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Experimental Climate Monitoring and Prediction

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25 June 2015

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June 18, 2015

PACIFIC SEAS STATE

During late May through early-June 2015 the SST was at a moderate El Niño level. The atmospheric variables support the El Niño pattern, including weakened trade winds and excess rainfall in the east-central tropical Pacific. The consensus of ENSO prediction models indicate continuation of moderate El Niño conditions during the June-August 2015 season in progress, likely strengthening further between summer and fall, and lasting into early 2016.

(Text Courtesy IRI)

INDIAN OCEAN STATE

0.5 ^{0}C above average temperature was observed around Sri Lanka.

MJO STATE

MJO phase is in 4 therefore shall slightly enhance rainfall in Sri Lanka.

Highlights

During 16th – 22nd June 2015 Western, Central and Sabaragamuwa provinces mostly received rainfall up to 20-45 mm. In 16th, 17th, and 18th June, rainfall up to 30 mm was observed in the ocean near Western, Eastern, Northern and Southern provinces. Rainfall up to 45 mm was observed in Kalutara, Ratnapura, Nuwara Eliya, and Kegalle on 16th and 18th June. Rainfall was decreasing in the end of the week. NOAA models predict high rainfall in south western and southern regions of the country in the next fortnight.

Summary

Monitoring

***Weekly Monitoring*:** During the time period 16th June – 22nd June 2015, rainfall was mostly observed in Western and Central regions. In 16th, 17th and 18th June Western, Central and Sabaragamuwa provinces received rainfall up to 45 mm and the highest rainfall was observed up to 45 mm in Kalutara and Western region of Ratnapura on 16th and in Kegalle and Western region of Nuwara Eliya on 18th June. On 19th June Gampaha district received rainfall up to 30 mm and on 20th June, southern region of Kurunegala received rainfall up to 30 mm. On 21st June there was no rainfall observed in the whole country and on 22nd, ocean near western province received rainfall up to 30 mm and Puttalam district received rainfall up to 20 mm. On 16th and 17th June, ocean near western, eastern, northern and southern regions of the country received rainfall up to 30 mm.

***Monthly Monitoring*:** In the month May 2015, most of the country received above average rainfall and Colombo, Gampaha, Kalutara, Galle, and the western regions of Kegalle, Ratnapura, Matara, Kandy and Nuwara Eliya districts received below average rainfall.

Predictions

14 day prediction: NOAA NCEP models predict high rainfall in south western and southern regions of the country during 24th June– 7th July. Up to 75 mm total rainfall is expected during the first week (24th- 30th) in south western region. Up to 45 mm rainfall is expected in the following week in southern region of the country.

IMD WRF &IRI Model Forecast: According to the IMD WRF model Western side of the country shall receive rainfall up to 35 mm/day while the rest of the country shall not receive rainfall on 26th June. The rainfall shall continue on 27th June and Kurunegala, Kegalle, Ratnapura and Galle districts shall receive rainfall up to 35 mm and the rest of the country shall not receive rainfall. IRI CFS model also predicts high rainfall in Western province on 24th – 29th June.

Seasonal Prediction: As per IRI Multi Model Probability Forecast for July to September, the total 3 month precipitation shall be climatological. The 3 month temperature has more than 70-80% likelihood in the entire country of being in the above-normal tercile during this period.

Inside this Issue

[1] International Research Institute for Climate and Society, Earth Institute at Columbia University, New York.

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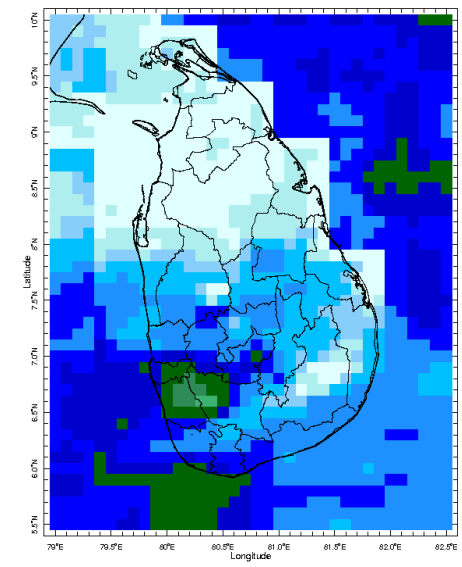
Weekly Hydro- Meteorological Report for Sri Lanka

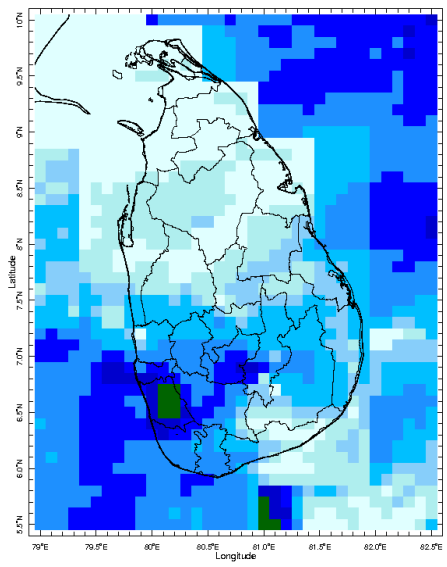
Inside This Issue

Daily Rainfall Monitoring

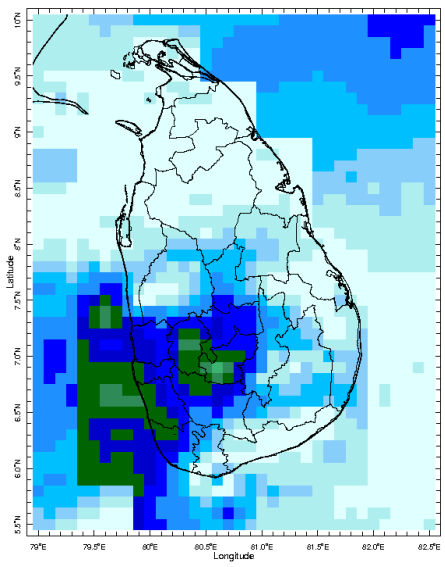
The following figures show the satellite observed rainfall in the last 7 days in Sri Lanka.



16 Jun 2015



17 Jun 2015



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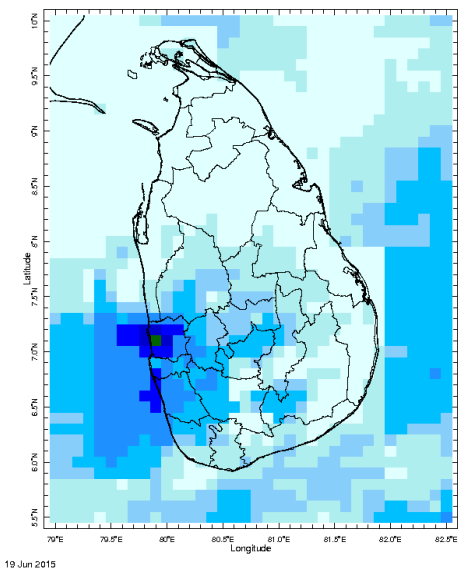
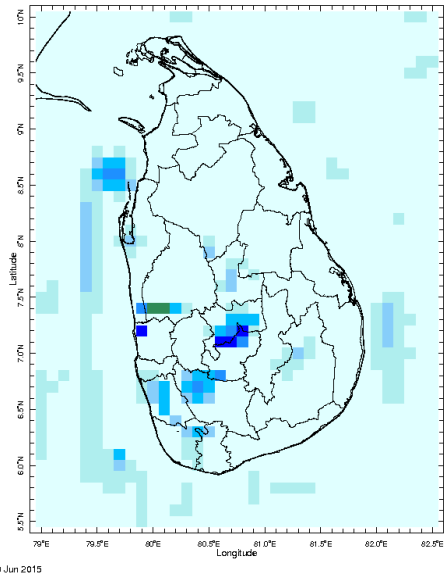
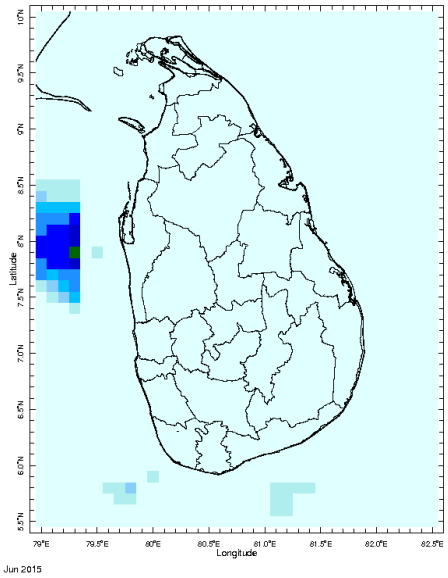


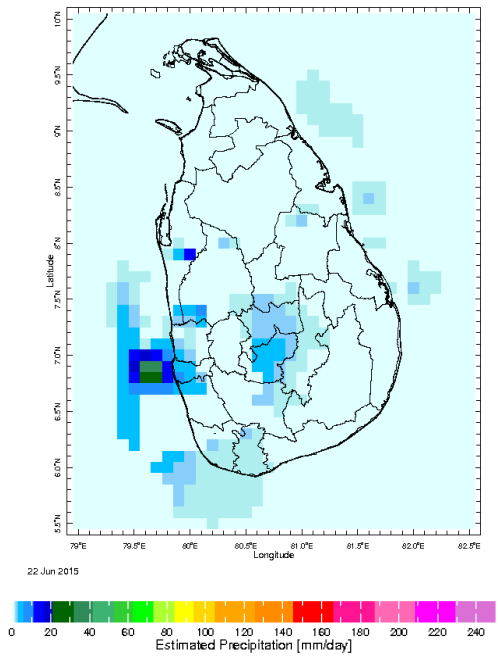
19 Jun 2015



20 Jun 2015

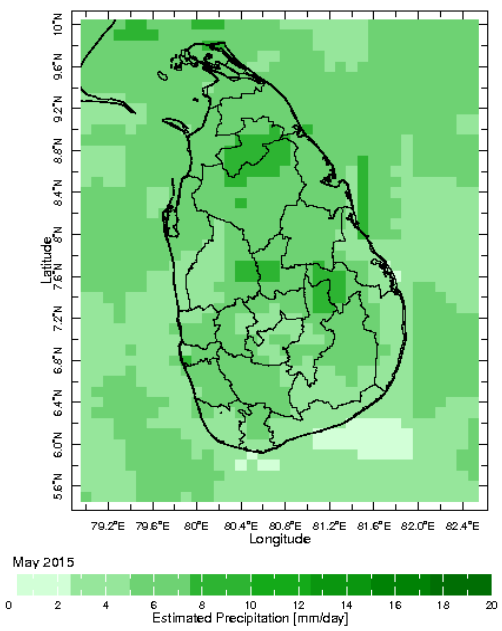


21 Jun 2015

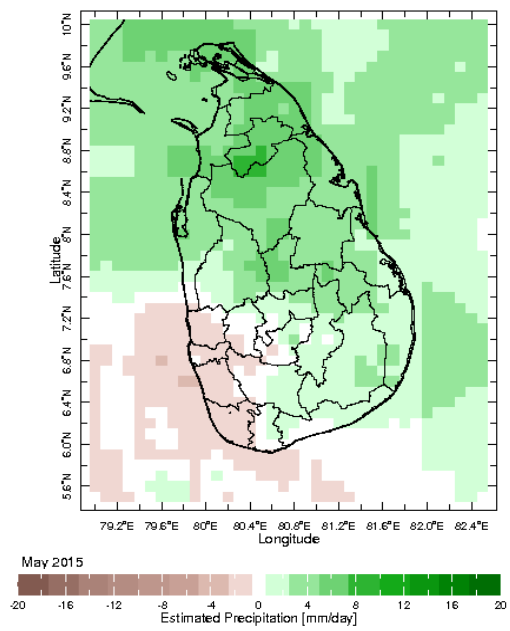


Monthly Rainfall Monitoring

The figure in the left shows the average observed rainfall in the previous month. The rainfall anomaly in the previous month is shown in the figure to the right. The brown color in the anomaly figure shows places which received less rainfall than the historical average while the green color shows places with above average rainfall. Darker shades show higher magnitudes in rainfall

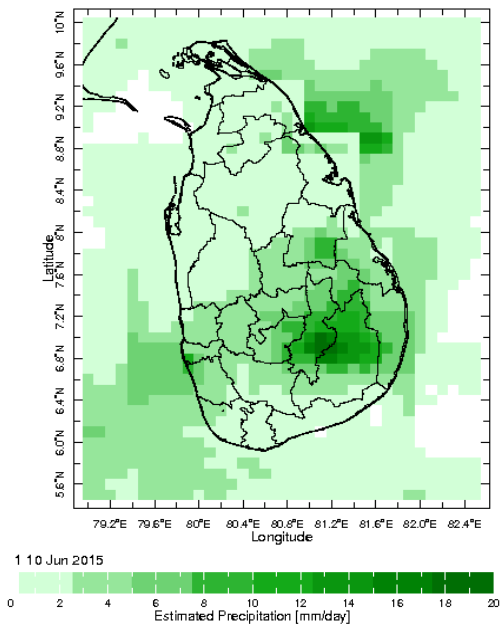


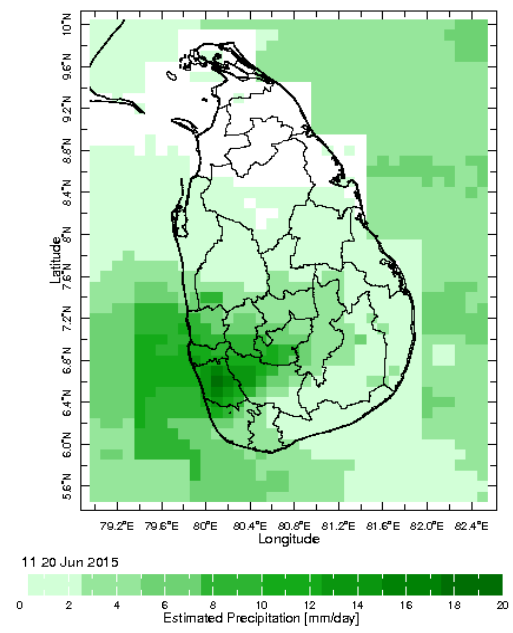
Monthly Average



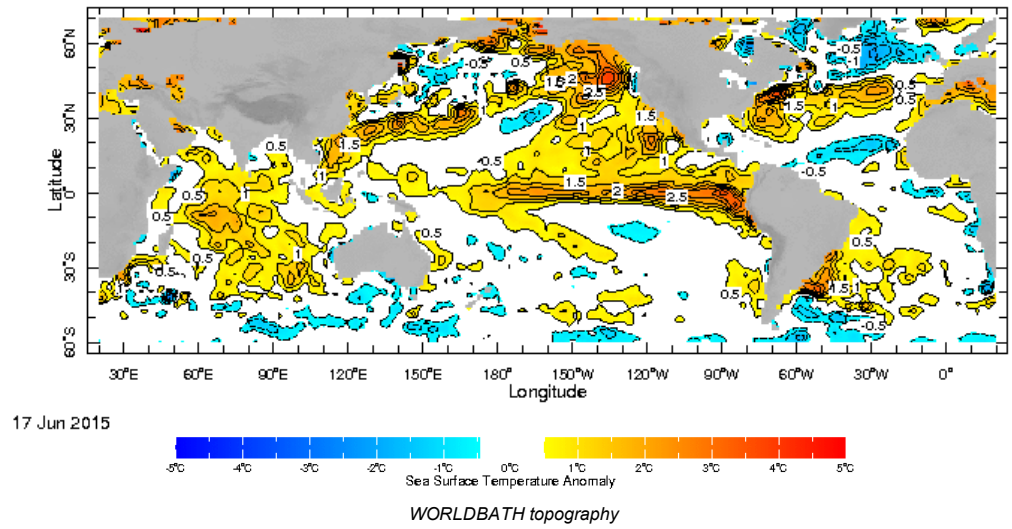
Monthly Anomaly

Dekadal (10 Day) Satellite Derived Rainfall Estimates

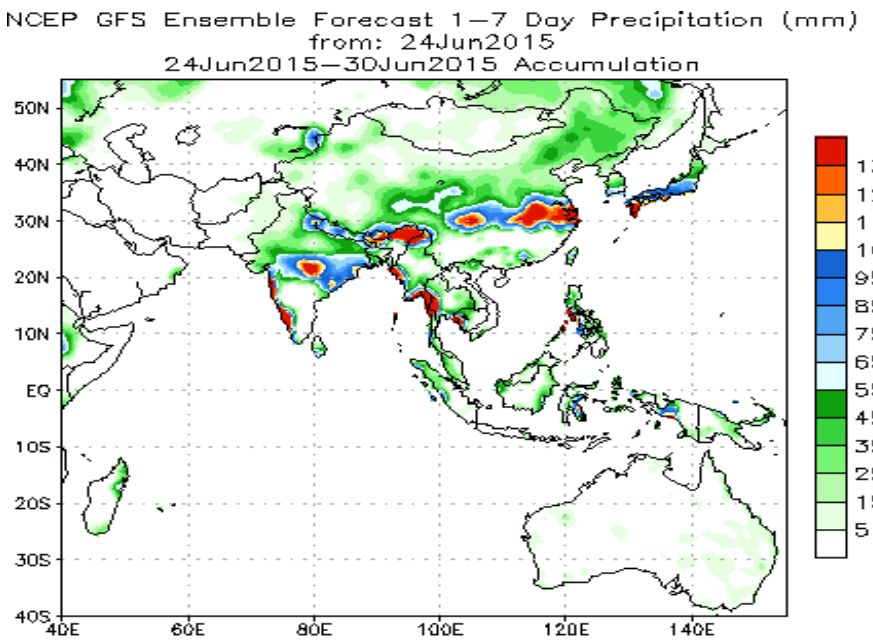


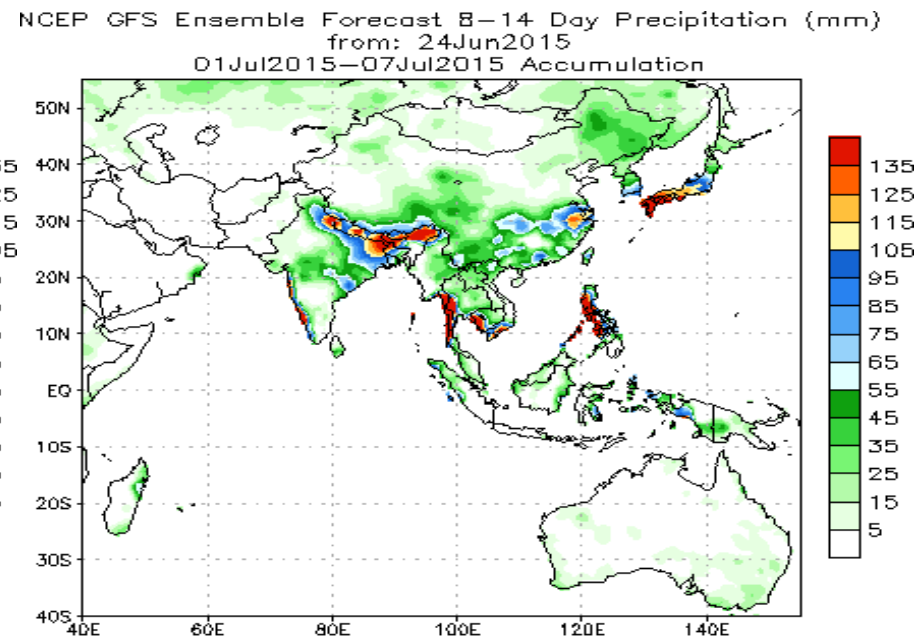


Weekly Average SST Anomalies

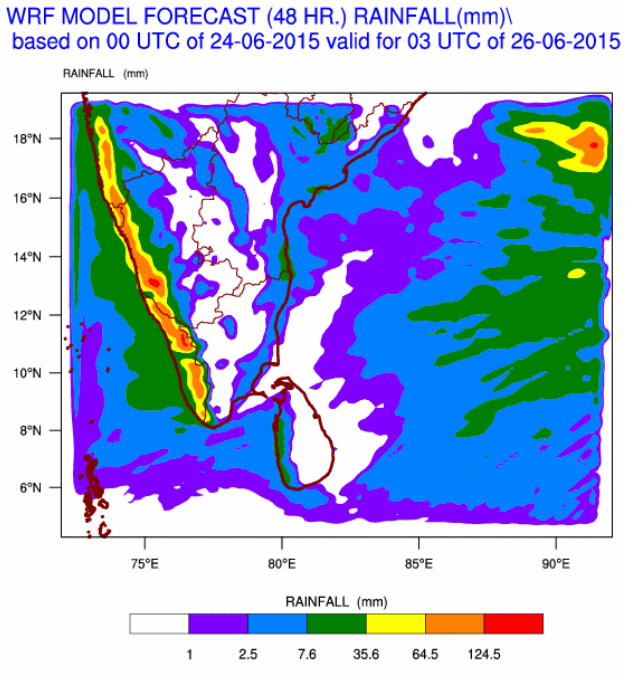


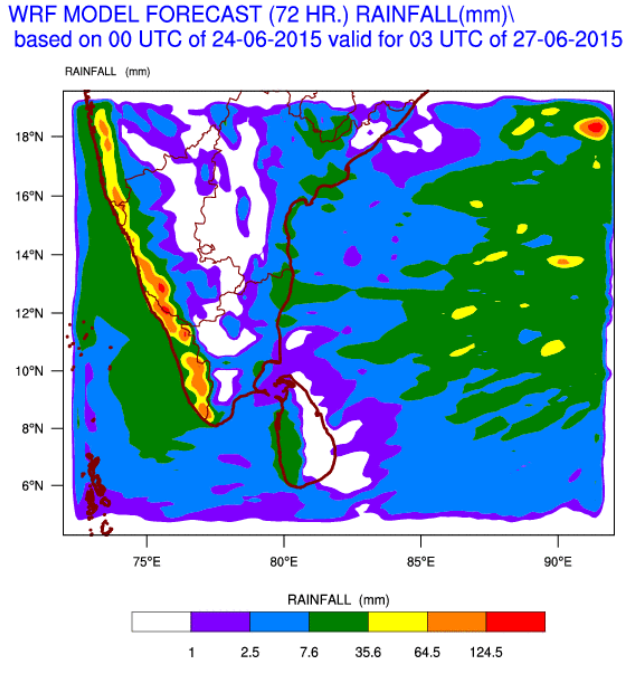
NCEP GFS 1- 14 Day prediction





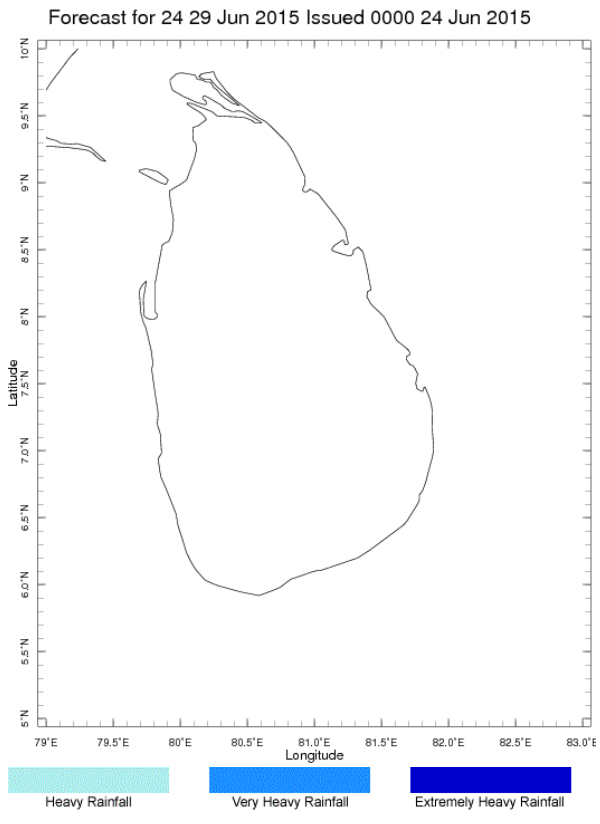
WRF Model Forecast (from IMD Chennai)



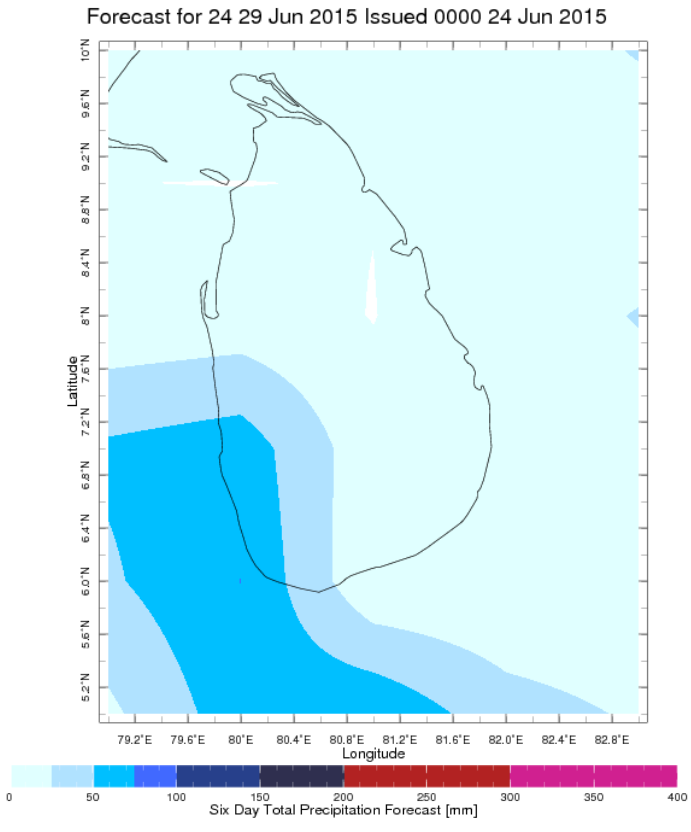


Weekly Rainfall Forecast

Total rainfall forecast from the IRI for next six days is provided in figures below. The figure to the left shows the expectancy of heavy rainfall events during these six days while the figure to the right is the prediction of total rainfall amount during this period.



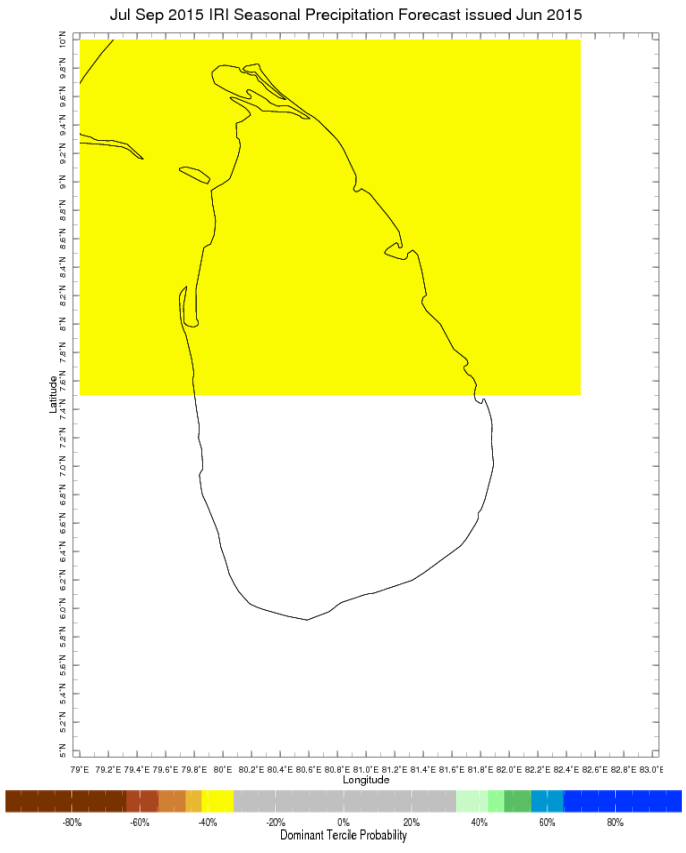
Extreme Rainfall Forecast



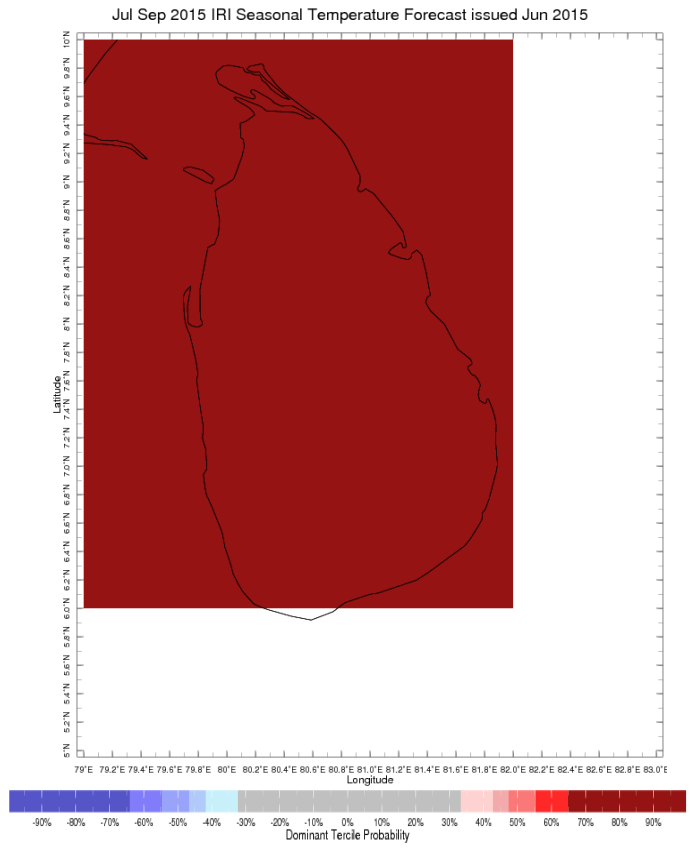
Total Six Day Precipitation Forecast

Seasonal Rainfall and Temperature Forecast

Following is the latest seasonal precipitation and temperature prediction for the next 3 months by the IRI. The color shading indicates the probability of the most dominant tercile -- that is, the tercile having the highest forecast probability. The color bar alongside the map defines these dominant tercile probability levels. The upper side of the color bar shows the colors used for increasingly strong probabilities when the dominant tercile is the above-normal tercile, while the lower side shows likewise for the below-normal tercile. The gray color indicates an enhanced probability for the near-normal tercile (nearly always limited to 40%).



Precipitation Forecast



Temperature Forecast

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