

Experimental Climate Monitoring and Prediction

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FECT BLOG

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May 21, 2015 PACIFIC SEAS STATE

During late April through mid-May 2015 the SST was at a weak to moderate Niño level. The atmospheric variables also indicate an El Niño pattern, including weakened trade winds, low Southern Oscillation Index and excess rainfall in the central tropical Pacific. The consensus of ENSO prediction models indicate weak to moderate El Niño conditions during the May-July 2015 season in progress, likely strengthening during summer and lasting through 2015.

(Text Courtesy IRI)

INDIAN OCEAN STATE

0.5 °C above average temperature was observed around Sri Lanka

MJO STATE

MJO continues to be weak and therefore shall not have a significant impact on the rainfall in Sri Lanka

Highlights

During 20th – 26th May 2015, only slight amounts of rainfall was observed throughout the country. Rainfall was only observed in the south western region during this period. However NOAA models predict high rainfall in the north western region of the country in the next fortnight while rainfall in the south western region is expected in the next few days. The MJO has been weak for some time now and therefore no influence on the rainfall from MJO is expected.

Summary

Monitoring

Weekly Monitoring: During the time period 20th May – 26th May 2015, a significant amount of rainfall was not observed in any part of the country. Only light rainfall was observed in south western region of the country

Monthly Monitoring: In the month May 2015, the entire country received above average rainfall while Jaffna, Kilinochchi, Trincomalee, Batticaloa, Ampara and Hambanthota received below average rainfall.

Predictions

14 day prediction: NOAA NCEP models predict high rainfall in the north western region of the country in the next two weeks. Up to 65 mm total rainfall is expected in this region during this period.

IMD WRF & IRI Model Forecast: According to the IMD WRF model south western region of the country shall receive rainfall up to 35 mm and the rest of the country shall not receive any rainfall on 29th and 30th May. NOAA CFS models also predict some rainfall (up to 50 mm total) in the south western region during 27th May- 1st June 2015.

Seasonal Prediction: As per IRI Multi Model Probability Forecast for June to August, 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.

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- Weekly precipitation forecast (IRI)
- Seasonal Predictions from IRI

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

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

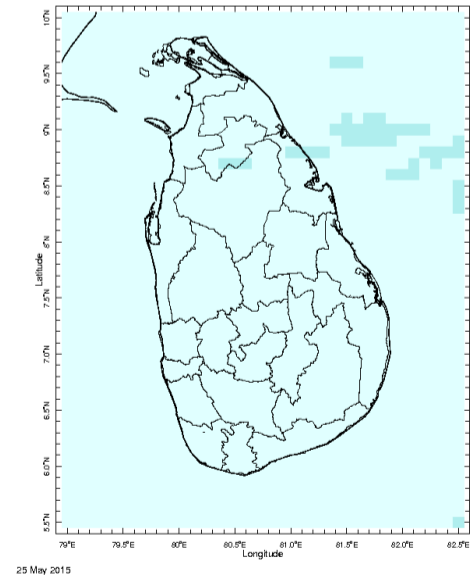
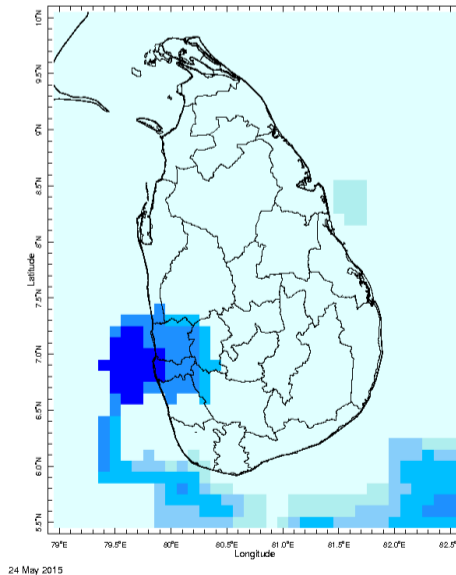
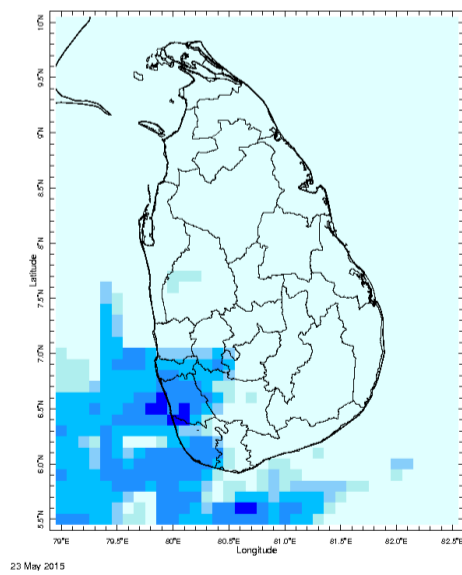
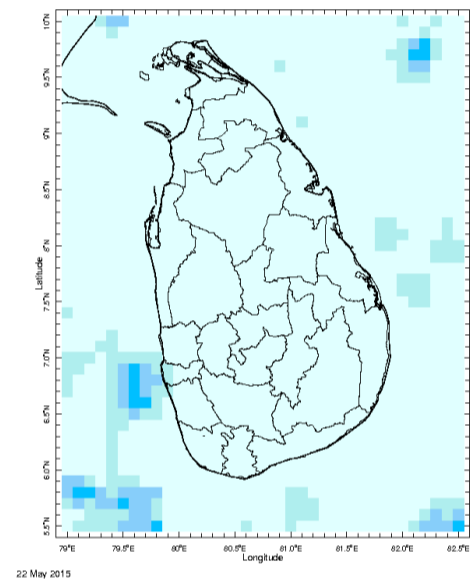
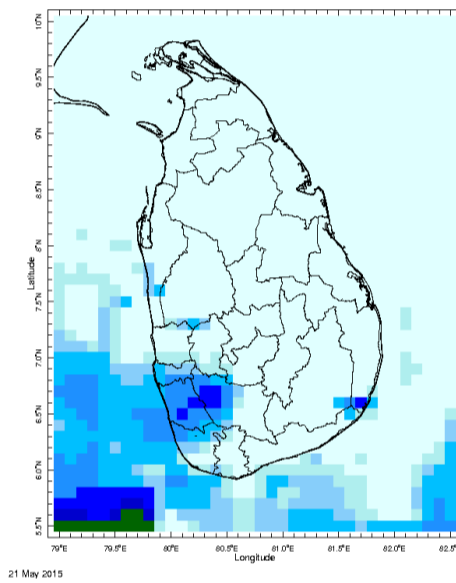
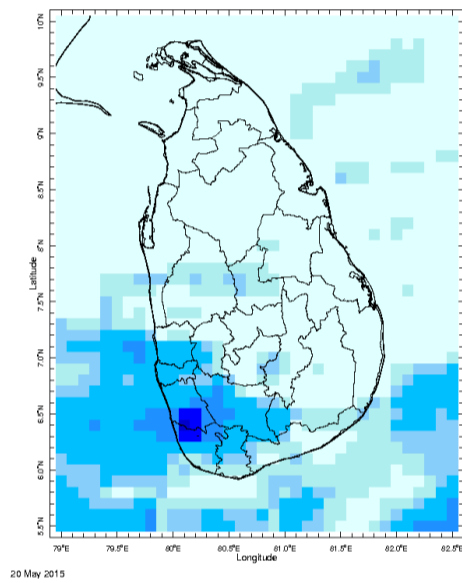
Weekly Hydro- Meteorological Report for Sri Lanka

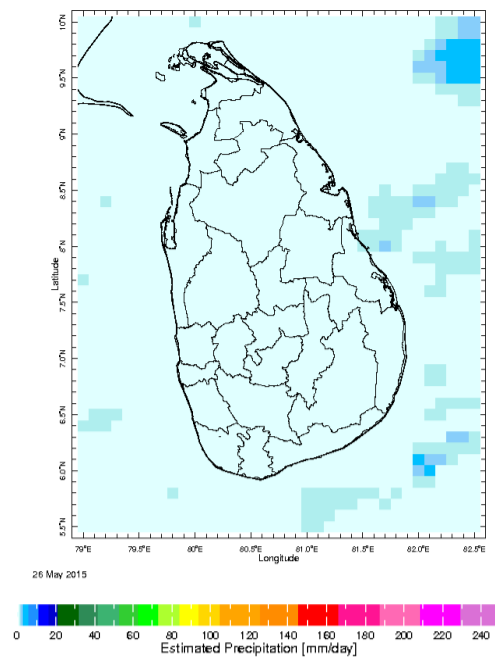
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Daily Rainfall Monitoring

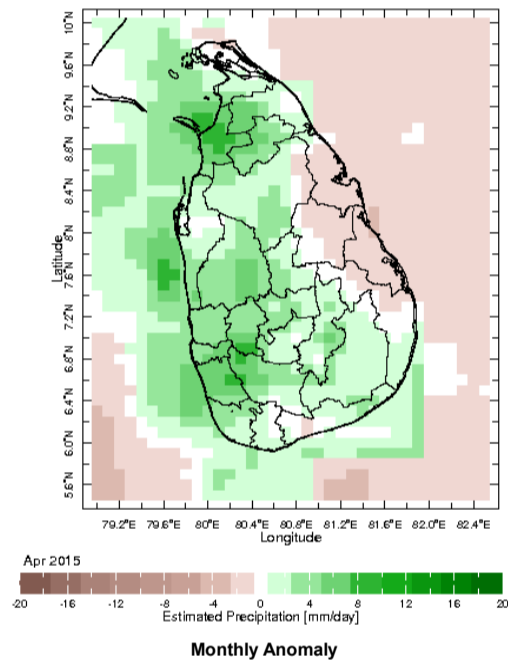
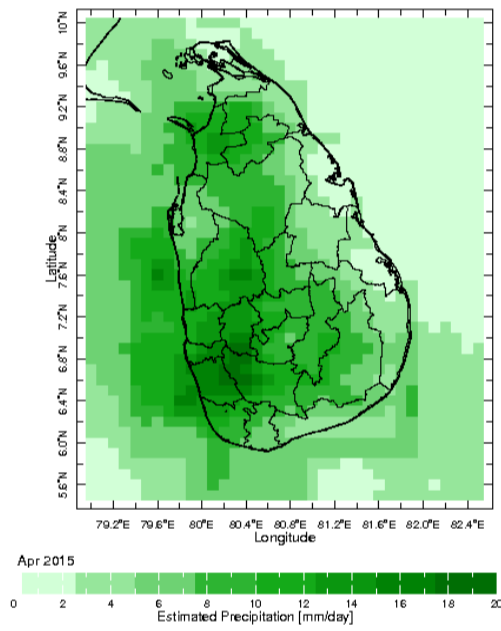
The following figures show the satellite observed rainfall in the last 7 days in Sri Lanka.



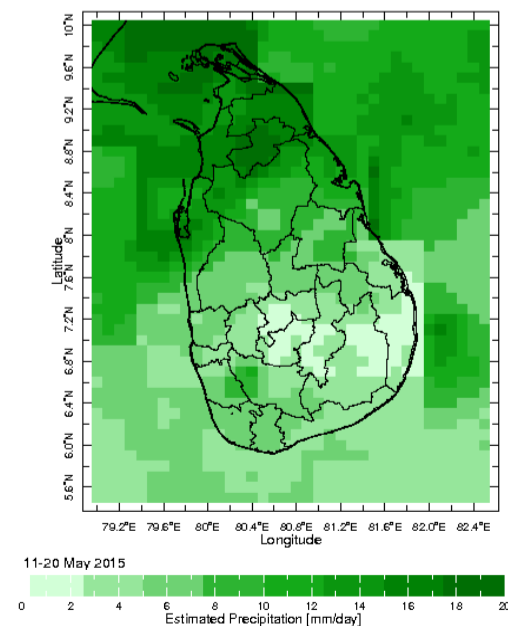
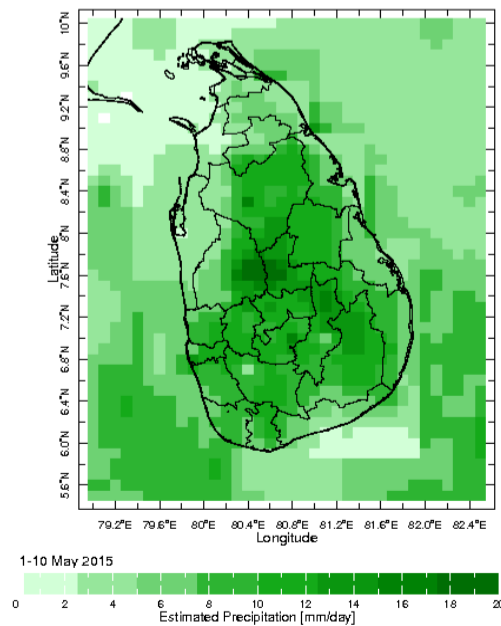


Monthly Rainfall Monitoring

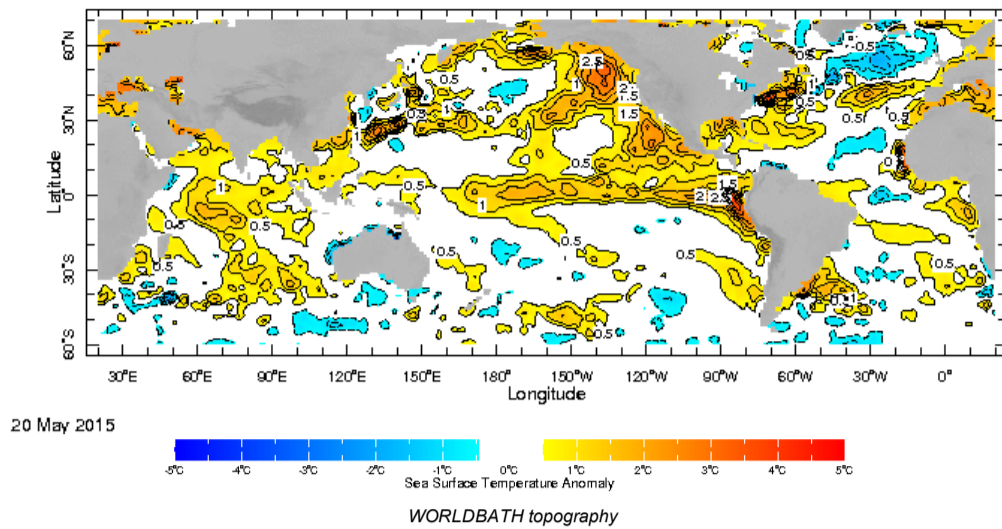
The figure in the left shows the average observed rainfall in the previous month. The rainfall anomaly in the previous month is shown in the figure to the right. The brown color in the anomaly figure shows places which received less rainfall than the historical average while the green color shows places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



Dekadal (10 Day) Satellite Derived Rainfall Estimates

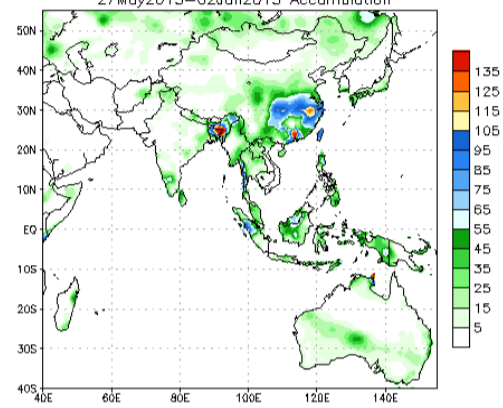


Weekly Average SST Anomalies

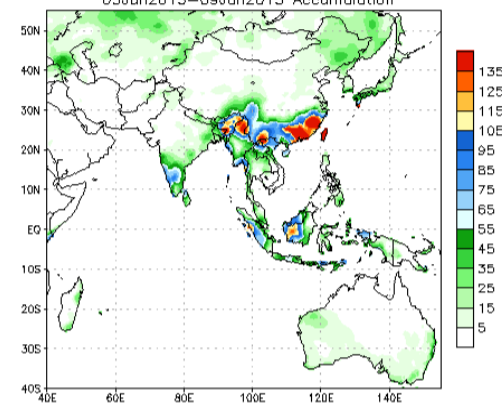


NCEP GFS 1- 14 Day prediction

NCEP GFS Ensemble Forecast 1-7 Day Precipitation (mm)
from: 27May2015
27May2015-02Jun2015 Accumulation

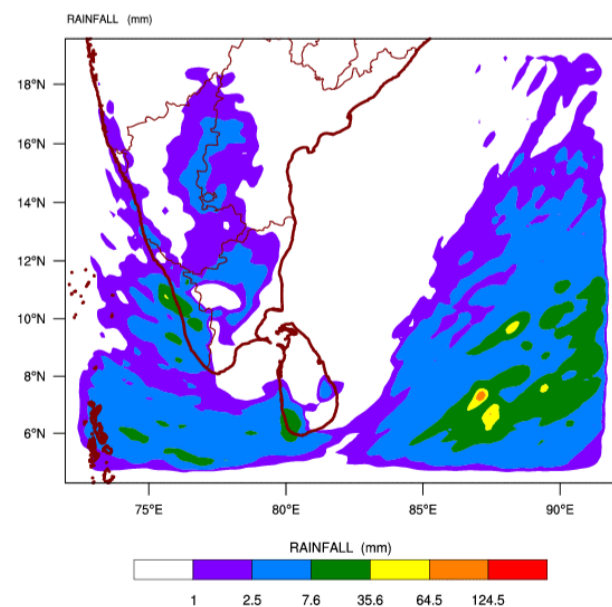


NCEP GFS Ensemble Forecast 8-14 Day Precipitation (mm)
from: 27May2015
03Jun2015-09Jun2015 Accumulation

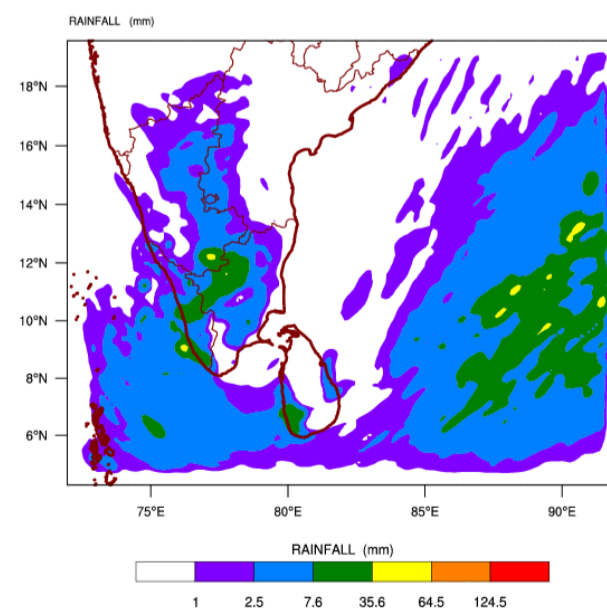


WRF Model Forecast (from IMD Chennai)

WRF MODEL FORECAST (48 HR.) RAINFALL(mm)\
based on 00 UTC of 27-05-2015 valid for 03 UTC of 29-05-2015



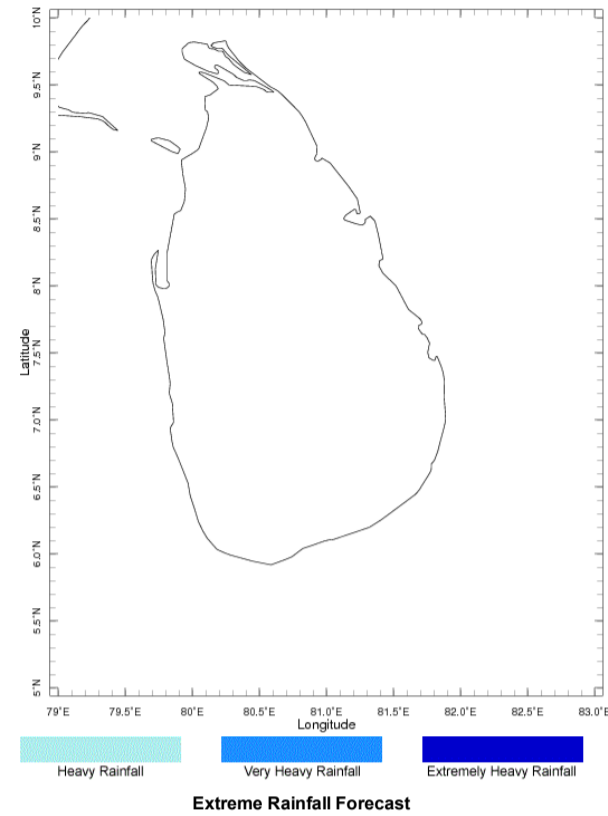
WRF MODEL FORECAST (72 HR.) RAINFALL(mm)\
based on 00 UTC of 27-05-2015 valid for 03 UTC of 30-05-2015



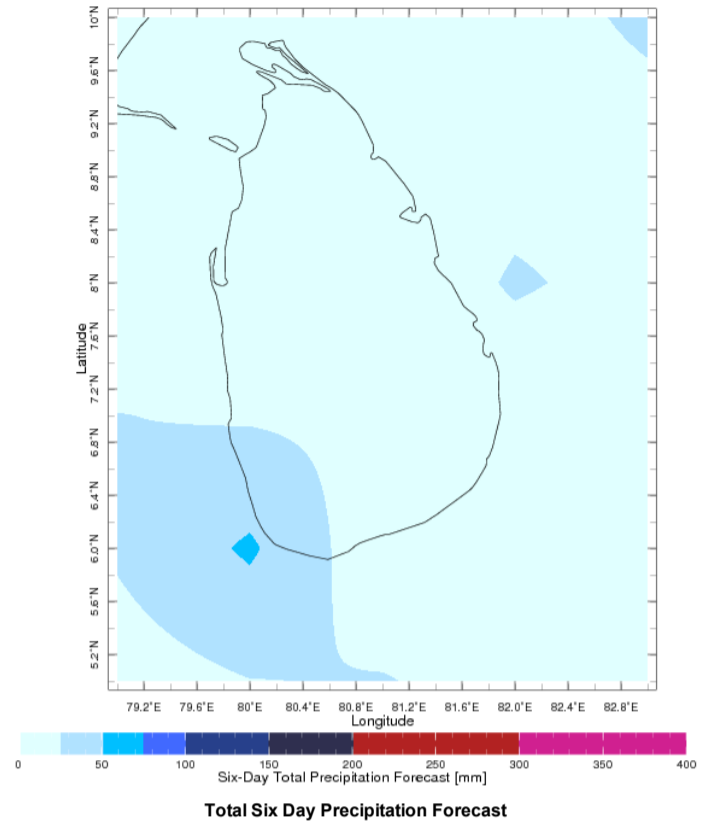
Weekly Rainfall Forecast

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.

Forecast for 27 May 2015 - 1 Jun 2015 Issued 0000 27 May 2015



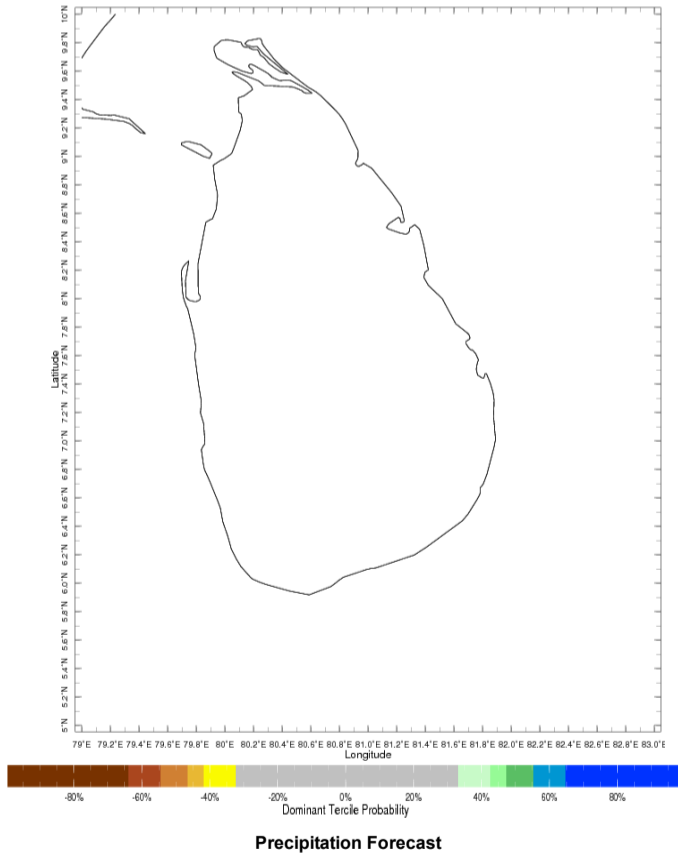
Forecast for 27 May 2015 - 1 Jun 2015 Issued 0000 27 May 2015



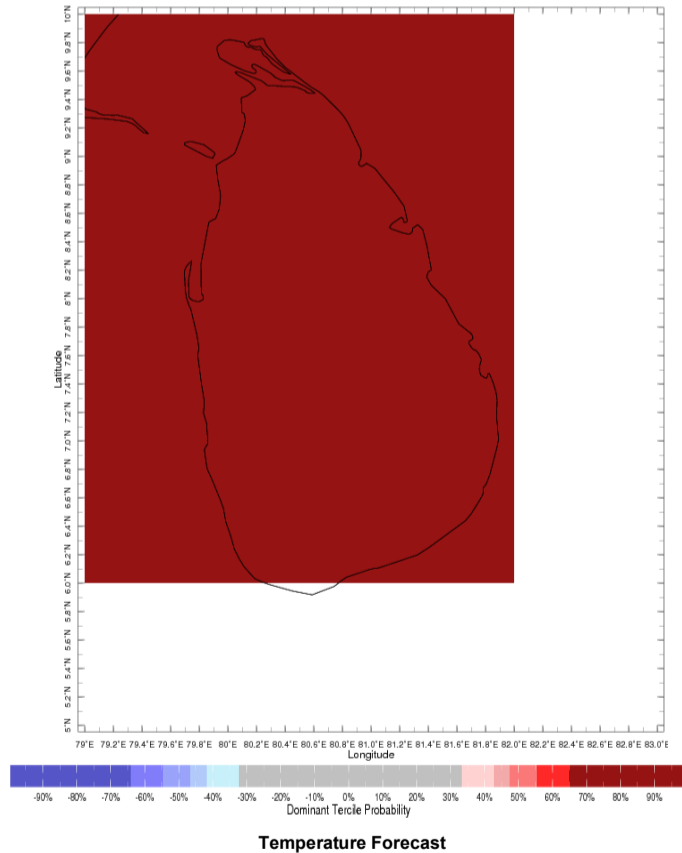
Seasonal Rainfall and Temperature Forecast

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%).

Jun-Aug 2015 IRI Seasonal Precipitation Forecast issued May 2015



Jun-Aug 2015 IRI Seasonal Temperature Forecast issued May 2015



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