

**2 April
2020**

EXPERIMENTAL CLIMATE MONITORING AND PREDICTION

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HIGHLIGHTS

Rainfall Forecast



- The NOAA weekly rainfall forecast predicts up to 50 mm of total rainfall in Nuwara Eliya and Badulla districts during 1 - 6 Apr.

Monitored Rainfalls



- Between 24 - 31 Mar: up to 70 mm of rainfalls were recorded in Kegalle, Badulla, Monaragala and Ratnapura districts on the 30th.

Monitored Wind



- From 24 - 30 Mar: up to 18 km/h, easterly winds were experienced by the entire island.

Monitored Sea Surface



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

Monitoring

Rainfall

Weekly Monitoring

Date	Rainfall
24 th March	Up to 5 mm in Ratnapura district.
25 th March	Up to 10 mm in Puttalam, Kurunegala, Gampaha and Colombo districts; up to 5 mm in Kegalle and Ratnapura districts.
26 th March	Up to 5 mm in Kegalle and Nuwara Eliya districts.
27 th March	Up to 5 mm in Galle and Matara districts.
28 th March	Up to 5 mm in Gampaha and Kegalle districts.
29 th March	Up to 20 mm in Kurunegala and Kegalle districts; up to 10 mm in Mannar, Puttalam, Anuradhapura, and Kandy districts.
30 th March	Up to 70 mm in Kegalle, Badulla, Monaragala and Ratnapura districts; up to 50 mm in Kalutara, Nuwara Eliya, Kandy, Matara and Galle districts; up to 30 mm in Kurunegala and Gampaha districts; and up to 20 mm in Puttalam, Colombo, and Hambantota districts.



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Date	Rainfall
31 st March	Up to 5 mm in Puttalam, Gampaha, Kegalle, Ratnapura, Monaragala, Kalutara and Galle districts.

Total Rainfall for the Past Week

The RFE 2.0 tool shows total up to 50-75 mm in Monaragala district; up to 25-50 mm in Kegalle, Kandy, Ratnapura, Kalutara and Galle districts; and up to 10-25 mm in Kurunegala, Puttalam, Gampaha, Colombo, and Matara districts. Below average rainfall up to 50-100 mm is shown for in Badulla and Monaragala districts; and up to 25-50 mm in Anuradhapura, Polonnaruwa, Matale, Kurunegala, Kandy, Nuwara Eliya, Ratnapura, Matara and Hambantota districts.

Monthly Monitoring

During March – Below average rainfall conditions up to 240 mm were experienced by Anuradhapura, Kurunegala, Matale, Polonnaruwa, Ampara, Badulla, Monaragala, Kandy, Nuwara Eliya, Kegalle, Ratnapura, Colombo, Kalutara, Galle, Matara and Hambantota districts; and up to 150 mm in rest of the island. The CPC Unified Precipitation Analysis tool shows up to 100 mm of total rainfall in Kurunegala, Kegalle, Ratnapura, Nuwara Eliya, Kalutara, Galle and Matara districts; and up to 75 mm in Puttalam, Gampaha, Colombo, Badulla and Kandy districts.

Ocean State (Text Courtesy IRI)

Pacific sea state: March 19, 2020

SSTs in the east-central Pacific were neutral, but above average during mid-March. Patterns in atmospheric variables are split between neutral and borderline El Niño conditions. Most model forecasts favor warm-neutral SST conditions during spring, cooling to average by early summer. The official CPC/IRI outlook is consistent with these model forecasts, calling for continuation of ENSO-neutral.

Indian Ocean State

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



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Predictions

Rainfall

14-day prediction: NOAA NCEP models

From 1st – 7th Apr: No Rainfall.

From 8th – 15th Apr: No Rainfall.

NOAA Model Forecast:

From 1st – 6th Apr: Total rainfall up to 50 mm in Nuwara Eliya and Badulla districts; and up to 25 mm is expected in most parts of the island.

MJO based OLR predictions

For the next 15 days:

MJO shall enhance the rainfall in Sri Lanka in next 5 days; and shall suppress in the following 10 days.

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Official hydro-meteorological statements are provided by the Sri Lanka Department of Meteorology and Department of Irrigation.



FECT Web

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



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Weekly Hydro- Meteorological Report for Sri Lanka

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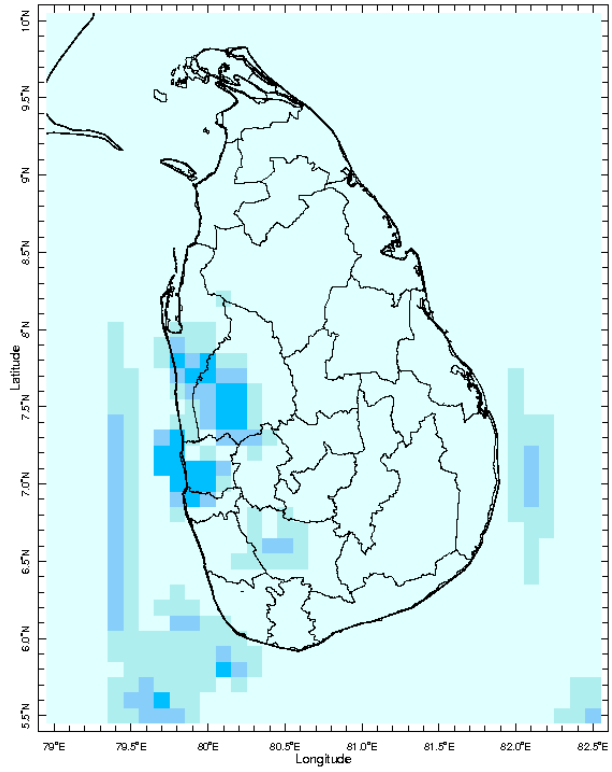
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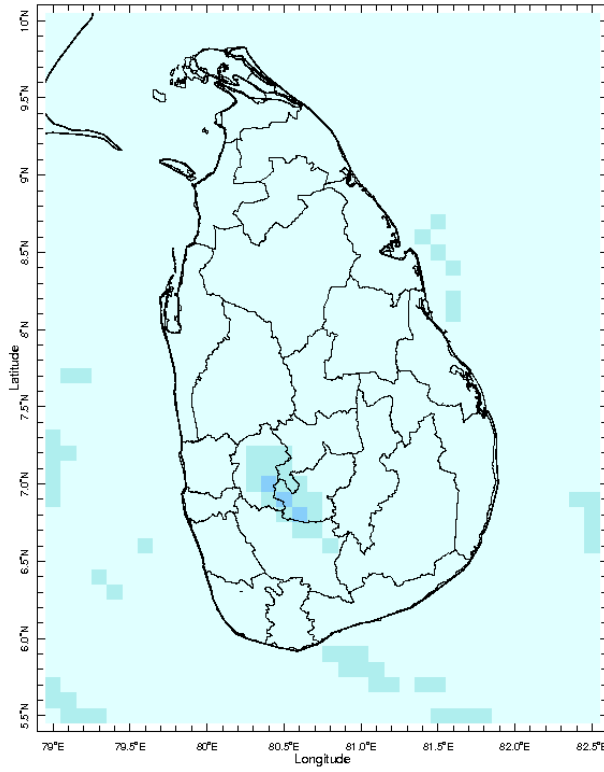
MONITORING

Daily Rainfall Monitoring

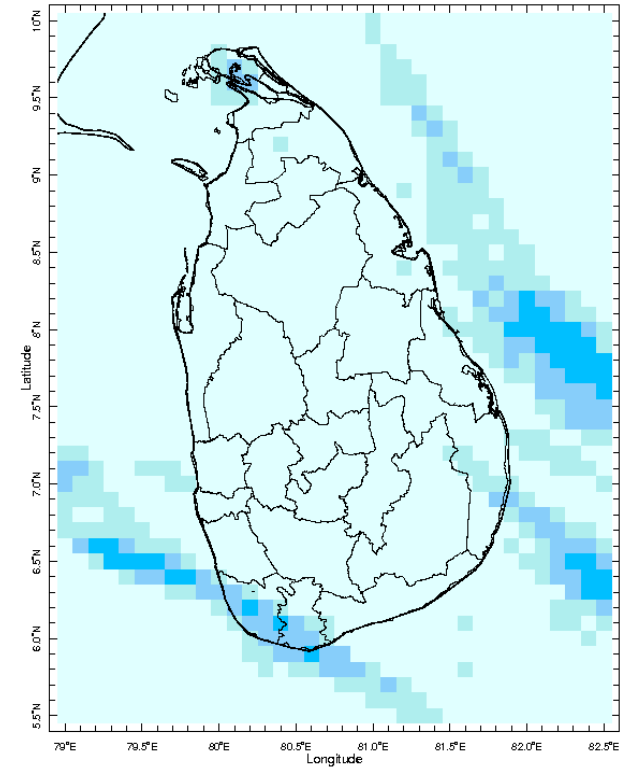
The following figures show the satellite observed rainfall in the last 7 days in Sri Lanka.



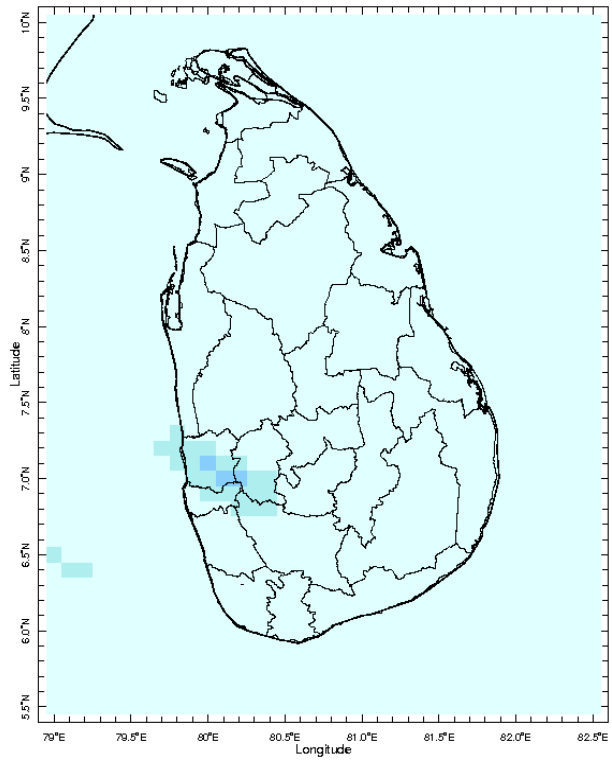
25 Mar 2020



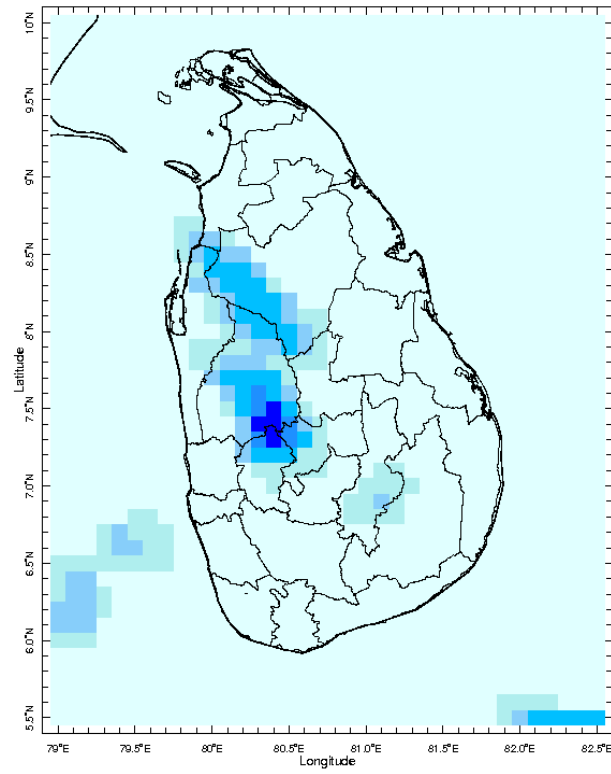
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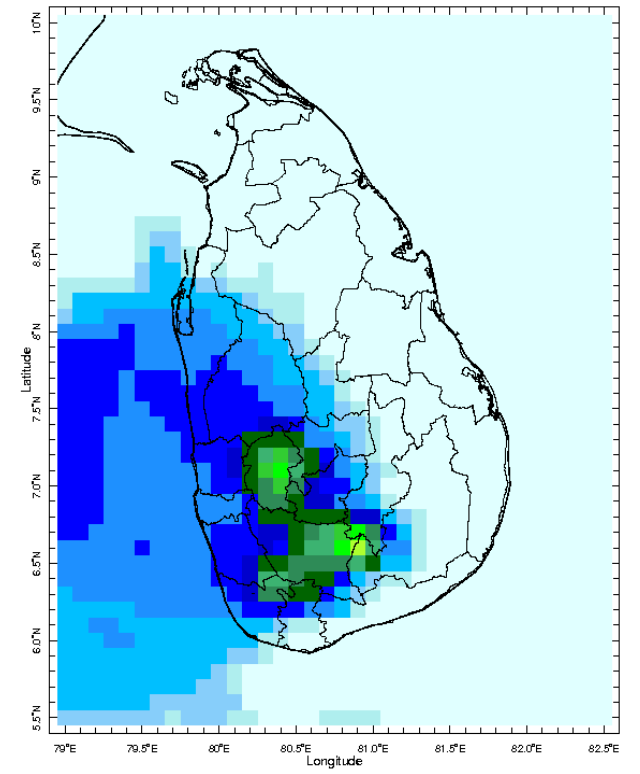
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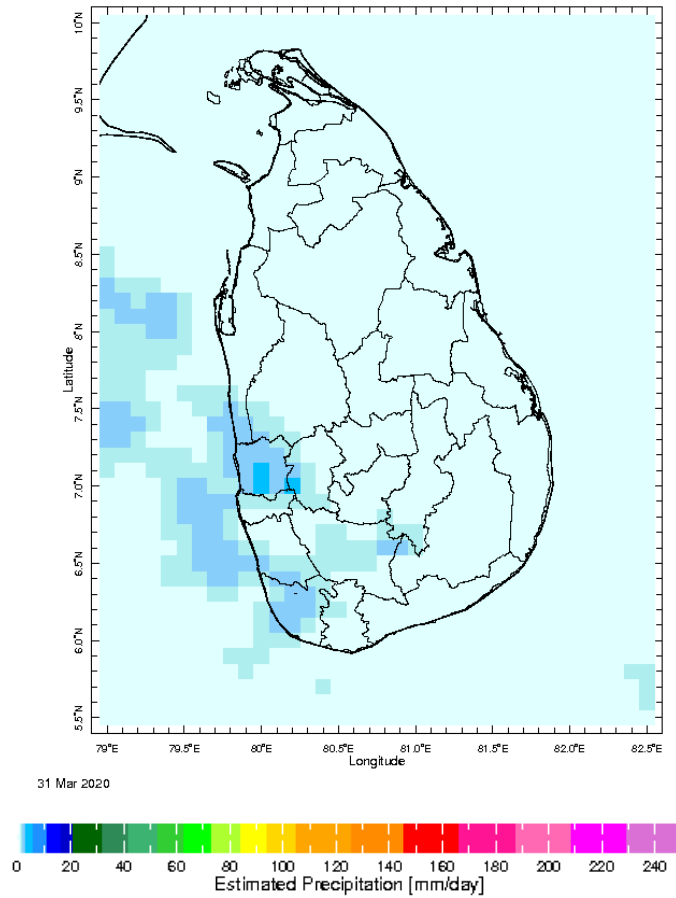
28 Mar 2020



29 Mar 2020

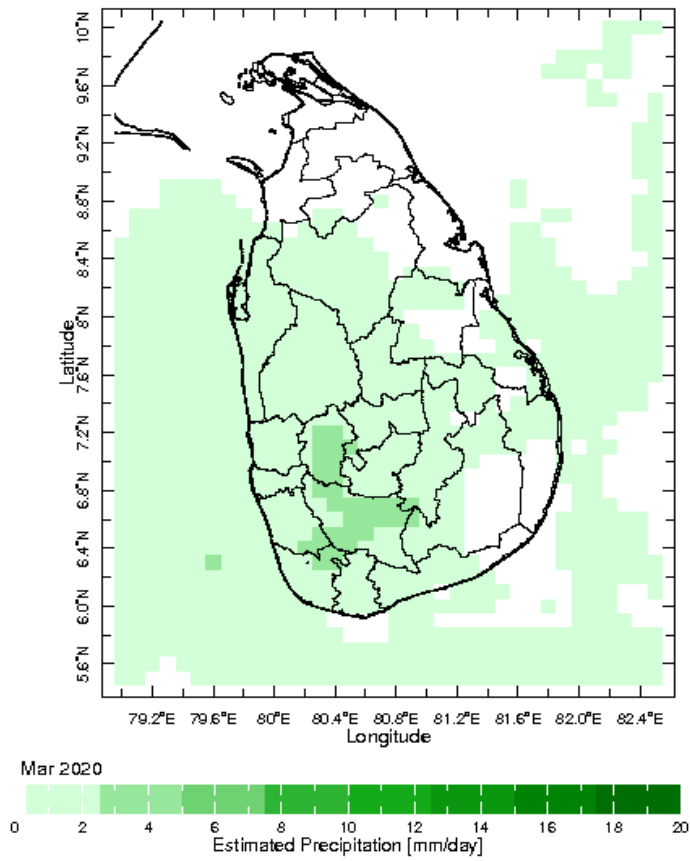


30 Mar 2020

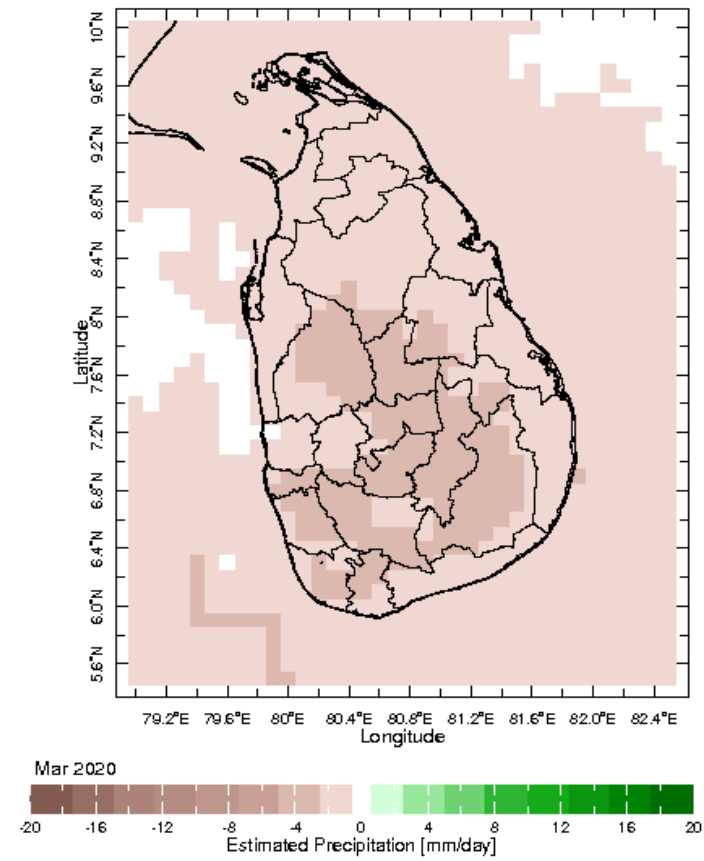


Monthly Rainfall Monitoring

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

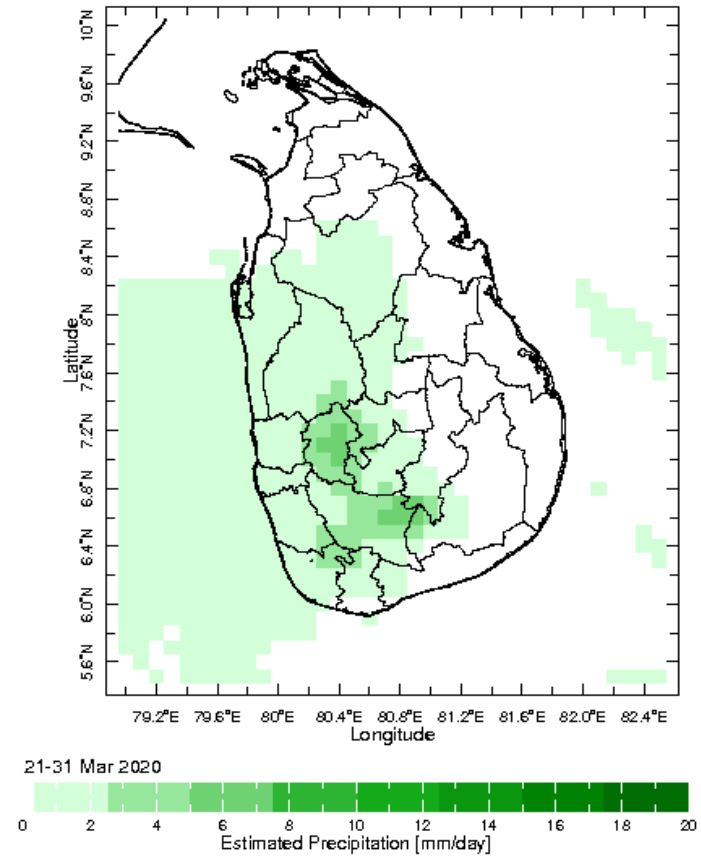
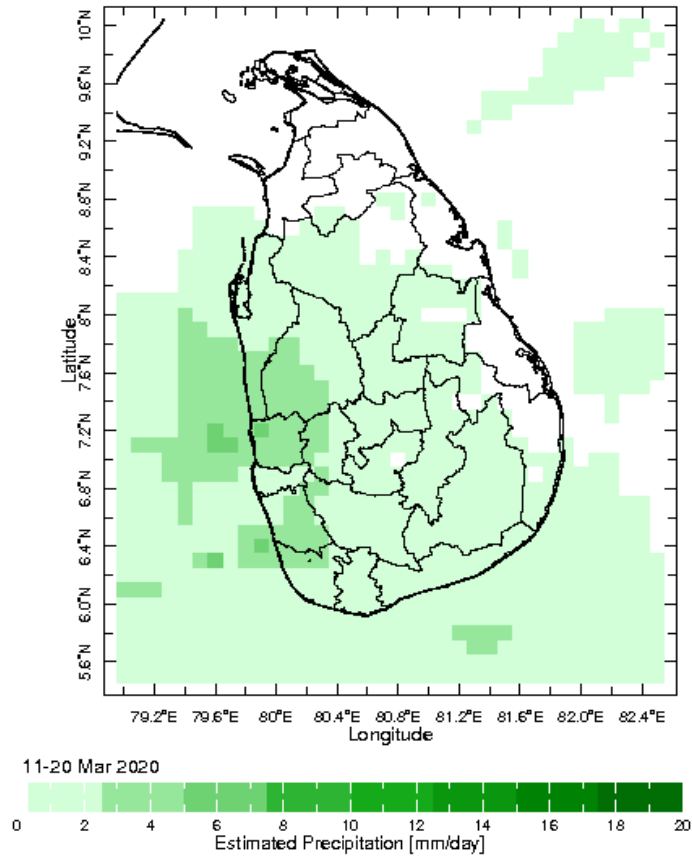


Monthly Average



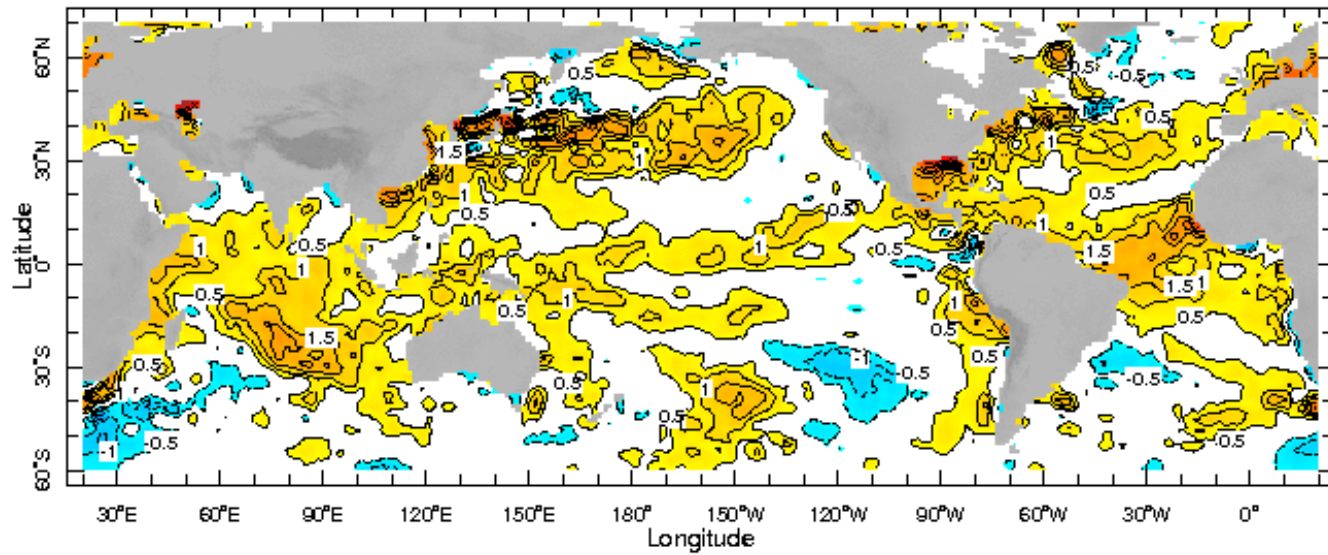
Monthly Anomaly

Dekadal (10 Day) Satellite Derived Rainfall Estimates

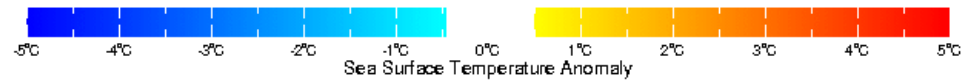


Weekly Average SST Anomalies

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



25 Mar 2020

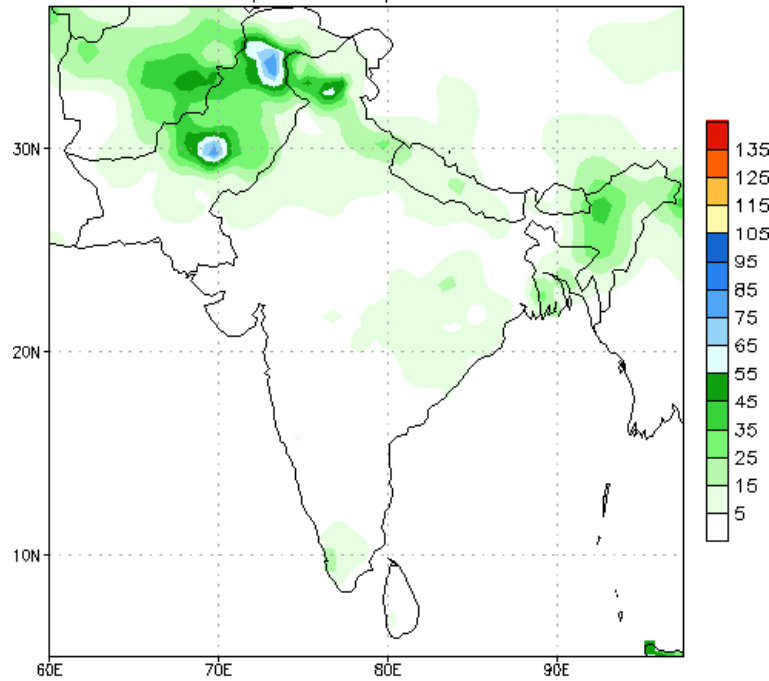


WORLDBATH topography

PREDICTIONS

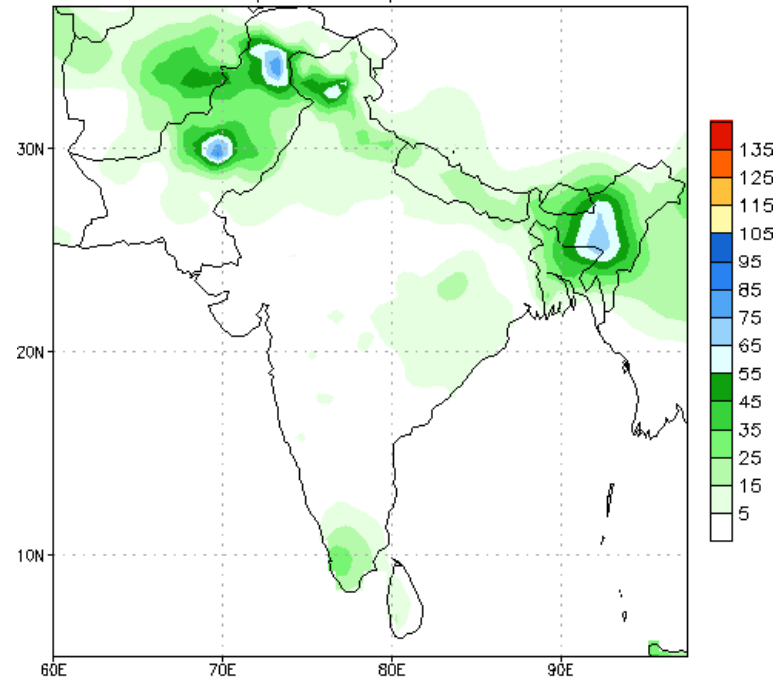
NCEP GFS 1- 14 Day prediction

NCEP GFS Ensemble Forecast 1-7 Day Precipitation (mm)
from: 01Apr2020
01Apr2020-07Apr2020 Accumulation



Bias correction based on last 30-day forecast error

NCEP GFS Ensemble Forecast 8-14 Day Precipitation (mm)
from: 01Apr2020
08Apr2020-14Apr2020 Accumulation



Bias correction based on last 30-day forecast error

WRF Model Forecast (from IMD Chennai)

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.

