

Experimental Climate Monitoring and Prediction

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Highlights

- The IRI weekly rainfall forecast predicts up to 75 mm of total rainfall in Jaffna district during 24 – 29 Jul.
- Between 17 – 22 Jul: up to 90 mm of rainfall was recorded in Nuwara Eliya district on the 18th.
- From 16 – 22 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 17th, Ratnapura district received up to 60 mm of rainfall; Nuwara Eliya, Kalutara, Galle and Matara districts up to 30 mm of rainfall; and Kegalle, Gampaha, Colombo, Kandy, Badulla, Monaragala and Hambantota districts up to 20 mm. On the 18th, Nuwara Eliya district received up to 90 mm of rainfall; Kandy and Badulla districts up to 60 mm; Kegalle, Ratnapura, Kalutara, Galle, Matara and Monaragala districts up to 50 mm; Colombo, Matale, Trincomalee, Ampara and Hambantota districts up to 30 mm; and Kurunegala and Gampaha districts up to 20 mm. On the 19th, Jaffna district received up to 5 mm of rainfall. On the 20th, Jaffna, Kilinochchi, Kandy, Colombo, Badulla, Ratnapura and Nuwara Eliya districts received up to 5 mm of rainfall. On the 21st, Nuwara Eliya district received up to 40 mm of rainfall; Ratnapura, Monaragala and Badulla districts up to 20 mm; and most parts of the country up to 10 mm. On the 22nd, Jaffna and Kilinochchi districts received up to 10 mm of rainfall; and Ratnapura district up to 5 mm.

Total Rainfall for the Past Week: The RFE 2.0 tool shows total up to 75-100 mm in Nuwara Eliya, Ratnapura and Galle districts; up to 50-75 mm in Kurunegala, Matale, Kandy, Kalutara, Badulla, Galle and Matara districts; and up to 10-25 mm in Puttalam, Anuradhapura, Polonnaruwa, Batticaloa and Trincomalee. Above average rainfall up to 50-100 mm is shown for Badulla, Nuwara Eliya, Ratnapura and Galle districts; and up to 25-50 mm in Kandy, Kegalle, Ampara, Monaragala and Matara 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 24th – 30th Jul: Total rainfall up to 25 mm on Jaffna, Kilinochchi and Mullaitivu districts; and up to 15-5 mm in most parts of the island.

From 31st Jul – 6th Aug: Total rainfall up to 25 mm in Colombo, Kegalle, Ratnapura, Matale, Kandy, Badulla, Monaragala and Nuwara Eliya districts; and up to 15-5 mm in most parts of the island.

IMD NCMWRF Forecast:

26th Jul: Not Available

27th Jul: Not Available

IRI Model Forecast:

From 24th – 29th Jul: Total rainfall up to 75 mm is expected in Jaffna district; and up to 25 mm in rest 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

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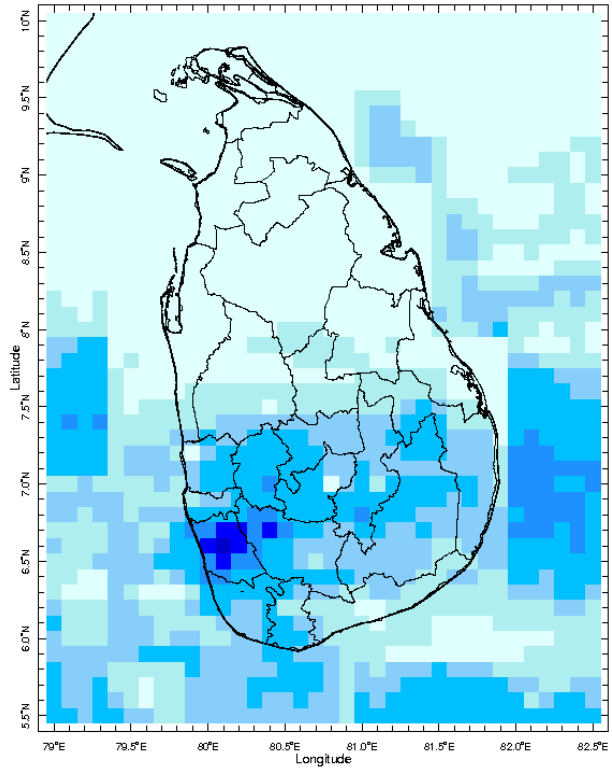
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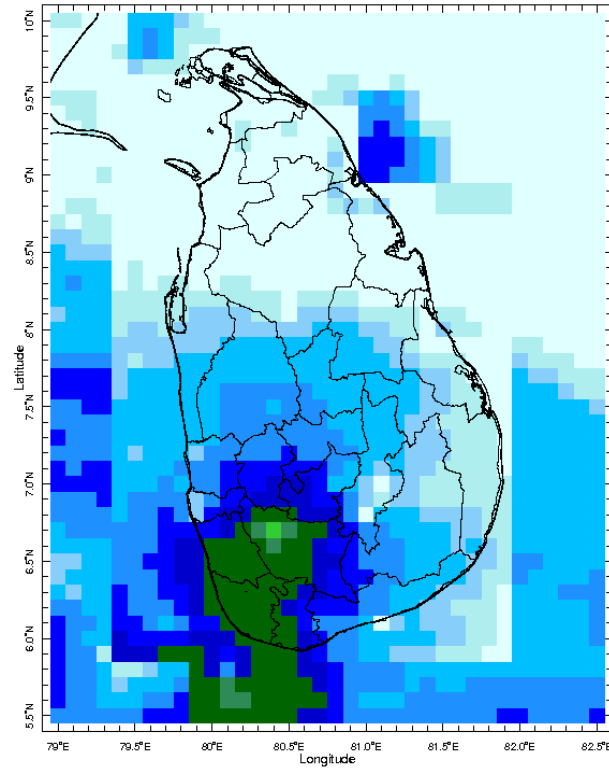
MONITORING

Daily Rainfall Monitoring

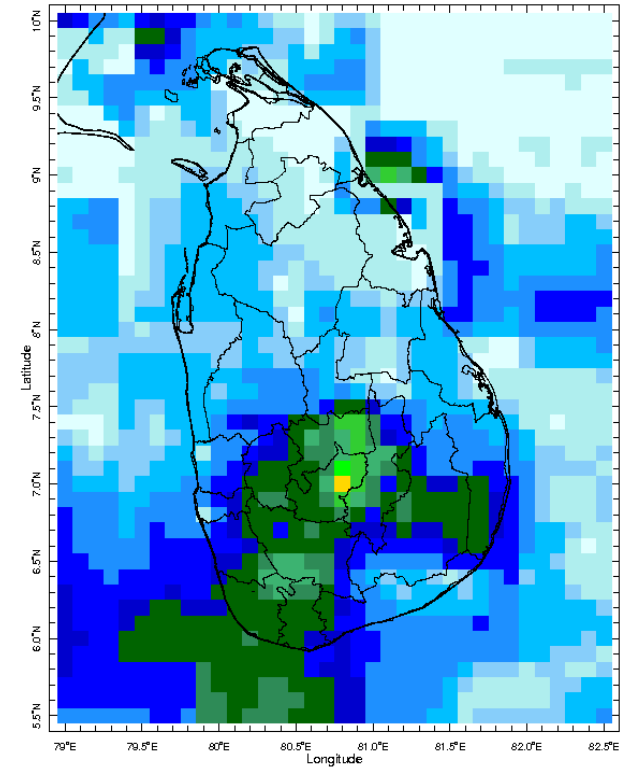
The following figures show the satellite observed rainfall in the last 7 days in Sri Lanka.



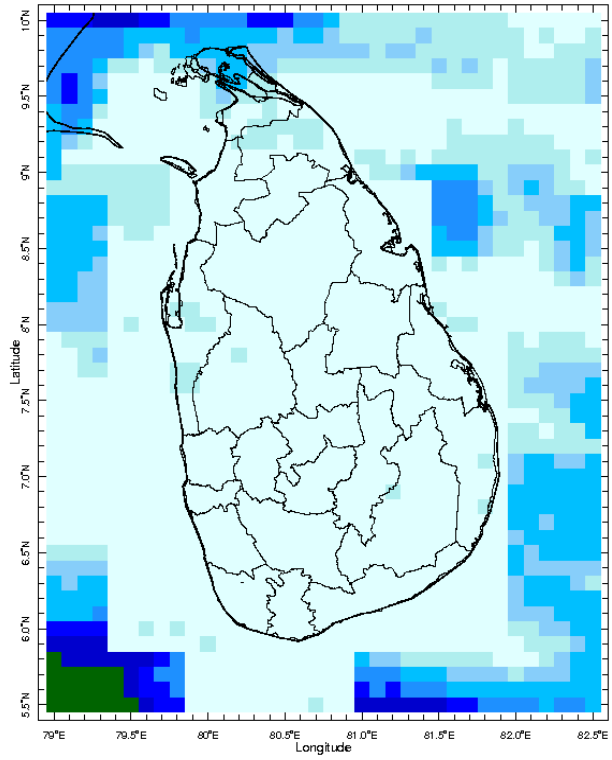
16 Jul 2019



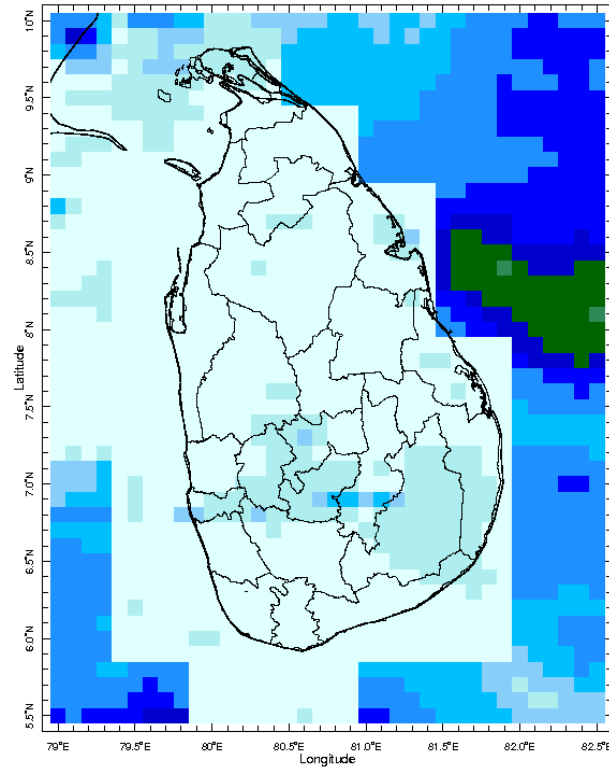
17 Jul 2019



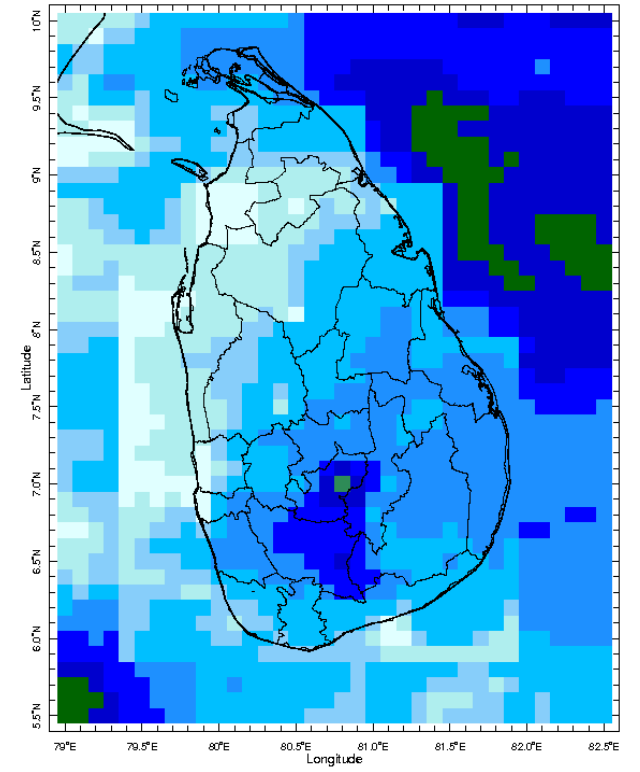
18 Jul 2019



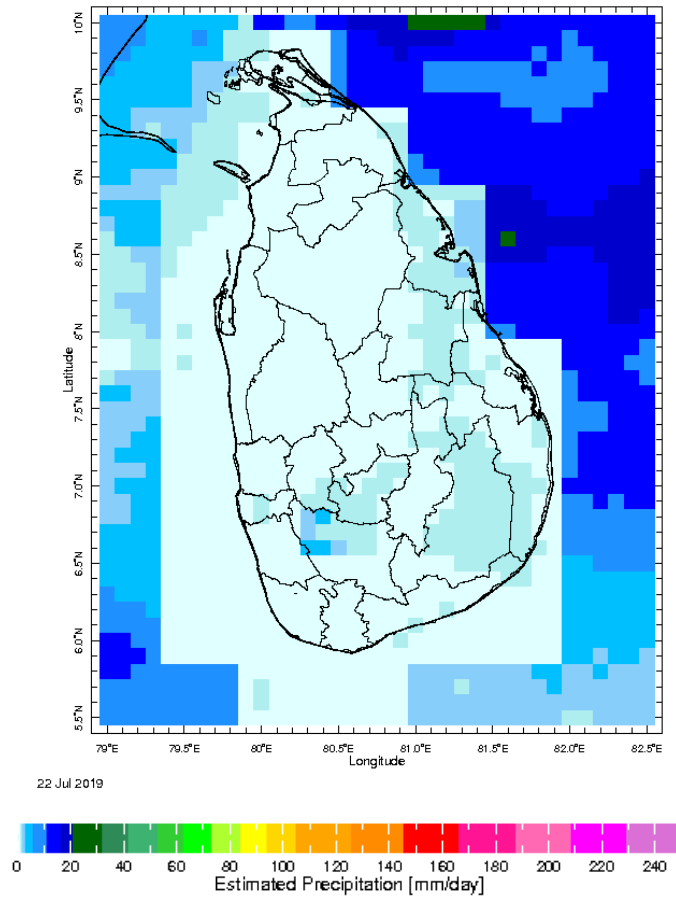
19 Jul 2019



20 Jul 2019

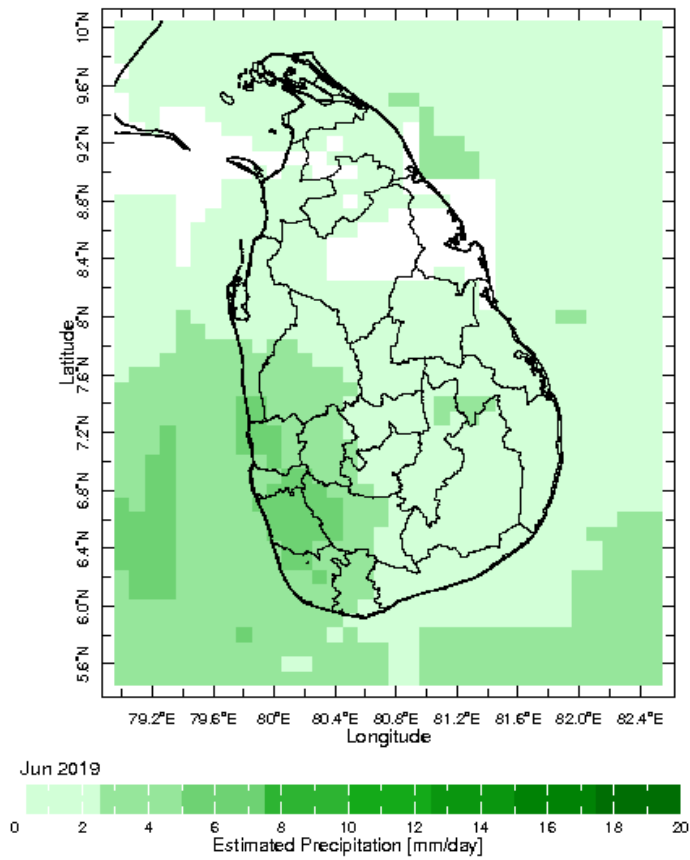


21 Jul 2019

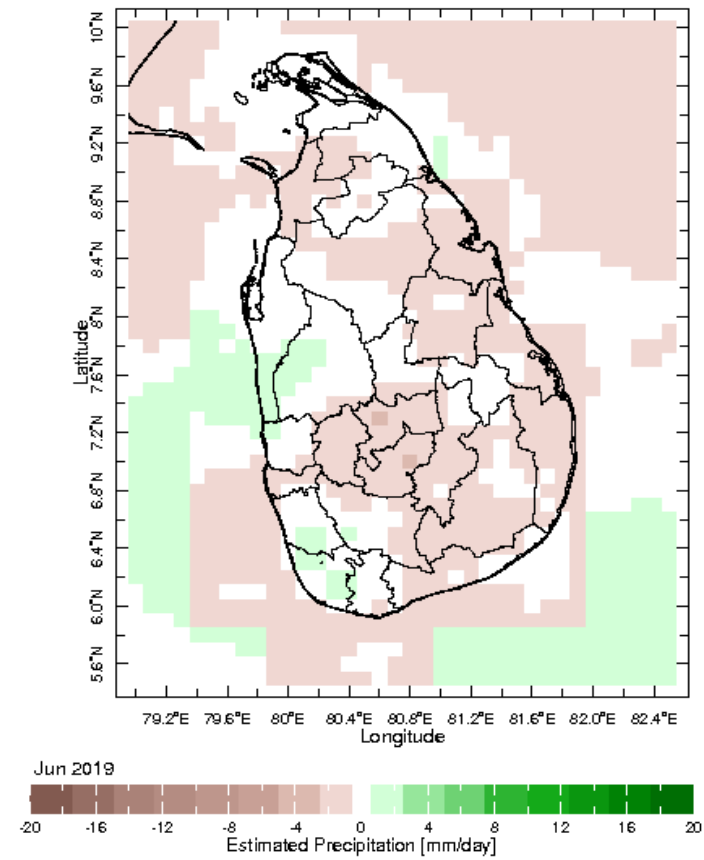


Monthly Rainfall Monitoring

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

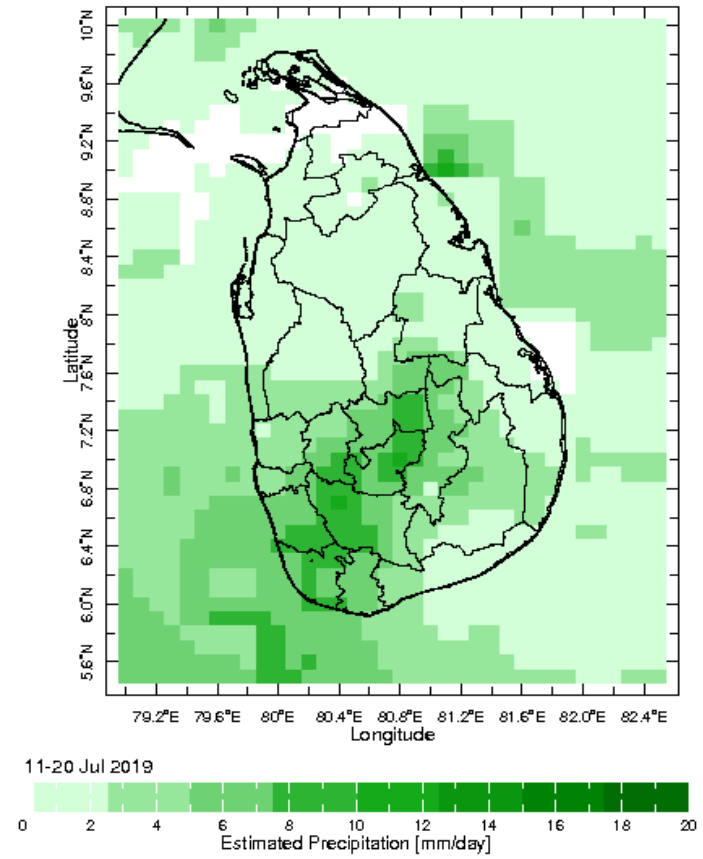
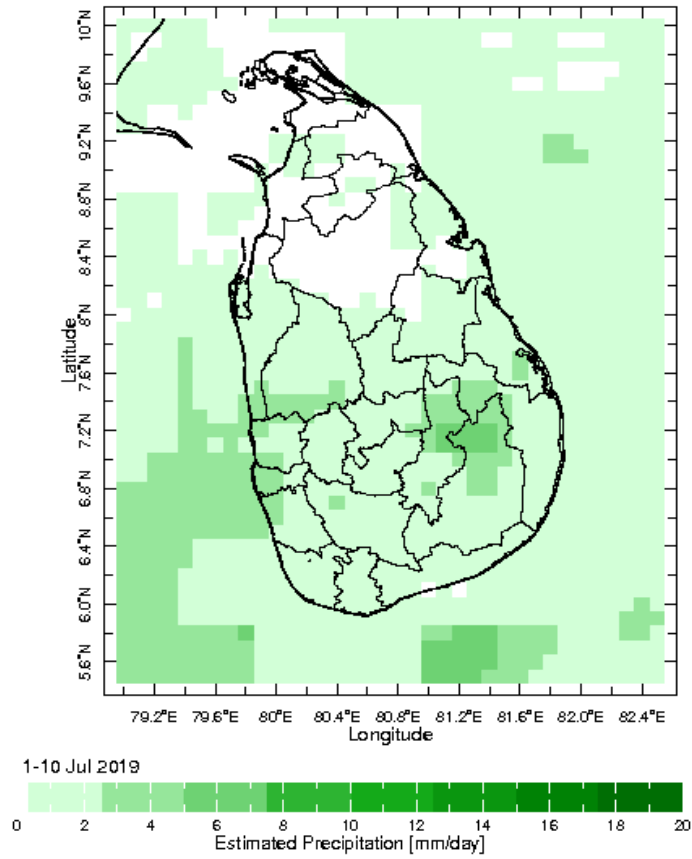


Monthly Average



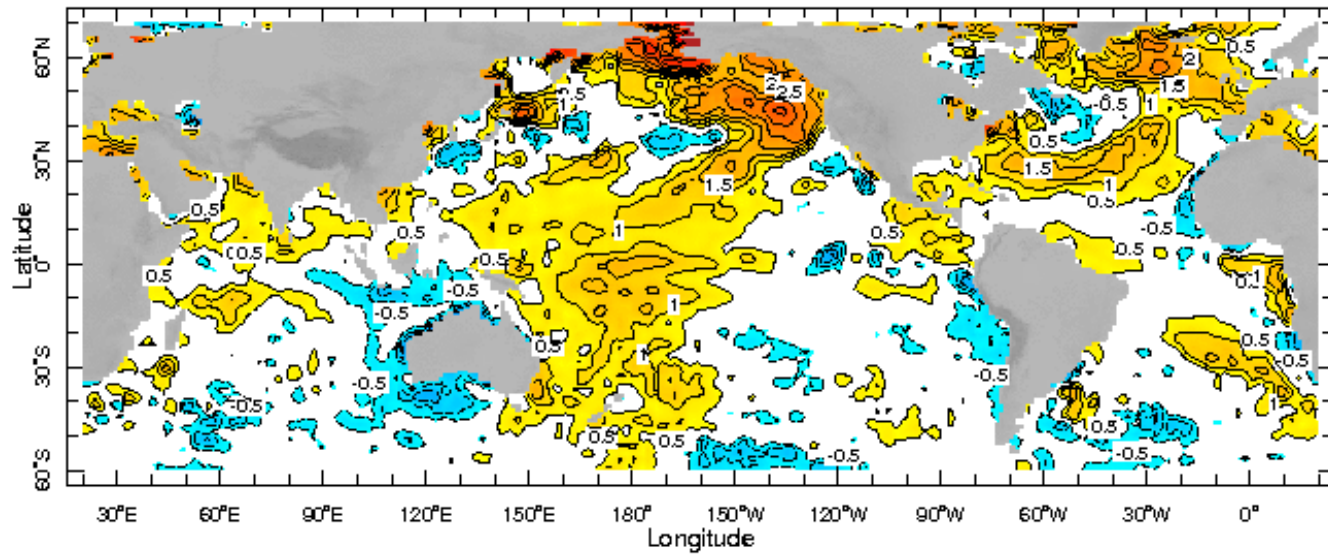
Monthly Anomaly

Dekadal (10 Day) Satellite Derived Rainfall Estimates

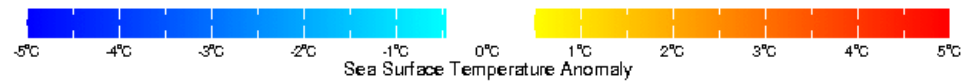


Weekly Average SST Anomalies

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



17 Jul 2019

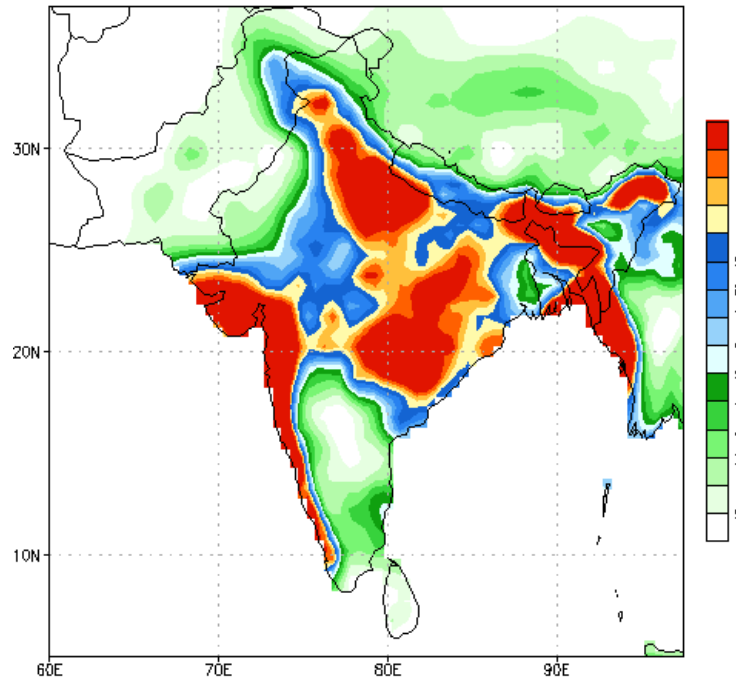


WORLDBATH topography

PREDICTIONS

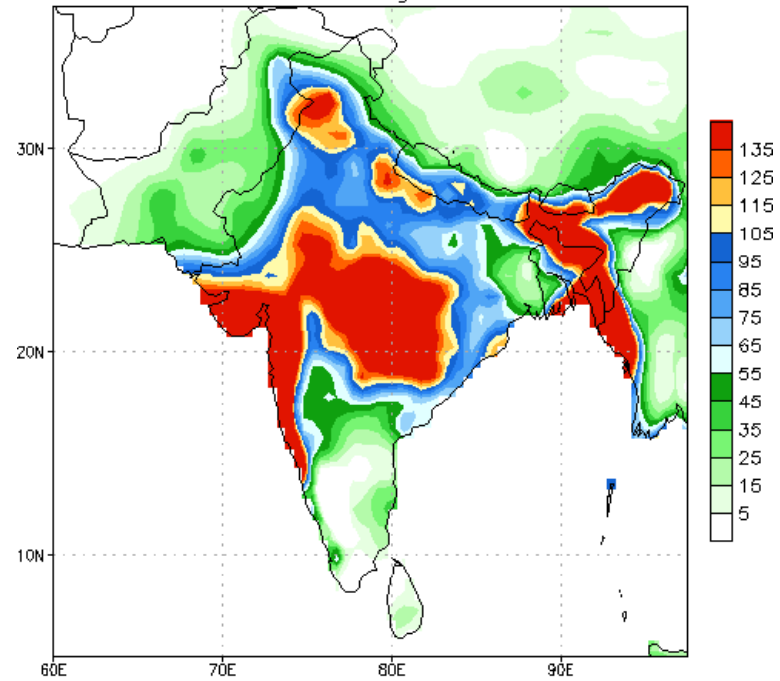
NCEP GFS 1- 14 Day prediction

NCEP GFS Ensemble Forecast 1-7 Day Precipitation (mm)
from: 24Jul2019
24Jul2019-30Jul2019 Accumulation



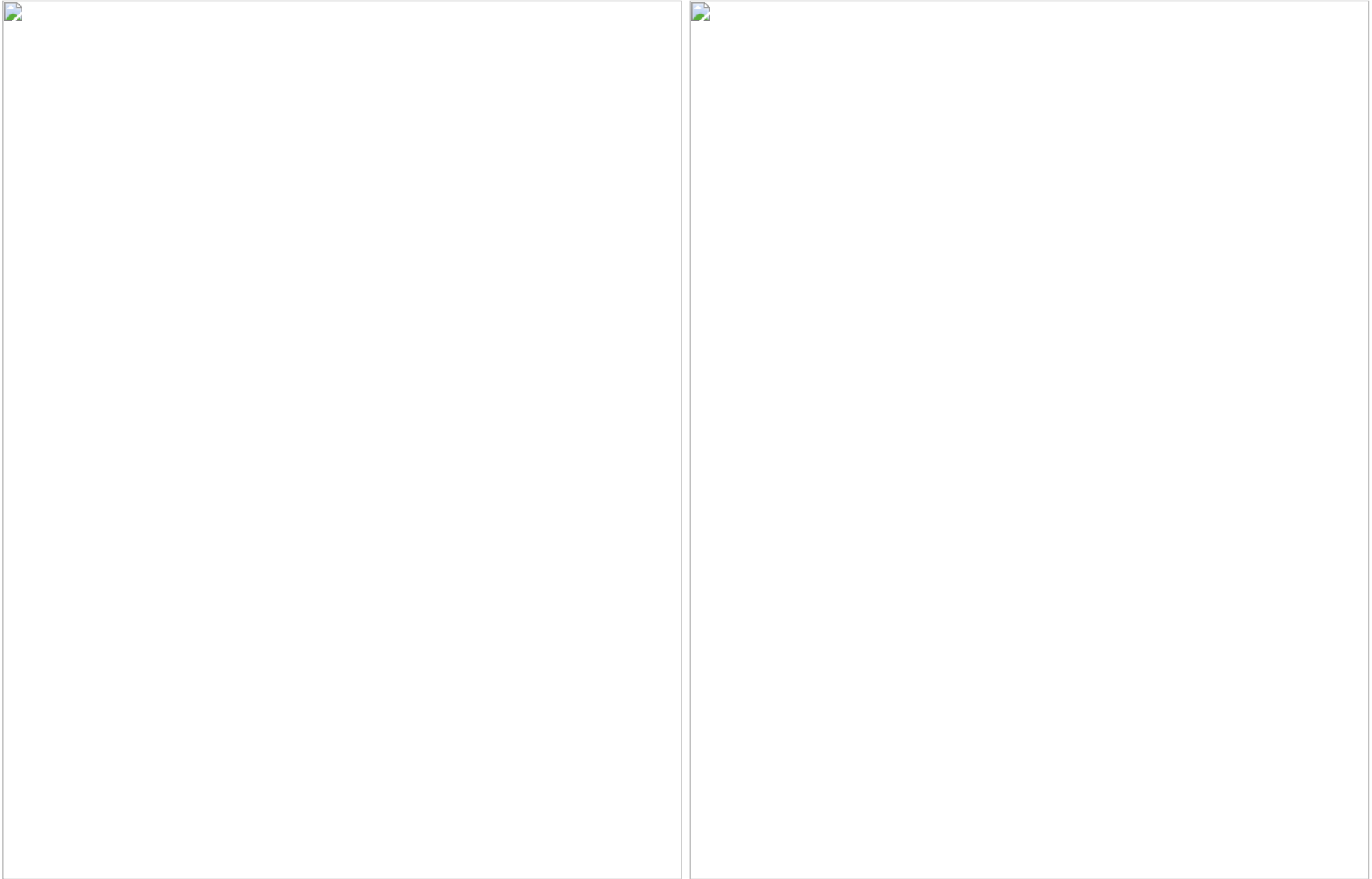
Bias correction based on last 30-day forecast error

NCEP GFS Ensemble Forecast 8-14 Day Precipitation (mm)
from: 24Jul2019
31Jul2019-06Aug2019 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.

