

Experimental Climate Monitoring and Prediction

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4 July 2019

Highlights

- The IRI weekly rainfall forecast predicts up to 25 mm of total rainfall in most parts of the island during 3 – 8 Jul.
- Between 24 Jun – 1 Jul: up to 20 mm of rainfall was recorded in Kurunegala, Ratnapura and Batticaloa districts on the 24th.
- From 26 Jun – 2 Jul: up to 54 km/h, northwesterly winds were experienced by the entire island.
- 1 °C above average sea surface temperature was observed in the seas around Sri Lanka.

Monitoring

Rainfall

Weekly Monitoring: On June 24th, Kurunegala, Ratnapura and Batticaloa districts received up to 20 mm of rainfall; and Polonnaruwa, Matale, Ampara, Monaragala, Kandy, Nuwara Eliya, Kegalle, Colombo, Gampaha, Kalutara, Galle and Matara districts. On the 25th, Jaffna, Kilinochchi, and Mullaitivu districts received up to 5 mm of rainfall. On the 26th, Jaffna and Kilinochchi districts received up to 5 mm of rainfall. No significant rainfalls were recorded in any part of the island during the period 27th - 29th. On the 30th, Vavuniya, Anuradhapura and Trincomalee districts received up to 5 mm of rainfall. On July 1st, Anuradhapura, Kandy, Kalutara, Badulla, Monaragala, Ampara and Batticaloa districts received up to 5 mm of rainfall.

Total Rainfall for the Past Week: The RFE 2.0 tool shows total up to 5-10 mm in Gampaha and Kurunegala districts; and 5-10 mm in Vavuniya, Anuradhapura, Trincomalee, Puttalam, Matale, Kandy, Badulla, Ampara, Kegalle, Ratnapura, Colombo and Kalutara districts. Below average rainfall up to 25-50 mm is shown for Gampaha, Colombo, Kalutara, Galle, Matara, Kegalle and Ratnapura districts; and up to 10-25 mm in Kurunegala, Kandy, Nuwara Eliya, Hambantota, Badulla and Monaragala districts.

Monthly Monitoring: During May – 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: June 19, 2019

SSTs in the tropical Pacific maintained a weak El Niño level during May and early June, and temperature anomalies of subsurface waters were slightly above average. Some patterns in the atmosphere show intermittent El Niño conditions. Collective model forecasts show a continuation of at least weak El Niño-level SSTs lasting through 2019. The official CPC/IRI outlook, with an El Niño advisory, calls for a 66% chance of El Niño continuing during Jun-Aug, decreasing to 50-55% for continuing through fall and winter.

Indian Ocean State

1 °C above average sea surface temperature was observed in the seas around Sri Lanka.

Predictions

Rainfall

14-day prediction:

NOAA NCEP models:

From 3rd - 9th Jul: Total rainfall up to 25 mm Puttalam, Kurunegala, Gampaha, Kegalle, Colombo and Ratnapura districts; and up to 5-15 mm in most parts of the island.

From 10th - 16th Jul: Total rainfall up to 35 mm in Jaffna and Kilinochchi districts; and up to 15-25 mm Mannar, Mullaitivu, Vavuniya, Anuradhapura, Polonnaruwa, Trincomalee, Batticaloa, Ampara, Matale, Kandy, Kurunegala, Gampaha, Colombo, Kegalle and Ratnapura districts.

IMD NCMWRF Forecast:

5th Jul: Not Available

6th Jul: Not Available

IRI Model Forecast:

From 3rd – 8th Jul: Total rainfall up to 25 mm is expected 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.

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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

Inside This Issue

1. Monitoring

- a. Daily Rainfall Monitoring
- b. Monthly Rainfall Monitoring
- c. Dekadal (10 Day) Satellite Derived Rainfall Estimates
- d. Weekly Average SST Anomalies

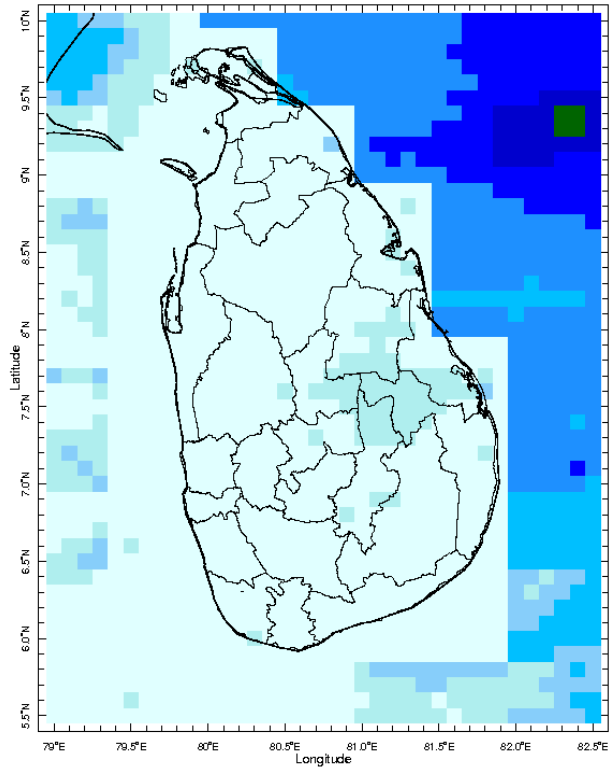
2. Predictions

- 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

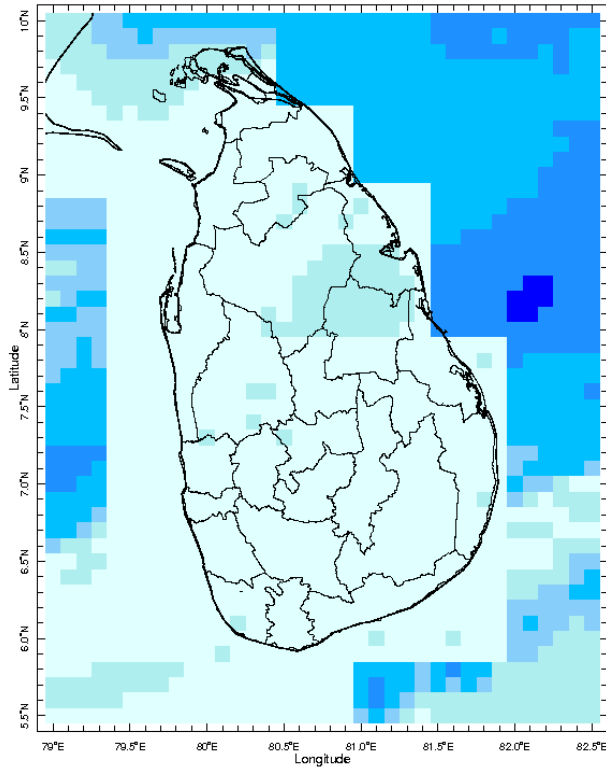
MONITORING

Daily Rainfall Monitoring

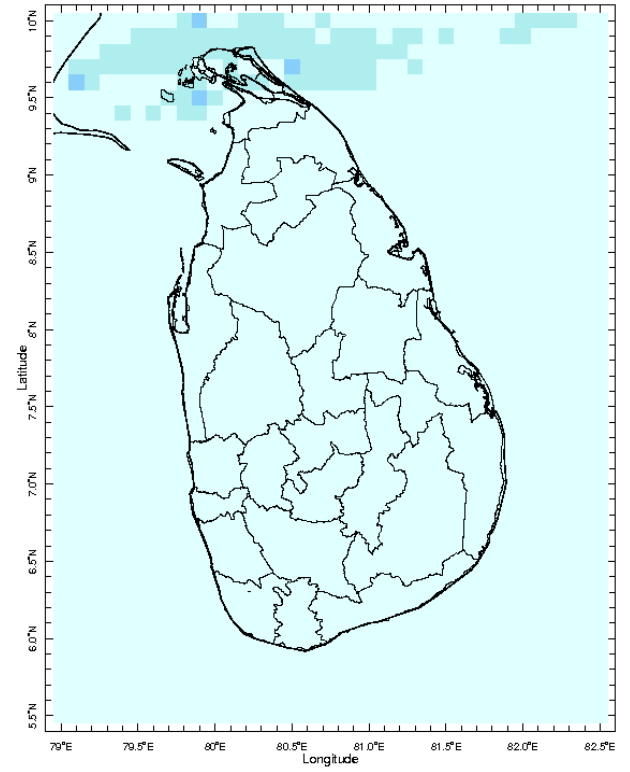
The following figures show the satellite observed rainfall in the last 7 days in Sri Lanka.



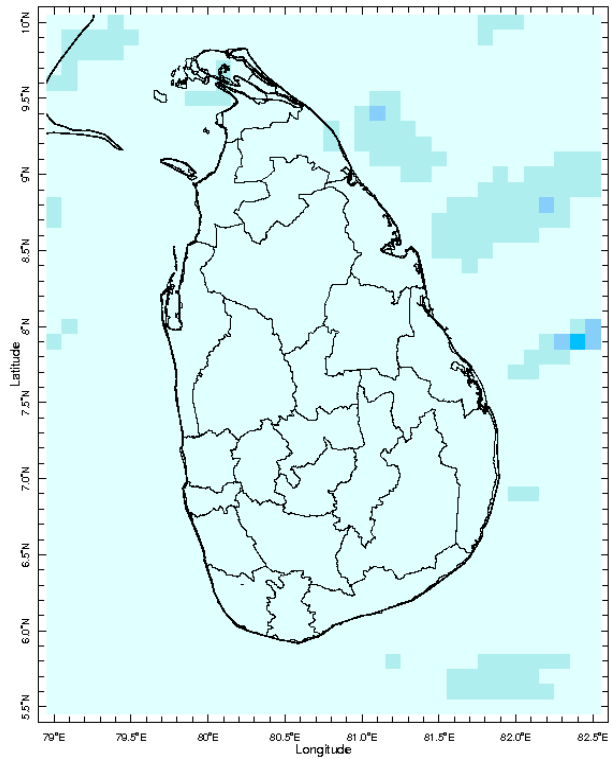
25 Jun 2019



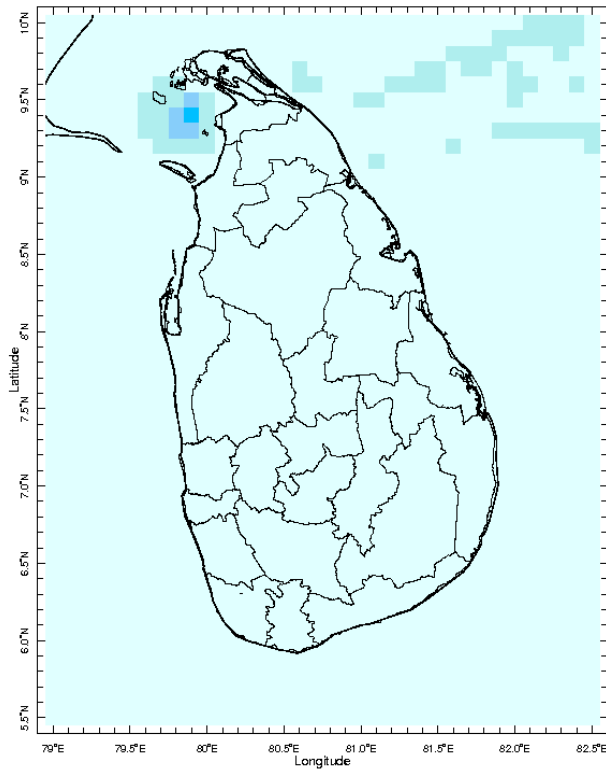
26 Jun 2019



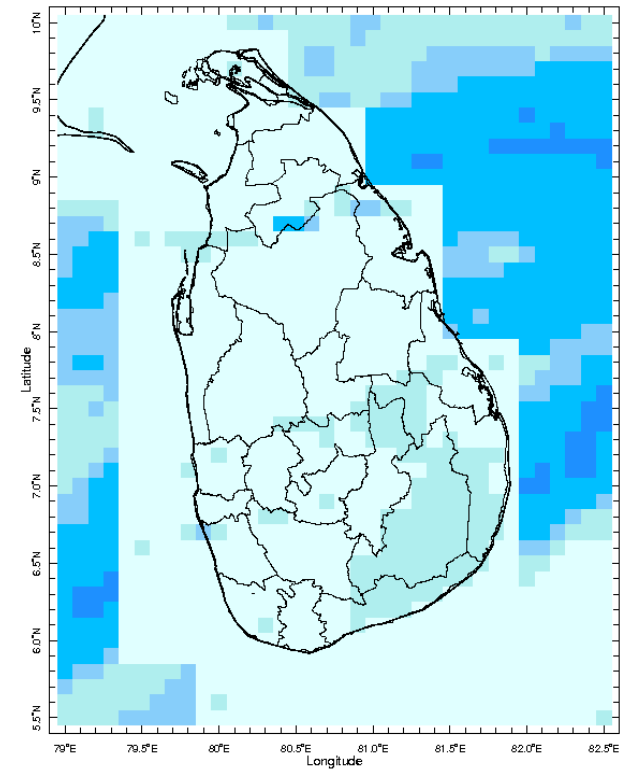
27 Jun 2019



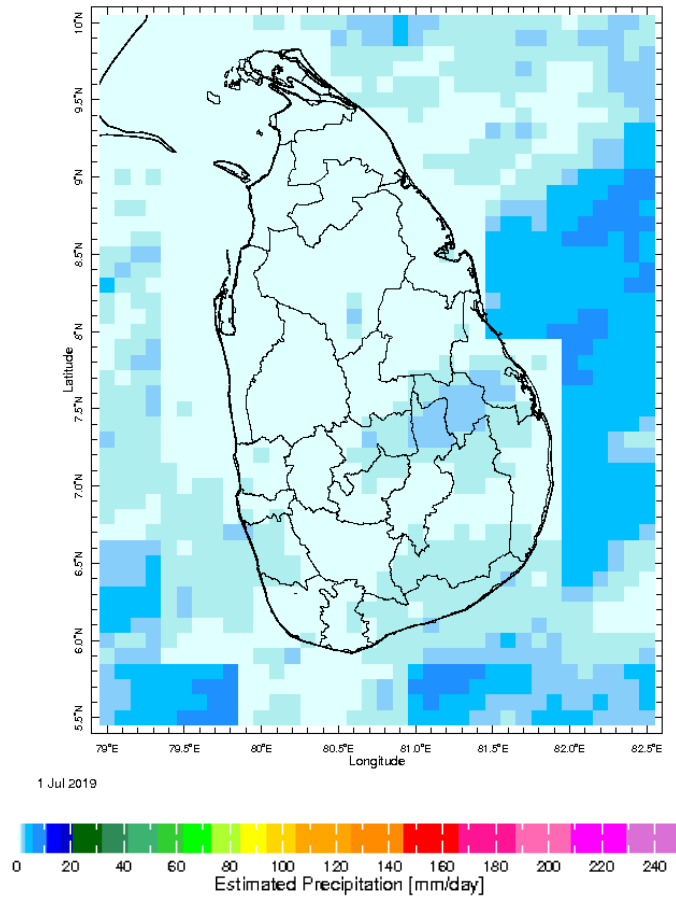
28 Jun 2019



29 Jun 2019

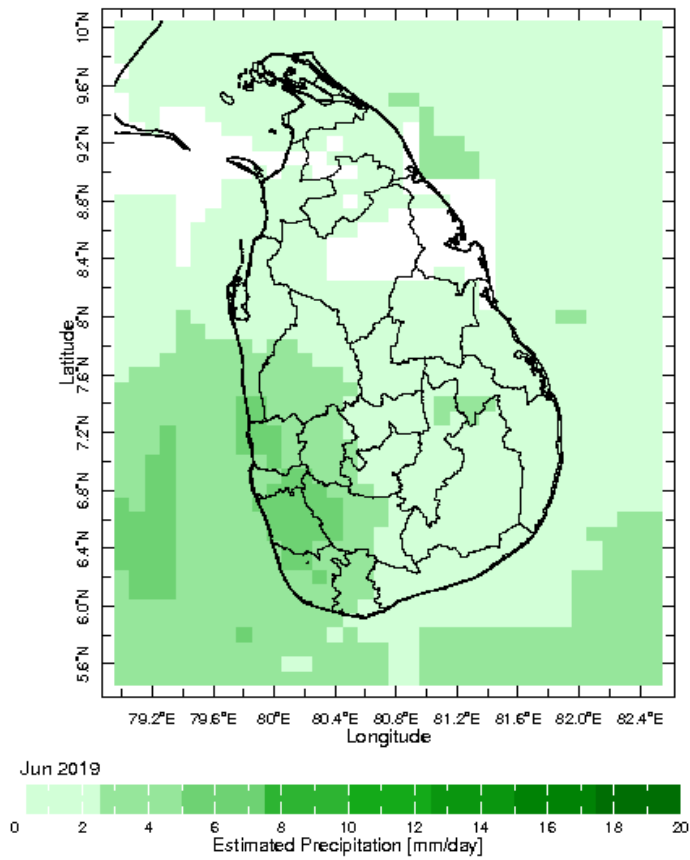


30 Jun 2019

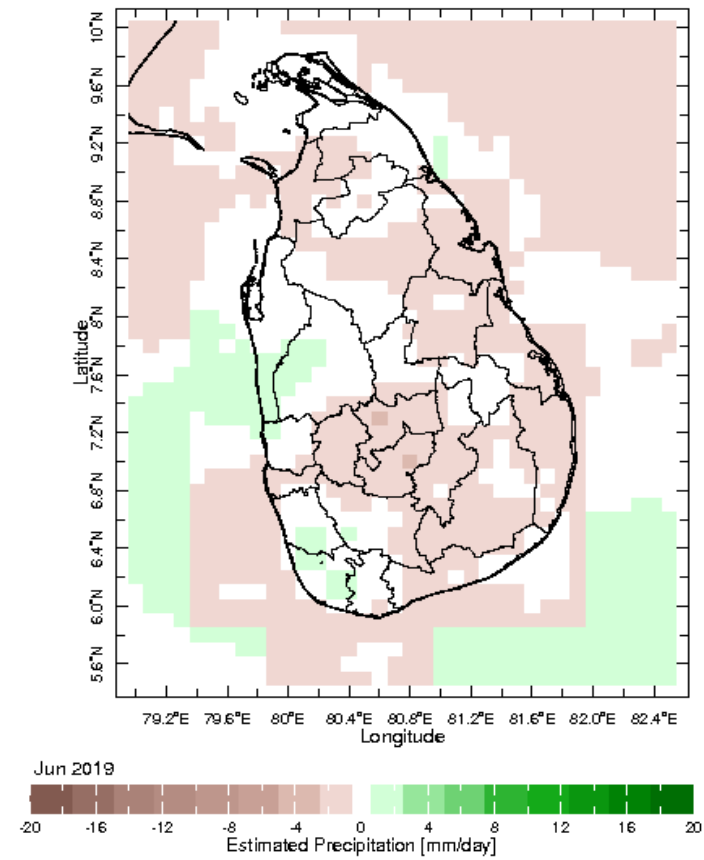


Monthly Rainfall Monitoring

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

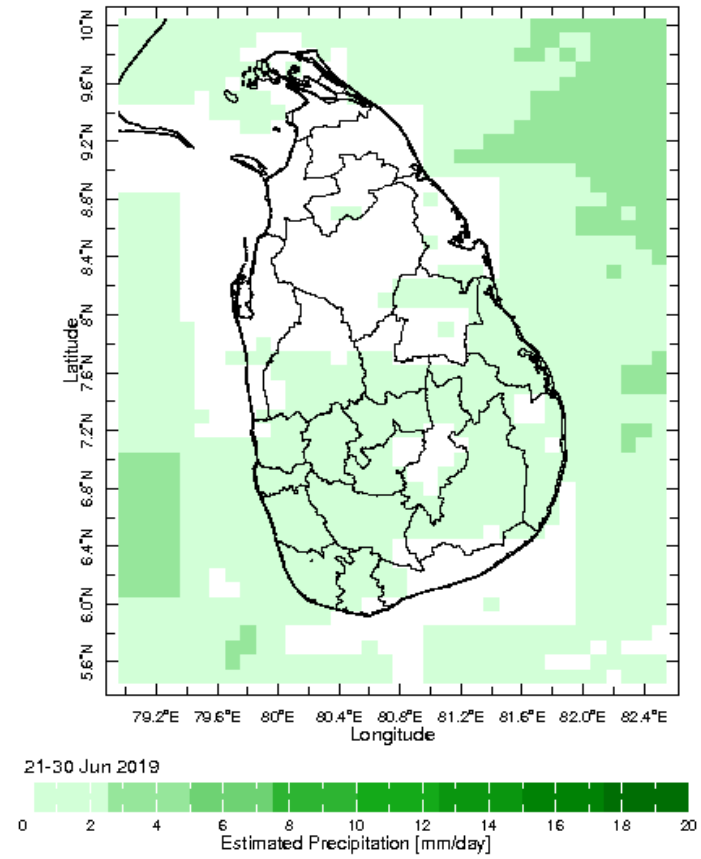
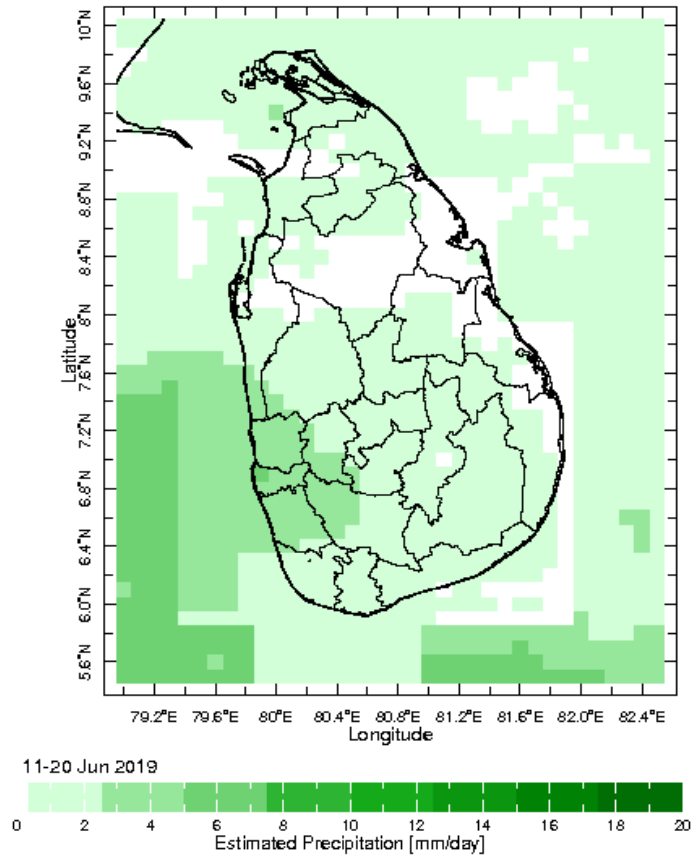


Monthly Average



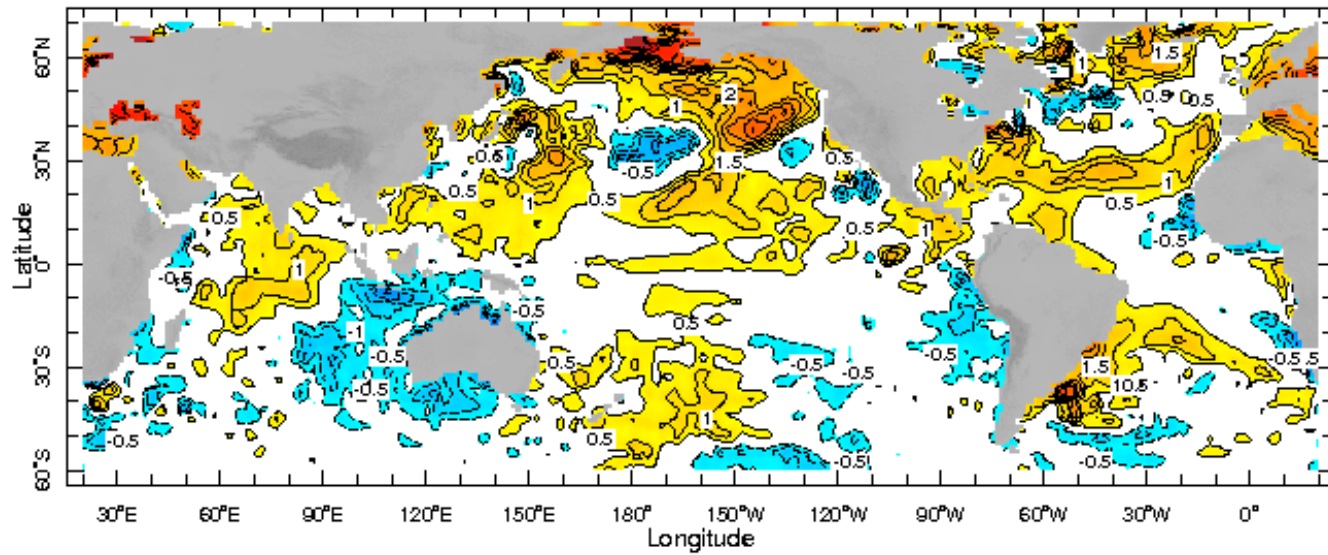
Monthly Anomaly

Dekadal (10 Day) Satellite Derived Rainfall Estimates

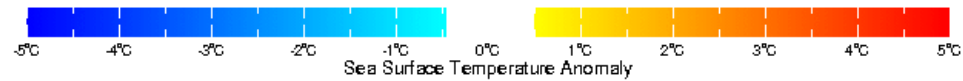


Weekly Average SST Anomalies

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



26 Jun 2019

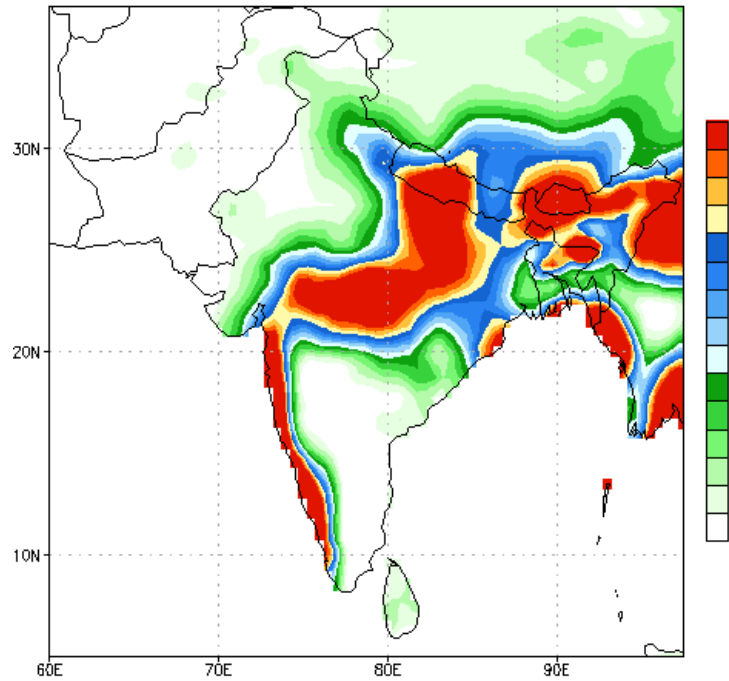


WORLDBATH topography

PREDICTIONS

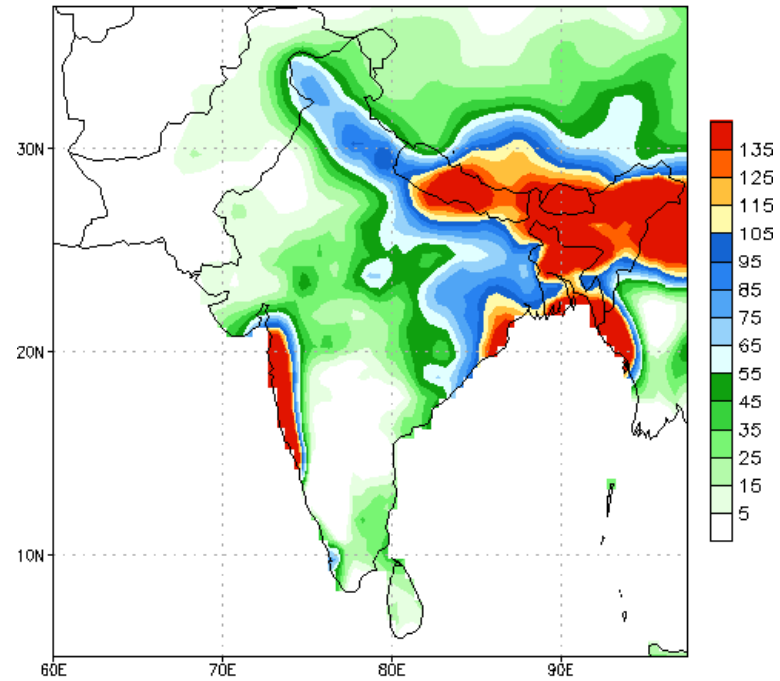
NCEP GFS 1- 14 Day prediction

NCEP GFS Ensemble Forecast 1-7 Day Precipitation (mm)
from: 04Jul2019
04Jul2019-10Jul2019 Accumulation



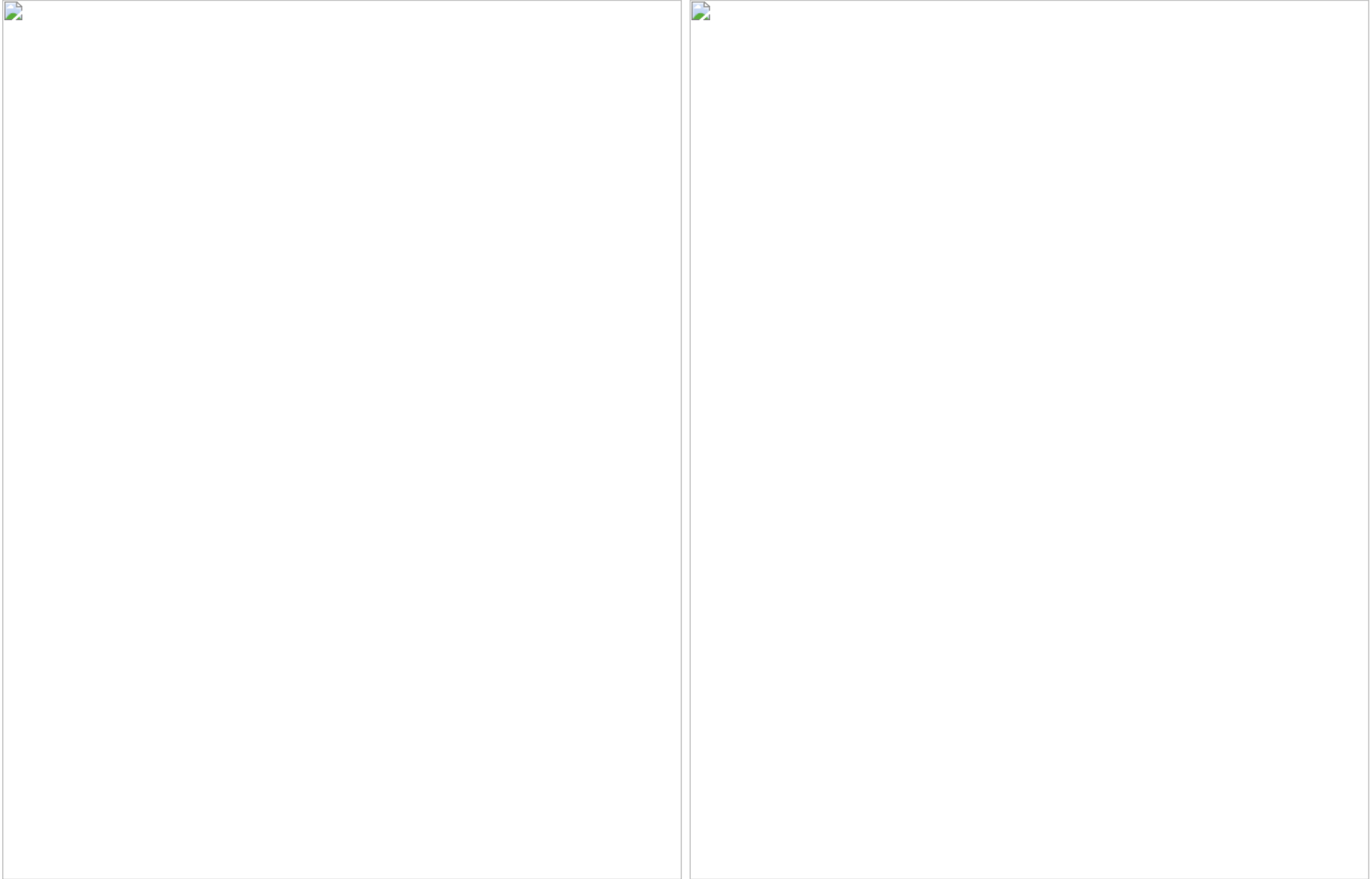
Bias correction based on last 30-day forecast error

NCEP GFS Ensemble Forecast 8-14 Day Precipitation (mm)
from: 04Jul2019
11Jul2019-17Jul2019 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.

