FECT Foundation for Environment Climate and Technology
c/o, Maintenance Office, Mahaweli Authority, Digana Village, Rajawella, Sri Lanka.
Phone (+94) 81-2376746, 4922992 E-mail climate@sltnet.lk Web Site http://www.climate.lk

Experimental Climate Monitoring and Prediction

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

24 July 2014

FECT BLOG

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17 July, 2014

PACIFIC SEAS STATE

During June through early-July 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 or late portion of northern summer.

(Text Courtesy IRI)

INDIAN OCEAN STATE

A neutral sea surface temperature anomaly was observed around Sri Lanka

MJO STATE

MJO is at phase 6 in the maritime continent and shall suppress precipitation.

Highlights

Monitoring and Predictions:

Rainfall observed in Sri Lanka is dwindling. Less than 20 mm of rainfall was observed during 16th- 22nd of July. No significant rainfall events are predicted for the next two weeks. The sea surface temperature anomaly remained neutral in the entire last month.

Summary

Monitoring

***Weekly Monitoring*:** During 16th- 22nd July significant rainfall was only observed on the 22nd. Rainfall up to 20 mm was observed in Kandy, Nuwara Eliya and Kurunegala districts on this day.

***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: Significant rainfall is not expected during the next two weeks.

IMD WRF &IRI Model Forecast: According to the IMD WRF model Galle to Puttalam districts shall receive rainfall up to 35 mm on the 25th and 26th of July while IRI models predict total rainfall up to 25 mm during 23rd- 28th of July.

***Seasonal Prediction*:** As per IRI Multi Model Probability Forecast issued on July 2014; for August 2014 to October 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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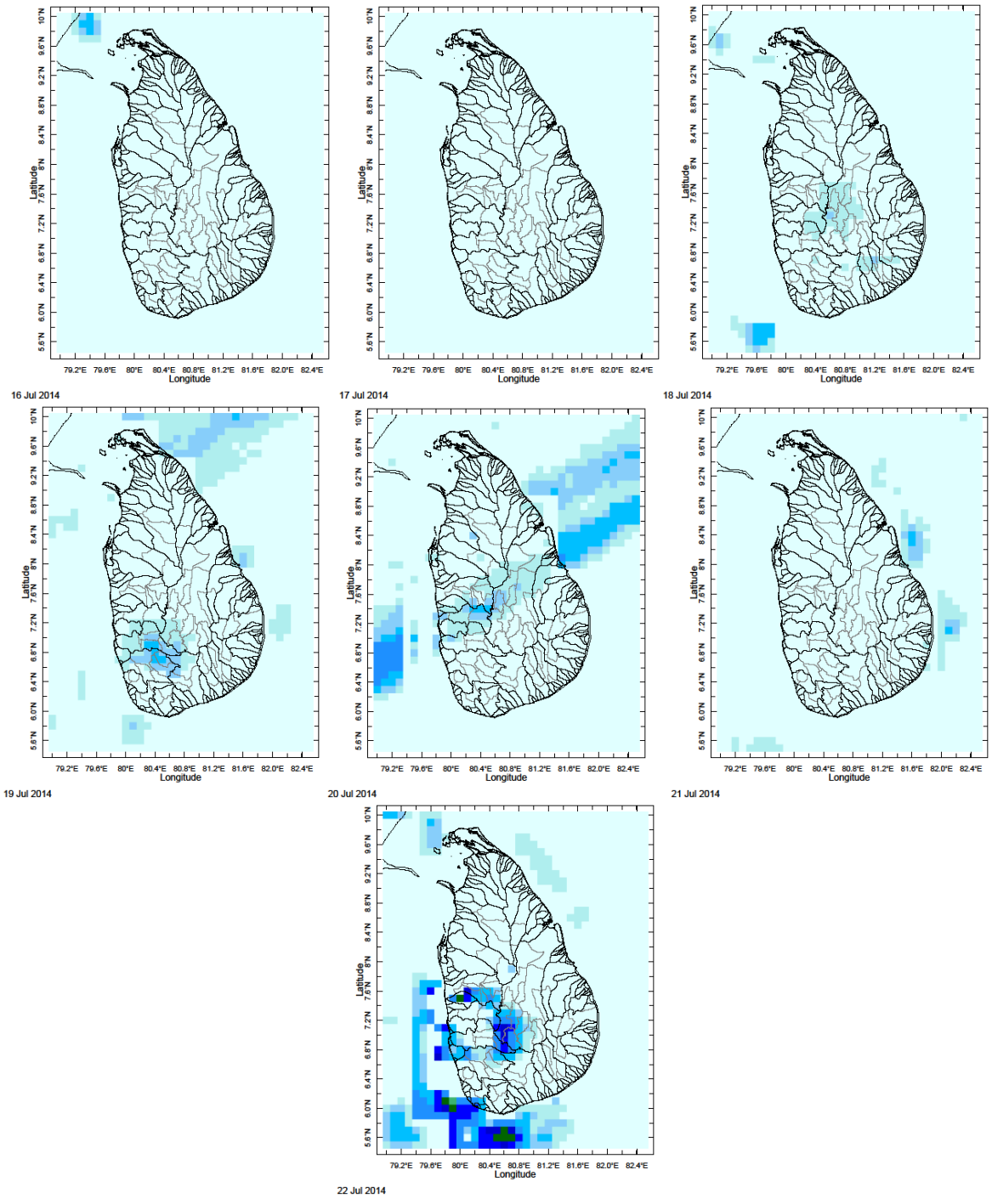
1. Monitoring

a) Daily Satellite Derived Rainfall Estimate Maps: 16th -22nd July *2014 (Left-Right, Top-Bottom)*



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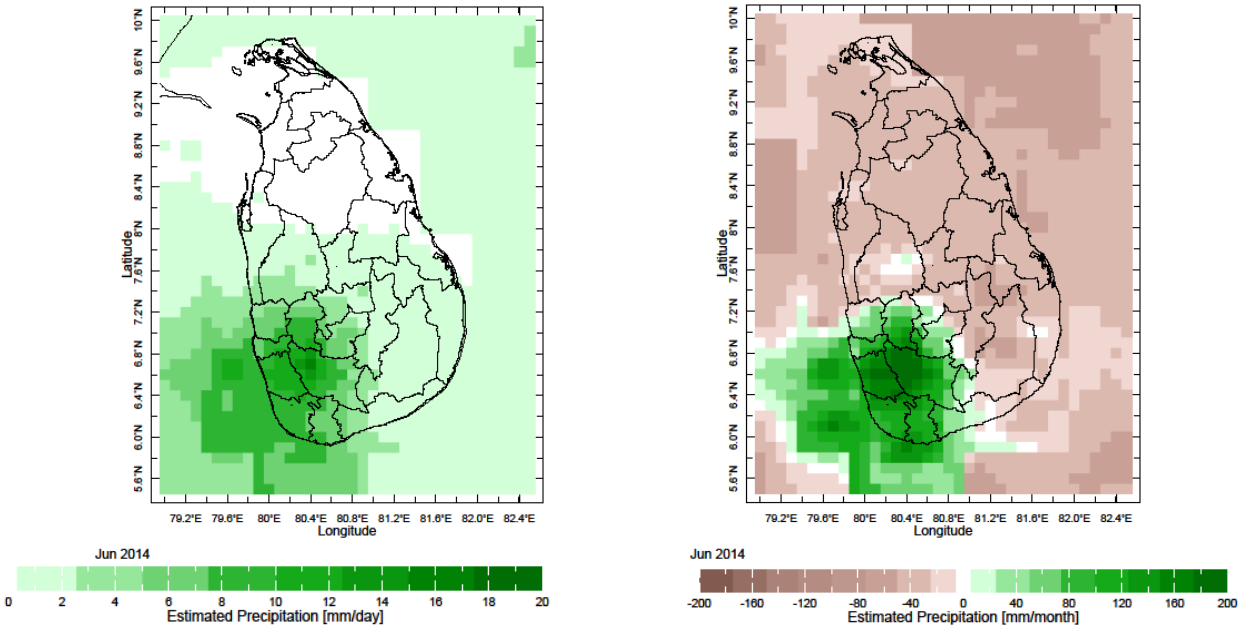
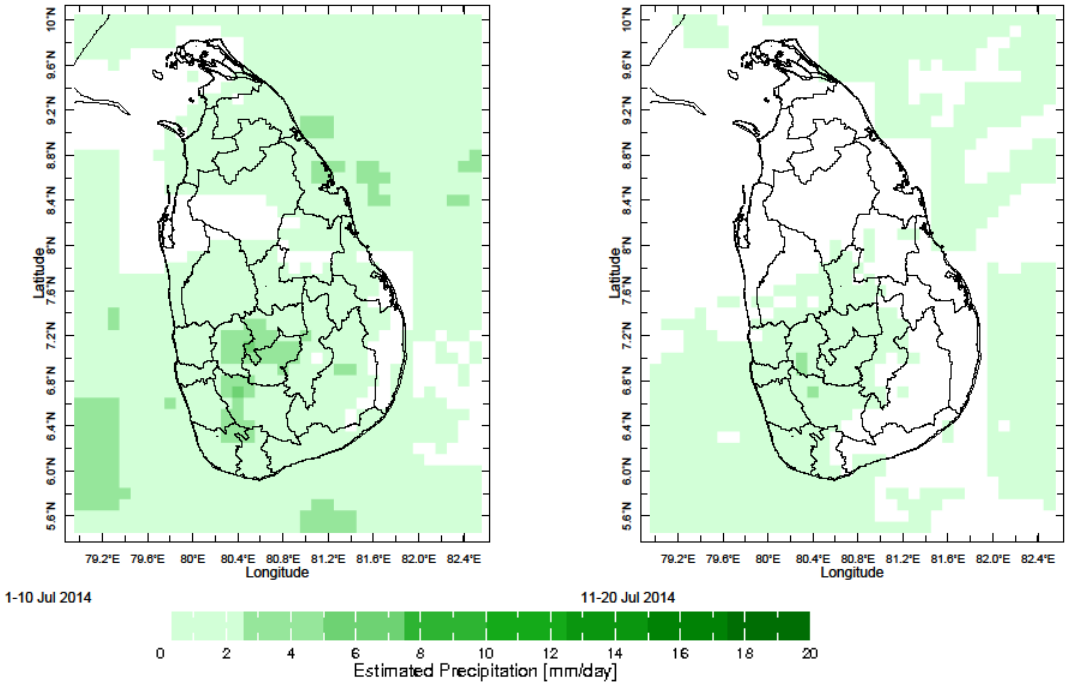
b) Monthly Satellite Derived Rainfall Estimates for June 2014 (Average – Left and Anomaly - Right)



c) Dekadal (10 Day) Satellite Derived Rainfall Estimates (1- 10 & 11- 20 July, 2014)



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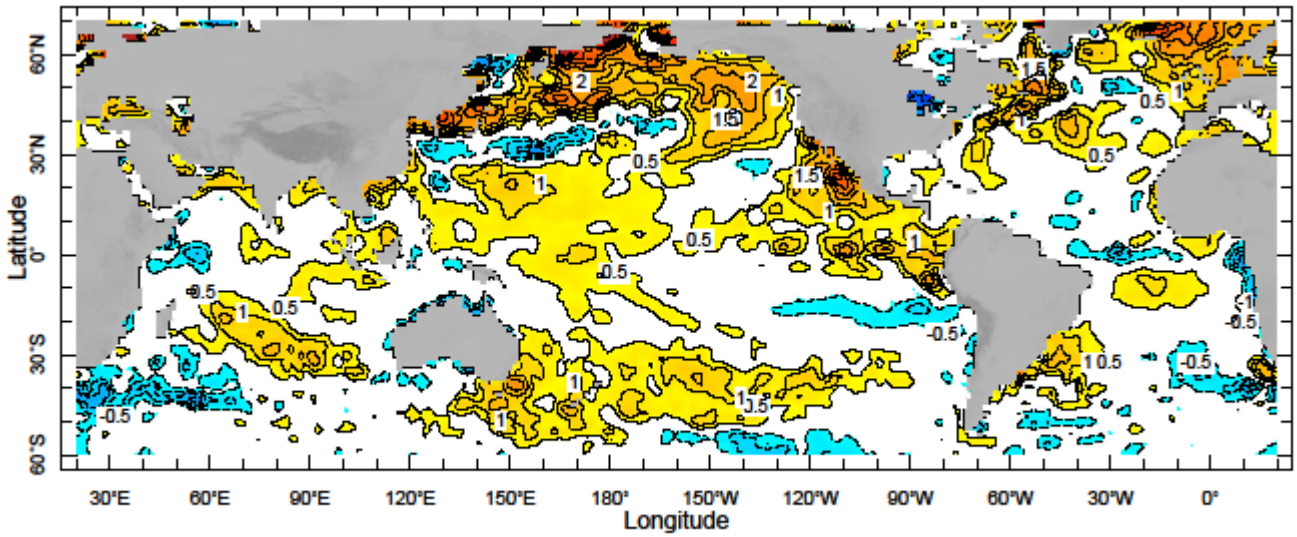
d) Weekly Average SST Anomalies



Weekly Average SST Anomalies (^{0}C), 13th - 19th July, 2014

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

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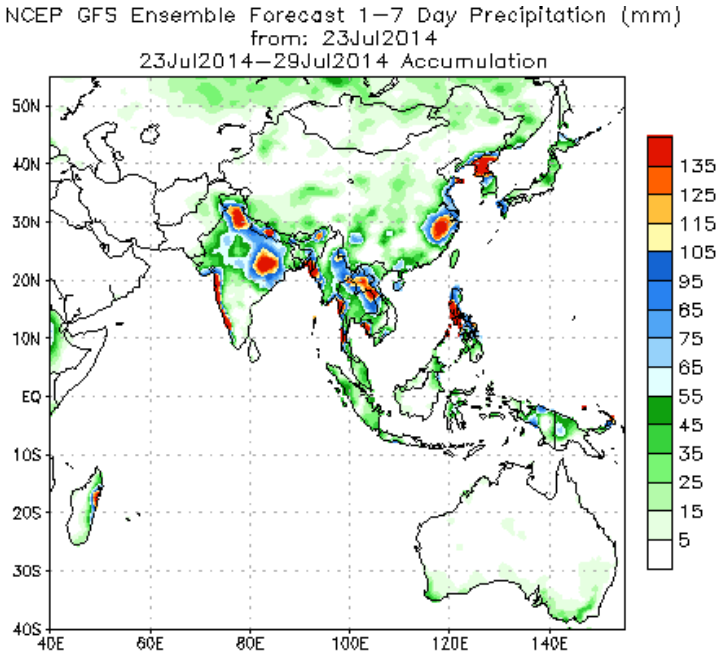
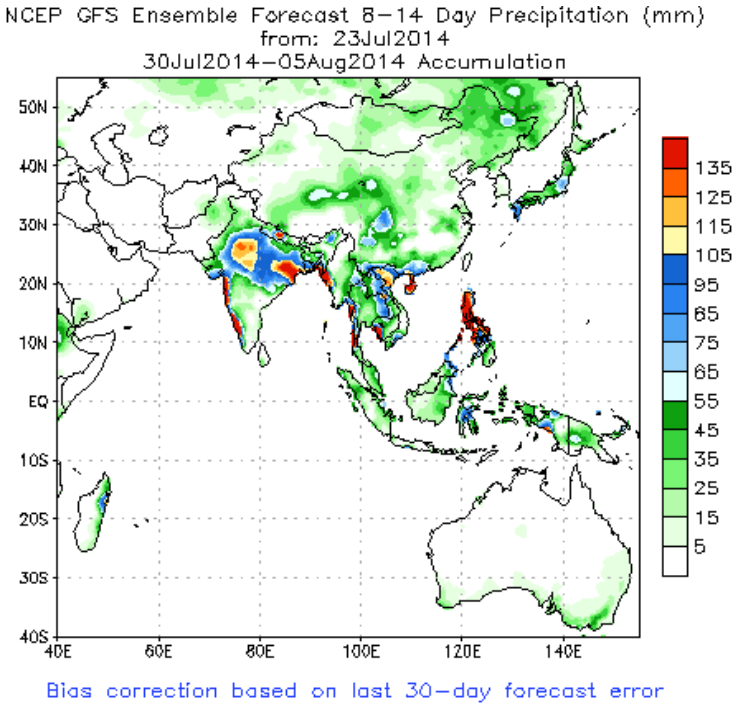
2. Predictions

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





Source – NOAA Climate Prediction Center

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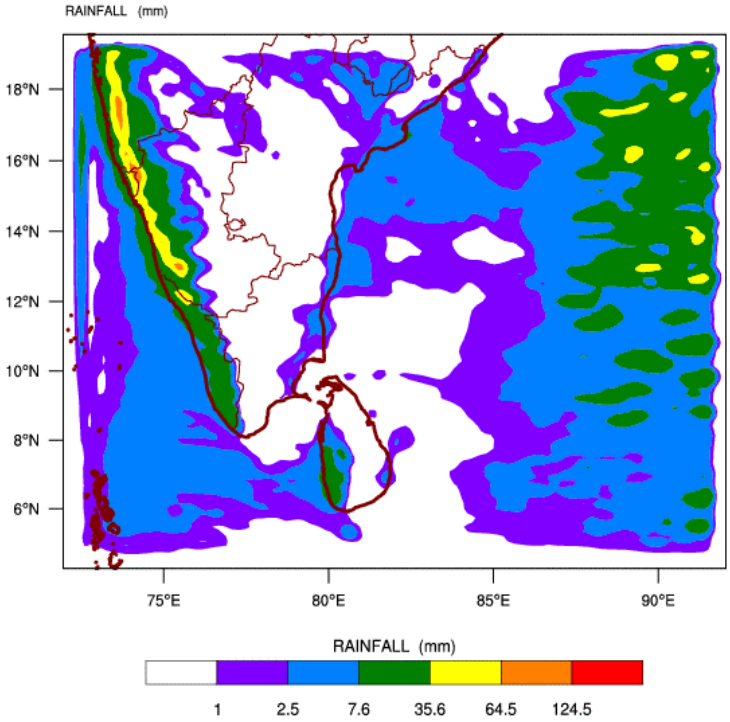
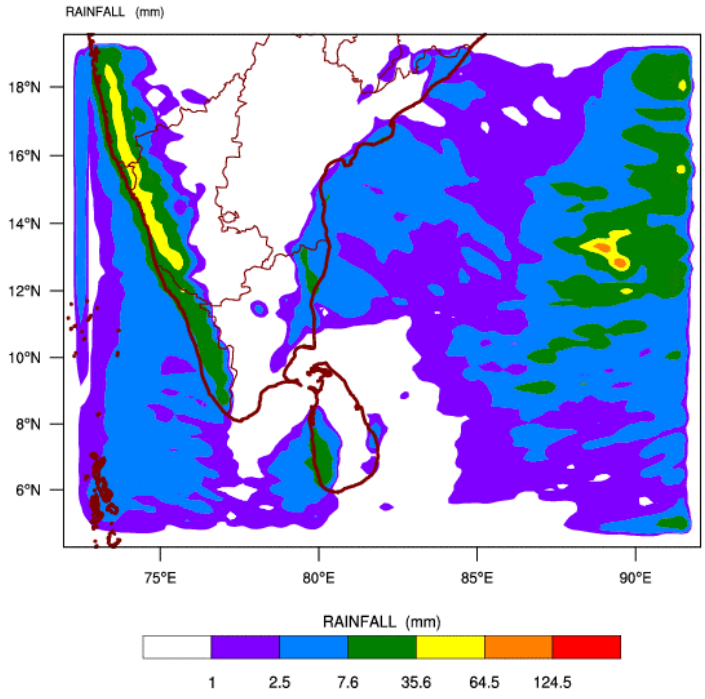
b) WRF model forecast from **Regional Meteorological Center, Chennai of Indian Meteorological Department**

WRF MODEL FORECAST (48 HR.) RAINFALL(mm)\
based on 00 UTC of 23-07-2014 valid for 03 UTC of 25-07-2014



WRF MODEL FORECAST (72 HR.) RAINFALL(mm)\
based on 00 UTC of 23-07-2014 valid for 03 UTC of 26-07-2014



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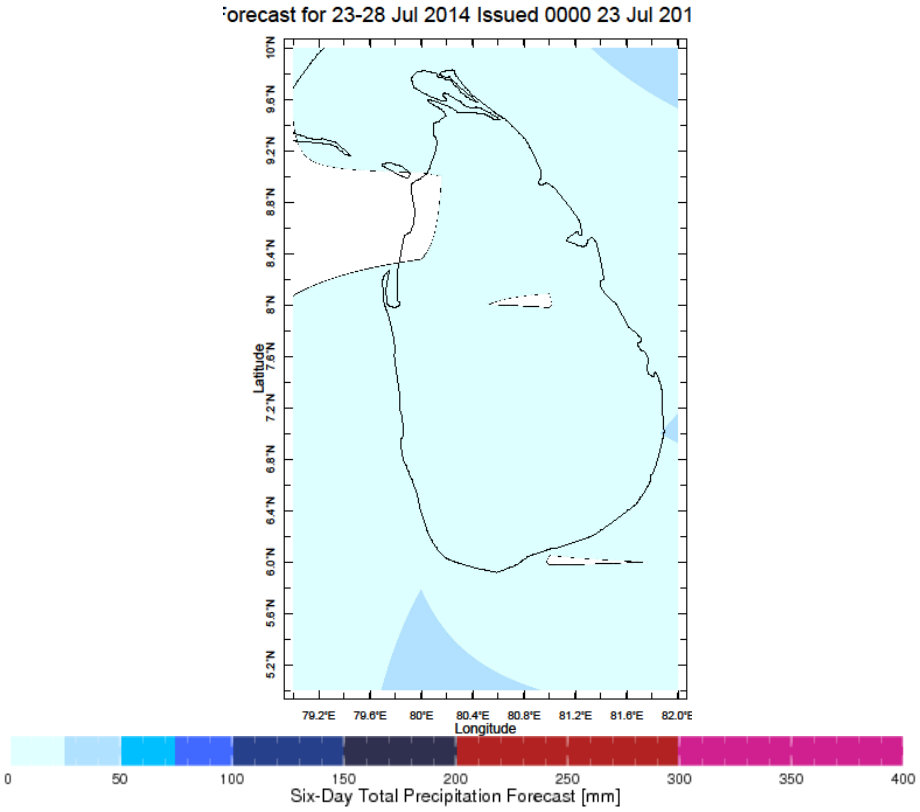
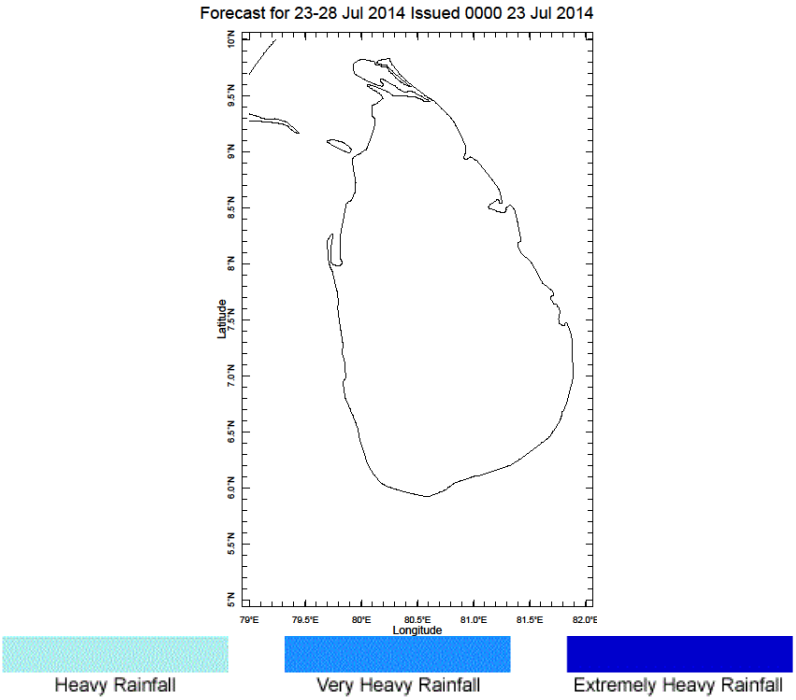
c) Weekly Precipitation Forecast for 23rd -28th July 2014 (Precipitation Forecast in Context Map Tool, IRI)





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e) Seasonal Rainfall and Temperature Predictions from IRI