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# Experimental Climate Monitoring and Prediction

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**5 May 2016**

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## April 21, 2016
## PACIFIC SEAS STATE

During mid-April 2016 the positive tropical Pacific SST anomaly was weakening, now indicating only a moderate strength El Niño. All atmospheric variables continue to support the El Niño pattern, but at reduced strength. This includes weakened trade winds and excess rainfall in the east-central tropical Pacific, extending eastward to a lesser extent than last month. Most ENSO prediction models indicate continued weakening El Niño conditions during the rest of the northern spring season, returning to neutral by late spring or early summer 2016, with La Niña development likely by fall.

(Text Courtesy IRI)

## INDIAN OCEAN STATE

1$^0$C above average sea surface temperature was observed around Sri Lanka.

## MJO STATE

MJO is weak and therefore it shall not affect the rainfall.

***Highlights***

*Up to 40 mm high rainfall was received by Colombo, Gampaha, Kegalle, Kurunrgala and Anuradhapura districts during the previous week. Galle and Matara districts also received up to 30 mm rainfall and apart from that more than 10 mm rainfall was not seen in the country. In April 2016 the entire country received below average rainfall except for Colombo, Gampaha and Ratnapura districts. The rainfall is expected to increase in the next two weeks. The high temperature shall continue in the country as the probability of having above average temperature remains high.*

***Summary***

**Monitoring**

***Weekly Monitoring*:** On 27th of April 2016 only up to 10 mm light rainfall was seen in various parts of the country. On the 28th eastern regions of Gampaha and the Kandy/ Kurunegala/Matale districts border received up to 30 mm rainfall while the surrounding regions received up to 15 mm rainfall. Once again slight rainfall was seen on the 29th. Kegalle, Colombo, Gampaha and Kurunegala districts received heavy rainfall up to 40 mm on the 30th while Kalutara, Ratnapura, Kandy and Puttalam districts received up to 30 mm rain along with the sea close to Colombo/ Gampaha. Galle and Matara districts received up to 20 mm rainfall on the 1st of May. Anuradhapura district received up to 40 mm rainfall on the 2nd. Eastern region of Matara district and Kuruwita region received up to 30 mm rain on the same day. Gampaha and Colombo districts received up to 30 mm rainfall on the 3rd.

***Monthly Monitoring*:** During April 2016 the entire country received below average rainfall except Ratnapura, Colombo and Gampaha districts. These districts received up to ~120 mm excess rainfall than the historical average.

**Predictions**

***14-day prediction:*** NOAA NCEP models predict up to 45 mm total rainfall during 4th – 10th May in the south western region of the country while the rest of the country may not receive significant rainfall during this period. Rainfall shall increase during the following week (11th- 17th May) and during this period up to 85 mm total rainfall is expected in the same region.

***IMD WRF & IRI Model Forecast:*** According to the IMD WRF model, up to 125 mm rainfall is expected in Ginigathhena area while Kegalle and Ratnapura areas shall have up to 65 mm rain on the 7th. The south western, central and north western region shall receive up to 35 mm rain on this day. Rainfall shall reduce on the 8th. There shall be up to 65 mm rainfall Ginigathhena, Ratnapura and Kegalle areas, but the rainfall shall be more localized. Surrounding region shall receive up to 35 mm rain. The IRI CFS model predict up to 100 mm total rainfall in the central to south eastern region of the country.

***Seasonal Prediction:*** As per IRI Multi Model Probability Forecast for May to July, 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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[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

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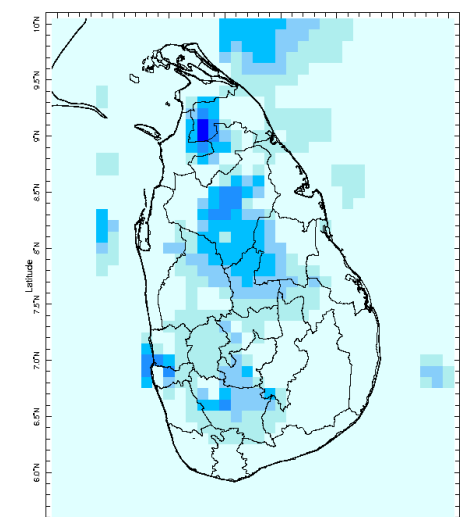
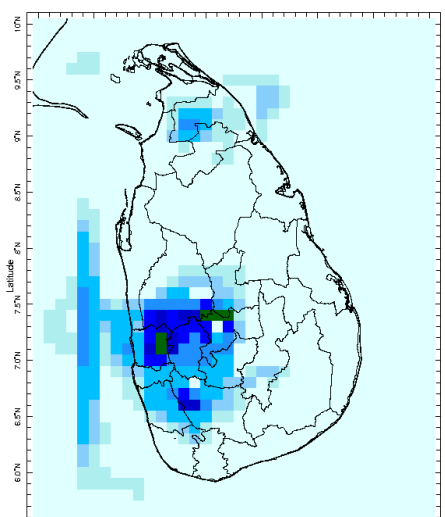
## Daily Rainfall Monitoring

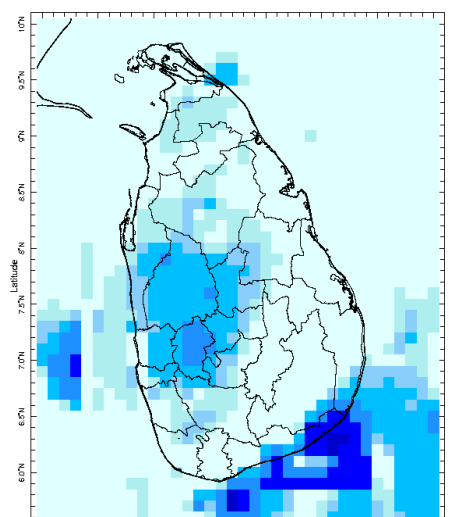
**The following figures show the satellite observed rainfall in the last 7 days in Sri Lanka.**




27 Apr 2016




28 Apr 2016

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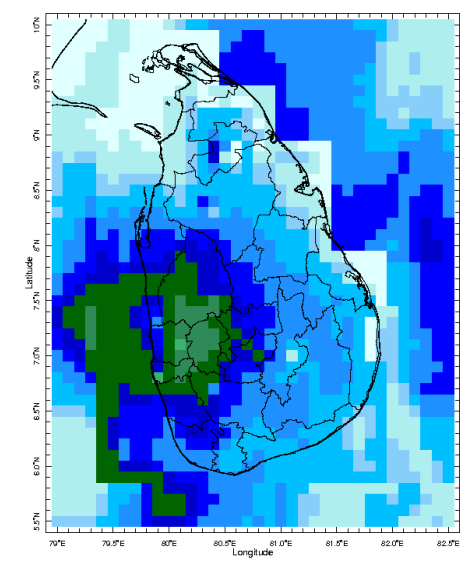


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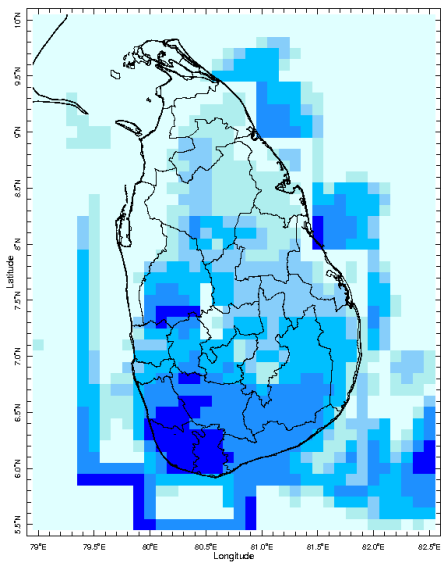
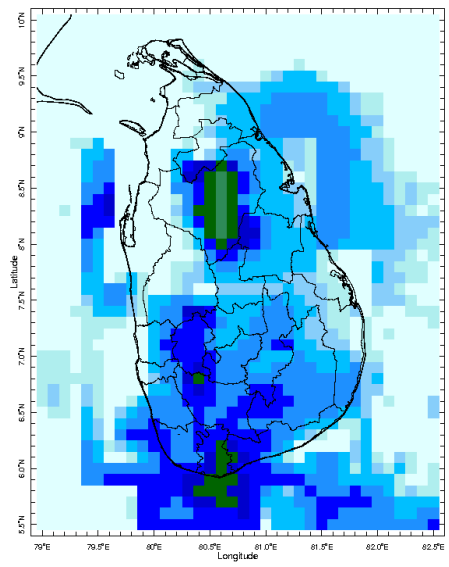
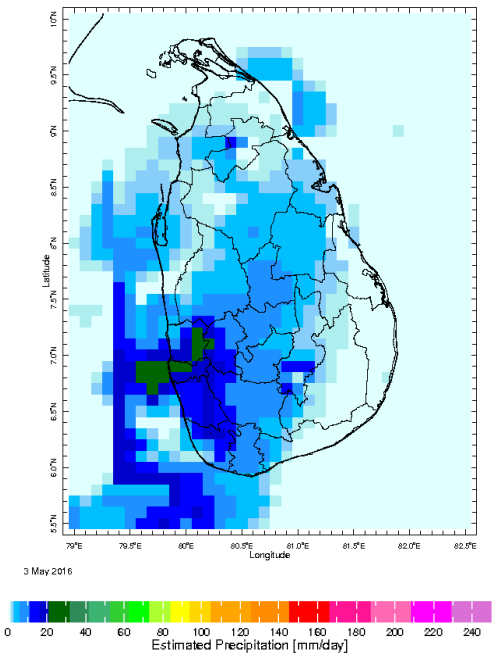



1 May 2016

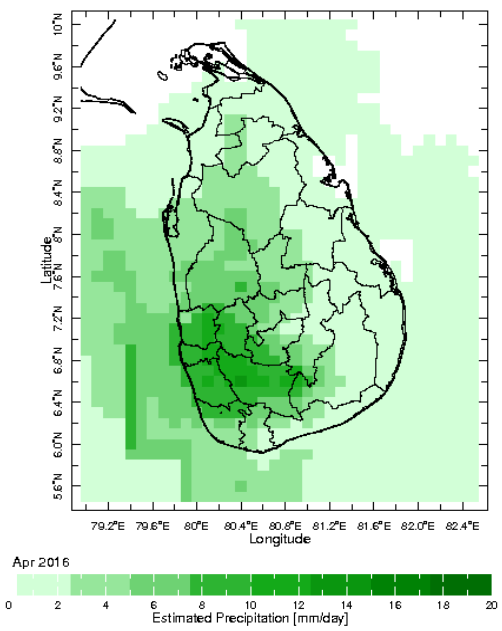



2 May 2016

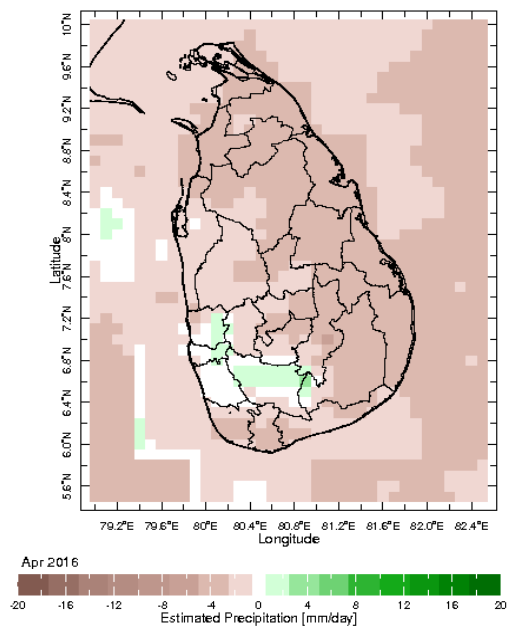



## Monthly Rainfall Monitoring

**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**

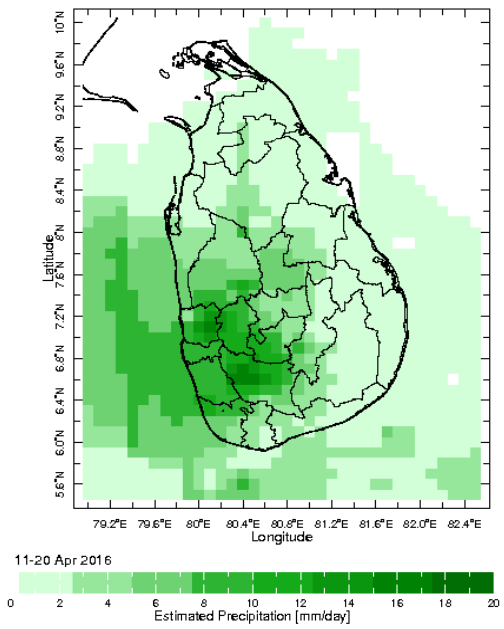


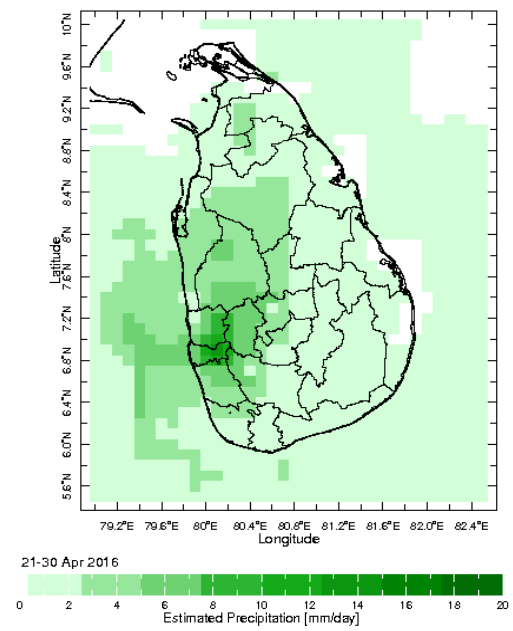

**Monthly Average**



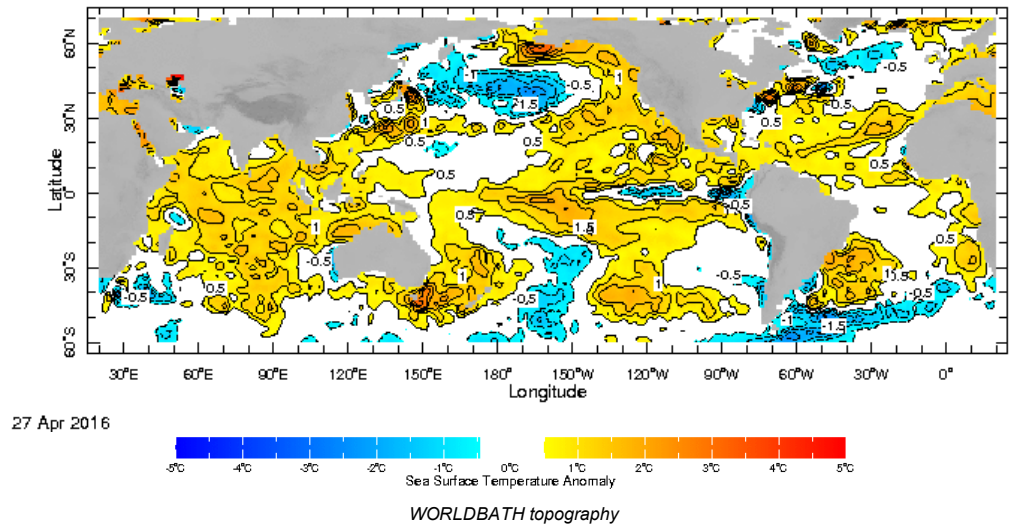

**Monthly Anomaly**

## Dekadal (10 Day) Satellite Derived Rainfall Estimates

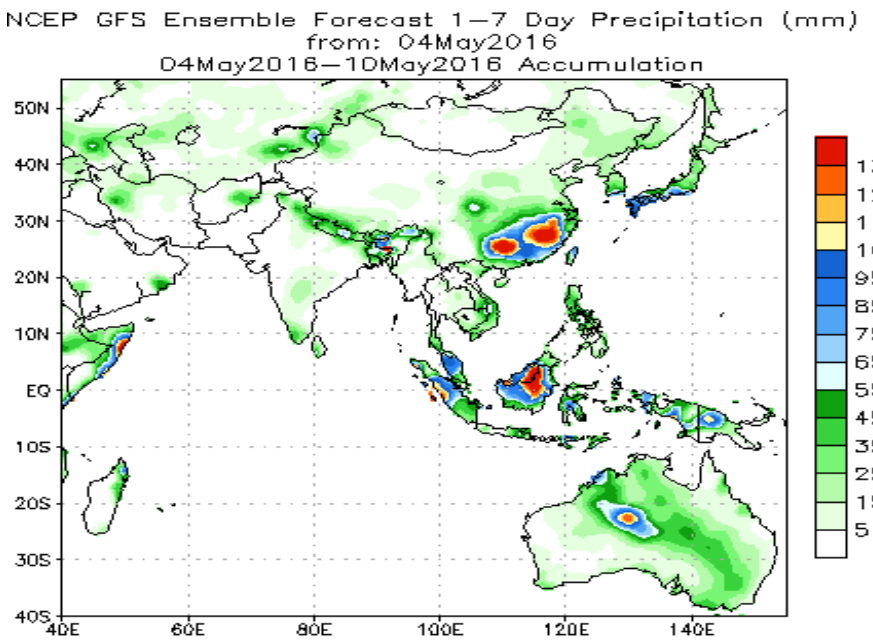


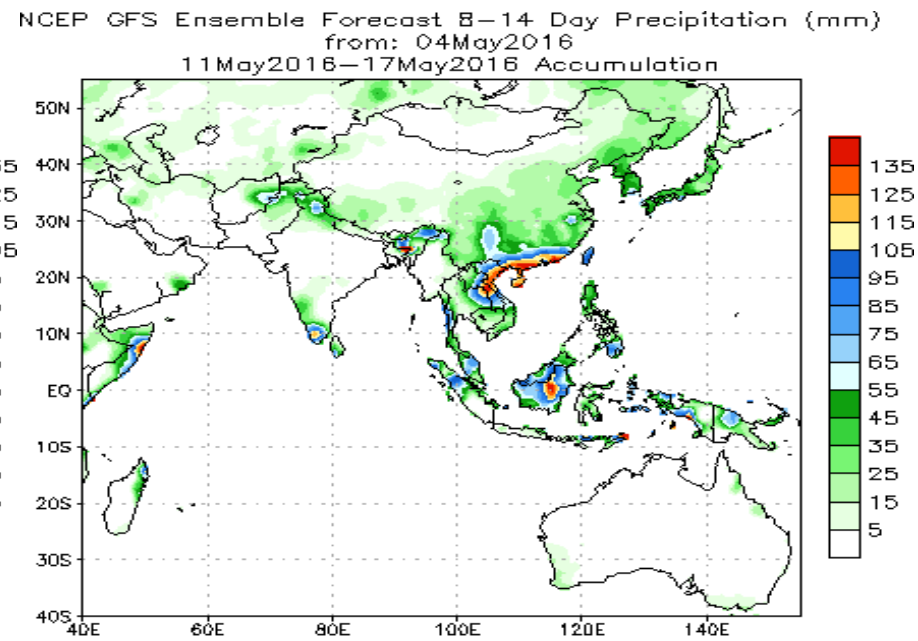



## Weekly Average SST Anomalies

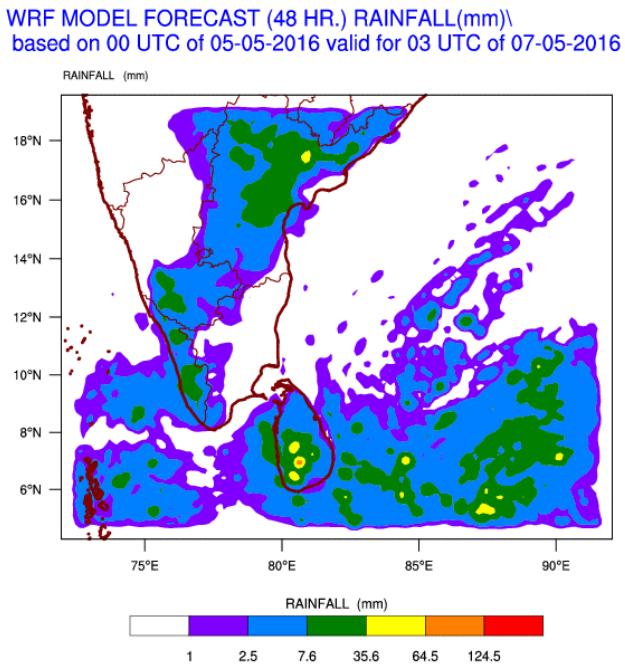


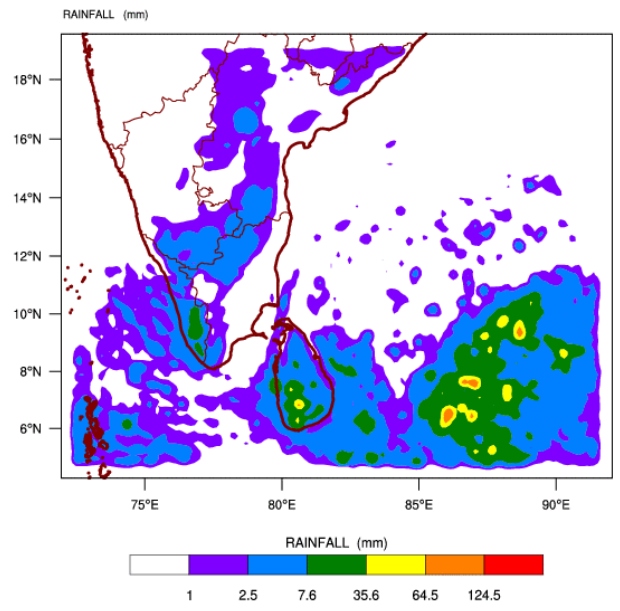

## NCEP GFS 1- 14 Day prediction



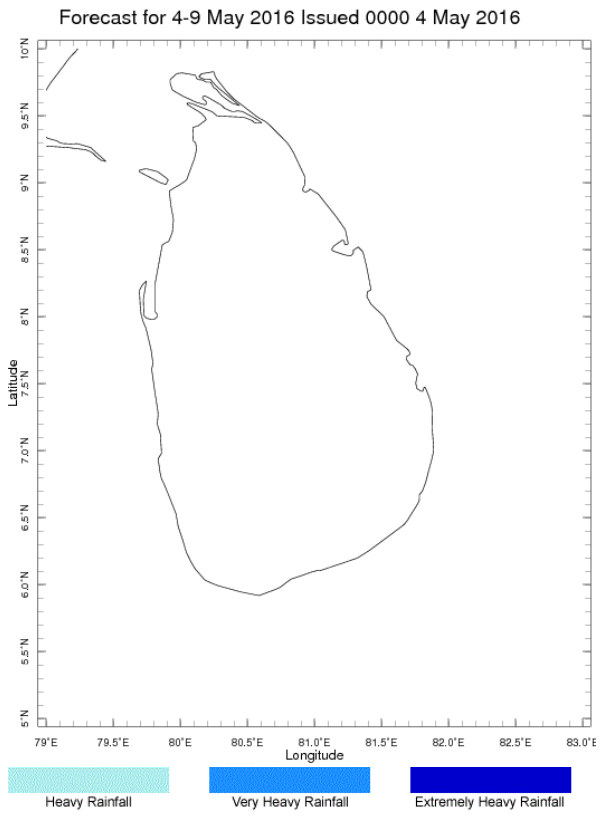

## WRF Model Forecast (from IMD Chennai)



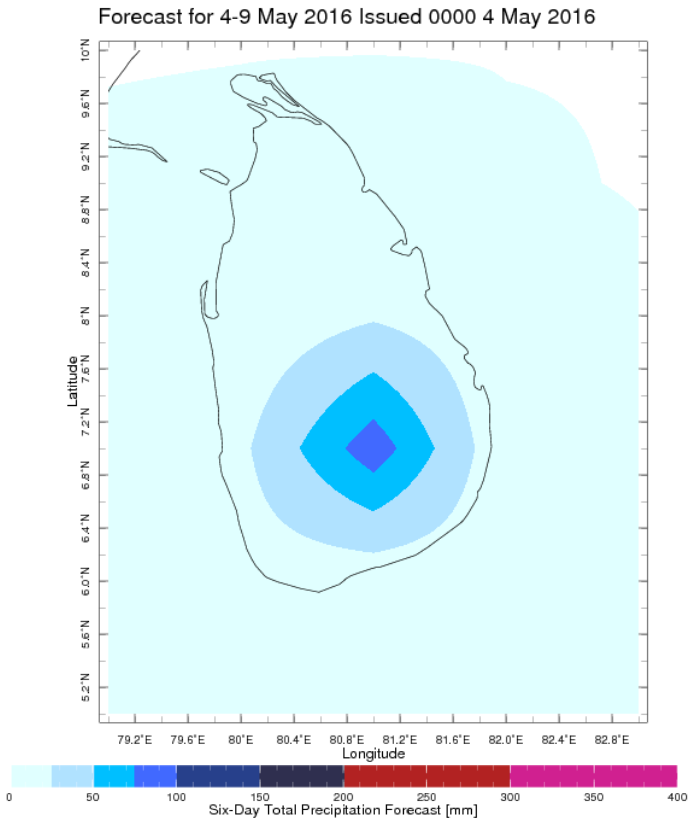



## Weekly Rainfall Forecast

**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.**



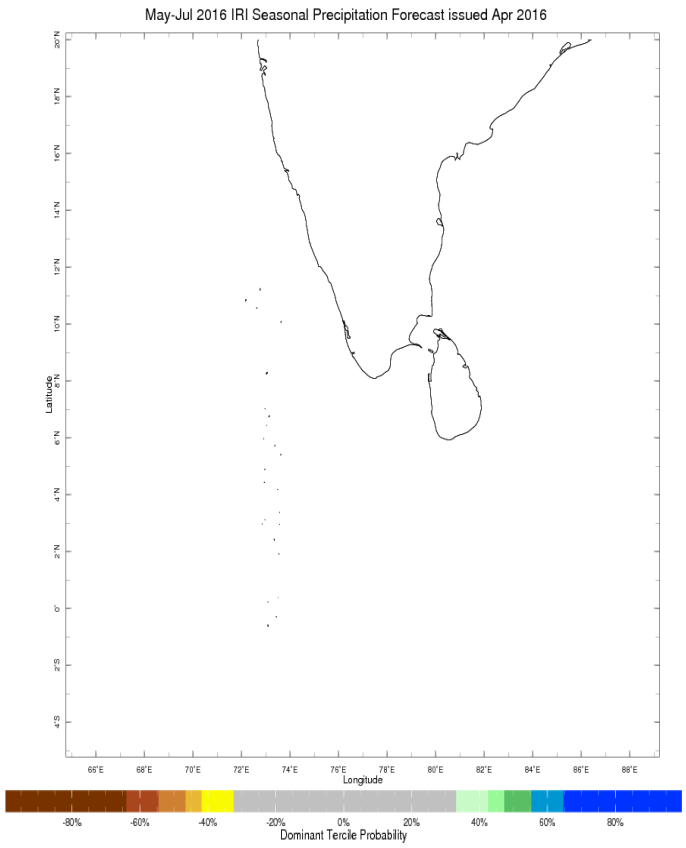

**Extreme Rainfall Forecast**



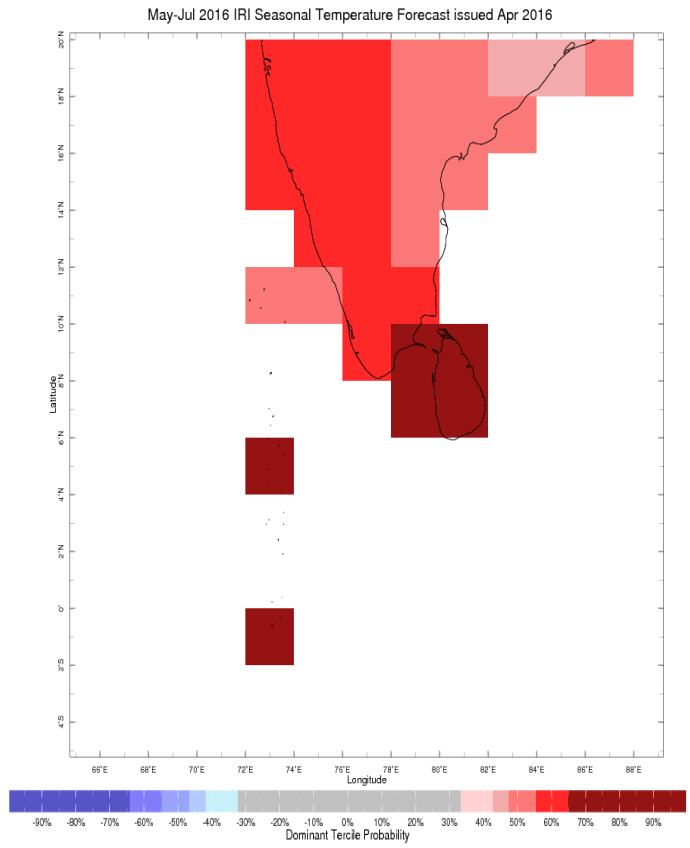

**Total Six Day Precipitation Forecast**

## 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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