

**7 May
2020**

EXPERIMENTAL CLIMATE MONITORING AND PREDICTION

By: Ruchira Lokuhetti, Divaskar Sathyendra, Chayana Gunathilake, Lareef Zubair and Michael Bell¹ (FECT and IRI¹)

HIGHLIGHTS

Rainfall Forecast



- The NOAA weekly rainfall forecast predicts up to 100 mm of total rainfall in Badulla, Nuwara Eliya and Kandy districts during 4- 9 May.

Monitored Rainfalls



- Between 29 Apr - 5 May: up to 140 mm of rainfall was recorded in Anuradhapura district on the 30th.

Monitored Wind



- From 28 Apr - 4 May: up to 18 km/h, northwesterly winds were experienced by the southern regions of the island.

Monitored Sea Surface



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

Monitoring

Rainfall

Weekly Monitoring

Date	Rainfall
29th April	Up to 70 mm in Ampara, Badulla and Monaragala districts; up to 60 mm in Matale, Kandy and Ratnapura districts; up to 30 mm in Kegalle and Nuwara Eliya districts; and up to 20 mm in Puttalam, Kalutara, Galle, Polonnaruwa and Batticaloa districts.
30th April	Up to 140 mm in Anuradhapura district; up to 70 mm in Vavuniya district; up to 60 mm in Ratnapura, Galle, Monaragala and Hambantota districts; up to 50 mm in Mullaitivu, Mannar, Kalutara, Polonnaruwa and Badulla districts; up to 30 mm in Kilinochchi, Trincomalee, Kegalle, Kandy and Nuwara Eliya districts; and up to 20 mm in Puttalam, Matale, Gampaha and Colombo districts.
1st May	Up to 120 mm in Anuradhapura district; up to 70 mm in Trincomalee and Polonnaruwa districts; up to 50 mm in Vavuniya, Monaragala and Hambantota districts; up to 30 mm in Ratnapura and Badulla districts; and up to 20 mm in Mullaitivu and Mannar districts.
2nd May	Up to 20 mm in Hambantota district.



Federation for Environment, Climate and Technology

c/o, Maintenance Office, Mahaweli Authority, Digana Village, Rajawella, Sri Lanka.

Phone (+94) 81-2376746, 2300415 E-mail: fectsl@gmail.com

Web Site <http://www.climate.lk>

Date	Rainfall
3 rd May	Up to 60 mm in Ampara, Monaragala, Colombo, Ratnapura, Galle and Matara districts; up to 50 mm in Gampaha, Kurunegala, Nuwara Eliya, Kegalle, Kalutara and Ratnapura districts; up to 30 mm in Kandy district; and up to 20 mm in Hambantota and Batticaloa districts.
4 th May	Up to 120 mm in Anuradhapura district; up to 100 mm in Vavuniya districts; up to 70 mm in Ratnapura, Badulla and Monaragala districts; up to 60 mm in Nuwara Eliya district; up to 50 mm in Kegalle and Mannar districts; up to 30 mm in Hambantota district; and up to 20 mm in Puttalam, Kurunegala, Matale, Kandy, Colombo, Kalutara and Matara districts.
5 th May	Up to 50 mm in Mannar and Anuradhapura districts; up to 30 mm in Kilinochchi, Vavuniya, Kurunegala, Gampaha, Kegalle, Ratnapura and Monaragala districts; up to 20 mm in most parts of the island.

Total Rainfall for the Past Week

The RFE 2.0 tool shows total up to 200-300 mm in Anuradhapura district; up to 150-200 mm in Vavuniya and Monaragala districts; up to 100-150 mm in Kegalle, Nuwara Eliya, Ratnapura Badulla and Ampara districts; and up to 75-100 mm in Mannar, Colombo, Galle and Hambantota districts. Above average rainfall up to 200-300 mm is shown for in Anuradhapura district; up and to 100-200 mm in Vavuniya and Badulla districts; and up to 50-100 mm in Mannar, Kegalle, Ratnapura, Ampara and Badulla districts. Below average rainfall up to 10-25 mm is shown for in Jaffna, Trincomalee and Batticaloa districts.

Monthly Monitoring

During April – Above average rainfall conditions up to 360 mm were experienced by Ratnapura, Badulla and Monaragala districts; up to 240 mm in Anuradhapura, Kegalle, Kandy and Matara districts; and up to 120 mm in Vavuniya, Matara, Nuwara Eliya, Colombo, Kalutara, Galle and Hambantota. Below average rainfall conditions up to 240 mm were experienced by Jaffna, Kilinochchi, Mullaitivu and Gampaha districts; and up to 120 mm in Badulla, Polonnaruwa and Trincomalee districts. The CPC Unified Precipitation Analysis tool shows up to 750 mm of total rainfall in Kegalle, Ratnapura and Monaragala districts; and up to 500 mm in Anuradhapura, Kurunegala, Matale, Kandy, Nuwara Eliya, Colombo, Kalutara, Colombo, Galle and Matara districts.

Ocean State *(Text Courtesy IRI)*

Pacific sea state: April 20, 2020

SSTs in the east-central Pacific were near the borderline of weak El Niño during mid-April. However, patterns in atmospheric variables were mainly neutral. Most model forecasts favor warm-neutral SST conditions during the rest of spring, cooling to average by summer. The official CPC/IRI outlook is consistent with these model forecasts, calling for continuation of ENSO-neutral through fall.



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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 6th - 12th May: Total rainfall more than 135 mm in Galle and Matara districts; up to 125 mm in Ratnapura district; up to 115 mm in Monaragala district; and up to 105 mm in Gampaha, Badulla and Hambantota districts.

From 13th - 19th May: Total rainfall up to 95 mm in Galle and Matara districts; up to 85 mm in Ratnapura district; and up to 75 mm in Kurunegala, Gampaha, Colombo and Kegalle districts.

NOAA Model Forecast:

From 4th – 9th May: Total rainfall up to 100 mm in Badulla, Nuwara Eliya and Kandy districts; up to 75 mm in Matale, Kegalle, Ratnapura, Monaragala and Ampara districts; and up to 50 mm in Trincomalee, Batticaloa, Polonnaruwa, Hambantota, Matara, Galle, Kalutara, Colombo, Gampaha, Kurunegala and Anuradhapura districts.

MJO based OLR predictions

For the next 15 days:

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

¹ International Research Institute for Climate and Society, Earth Institute at Columbia University, New York.
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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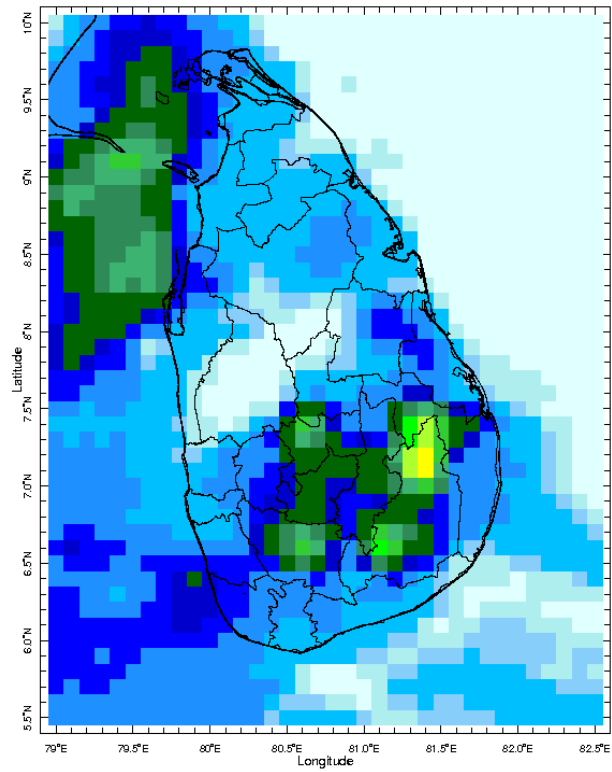
2. Predictions

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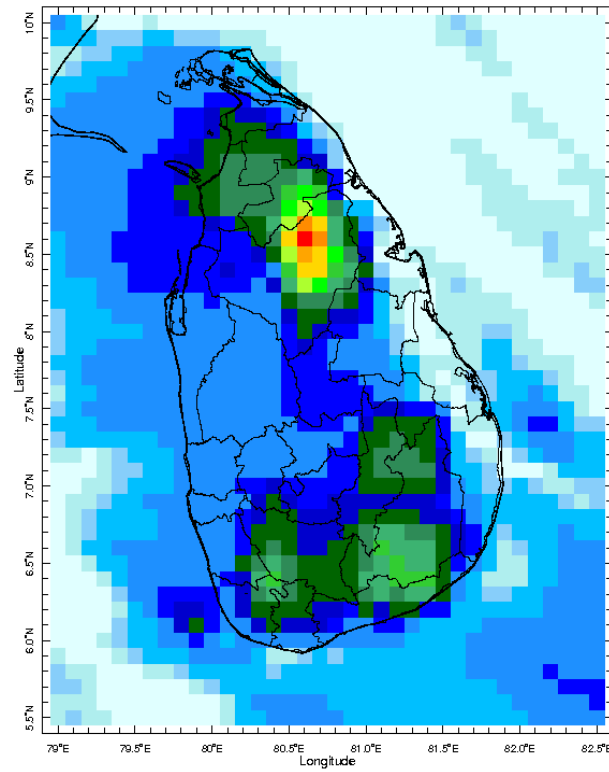
MONITORING

Daily Rainfall Monitoring

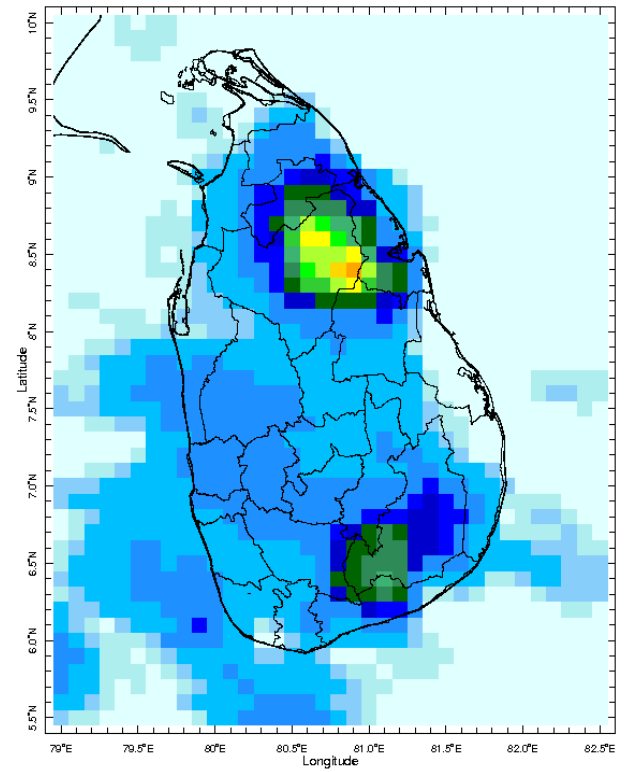
The following figures show the satellite observed rainfall in the last 7 days in Sri Lanka.



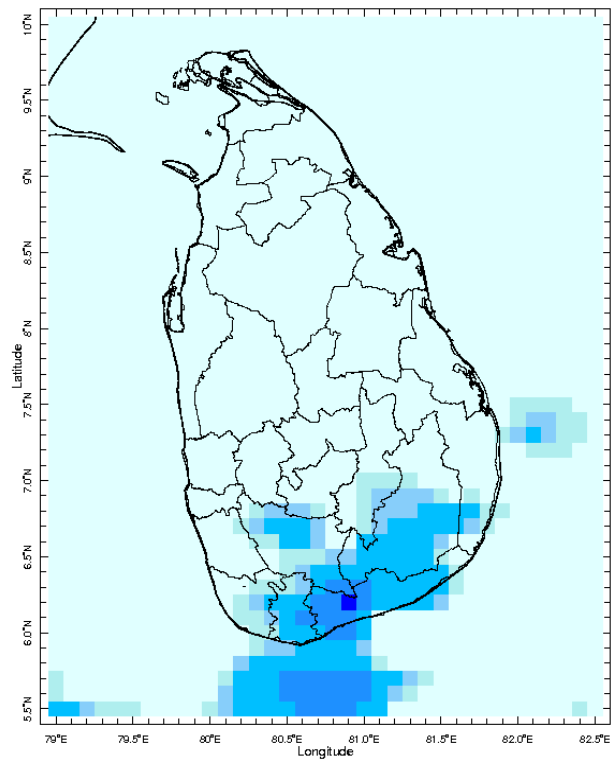
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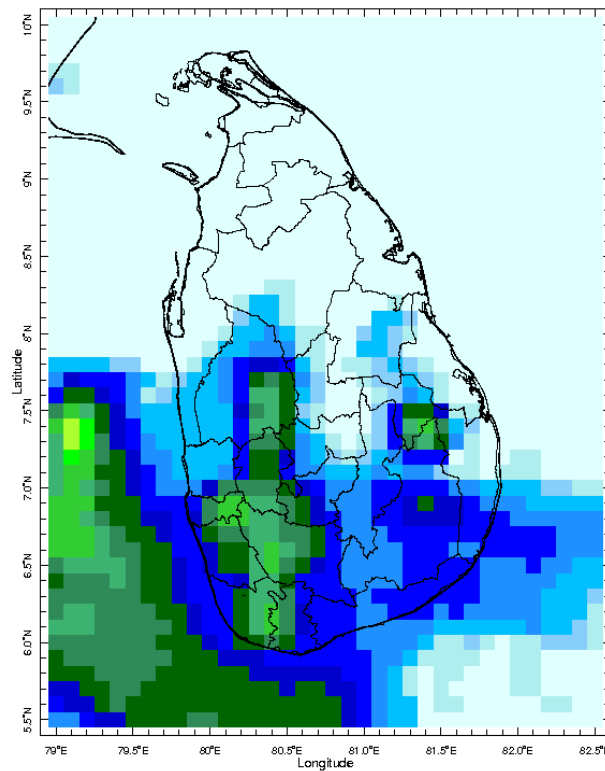
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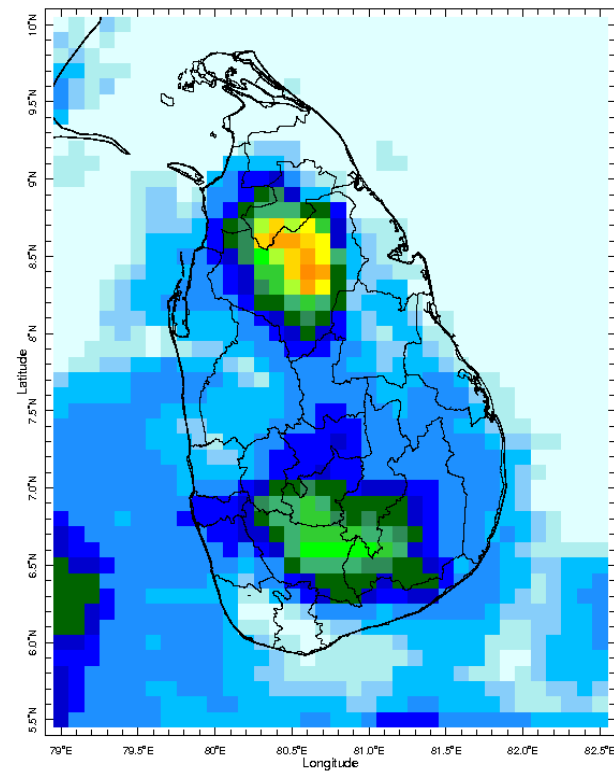
1 May 2020



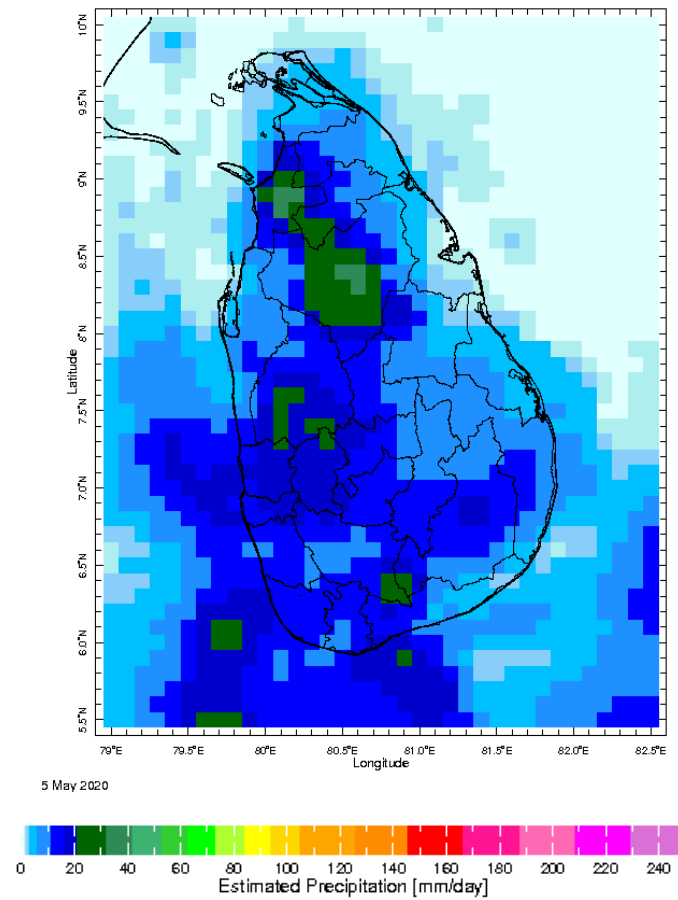
2 May 2020



3 May 2020

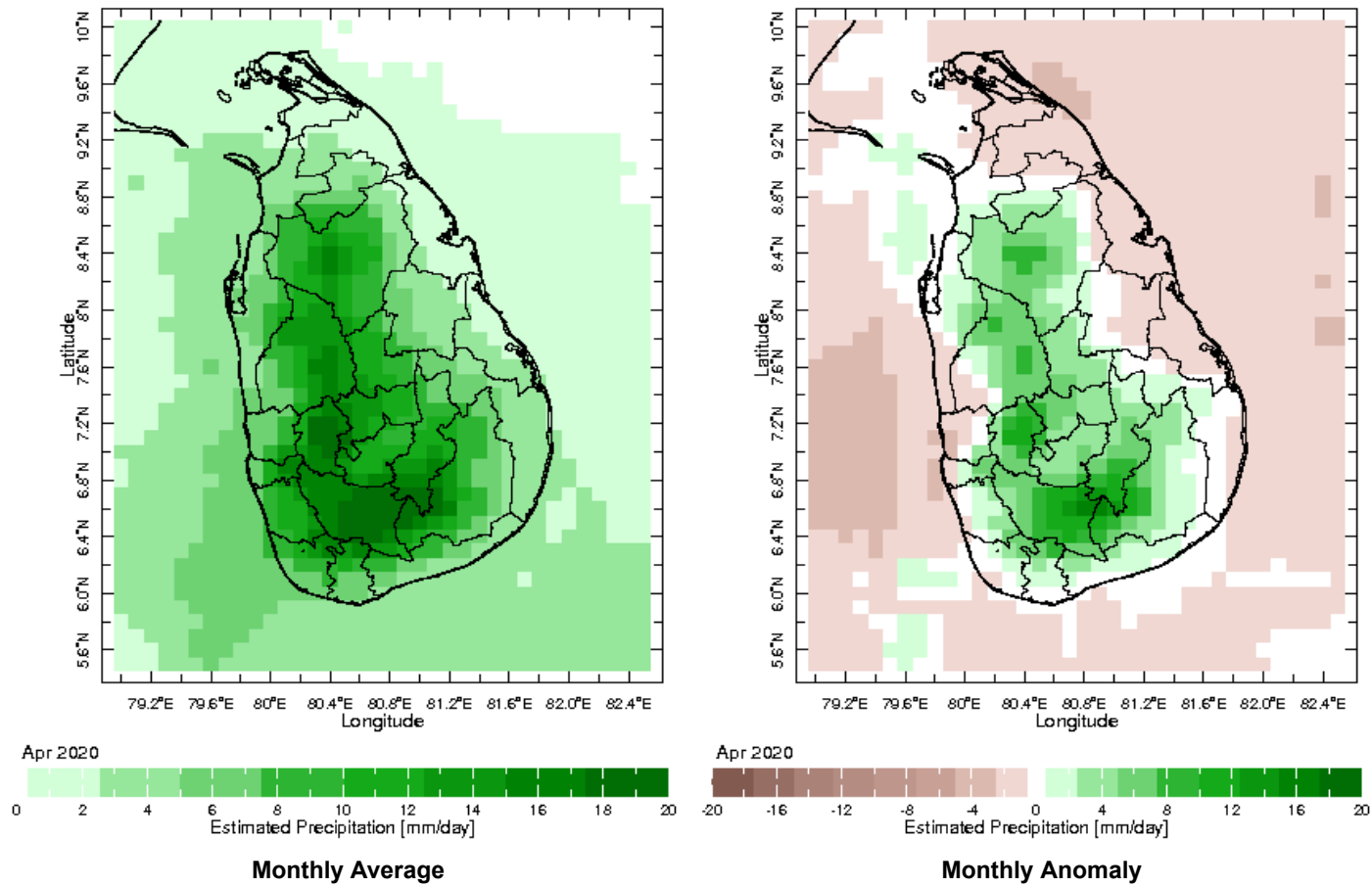


4 May 2020

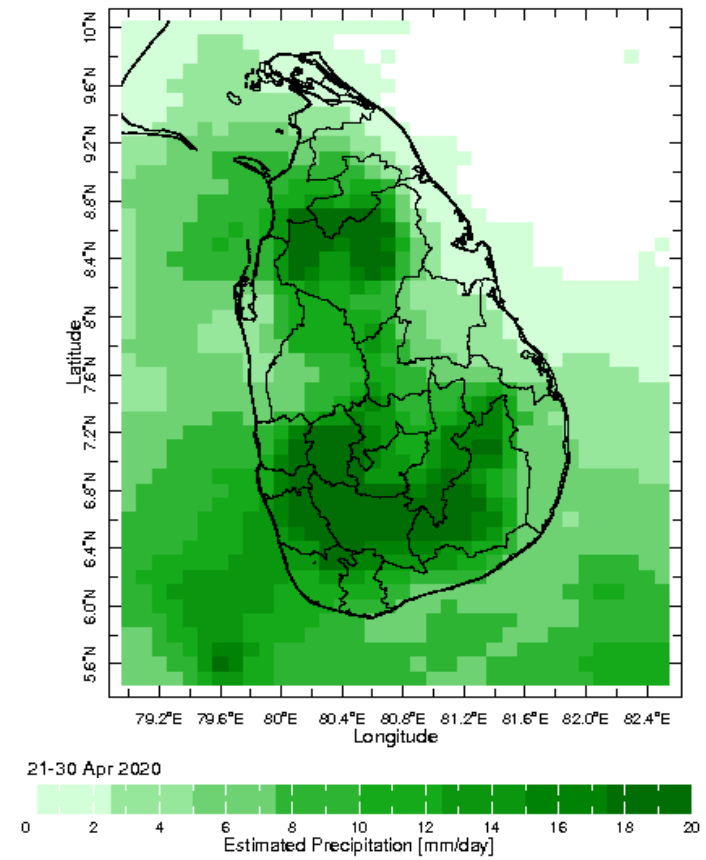
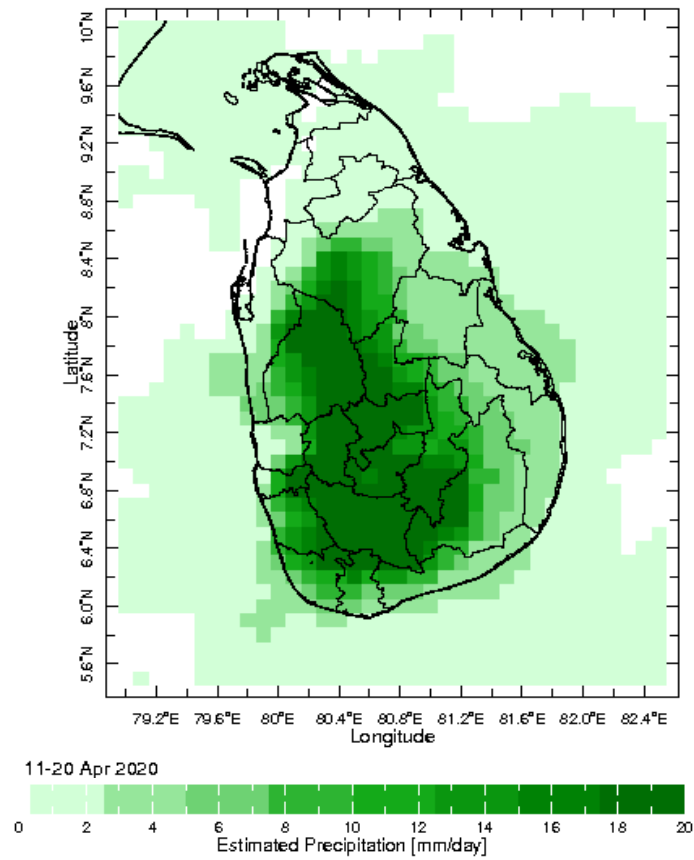


Monthly Rainfall Monitoring

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

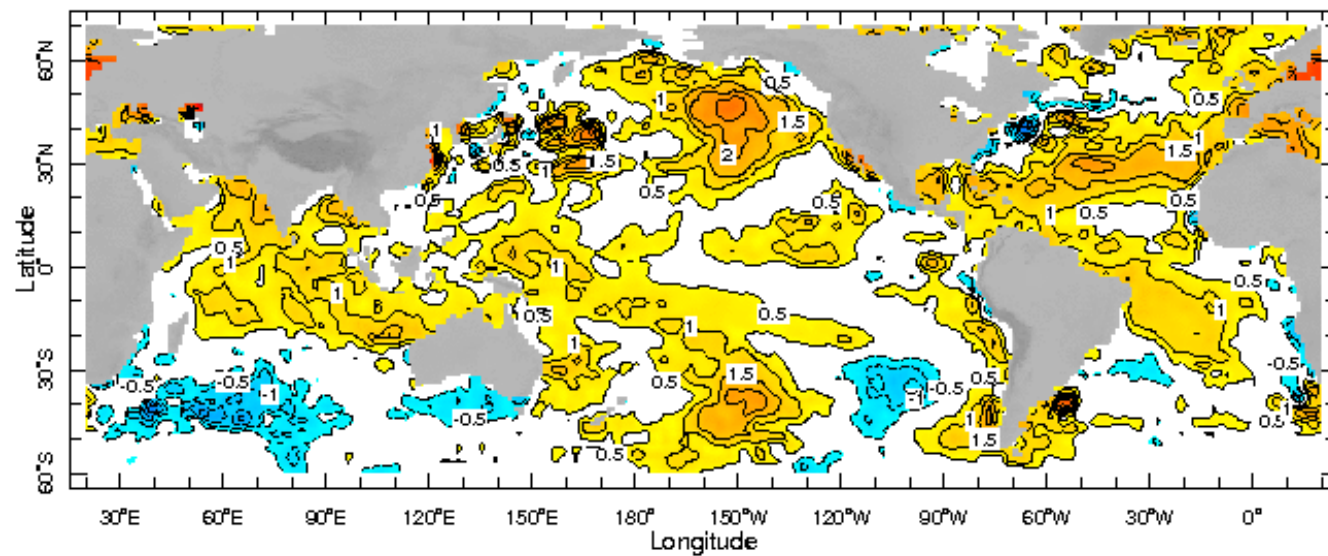


Dekadal (10 Day) Satellite Derived Rainfall Estimates

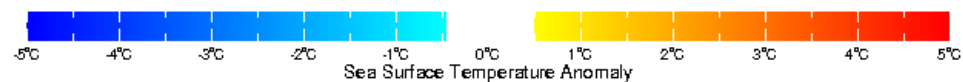


Weekly Average SST Anomalies

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



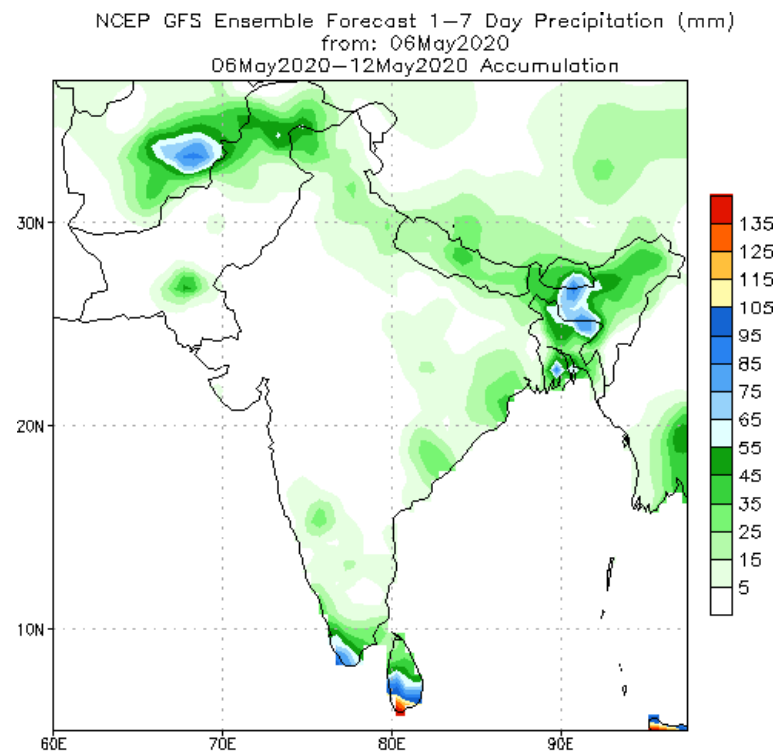
29 Apr 2020



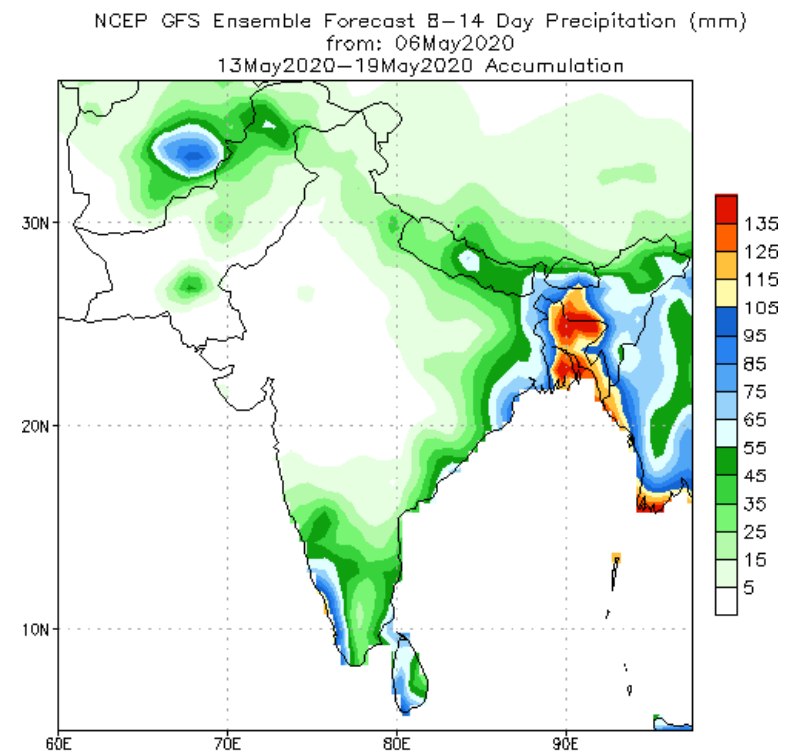
WORLDBATH topography

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)

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.

