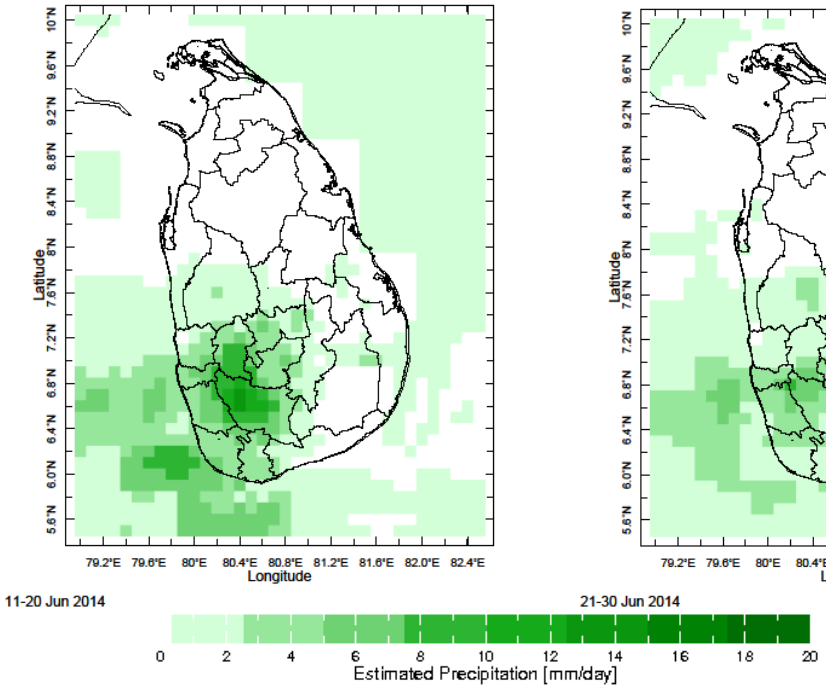
b) Monthly Satellite Derived Rainfall Estimates for June 2014 (Average – Left and Anomaly - Right)



c) Dekadal (10 Day) Satellite Derived Rainfall Estimates (11-20 & 21- 30 June, 2014)



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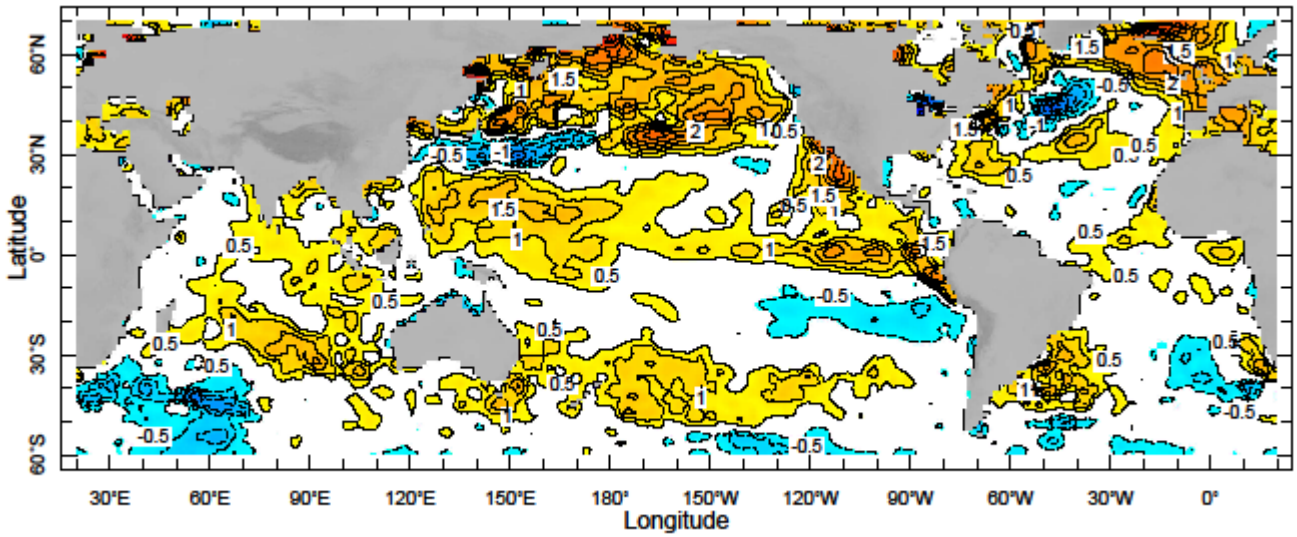
d) Weekly Average SST Anomalies



22-28 Jun 2014

Weekly Average SST Anomalies (^{0}C), 22nd-28th June, 2014

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

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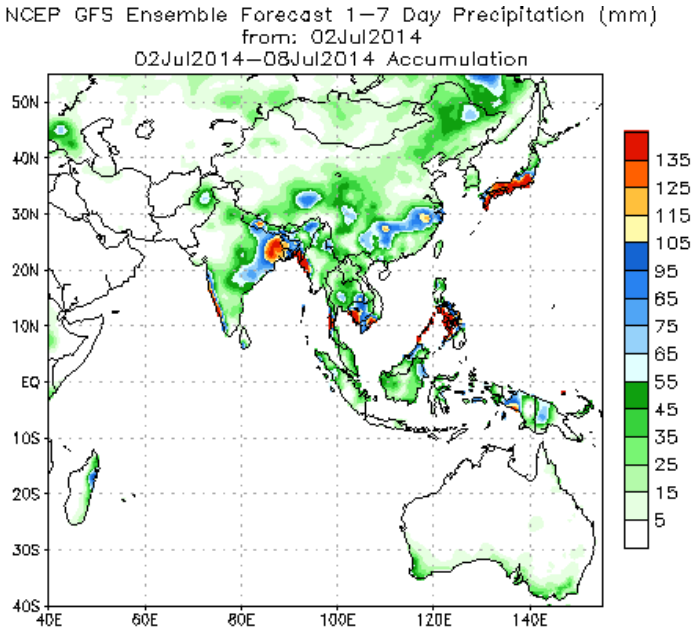
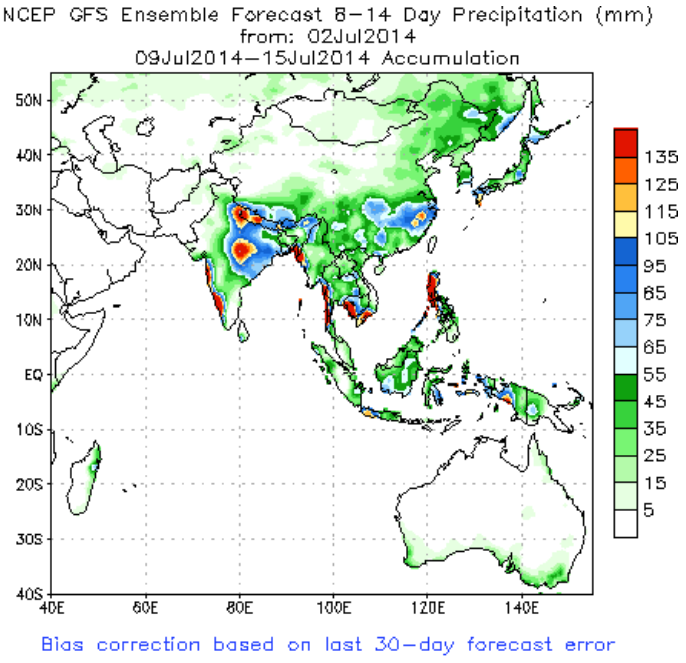
2. Predictions

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





Source – NOAA Climate Prediction Center

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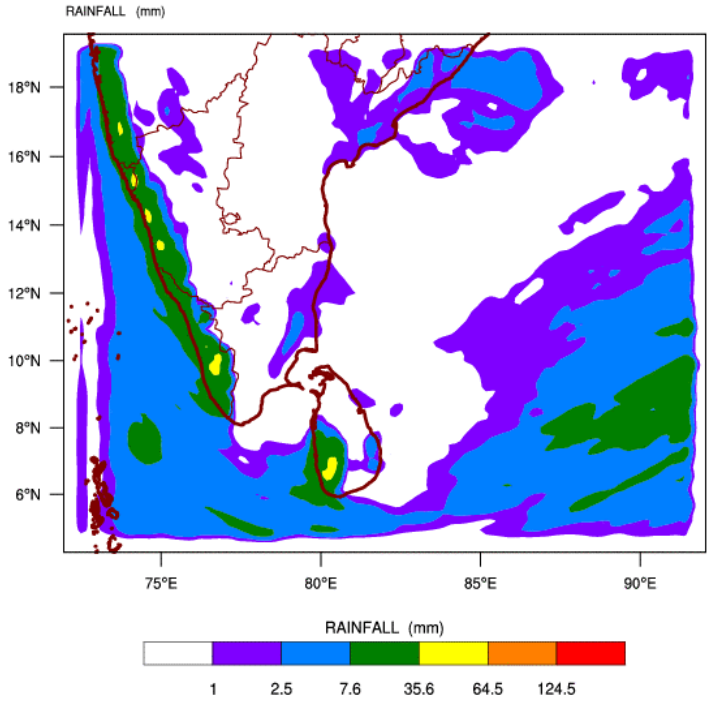
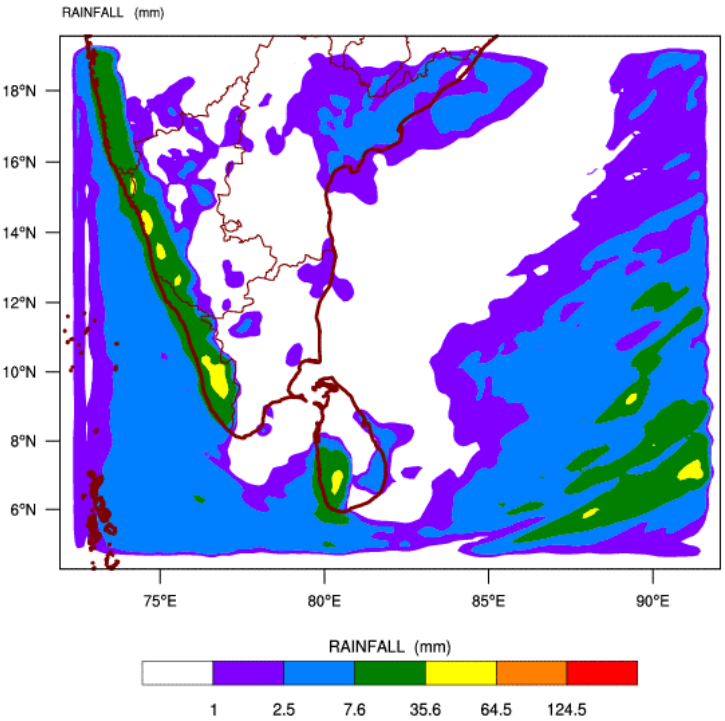
b) WRF model forecast from **Regional Meteorological Center, Chennai of Indian Meteorological Department**

WRF MODEL FORECAST (48 HR.) RAINFALL(mm)\
based on 00 UTC of 02-07-2014 valid for 03 UTC of 04-07-2014



WRF MODEL FORECAST (72 HR.) RAINFALL(mm)\
based on 00 UTC of 02-07-2014 valid for 03 UTC of 05-07-2014



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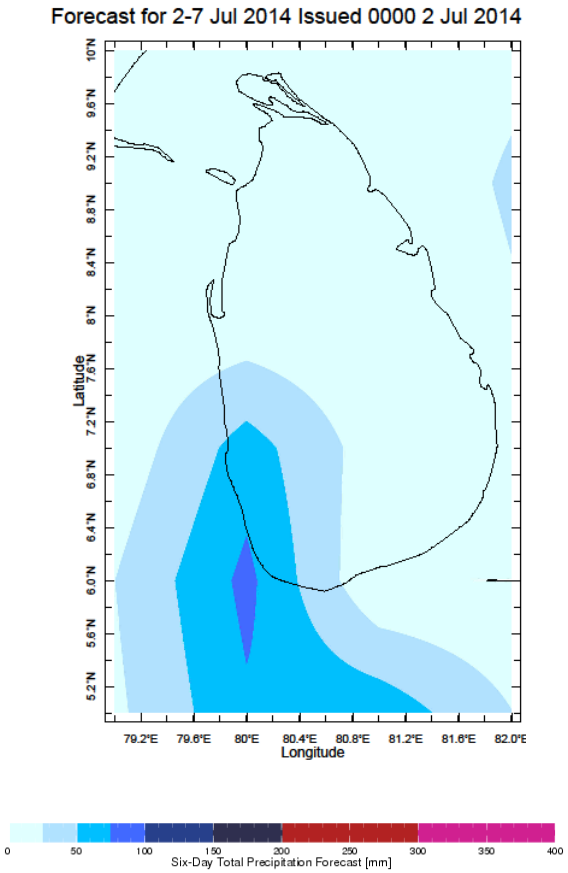
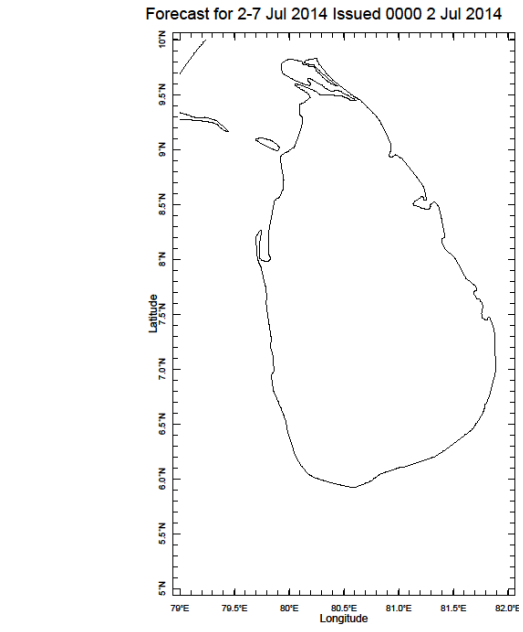
c) Weekly Precipitation Forecast for 2nd -7th July 2014 (Precipitation Forecast in Context Map Tool, IRI)





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e) Seasonal Rainfall and Temperature Predictions from IRI