

Experimental Climate Monitoring and Prediction

by: Ruchira Lokuhetti, Chalani Malge, Janan Visvanathan,
Lareef Zubair and Michael Bell¹ (FECT and IRI¹)

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Highlights

- The IRI weekly rainfall forecast predicts up to 75 mm of total rainfall in Colombo, Kalutara, Ratnapura, Matara and Galle districts during 28 Aug – 2 Sep.
- Between 21 – 26 Aug: up to 90 mm of rainfalls were recorded in Gampaha and Kegalle districts on the 21st.
- From 20 – 26 Aug: up to 36 km/h, westerly winds were experienced by the entire island.
- 0.5 °C above average sea surface temperature was observed in the seas around Sri Lanka.

Monitoring

Rainfall

Weekly Monitoring: On August 21st, Gampaha and Kegalle districts received up to 90 mm of rainfall; Kurunegala, Colombo, Kalutara, Ratnapura and Nuwara Eliya districts up to 50 mm; Jaffna, Kilinochchi and Matara districts up to 30 mm; and Puttalam, Galle and Hambantota districts up to 20 mm. On the 22nd, Anuradhapura, Puttalam, Kurunegala, Colombo, Ratnapura and Kalutara districts received up to 30 mm of rainfall; and Matale, Kegalle, Gampaha, Nuwara Eliya, Galle, Matara and Hambantota districts up to 20 mm. On the 23rd, Kalutara and Galle districts received up to 50 mm of rainfall; Ratnapura, Matara and Hambantota districts up to 30 mm; and Kurunegala, Gampaha, Colombo, Kegalle, and Monaragala districts up to 20 mm. On the 24th, Colombo, Kalutara and Ratnapura district received up to 30 mm of rainfall; and Gampaha, Kegalle and Galle districts up to 20 mm. On the 25th, Kalutara, Colombo, Gampaha, Kegalle, Ratnapura and Nuwara Eliya districts received up to 50 mm of rainfall; Galle district up to 30 mm; and Puttalam, Kurunegala, Badulla, Ampara and Matara districts up to 20 mm. On the 26th, Matale district received up to 30 mm of rainfall; and Puttalam, Kurunegala and Ampara districts up to 20 mm.

Total Rainfall for the Past Week: The RFE 2.0 tool shows total up to 100-150 mm in Gampaha, Colombo, Kalutara, Galle, Ratnapura and Kegalle districts; up to 75-100 mm in Kurunegala, Nuwara Eliya, Matara and Hambantota districts; and up to 50-75 mm Puttalam district. Above average rainfall up to 100-200 mm in Gampaha, Colombo, Kalutara and Ratnapura districts; up to 50-100 mm in Kurunegala, Kegalle, Galle, Matara, Nuwara Eliya and Hambantota districts; and up to 25-50 mm in Jaffna, Puttalam, Matale and southern regions of Anuradhapura, Badulla and Monaragala districts. Below average rainfall up to 25-50 mm in Vavuniya district; and up to 10-25 mm in Mannar, Mullaitivu, Trincomalee, Ampara, Kandy and northern regions of Anuradhapura, Badulla and Monaragala districts.

Monthly Monitoring: During July – Above average rainfall conditions up to 60 mm were experienced by Puttalam, Kurunegala, Kandy, Nuwara Eliya, Badulla, Monaragala, Ampara and Hambantota districts. Below average rainfall conditions up to 60 mm were experienced by Jaffna, Kilinochchi, Mullaitivu, Mannar, Vavuniya, Matale, Gampaha, Colombo, Kalutara, Galle and Batticaloa districts. The CPC Unified Precipitation Analysis tool shows up to 200 mm of total rainfall in Nuwara Eliya, Badulla and Ratnapura districts; up to 150 mm in Kalutara, Galle, Matara, Kegalle, Kandy and Monaragala districts; up to 100 mm in Puttalam, Kurunegala, Matale and Ampara districts; and up to 75 mm in Gampaha and Trincomalee districts.

Ocean State (Text Courtesy IRI)

Pacific sea state: August 19, 2019

The weak El Niño of 2018-19 has ended, as SSTs in the east-central Pacific cooled to ENSO-neutral levels during July. Patterns in most atmospheric variables also are showing ENSO-neutral conditions. Collective model forecasts favor ENSO-neutral through autumn and winter, but with higher chances for El Niño than La Niña. The official CPC/IRI outlook, no longer carrying an El Niño advisory, generally agrees with the model forecasts through winter.

Indian Ocean State

0.5 °C above average sea surface temperature was observed in the seas around Sri Lanka.

Predictions

Rainfall

14-day prediction:

NOAA NCEP models:

From 28th Aug – 3rd Sep: Total rainfall up to 65 mm on Ratnapura and Galle districts; up to 45-55 mm in Colombo, Kegalle, Matara and Hambantota districts; and up to 35-45 mm in Gampaha, Puttalam, Kurunegala, Nuwara Eliya, Badulla and Monaragala districts.

From 4th – 10th Sep: Total rainfall up to 75 mm Ratnapura and Galle districts; and up to 45-55 mm in Gampaha, Kegalle, Nuwara Eliya, Hambantota, Badulla and Monaragala districts.

IMD NCMWRF Forecast:

30th Aug: Not Available

31st Aug: Not Available

IRI Model Forecast:

From 28th Aug – 2nd Sep: Total rainfall up to 75 mm is expected in Colombo, Kalutara, Ratnapura, Matara and Galle districts; and up to 25 mm in most parts of the island.

MJO based OLR predictions

For the next 15 days:

MJO shall not have an impact on the rainfall in Sri Lanka.

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.

FECT BLOG

Past reports available at <http://fectsl.blogspot.com/> and <http://fectsl.wordpress.com/>

FECT WEBSITES

<http://www.climate.lk> and <http://www.tropicalclimate.org/>



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Weekly Hydro- Meteorological Report for Sri Lanka

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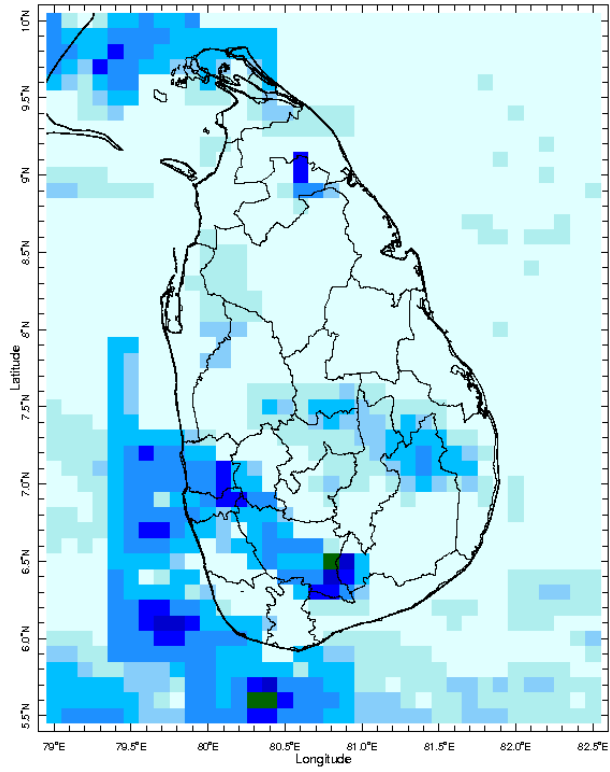
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- c. Weekly Precipitation Forecast from IRI
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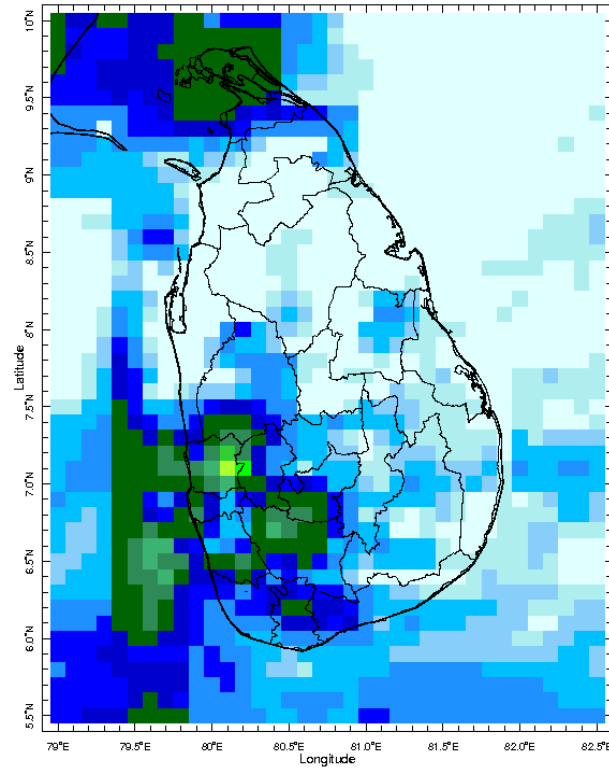
MONITORING

Daily Rainfall Monitoring

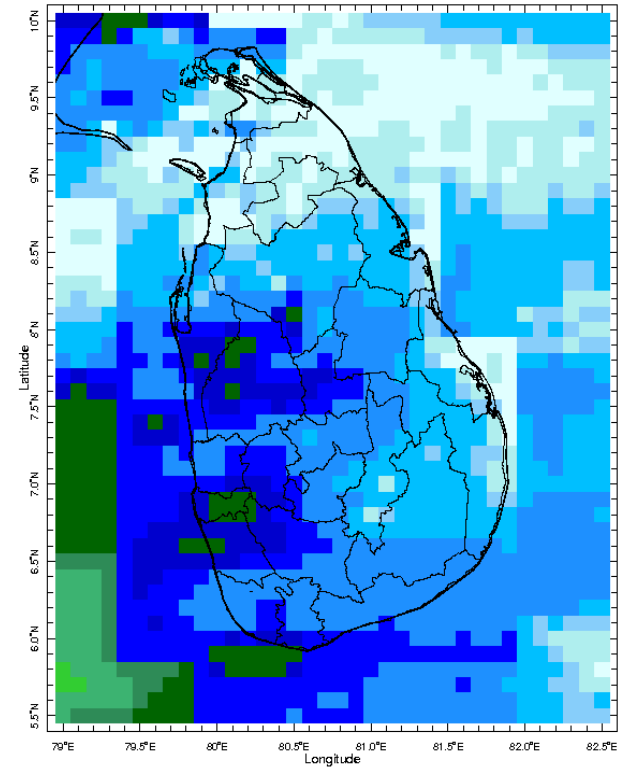
The following figures show the satellite observed rainfall in the last 7 days in Sri Lanka.



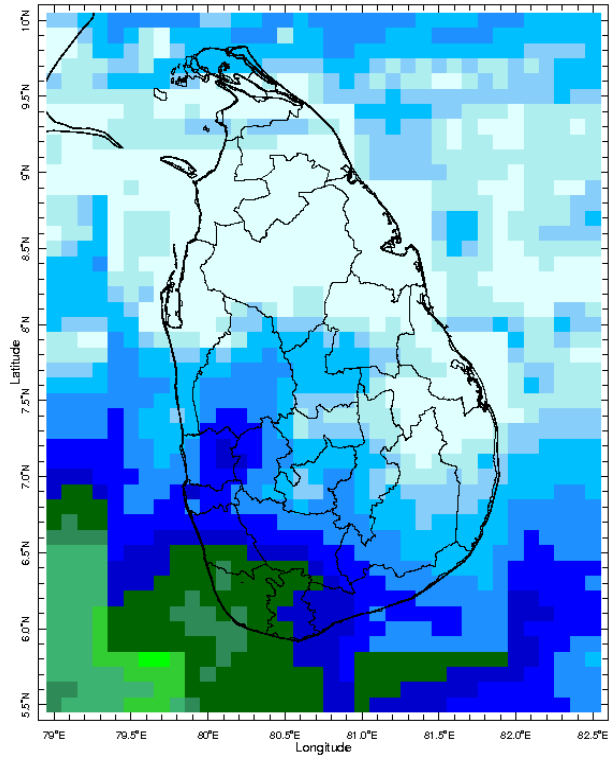
20 Aug 2019



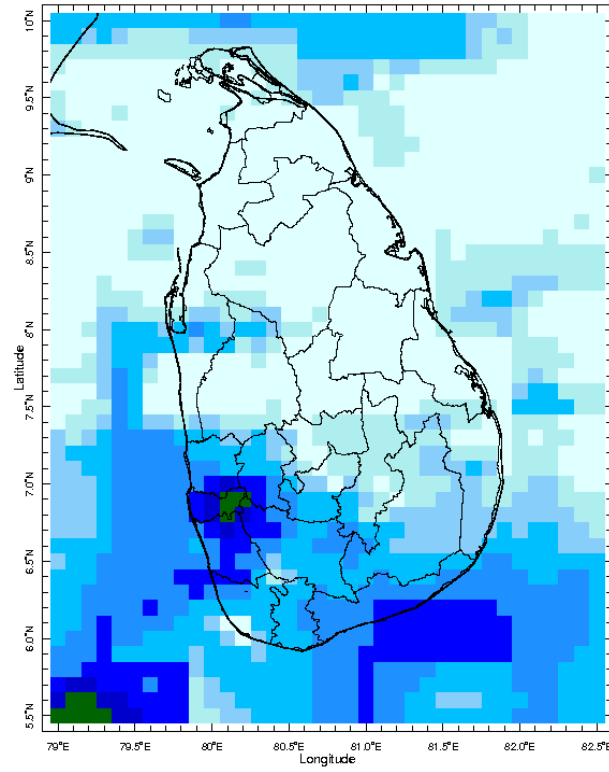
21 Aug 2019



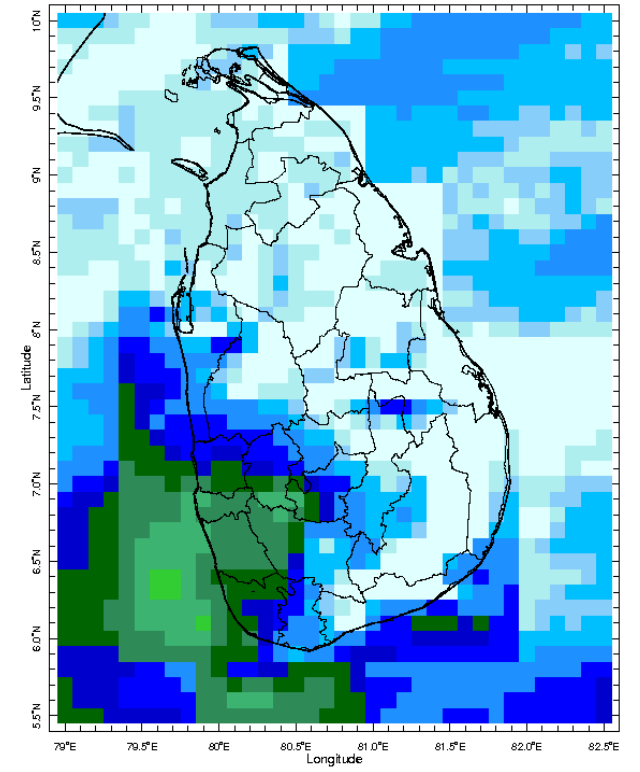
22 Aug 2019



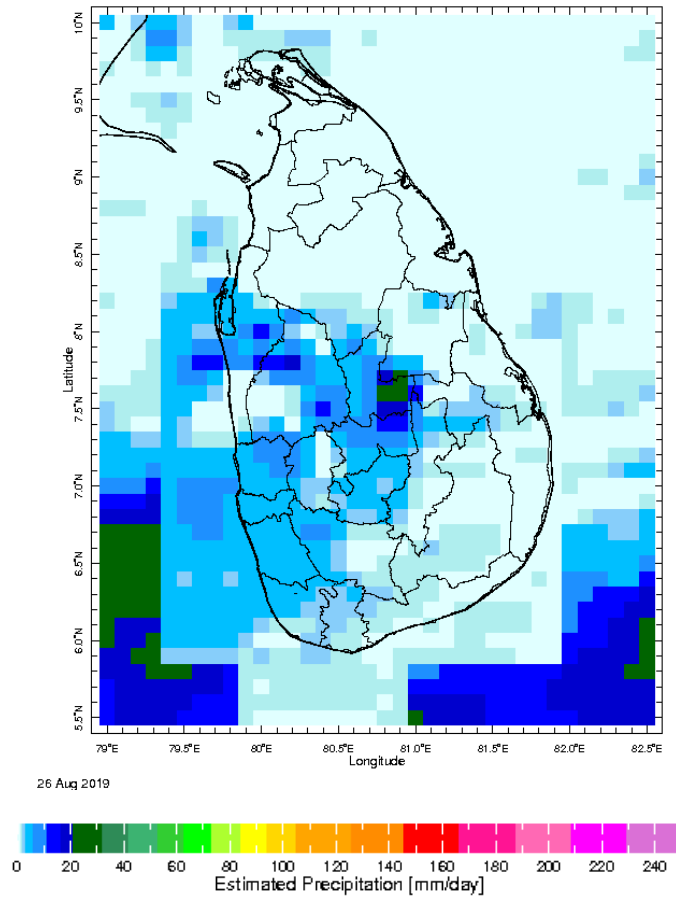
23 Aug 2019



24 Aug 2019

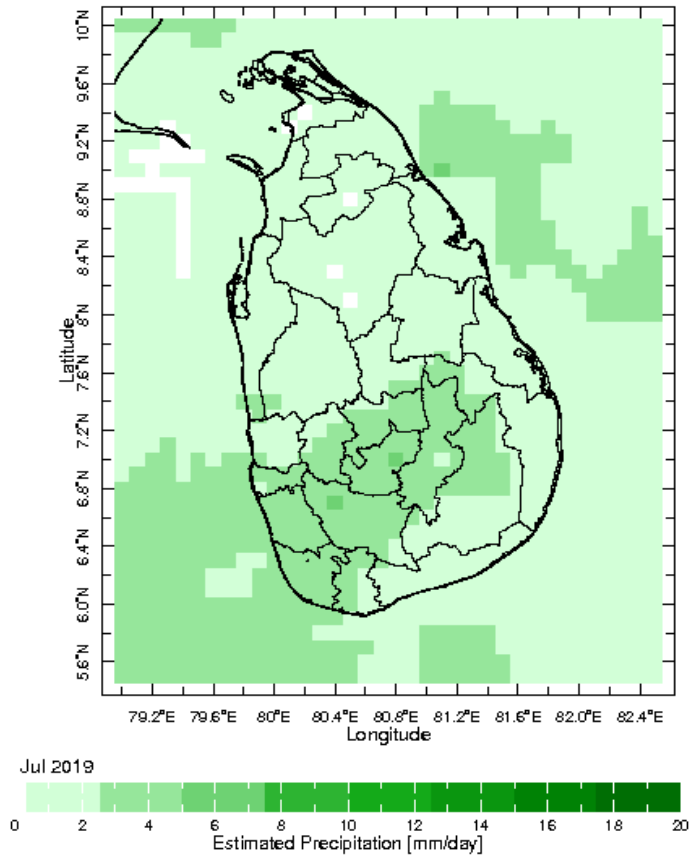


25 Aug 2019

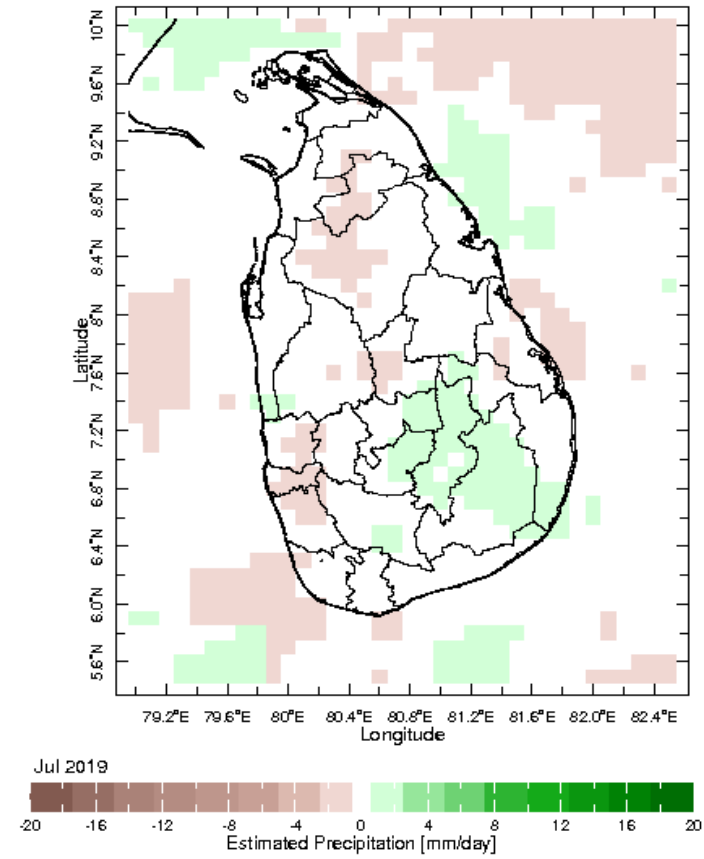


Monthly Rainfall Monitoring

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

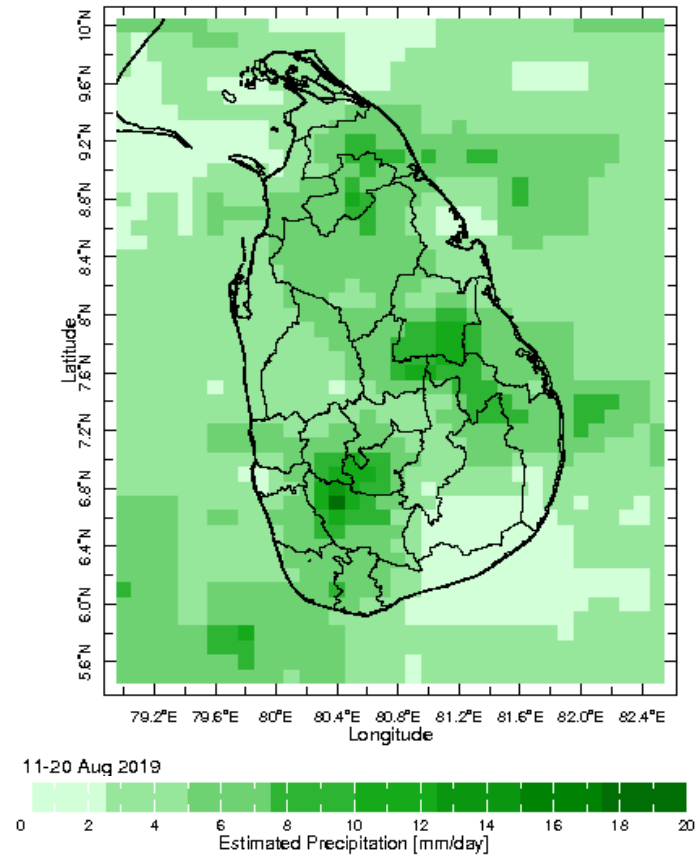
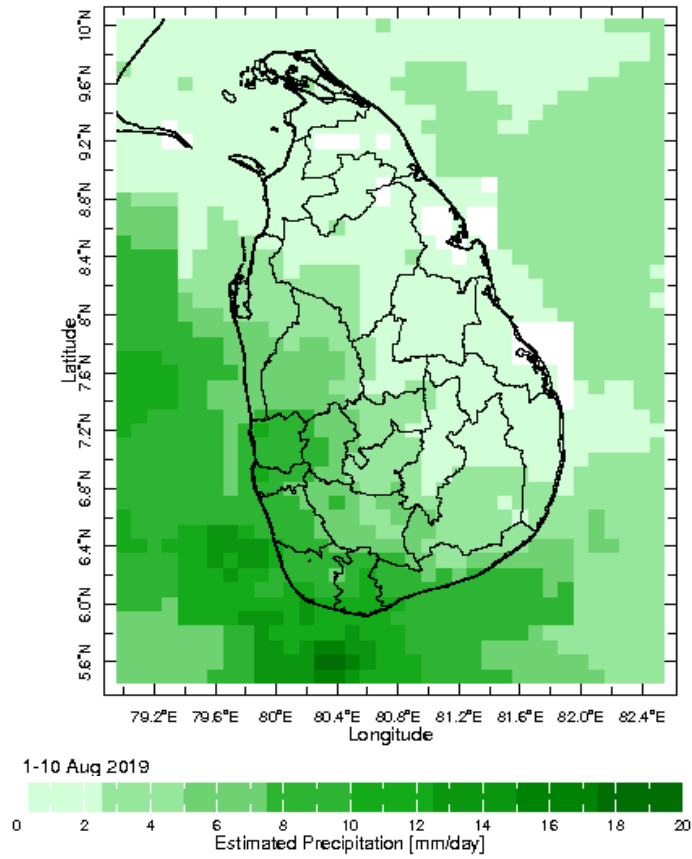


Monthly Average



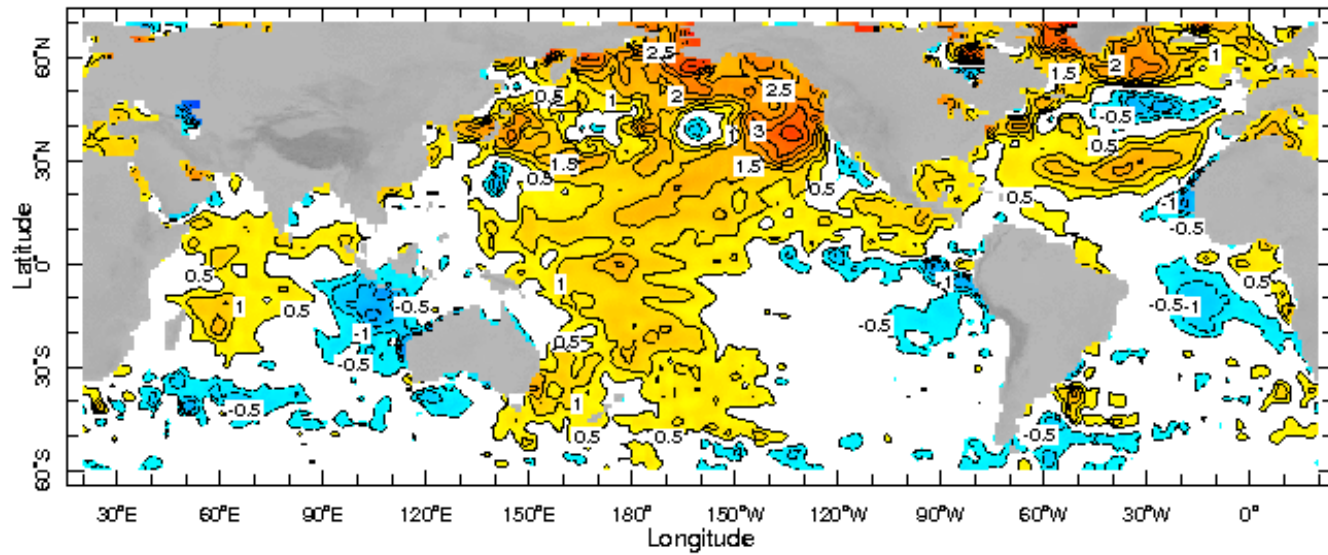
Monthly Anomaly

Dekadal (10 Day) Satellite Derived Rainfall Estimates

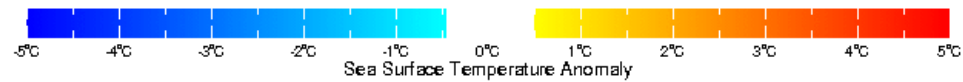


Weekly Average SST Anomalies

Weekly average Sea Surface Temperature (SST) anomaly in the world from NOAA NCEP



14 Aug 2019

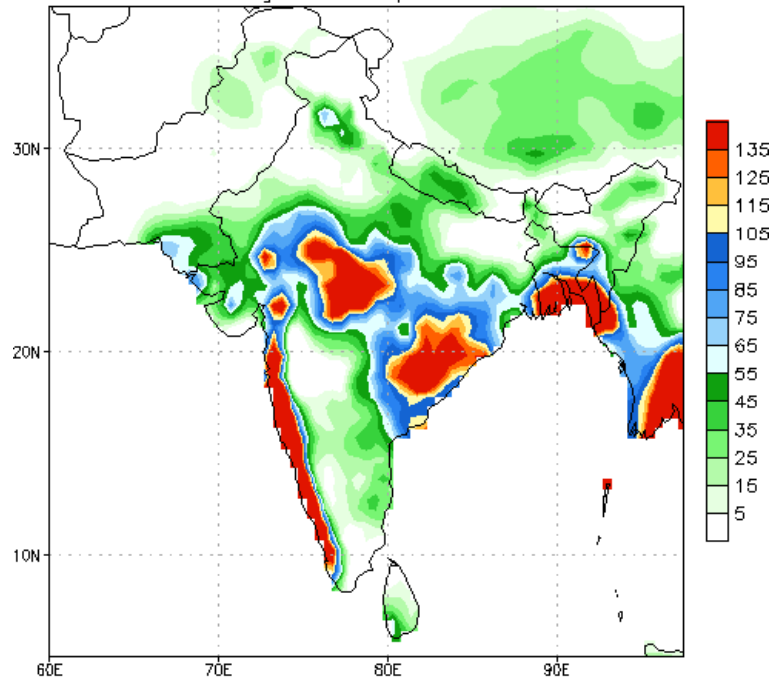


WORLDBATH topography

PREDICTIONS

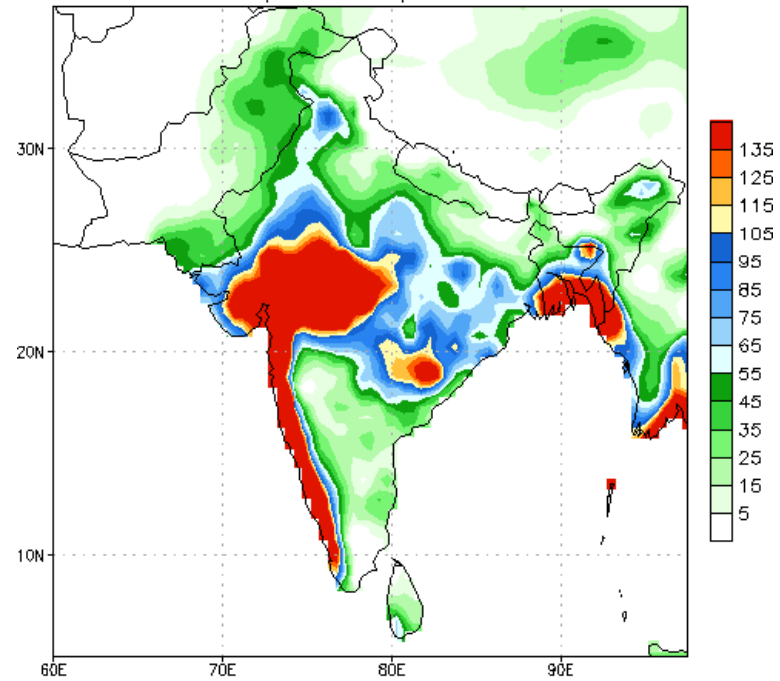
NCEP GFS 1- 14 Day prediction

NCEP GFS Ensemble Forecast 1-7 Day Precipitation (mm)
from: 28Aug2019
28Aug2019-03Sep2019 Accumulation



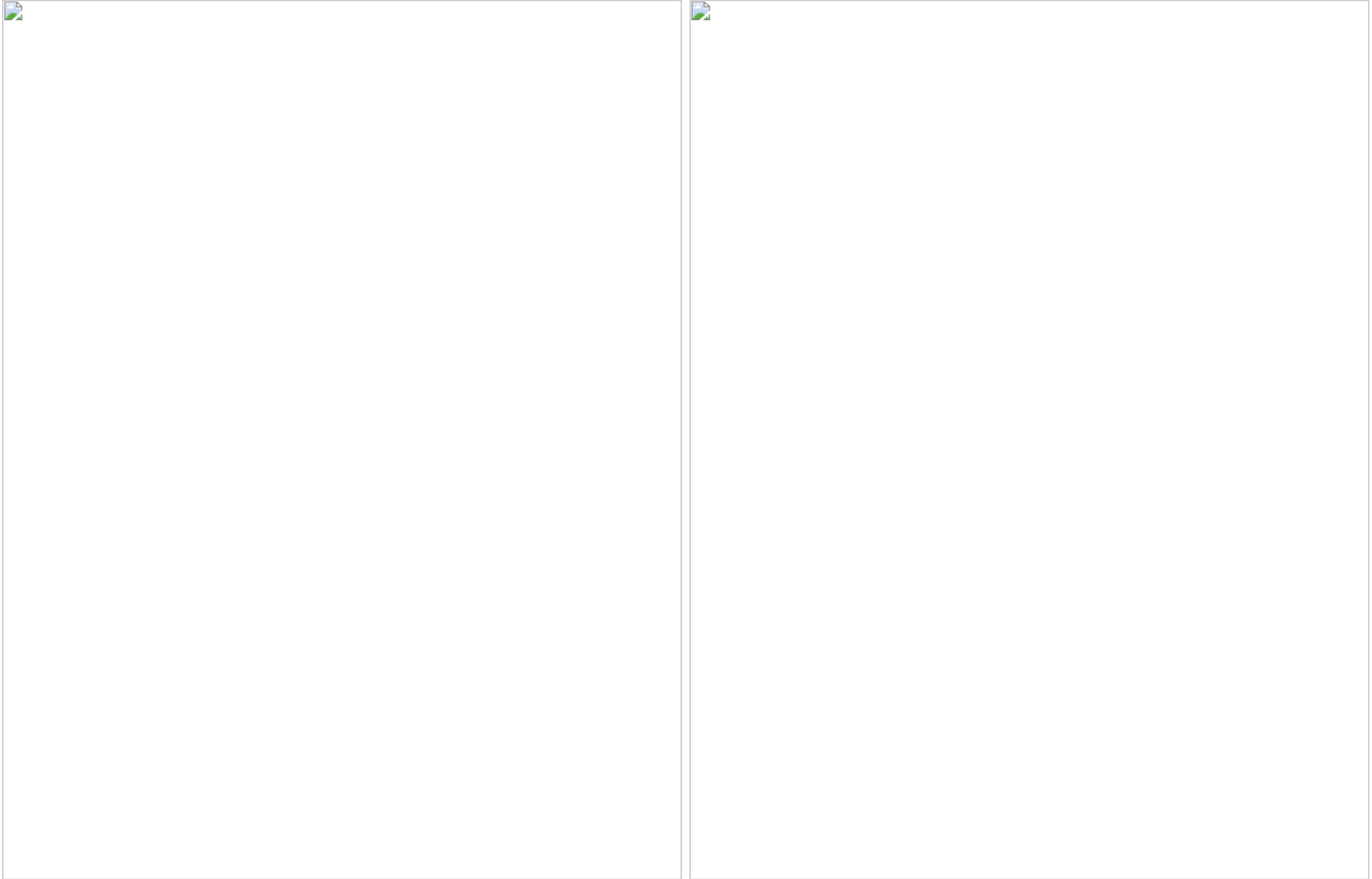
Bias correction based on last 30-day forecast error

NCEP GFS Ensemble Forecast 8-14 Day Precipitation (mm)
from: 28Aug2019
04Sep2019-10Sep2019 Accumulation



Bias correction based on last 30-day forecast error

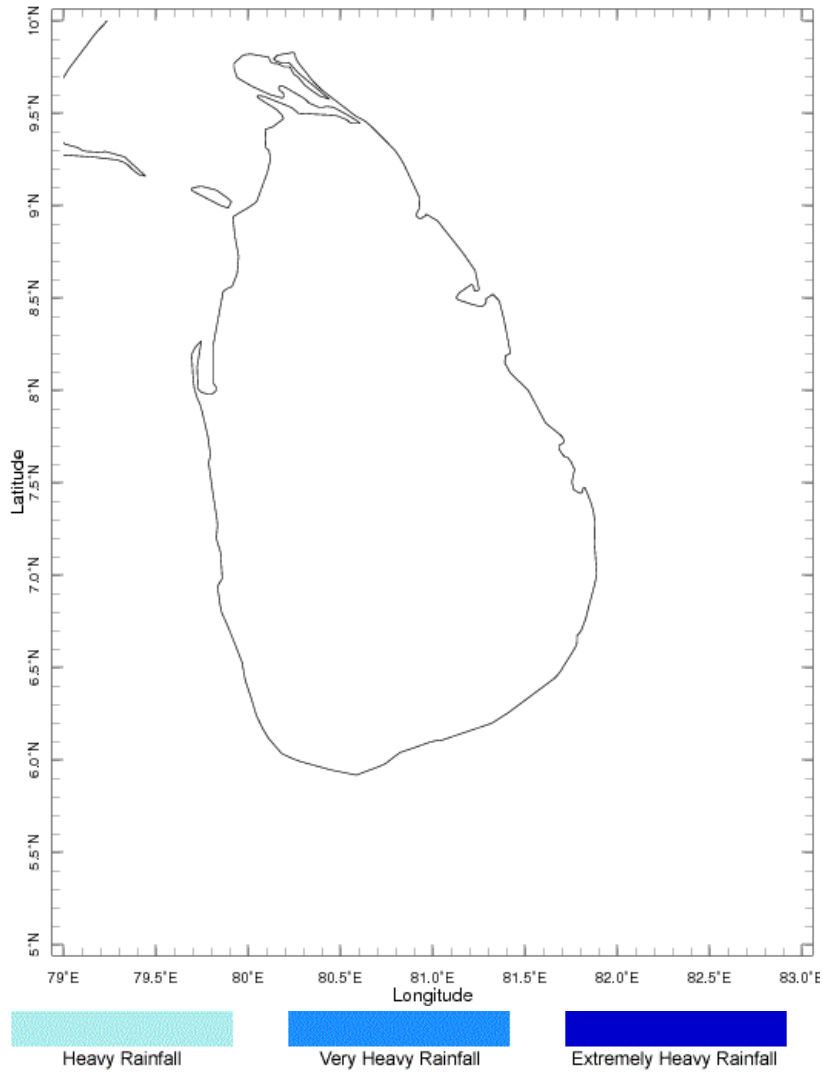
WRF Model Forecast (from IMD Chennai)



Weekly Rainfall Forecast from IRI

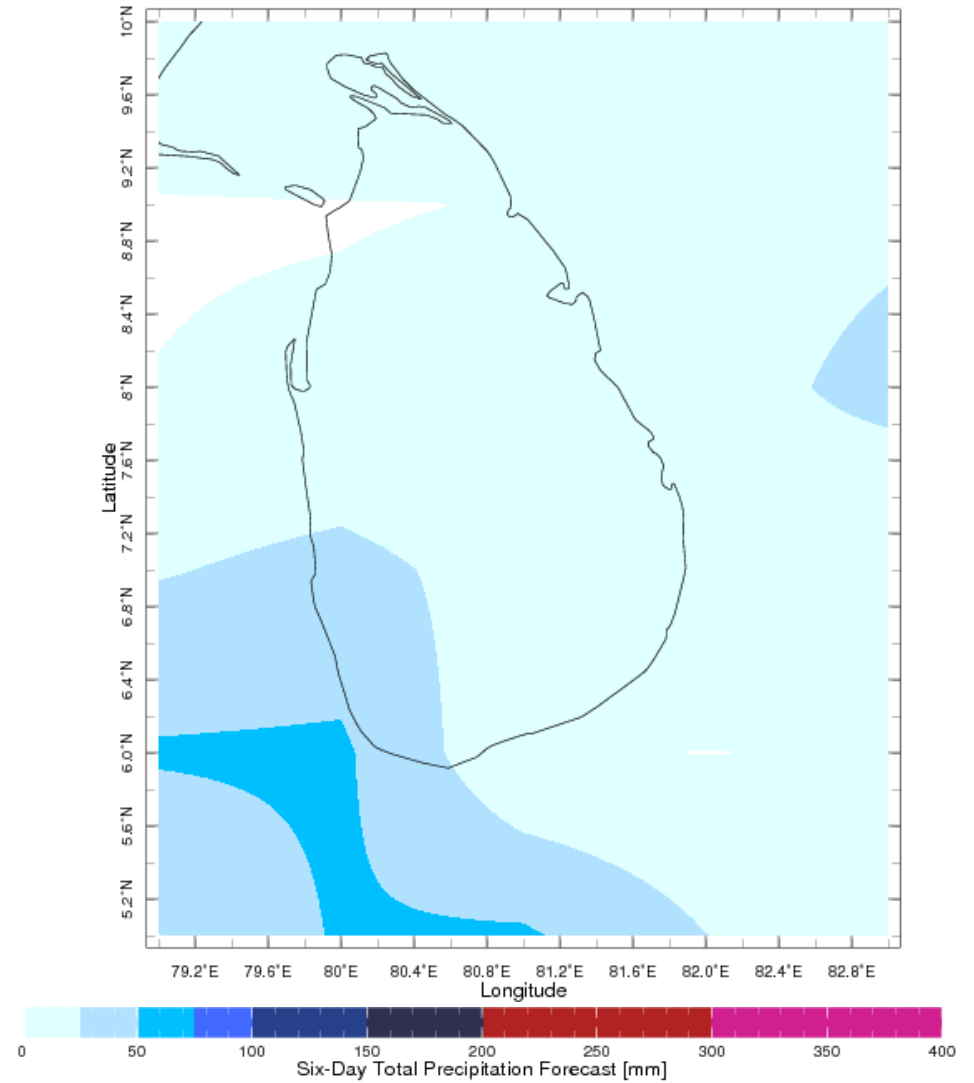
Total rainfall forecast from the IRI for next six days is provided in figures below. The figure to the left shows the expectancy of heavy rainfall events during these six days while the figure to the right is the prediction of total rainfall amount during this period.

Forecast for 28 Aug 2019 - 2 Sep 2019 Issued 0000 28 Aug 2019



Extreme Rainfall Forecast

Forecast for 28 Aug 2019 - 2 Sep 2019 Issued 0000 28 Aug 2019



Total Six Day Precipitation Forecast