

Experimental Climate Monitoring and Prediction

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1 August 2019

Highlights

- The IRI weekly rainfall forecast predicts up to 25 mm of total rainfall in the entire island during 31 Jul - 5 Aug.
- Between 24 - 30 Jul: up to 20 mm of rainfalls were recorded in several areas on the 24th and 25th.
- From 23 - 29 Jul: up to 54 km/h, northwesterly 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 July 24th, Badulla district received up to 20 mm of rainfall; and Kurunegala, Ampara, Matale, Nuwara Eliya, Ratnapura and Monaragala districts up to 10 mm. On the 25th, Jaffna and Gampaha districts received up to 20 mm of rainfall; and Colombo, Kalutara, Kegalle and Ratnapura districts up to 10 mm. On the 26th, Puttalam district received up to 10 mm of rainfall; and Kurunegala, Gampaha and Colombo districts up to 5 mm. On the 27th, Jaffna, Kilinochchi and Vavuniya districts received up to 5 mm of rainfall. No significant rainfalls were recorded in any part of the island during 28th - 30th.

Total Rainfall for the Past Week: The RFE 2.0 tool shows total up to 10-25 mm in Badulla, Gampaha and Jaffna districts; and up to 5-10 mm in Monaragala, Kurunegala, Colombo, Kegalle, Ratnapura and Ampara districts. Below average rainfall up to 10-25 mm is shown for Kalutara Nuwara Eliya, Ratnapura, Matara and Galle districts.

Monthly Monitoring: During June - Above average rainfall conditions up to 60 mm were experienced by Puttalam, Kurunegala, Gampaha, Kalutara, Galle and southern parts of the Ratnapura district. Below average rainfall conditions up to 150 mm were experienced by Kandy and Nuwara Eliya districts; and up to 90 mm in Mannar, Vavuniya, Mullaitivu, Anuradhapura, Polonnaruwa, Batticaloa, Matale, Ampara, Badulla, Monaragala, Hambantota, Kegalle and Colombo districts. The CPC Unified Precipitation Analysis tool shows up to 200 mm of total rainfall in Puttalam, Gampaha, Colombo, Kalutara, Ratnapura and Galle districts; up to 150 mm in Kurunegala, Kegalle, Nuwara Eliya and Matara districts; up to 100 mm in Badulla and Ampara districts; and up to 75 mm in Batticaloa, Hambantota, Monaragala, Matale and Kandy districts.

Ocean State (Text Courtesy IRI)

Pacific sea state: July 19, 2019

SSTs in the east-central Pacific declined to ENSO-neutral levels during early July, but still above average. Temperature anomalies of subsurface waters were near-average. Patterns in the atmosphere showed mainly ENSO-neutral to borderline El Niño conditions. Collective model forecasts favor ENSO-neutral through autumn, possibly returning to weak El Niño by winter. The official CPC/IRI outlook, still with an El Niño advisory, calls for a transition to ENSO-neutral by late summer, most likely remaining neutral through fall and 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 31st Jul – 6th Aug: Total rainfall up to 25 mm on Kegalle, Ratnapura, Galle, Kandy and Nuwara Eliya districts; and up to 5-15 mm in Gampaha, Kurunegala, Matale, Badulla, Monaragala and Matara districts.

From 6th – 13th Aug: Total rainfall up to 55 mm in Jaffna, Colombo, Kegalle, Kandy, Nuwara Eliya, Ratnapura and Hambantota districts; and up to 35-45 mm in Gamapaha, Badulla and Monaragala districts.

IMD NCMWRF Forecast:

2nd Aug: Not Available

3rd Aug: Not Available

IRI Model Forecast:

From 24th – 29th Jul: Total rainfall up to 25 mm is expected in the entire island.

MJO based OLR predictions

For the next 15 days:

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

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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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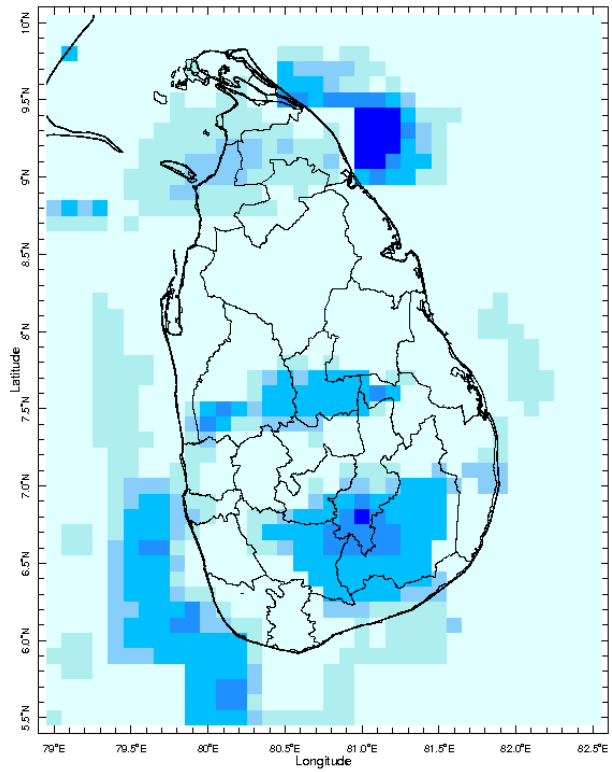
2. Predictions

- a. NCEP GFS Ensemble 1-14 day Rainfall Predictions
- b. WRF Model Rainfall Forecast from IMD Chennai
- c. Weekly Precipitation Forecast from IRI
- d. Seasonal Predictions from IRI

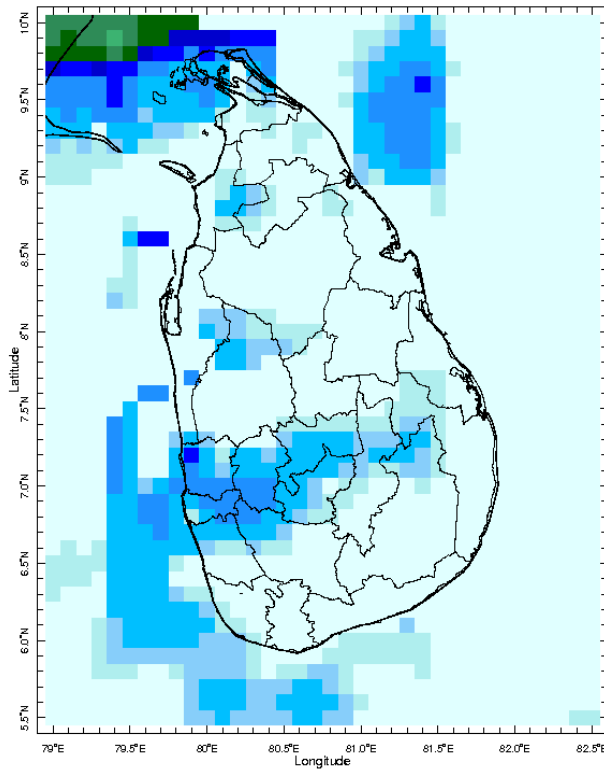
MONITORING

Daily Rainfall Monitoring

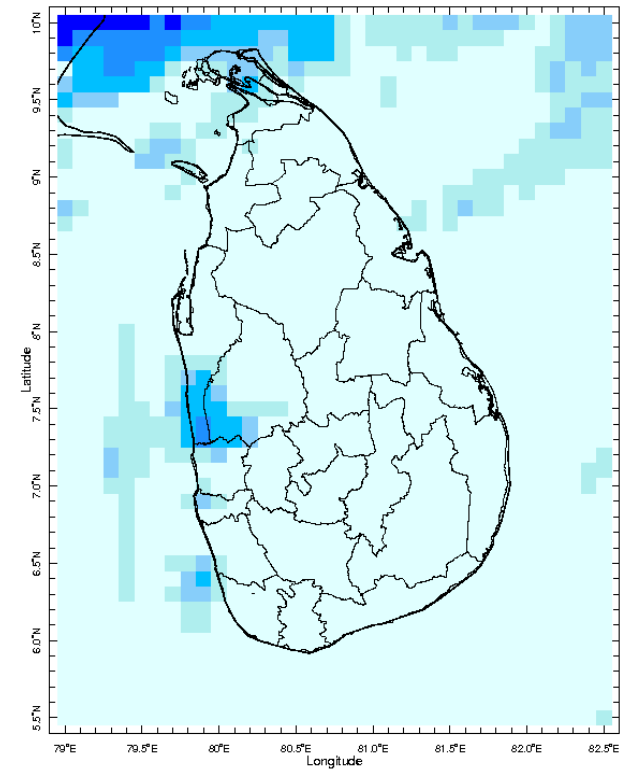
The following figures show the satellite observed rainfall in the last 7 days in Sri Lanka.



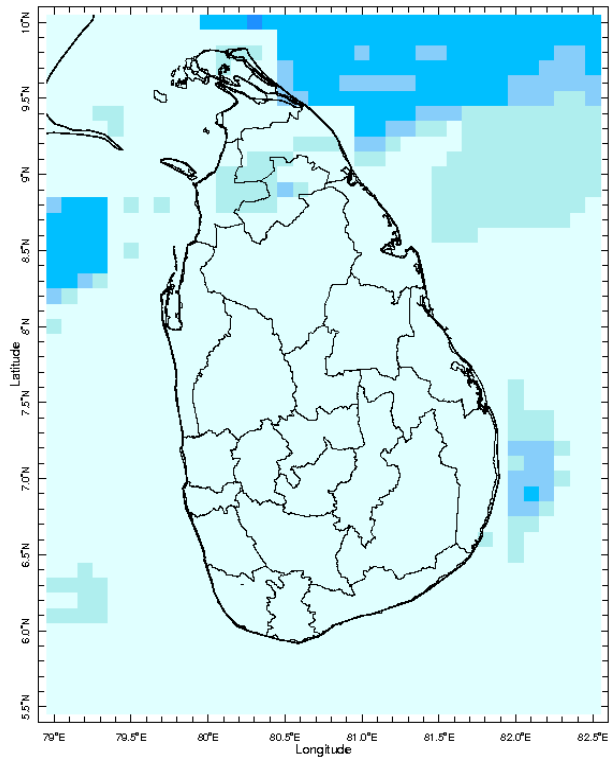
24 Jul 2019



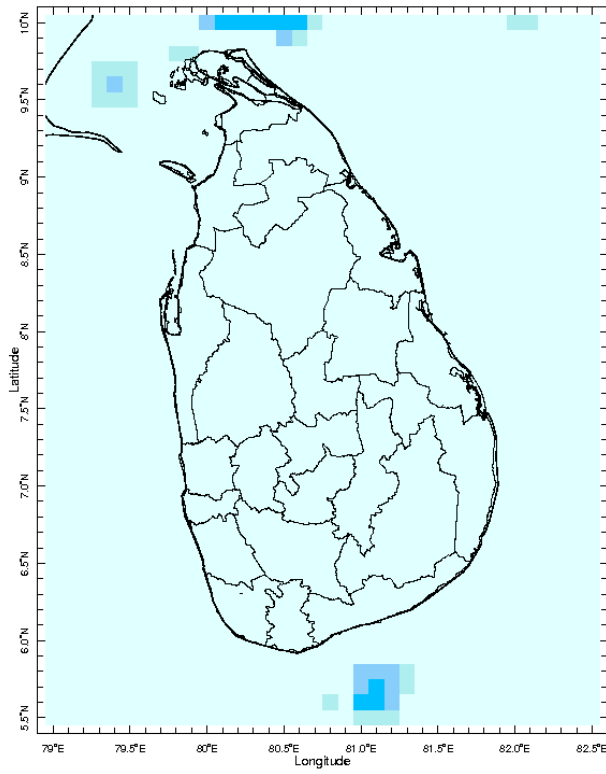
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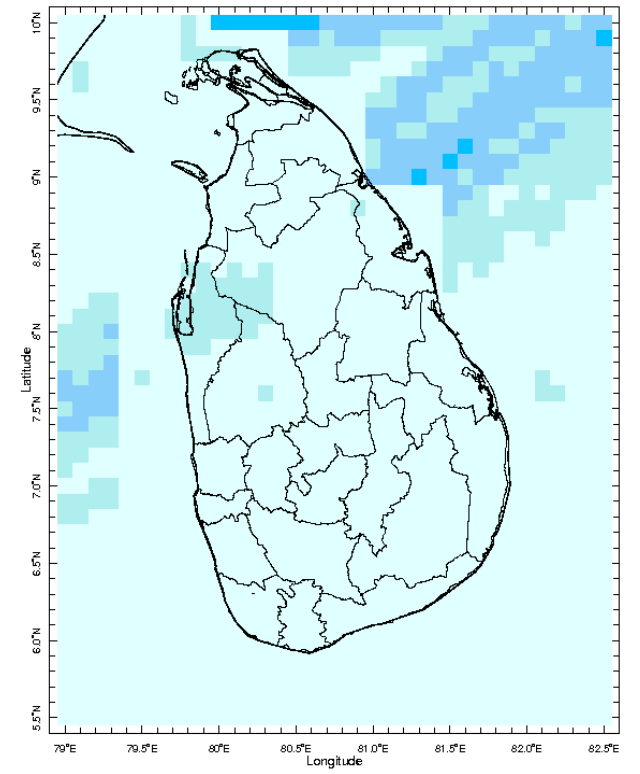
26 Jul 2019



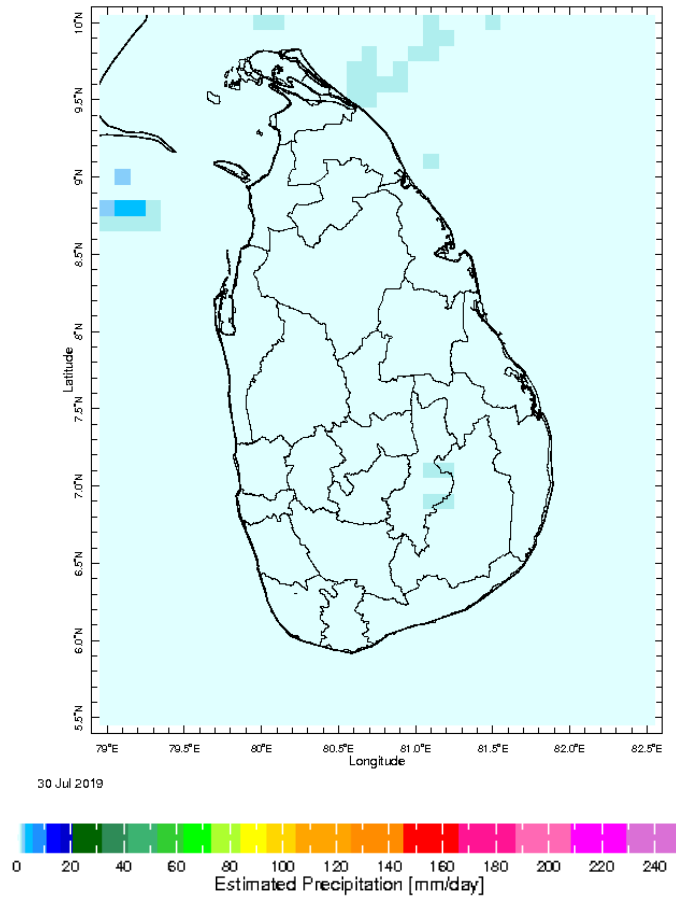
27 Jul 2019



28 Jul 2019

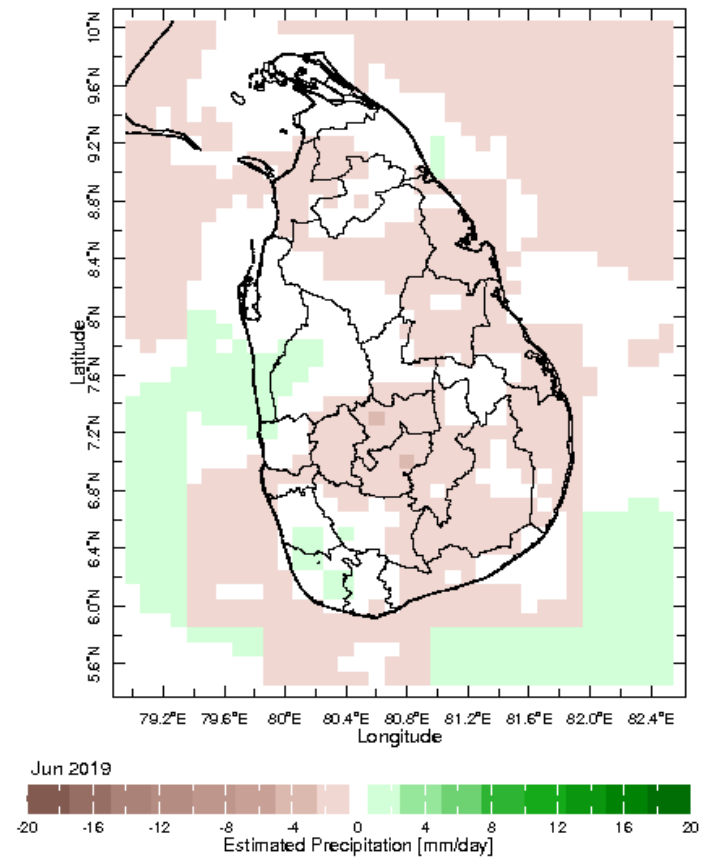
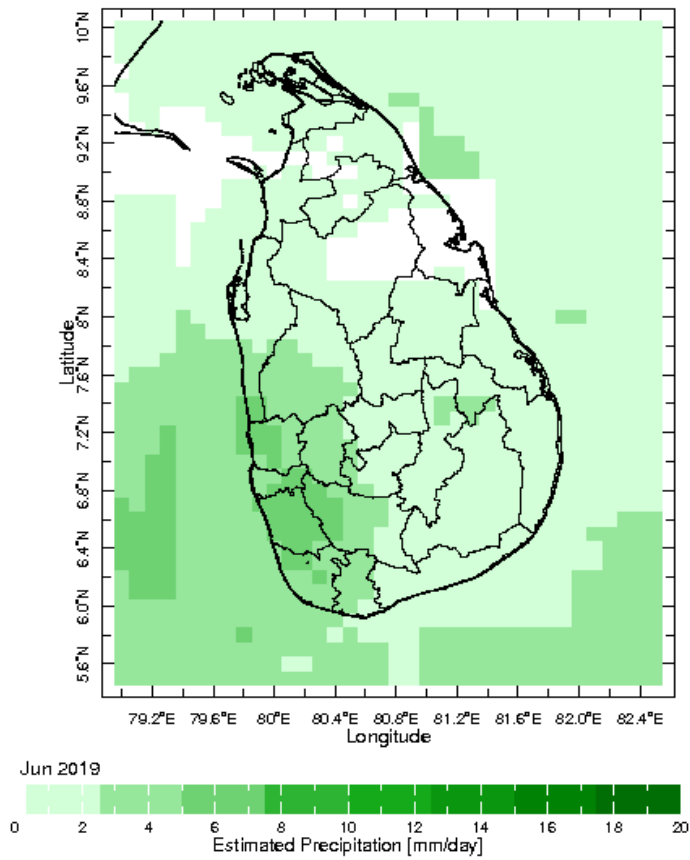


29 Jul 2019

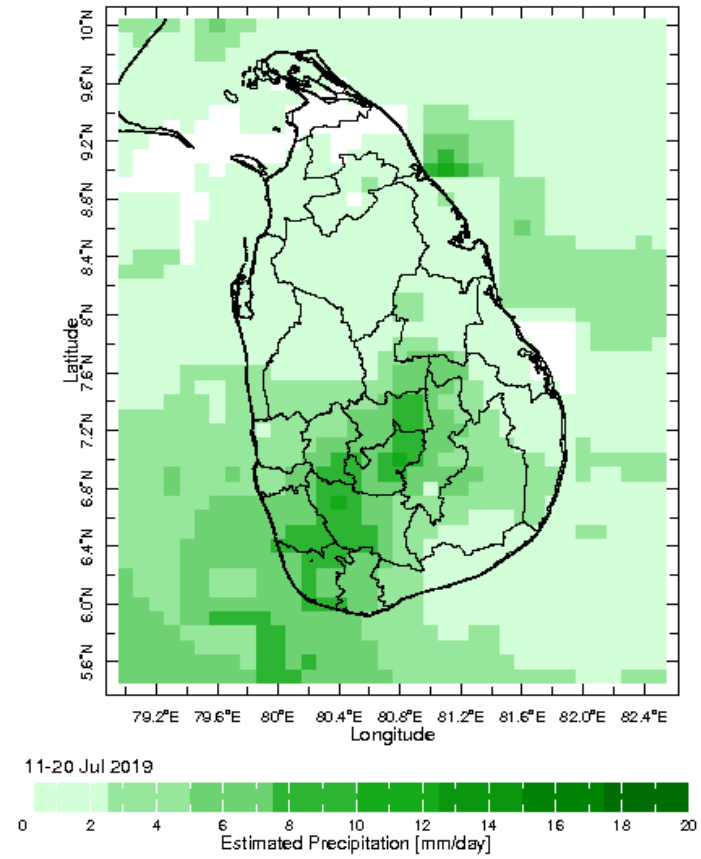
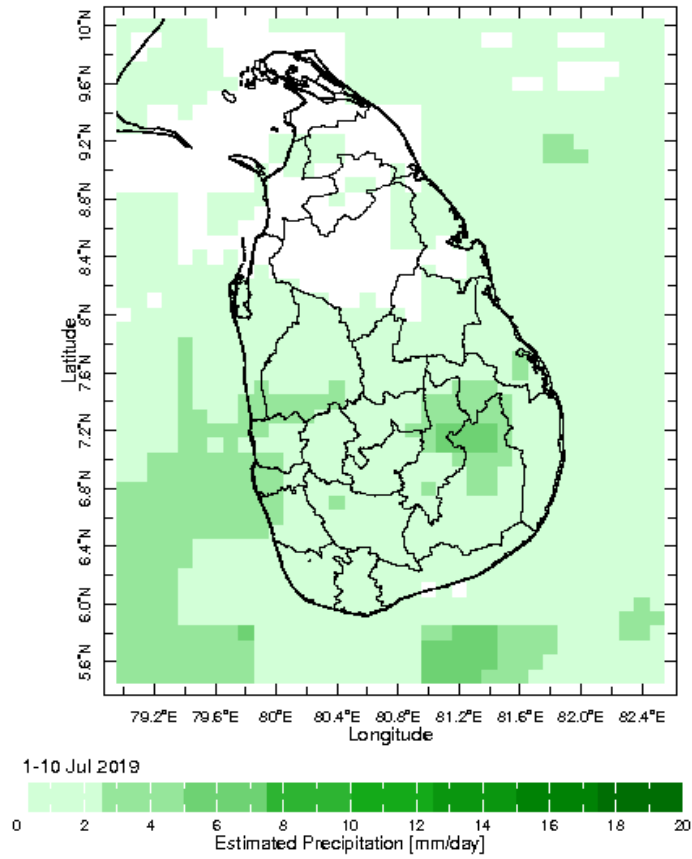


Monthly Rainfall Monitoring

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

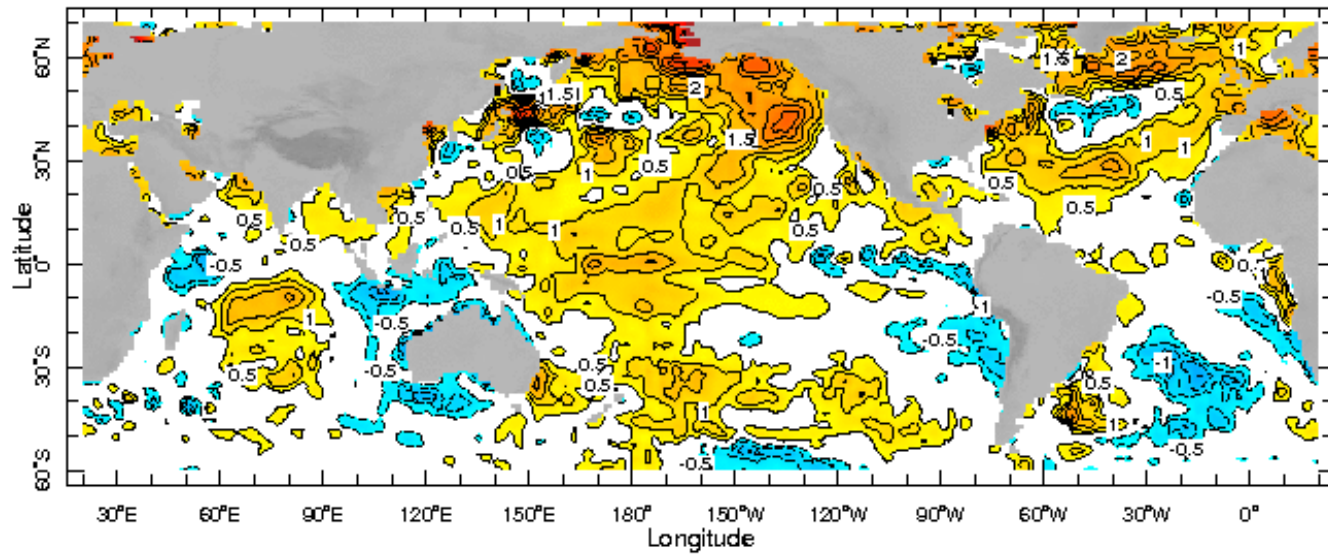


Dekadal (10 Day) Satellite Derived Rainfall Estimates

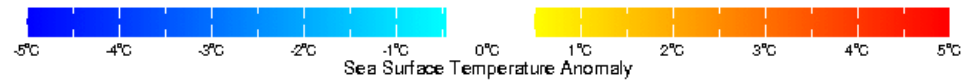


Weekly Average SST Anomalies

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



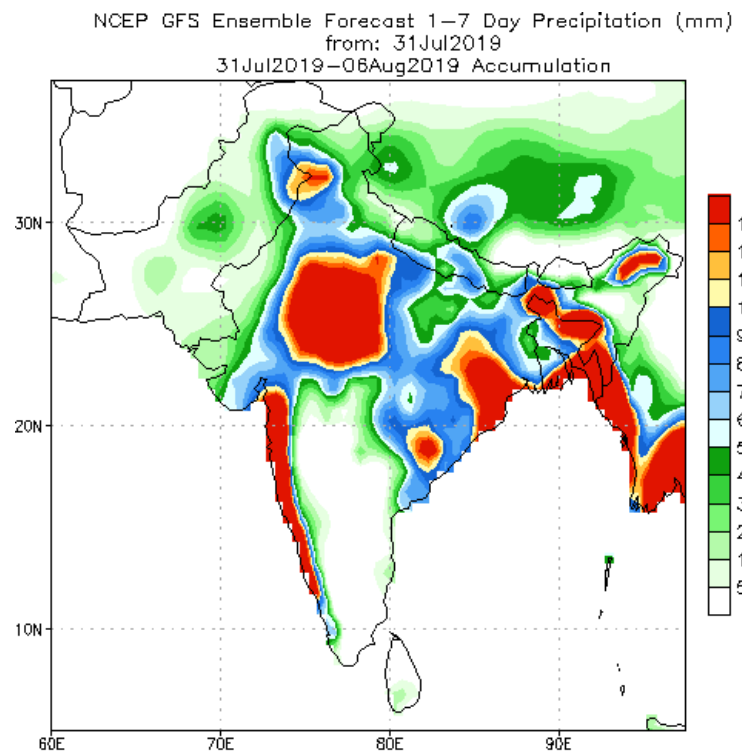
24 Jul 2019



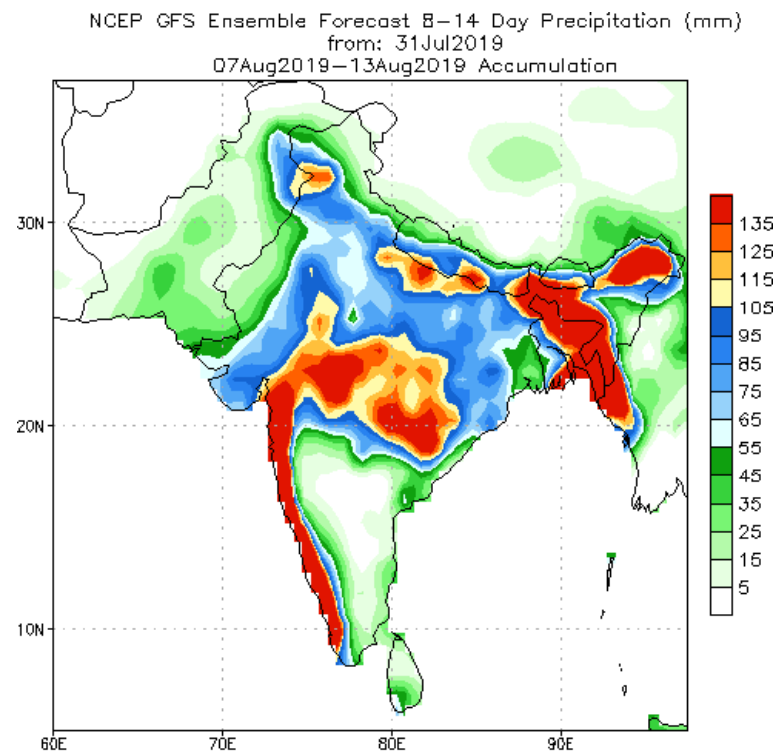
WORLD BATH topography

PREDICTIONS

NCEP GFS 1- 14 Day prediction

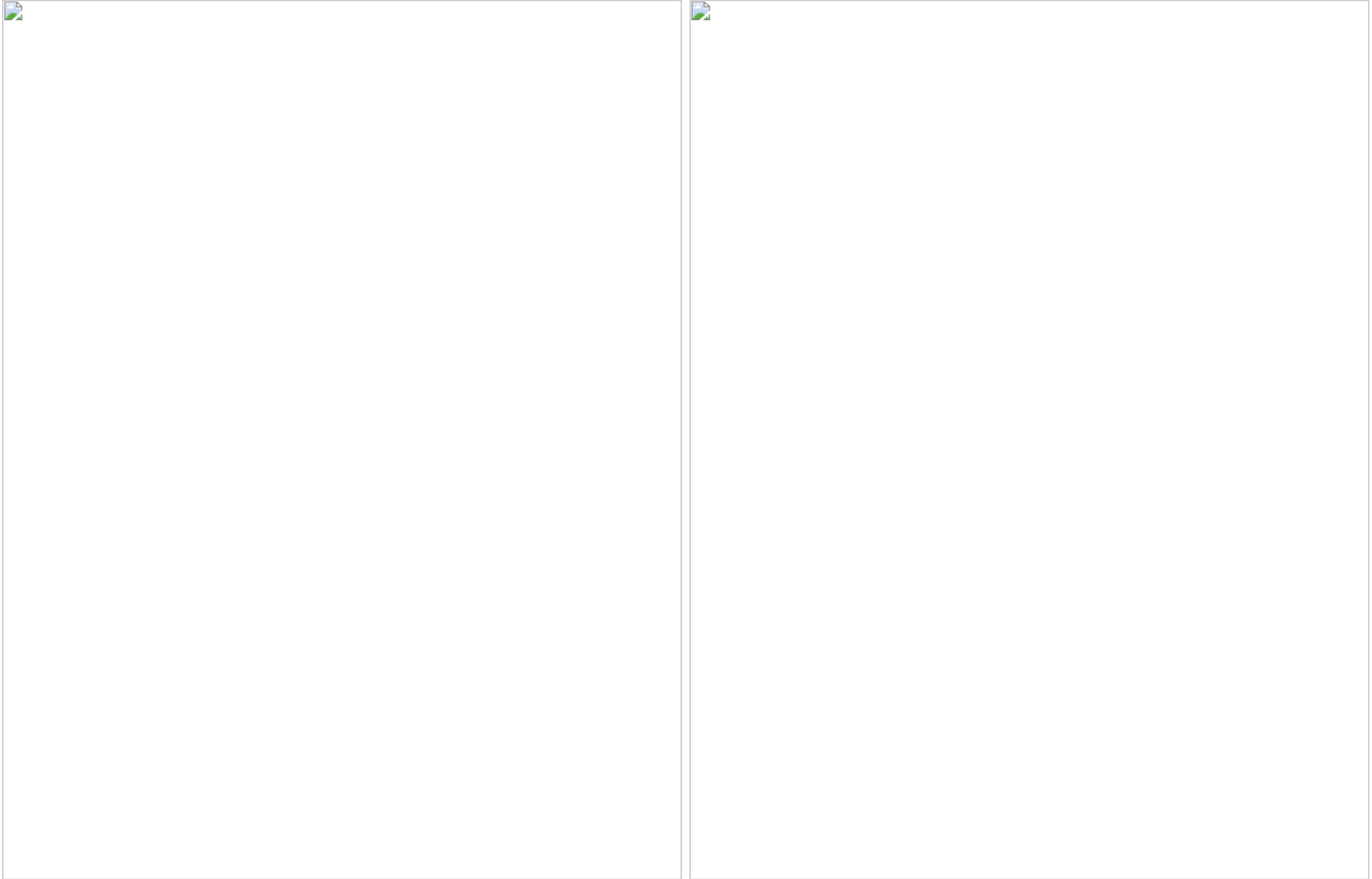


Bias correction based on last 30-day forecast error



Bias correction based on last 30-day forecast error

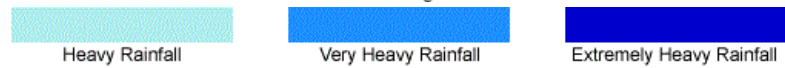
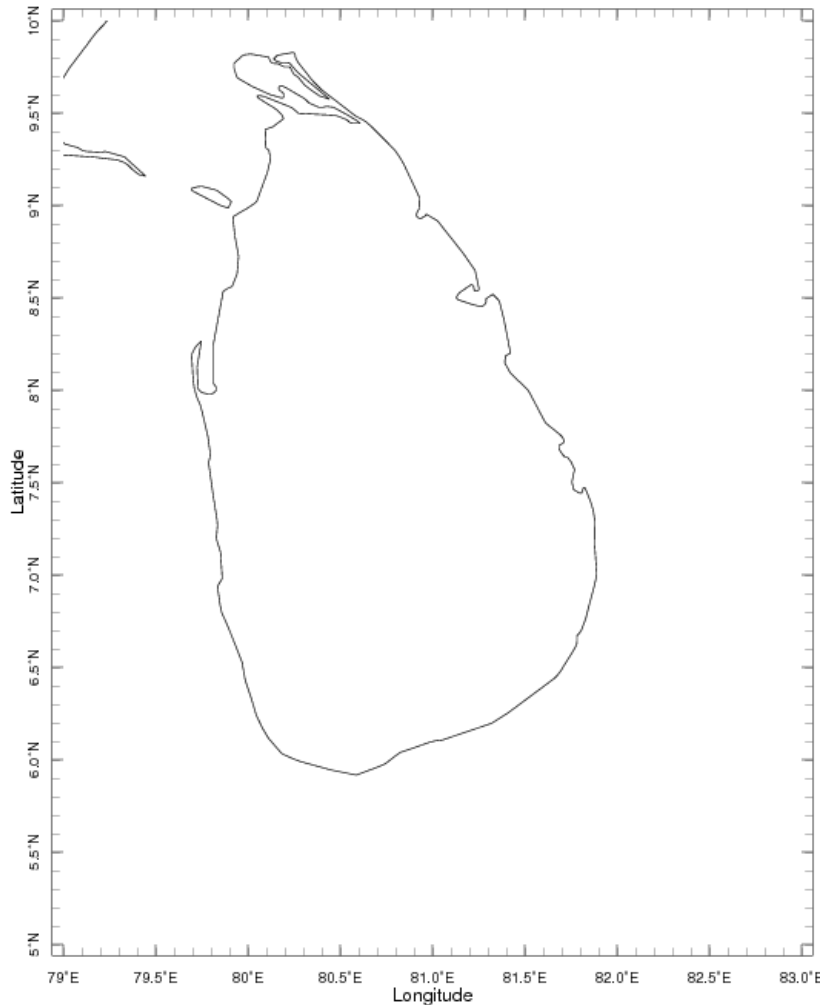
WRF Model Forecast (from IMD Chennai)



Weekly Rainfall Forecast from IRI

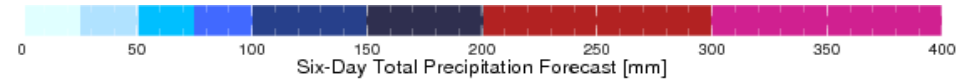
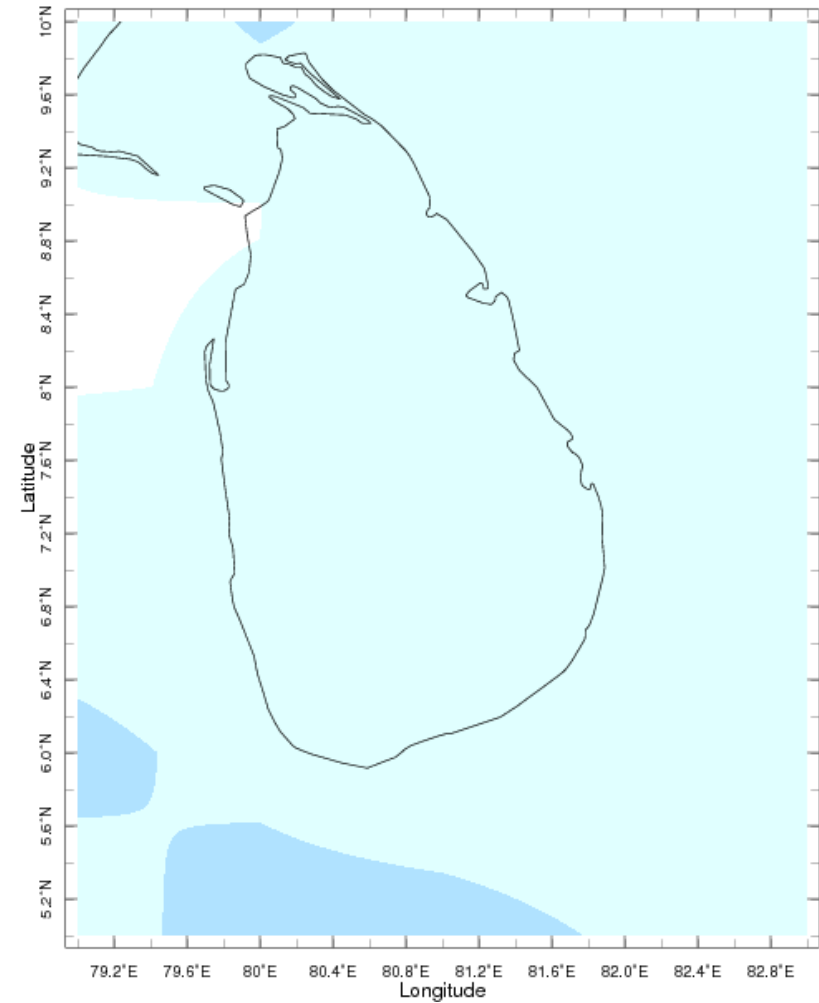
Total rainfall forecast from the IRI for next six days is provided in figures below. The figure to the left shows the expectancy of heavy rainfall events during these six days while the figure to the right is the prediction of total rainfall amount during this period.

Forecast for 31 Jul 2019 - 5 Aug 2019 Issued 0000 31 Jul 2019



Extreme Rainfall Forecast

Forecast for 31 Jul 2019 - 5 Aug 2019 Issued 0000 31 Jul 2019



Total Six Day Precipitation Forecast