

Experimental Climate Monitoring and Prediction

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Highlights

- The IRI weekly rainfall forecast predicts up to 75 mm of total rainfall in Kandy, Nuwara Eliya, Badulla and Monaragala districts during 11 – 16 Sep.
- Between 4 - 9 Sep: up to 50 mm of rainfalls were recorded in Monaragala and Badulla districts on the 9th.
- From 3 – 9 Sep: up to 36 km/h, westerly 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 September 4th, Galle, Kalutara, Colombo, Gampaha, Hambantota and Monaragala districts received up to 20 mm of rainfall. On the 5th, Kurunegala district received up to 30 mm of rainfall; and Puttalam, Kalutara, Galle, Ratnapura and Hambantota districts up to 20 mm. On the 6th, Kegalle, Ratnapura, Nuwara Eliya, Monaragala and Ampara districts received up to 10 mm of rainfall; and Colombo, Kalutara, Matara and Badulla districts up to 5 mm. No significant rainfalls were recorded in any part of the island on the 7th and 8th. On the 9th, Monaragala and Badulla districts received up to 50 mm of rainfall; and Kalutara, Ratnapura, Kegalle, Galle, Matara and Kandy districts up to 10 mm.

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

Monthly Monitoring: During August – Above average rainfall conditions up to 360 mm were experienced by Gampaha, Colombo, Kalutara, Galle, Matara, Kegalle and Ratnapura districts; up to 240 mm in Puttalam, Kurunegala, Nuwara Eliya, Anuradhapura, Polonnaruwa, Matale, Monaragala and Hambantota; and up to 120 mm in Jaffna, Kilinochchi, Mullaitivu, Mannar, Vavuniya, Ampara and Batticaloa. Below average rainfall conditions up to 180 mm were experienced Trincomalee and most parts of Badulla district. The CPC Unified Precipitation Analysis tool shows up to 750 mm of total rainfall in Ratnapura district; up to 500 mm in Gampaha, Colombo, Kalutara, Galle, Matara, Kegalle, and Nuwara Eliya districts; up to 300 mm in Puttalam, Kurunegala and Hambantota districts; and up to 200 mm in Kandy, Badulla and Monaragala 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

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

Predictions

Rainfall

14-day prediction:

NOAA NCEP models:

From 11th – 17th Sep: Total rainfall up to 85 mm on Colombo, Ratnapura and Matara districts; up to 65-75 mm in Gampaha, Kegalle and Hambantota districts; and up to 55-65 mm in Kalutara, Nuwara Eliya, Badulla and Monaragala districts.

From 18th – 24th Sep: Total rainfall up to 85 mm on Gampaha, Ratnapura and Galle districts; up to 65-75 mm in Kegalle, Matara and Hambantota districts; and up to 55-65 mm in Galle, Kalutara, Nuwara Eliya and Badulla districts.

IRI Model Forecast:

From 11th – 16th Sep: Total rainfall up to 75 mm is expected in Kandy, Nuwara Eliya, Badulla and Monaragala districts; and up to 50 mm in most parts of the island.

MJO based OLR predictions

For the next 15 days:

MJO shall suppress the rainfall in Sri Lanka in the next 10 days and shall not have an impact in the following 5 days.

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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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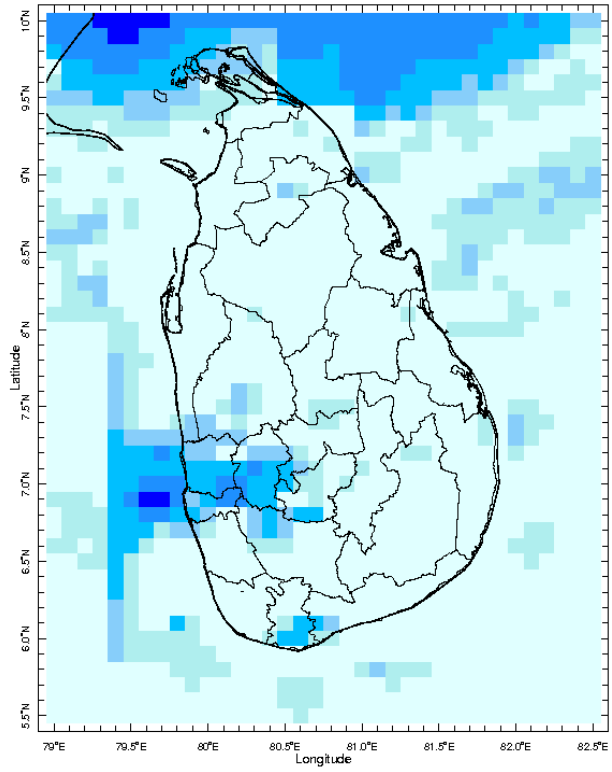
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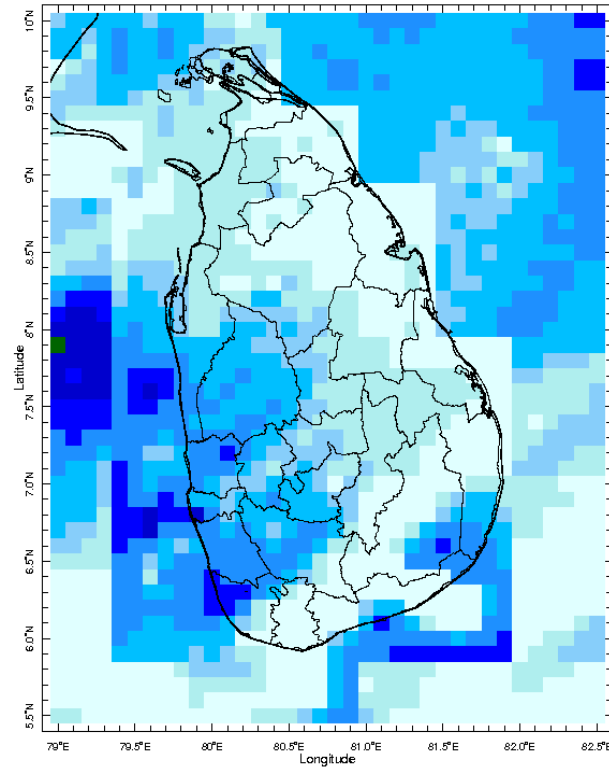
MONITORING

Daily Rainfall Monitoring

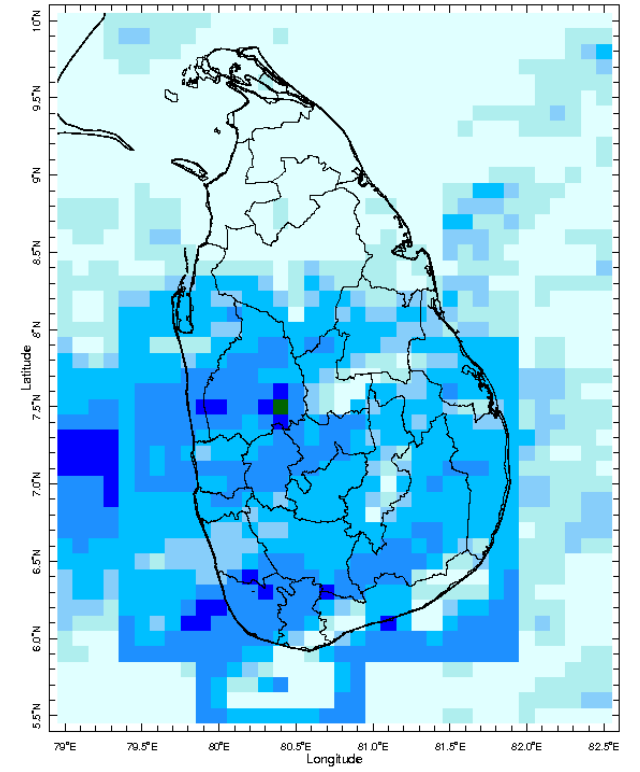
The following figures show the satellite observed rainfall in the last 7 days in Sri Lanka.



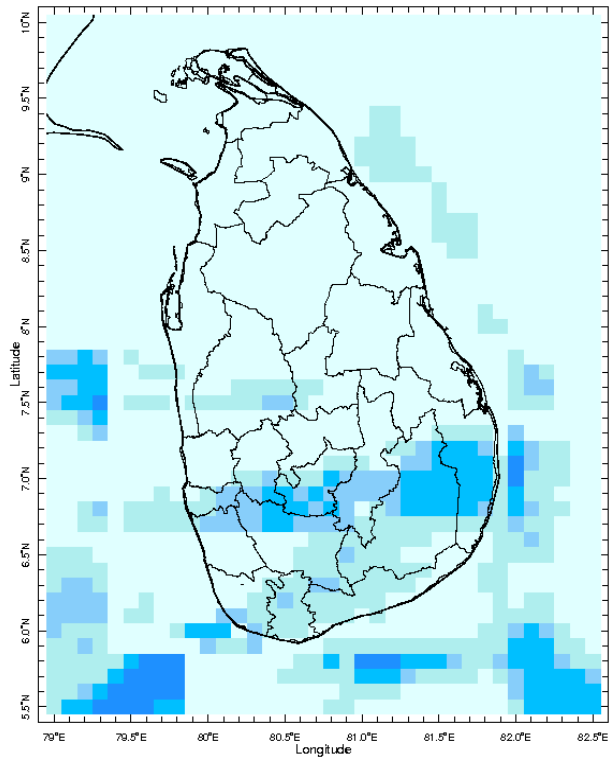
3 Sep 2019



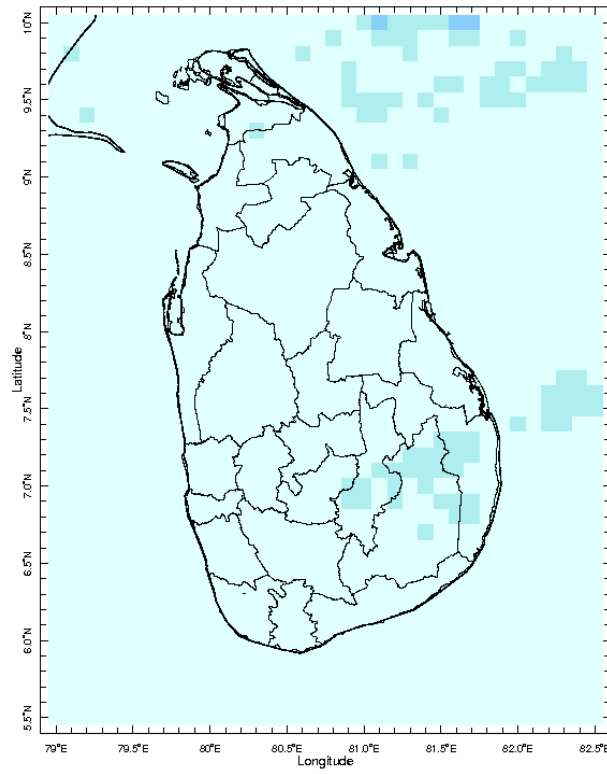
4 Sep 2019



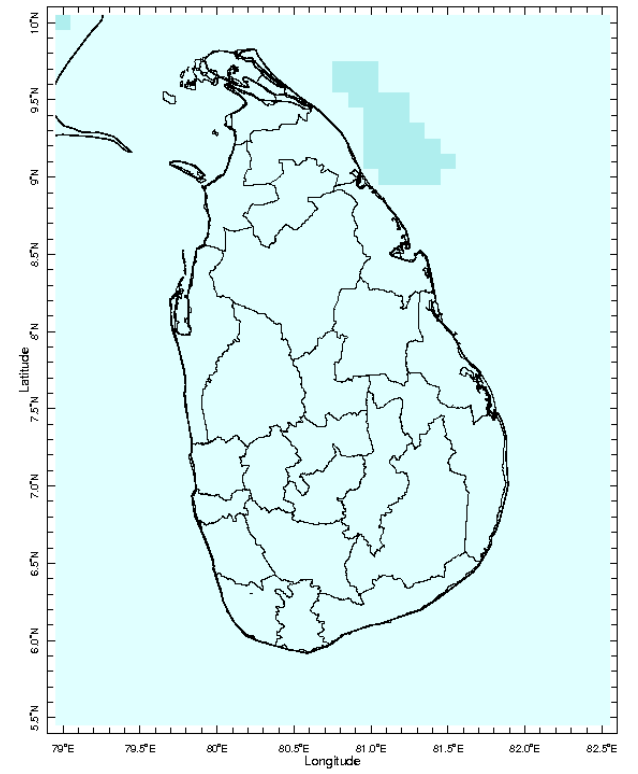
5 Sep 2019



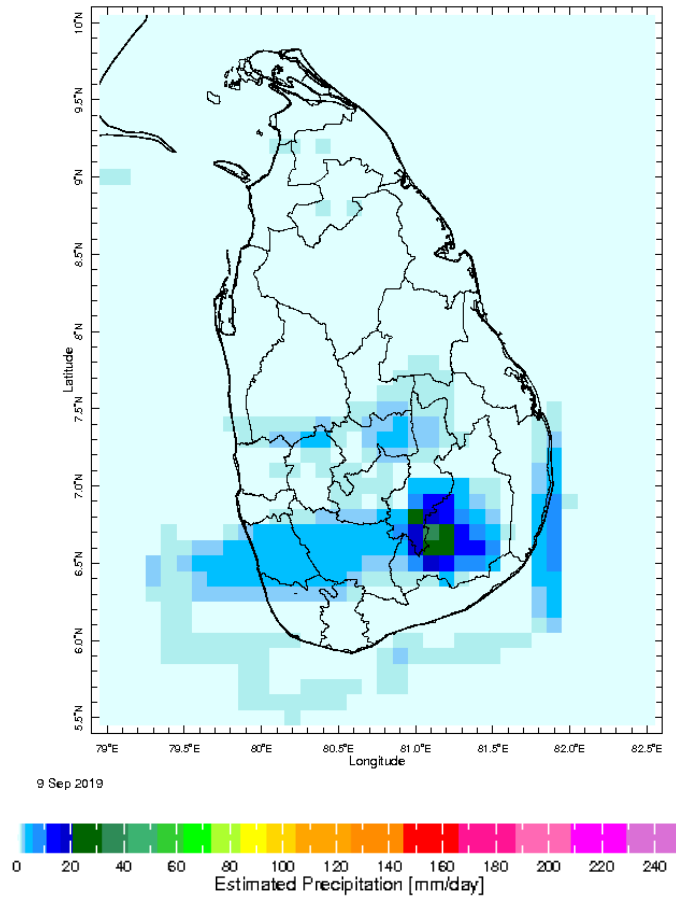
6 Sep 2019



7 Sep 2019

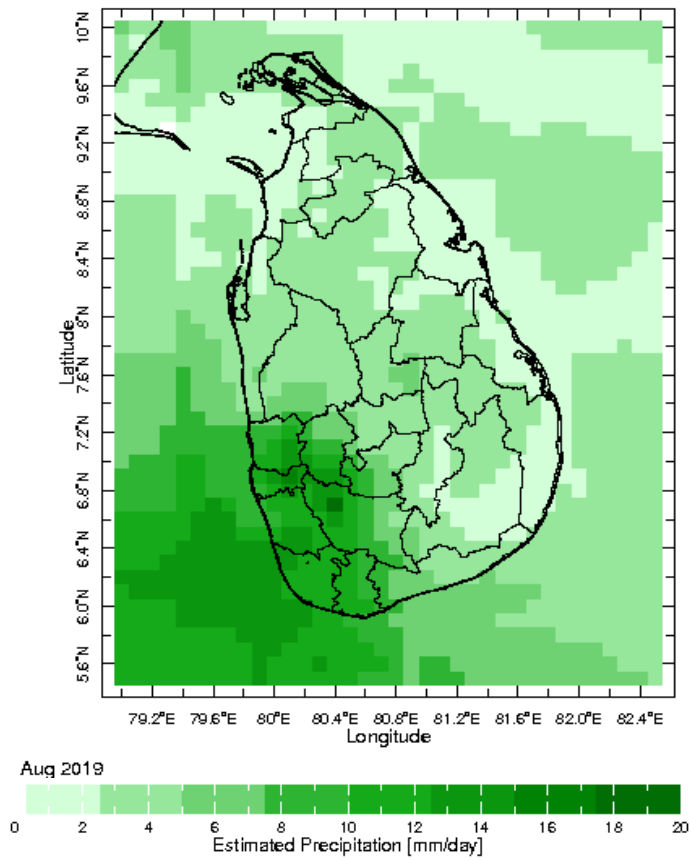


8 Sep 2019

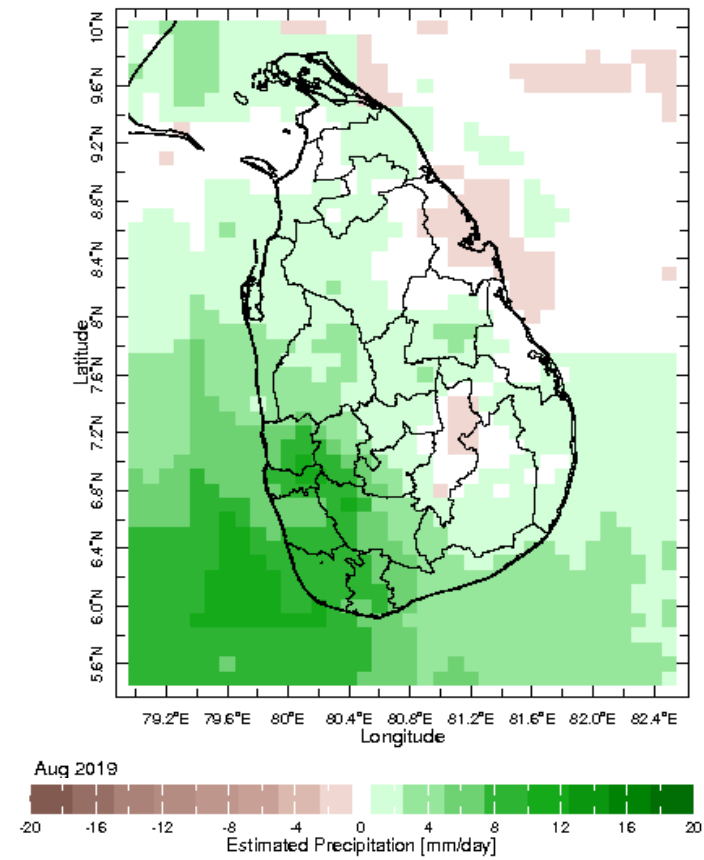


Monthly Rainfall Monitoring

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

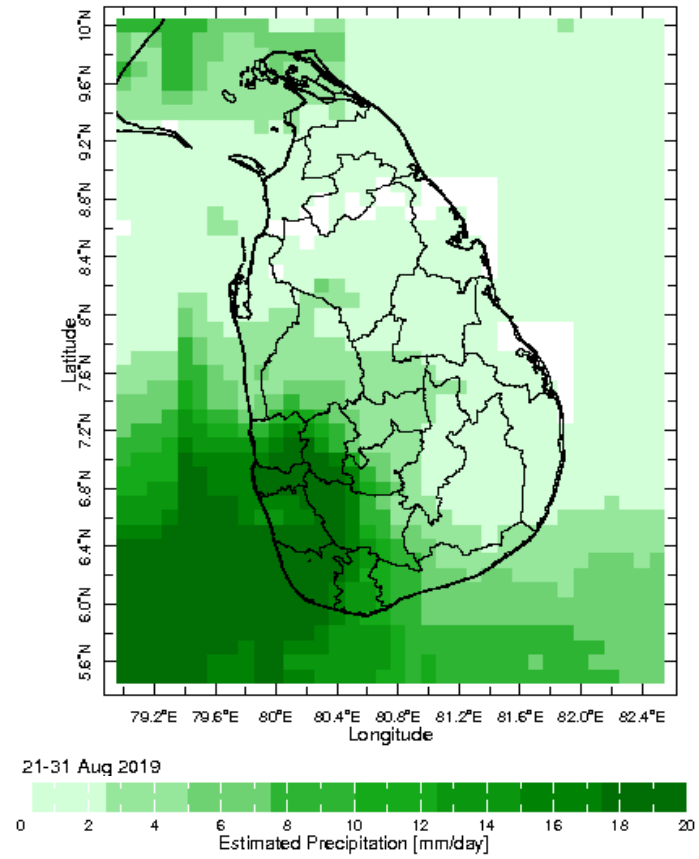
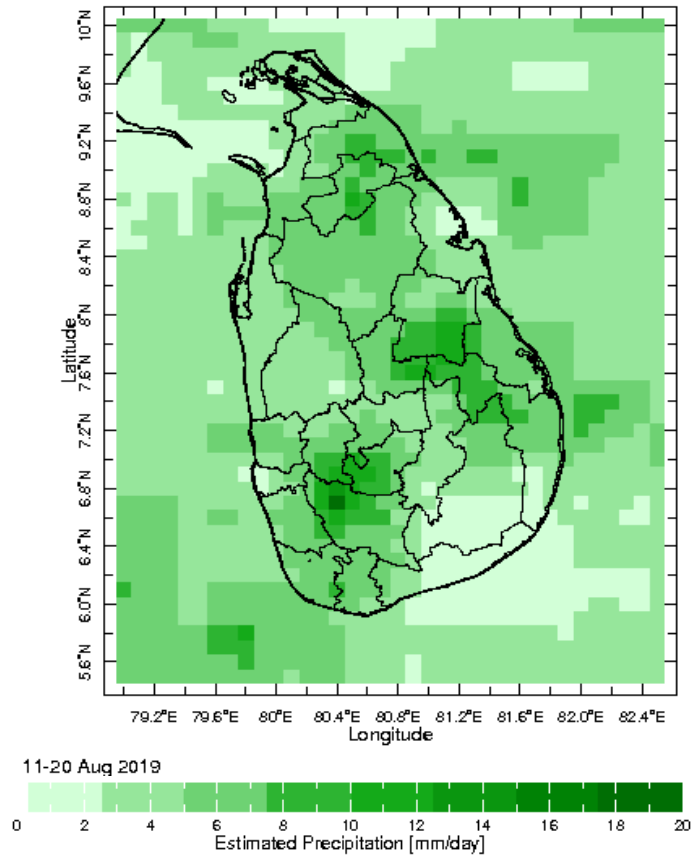


Monthly Average



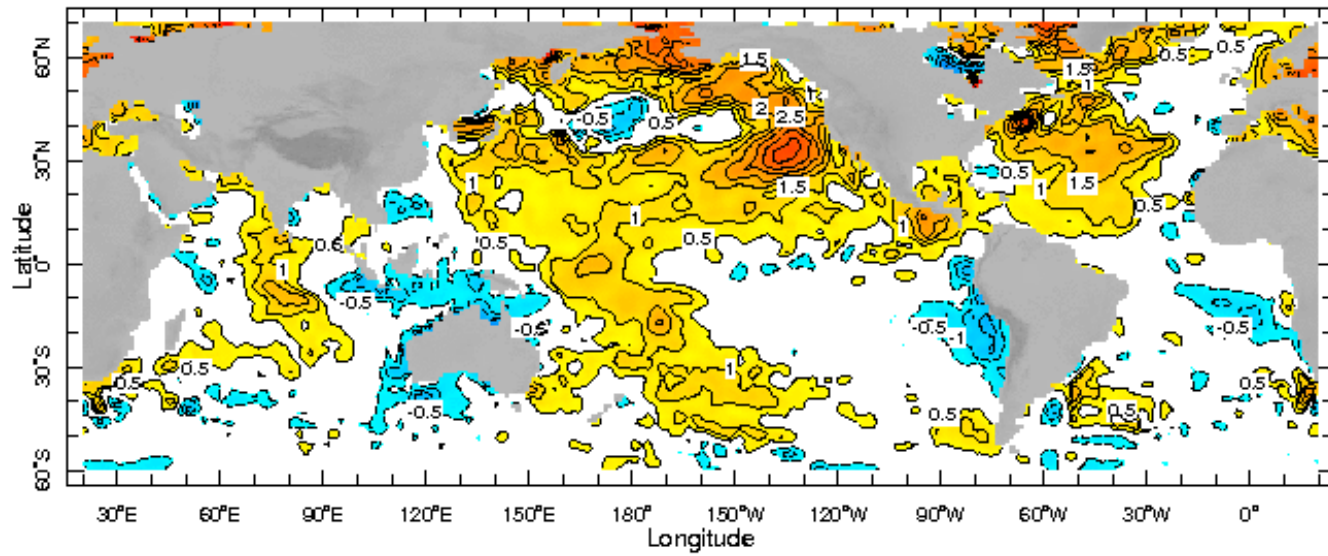
Monthly Anomaly

Dekadal (10 Day) Satellite Derived Rainfall Estimates

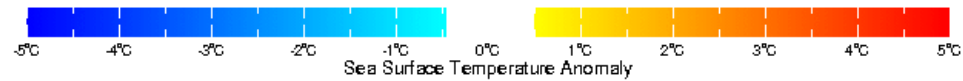


Weekly Average SST Anomalies

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



4 Sep 2019

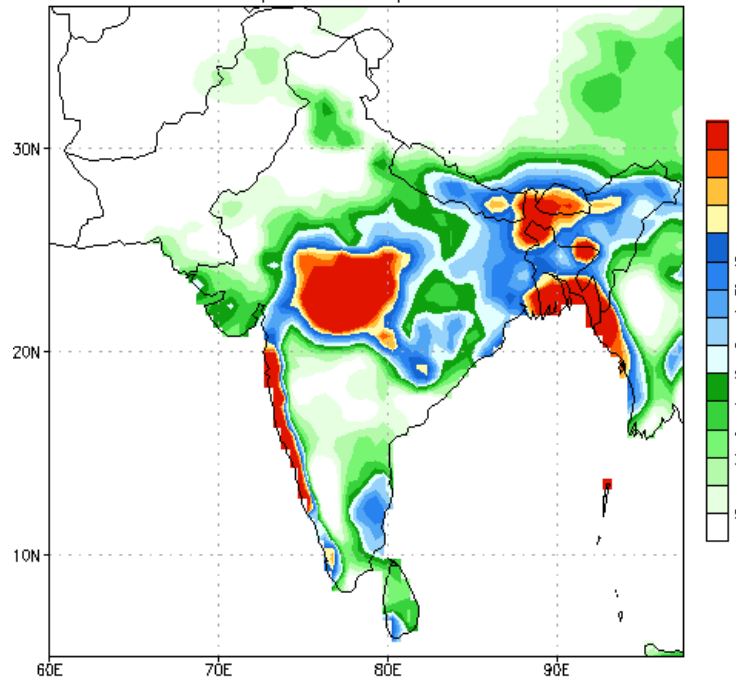


WORLDBATH topography

PREDICTIONS

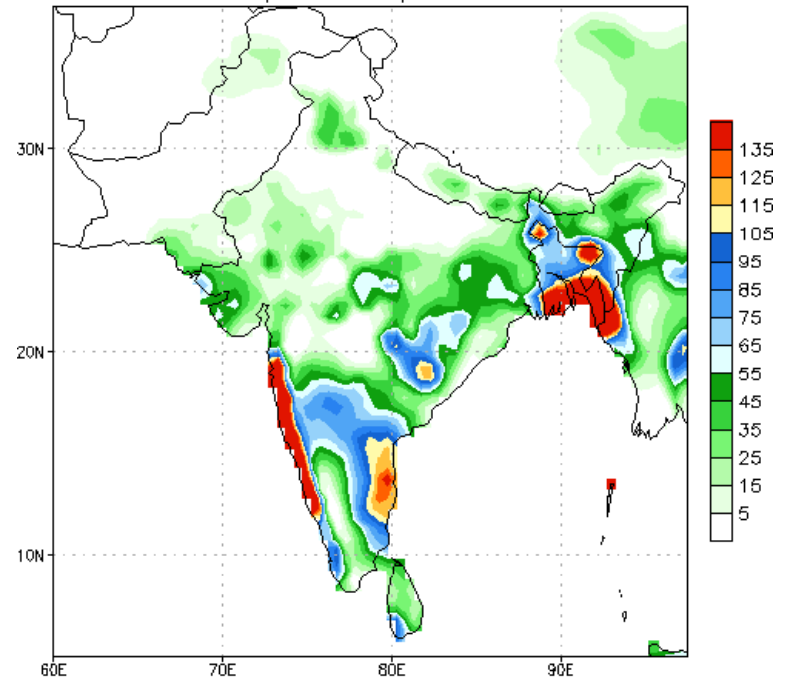
NCEP GFS 1- 14 Day prediction

NCEP GFS Ensemble Forecast 1-7 Day Precipitation (mm)
from: 11Sep2019
11Sep2019-17Sep2019 Accumulation



Bias correction based on last 30-day forecast error

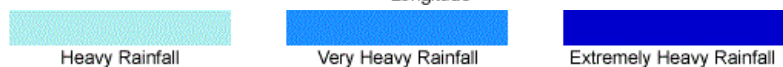
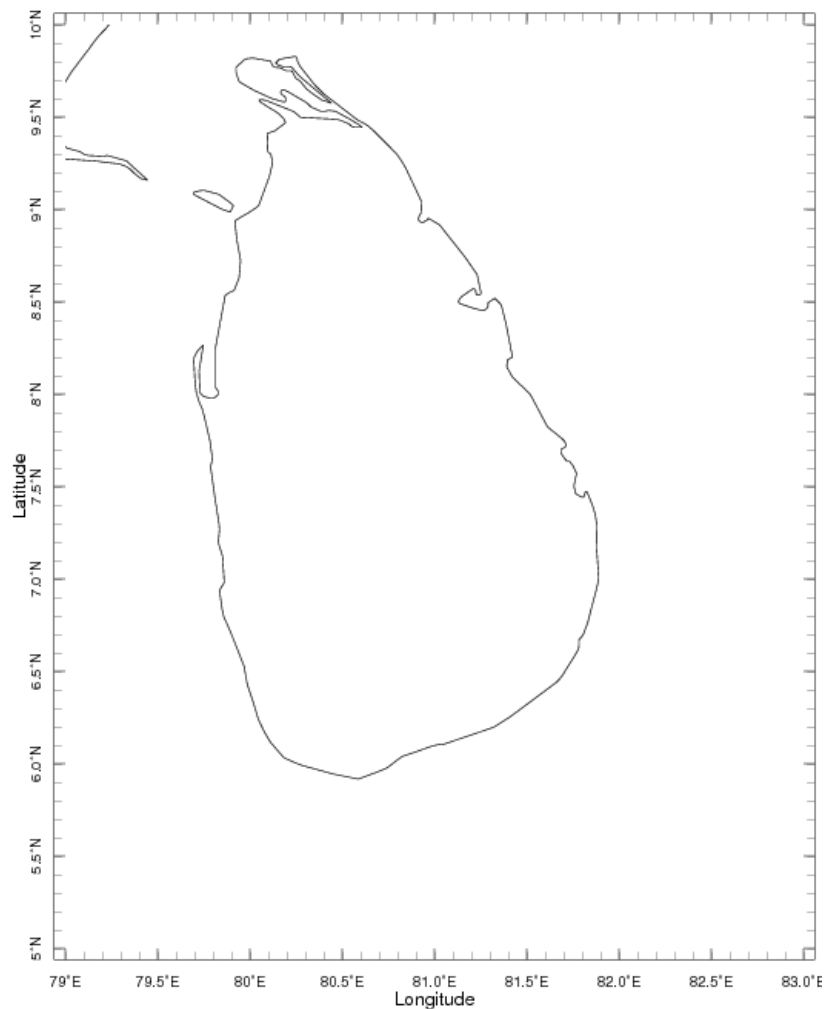
NCEP GFS Ensemble Forecast 8-14 Day Precipitation (mm)
from: 11Sep2019
18Sep2019-24Sep2019 Accumulation



Bias correction based on last 30-day forecast error

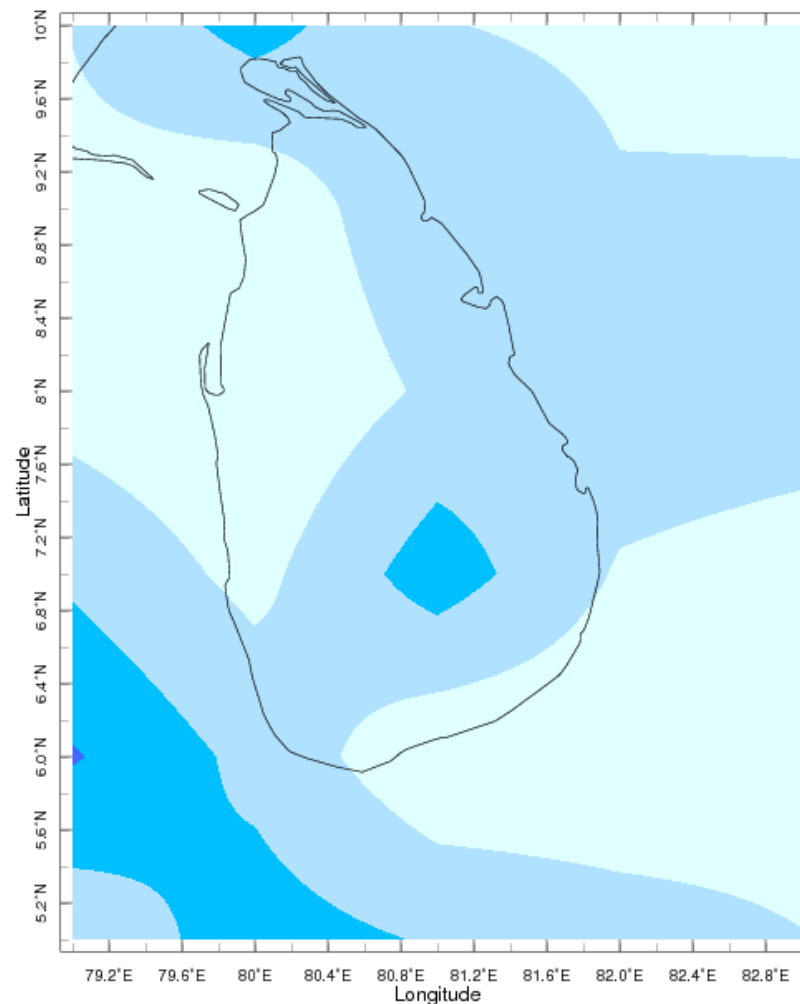
Total rainfall forecast from the IRI for next six days is provided in figures below. The figure to the left shows the expectancy of heavy rainfall events during these six days while the figure to the right is the prediction of total rainfall amount during this period.

Forecast for 10-15 Sep 2019 Issued 0000 10 Sep 2019



Extreme Rainfall Forecast

Forecast for 10-15 Sep 2019 Issued 0000 10 Sep 2019



Total Six Day Precipitation Forecast