

**13 February
2020**

EXPERIMENTAL CLIMATE MONITORING AND PREDICTION

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HIGHLIGHTS

Rainfall Forecast



- The NOAA weekly rainfall forecast predicts up to 75 mm of total rainfall in the southern half of the island during 12 - 18 Feb.

Monitored Rainfalls



- Between 4 - 10 Feb: up to 10 mm of rainfall was recorded in Galle and Matara districts on the 5th.

Monitored Wind



- From 4 - 10Feb: up to 18 km/h, northeasterly 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
4 th February	Up to 5 mm in Ratnapura district.
5 th February	Up to 10 mm in Kalutara, Galle and Matara districts and up to 5 mm in Ratnapura, Colombo, Kegalle, Monaragala and Hambantota districts .
6 th February	No Rainfall.
7 th February	No Rainfall.
8 th February	No Rainfall.
9 th February	No Rainfall.
10 th February	No Rainfall.



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Total Rainfall for the Past Week

The RFE 2.0 tool shows total up to 10-25 mm in Hambantota, Ampara and Matara districts. Below average rainfall up to 25-50 mm is shown for Polonnaruwa, Batticaloa and Ampara districts; and up to 10-25 mm in rest of the island.

Monthly Monitoring

During January – Above average rainfall conditions up to 120 mm were experienced by Gampaha, Colombo, Kalutara and southern regions of Kegalle and northern regions of Ratnapura districts. Below average rainfall conditions up to 240 mm were experienced by Trincomalee, Anuradhapura, Polonnaruwa Matale, Kandy, Badulla, Monaragala, Batticaloa and Ampara districts; and up to 150 mm in rest of the island. The CPC Unified Precipitation Analysis tool shows up to 100 mm were experienced by Ratnapura and Kalutara districts; up to 50-75 mm in Galle and Matara districts; and up to in Badulla, Monaragala, Ampara, Hambantota, Nuwara Eliya and Kegalle districts.

Ocean State (Text Courtesy IRI)

Pacific sea state: January 21, 2020

SSTs in the east-central Pacific were near the borderline of weak El Niño levels during mid-January. Patterns in atmospheric variables have mainly maintained neutral conditions, with some trends toward El Niño. Most model forecasts favor borderline weak El Niño SST conditions during winter, returning to ENSO-neutral by early spring and beyond. The official CPC/IRI outlook is consistent with these model forecasts.

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 12th – 18th Feb: Total rainfall up to 55 mm in Galle and Matara districts; up to 35-45 mm in Ratnapura and Hambantota districts; and up to 25-35 mm in Colombo, Kegalle and Nuwara Eliya districts.

From 19th – 25th Feb: Total rainfall up to 55 mm in Batticaloa, Ampara, Badulla, Monaragala, Hambantota and Matara districts; up to 35-45 mm in Galle, Ratnapura, Kegalle, Nuwara Eliya, Kandy and Polonnaruwa districts; and up to 25-35 mm in Colombo, Matale and Anuradhapura districts.

NOAA Model Forecast:

From 13th – 18th Feb: Total rainfall up to 75 mm is expected in Gampaha, Colombo, Kalutara, Galle, Matara, Kegalle, Ratnapura, Kandy, Kegalle, Nuwara Eliya, Badulla, Monaragala and Hambantota districts.

MJO based OLR predictions

For the next 15 days:

MJO shall suppress 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 Web

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



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Weekly Hydro- Meteorological Report for Sri Lanka

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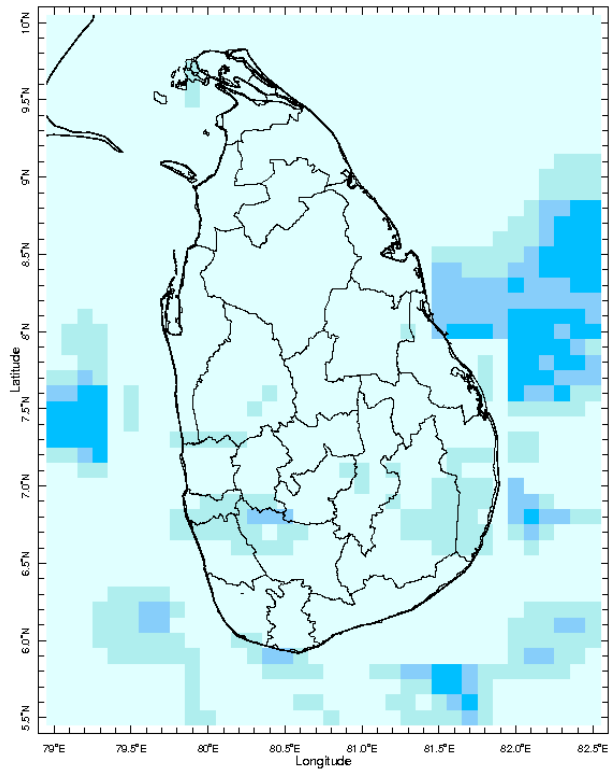
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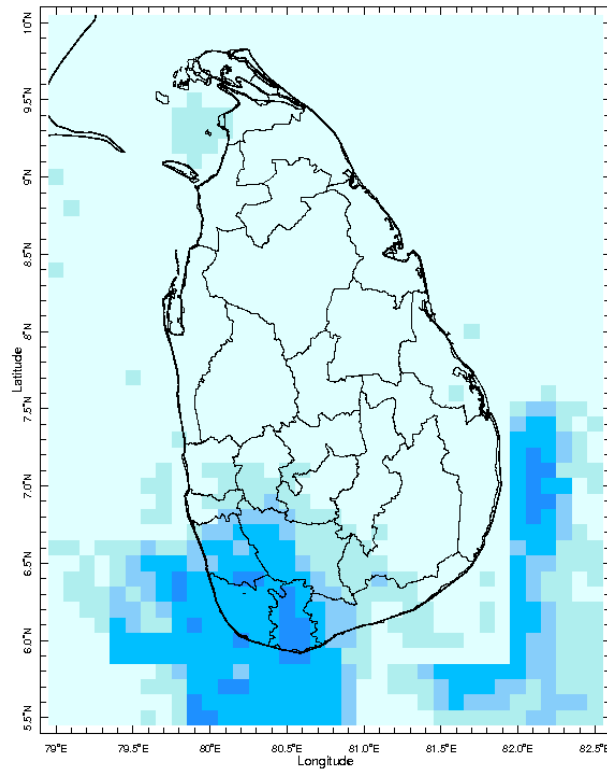
MONITORING

Daily Rainfall Monitoring

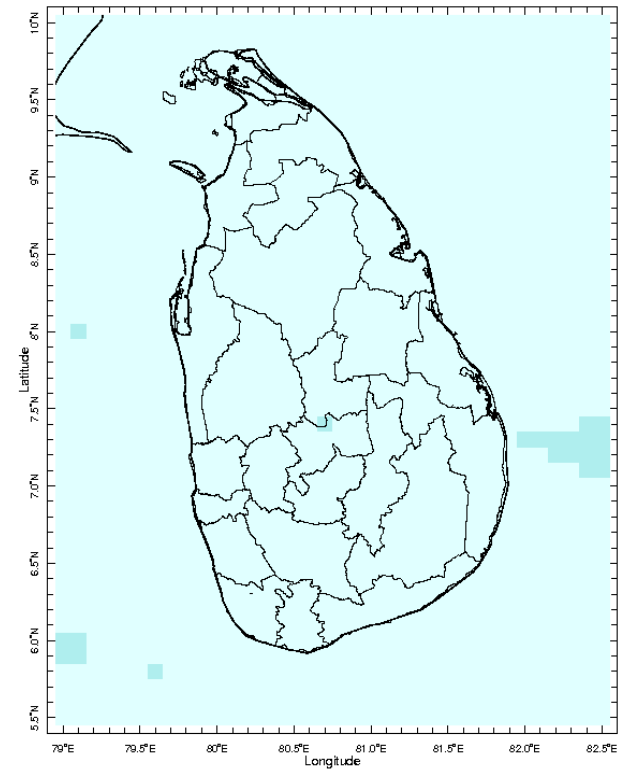
The following figures show the satellite observed rainfall in the last 7 days in Sri Lanka.



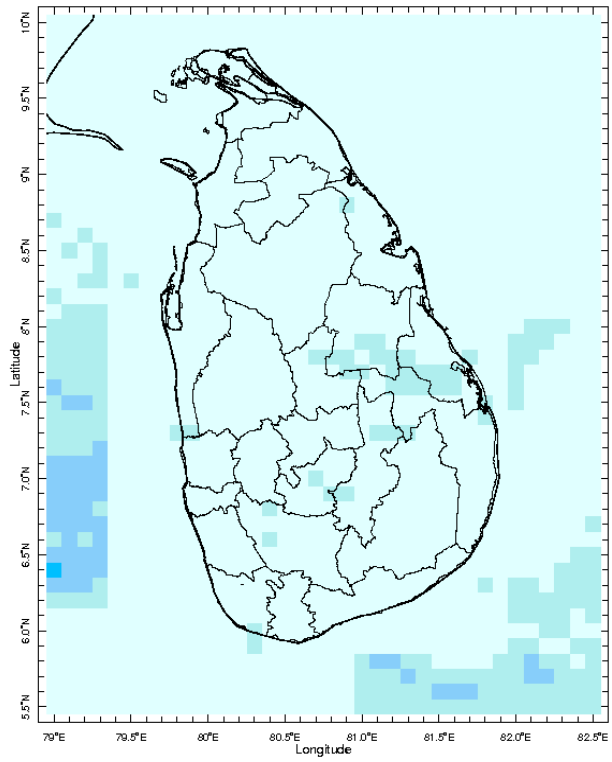
4 Feb 2020



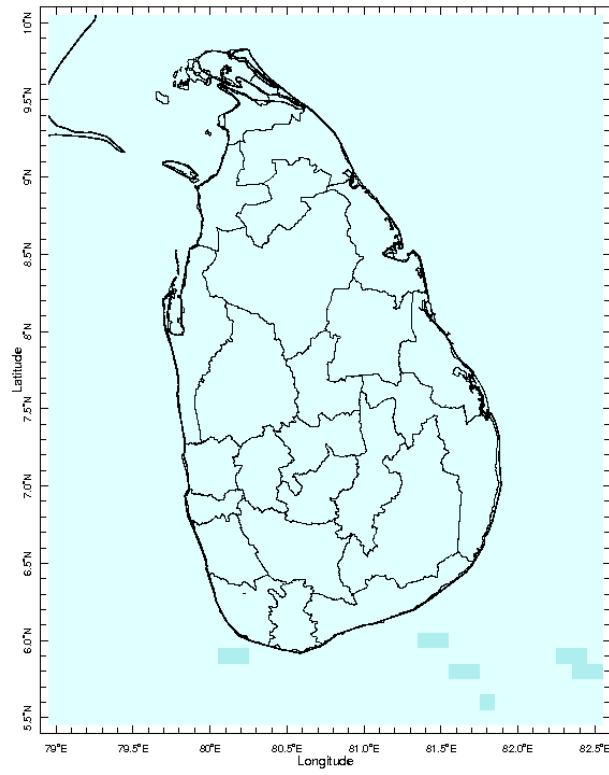
5 Feb 2020



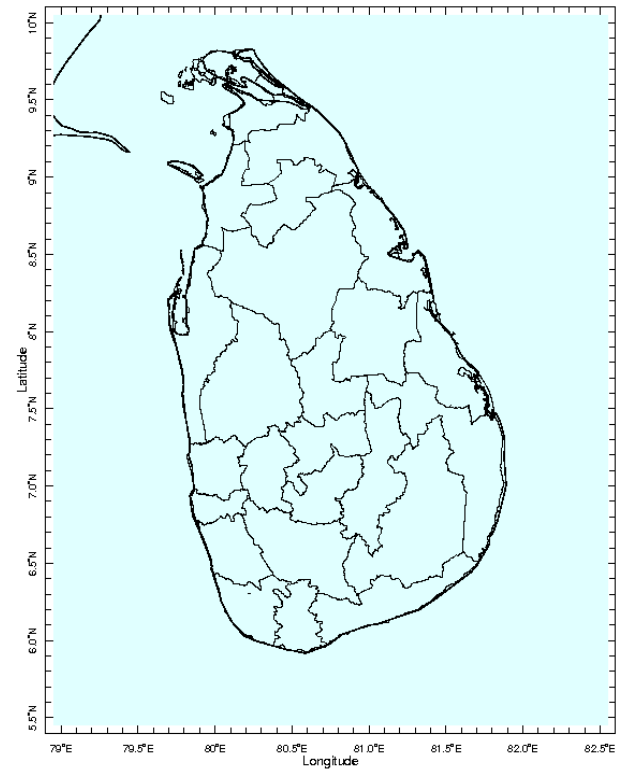
6 Feb 2020



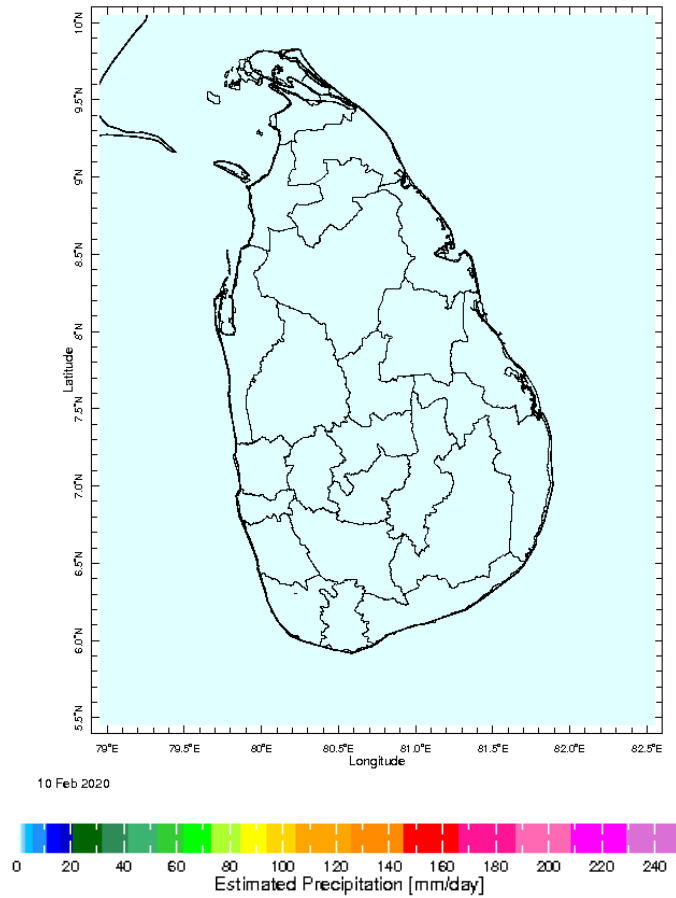
7 Feb 2020



8 Feb 2020

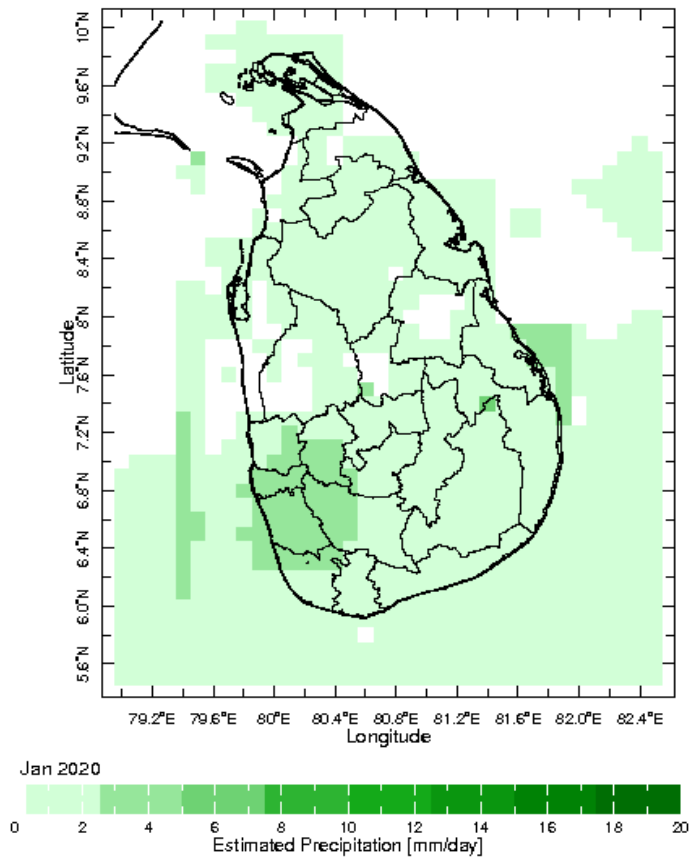


9 Feb 2020

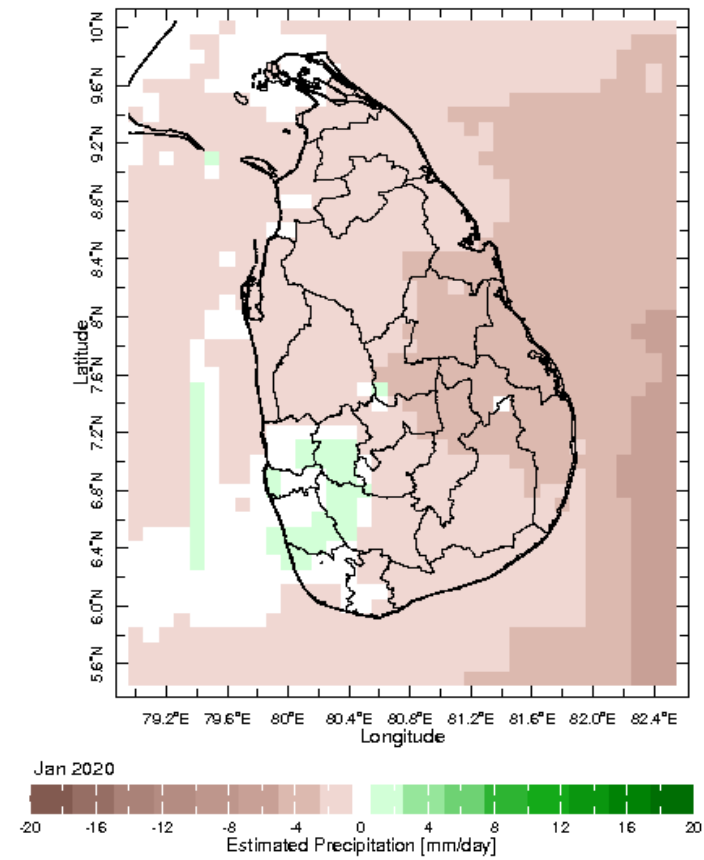


Monthly Rainfall Monitoring

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

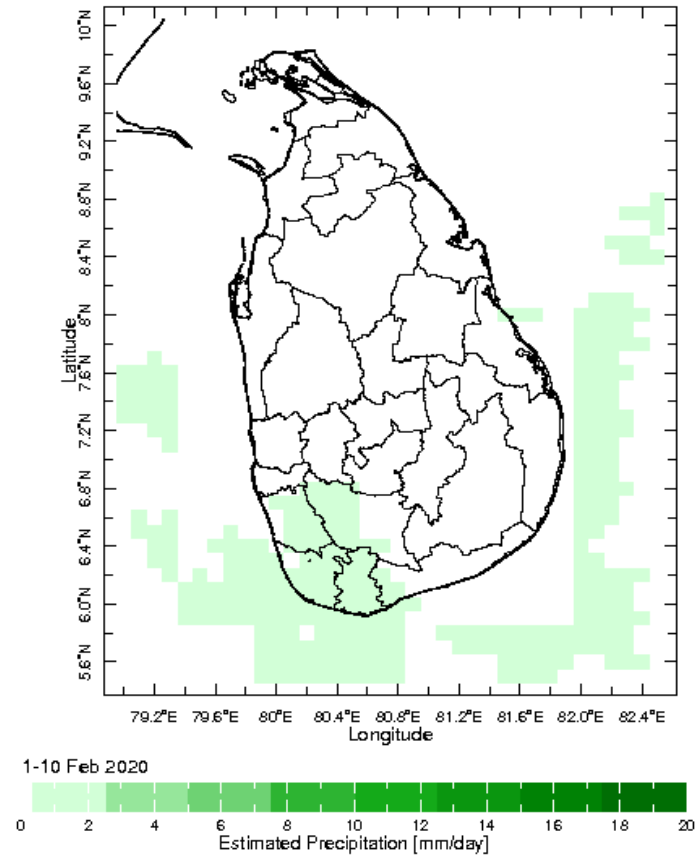
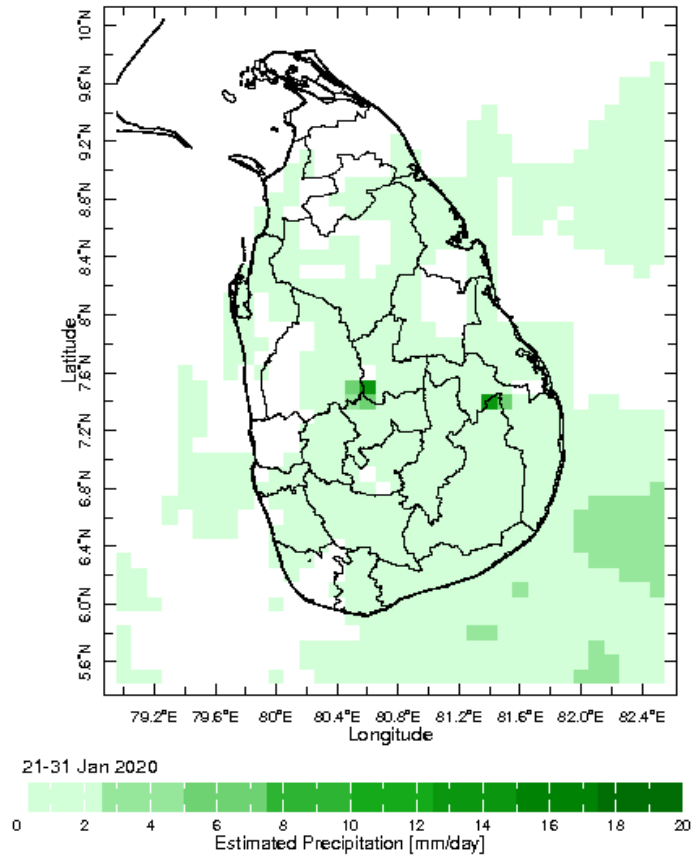


Monthly Average



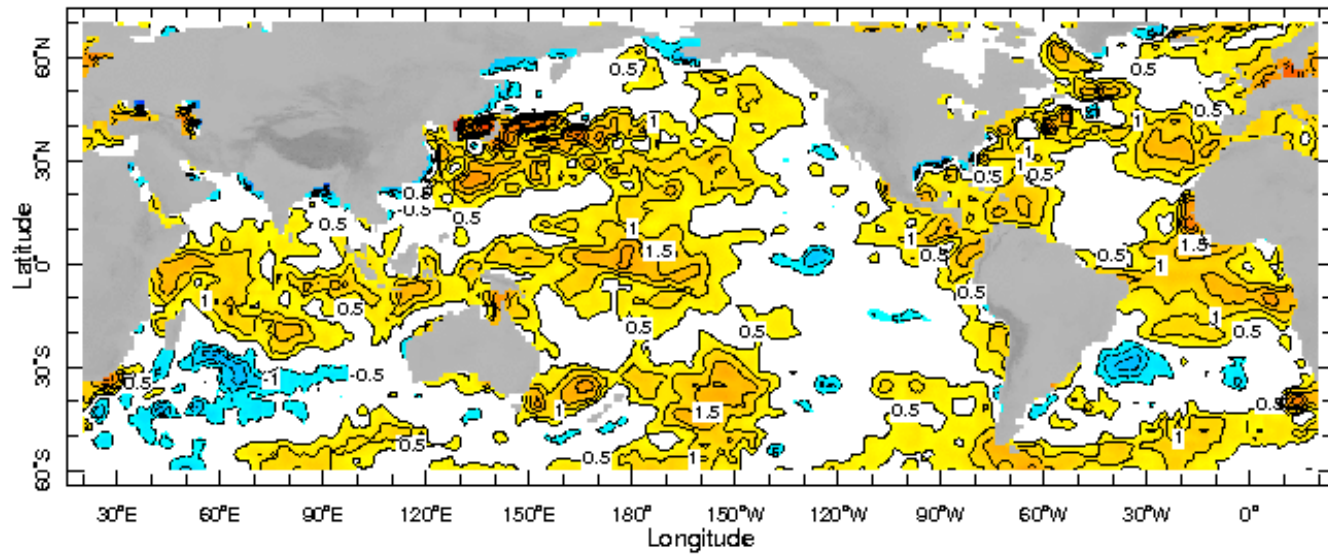
Monthly Anomaly

Dekadal (10 Day) Satellite Derived Rainfall Estimates

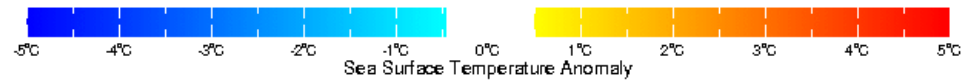


Weekly Average SST Anomalies

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



5 Feb 2020

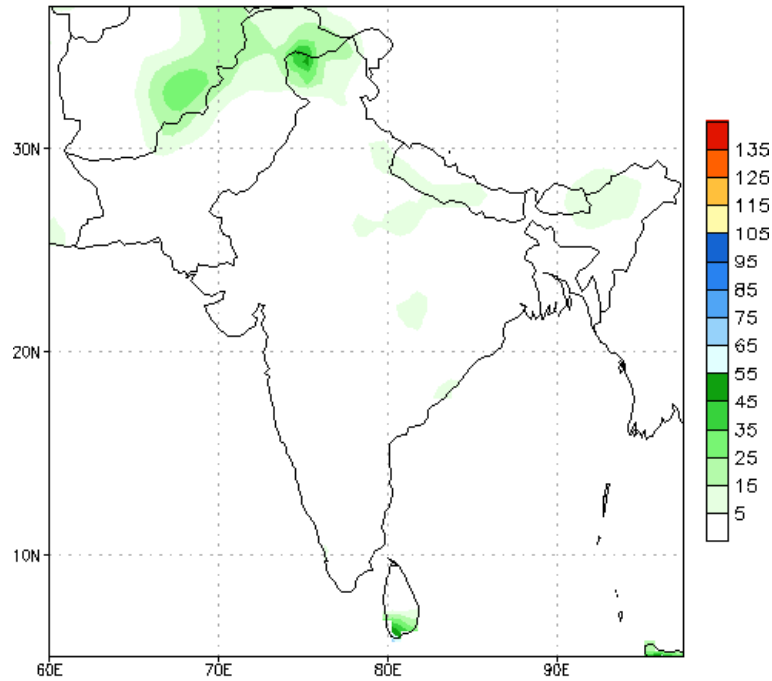


WORLDBATH topography

PREDICTIONS

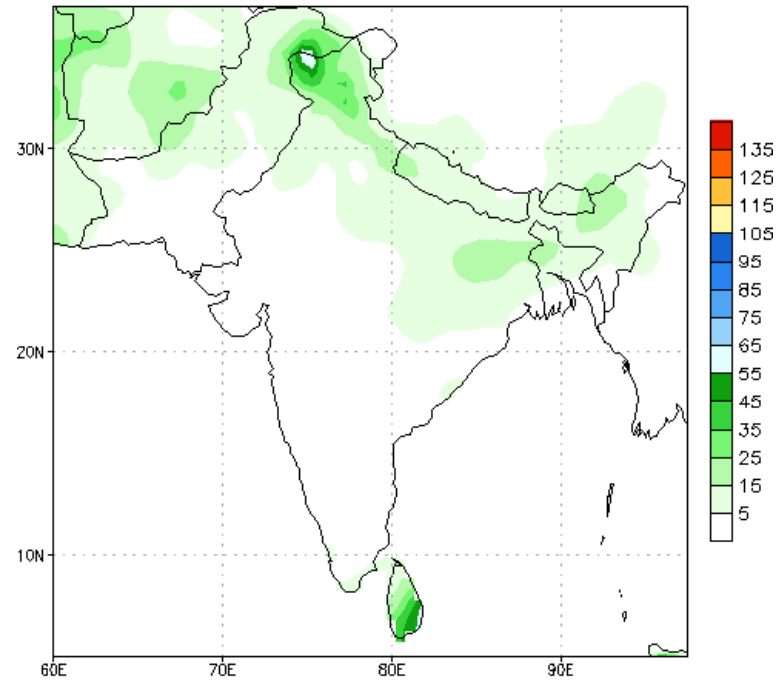
NCEP GFS 1- 14 Day prediction

NCEP GFS Ensemble Forecast 1-7 Day Precipitation (mm)
from: 12Feb2020
12Feb2020-18Feb2020 Accumulation



Bias correction based on last 30-day forecast error

NCEP GFS Ensemble Forecast 8-14 Day Precipitation (mm)
from: 12Feb2020
19Feb2020-25Feb2020 Accumulation

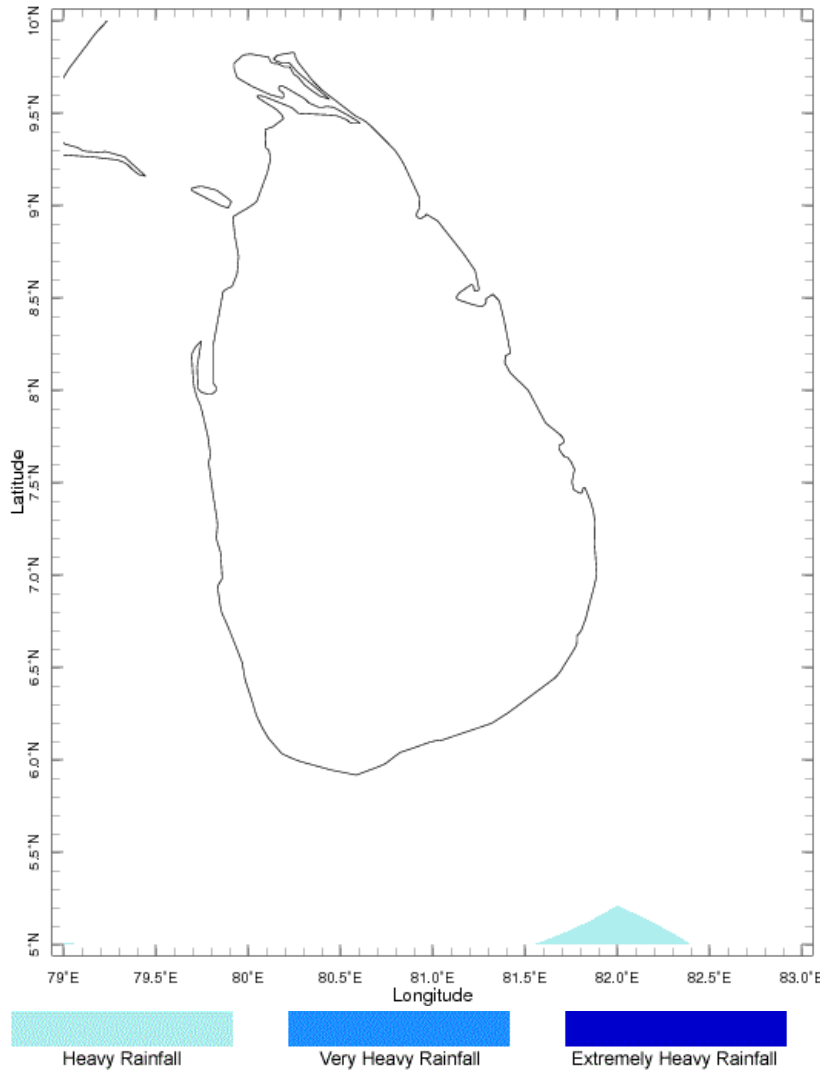


Bias correction based on last 30-day forecast error

WRF Model Forecast (from IMD Chennai)

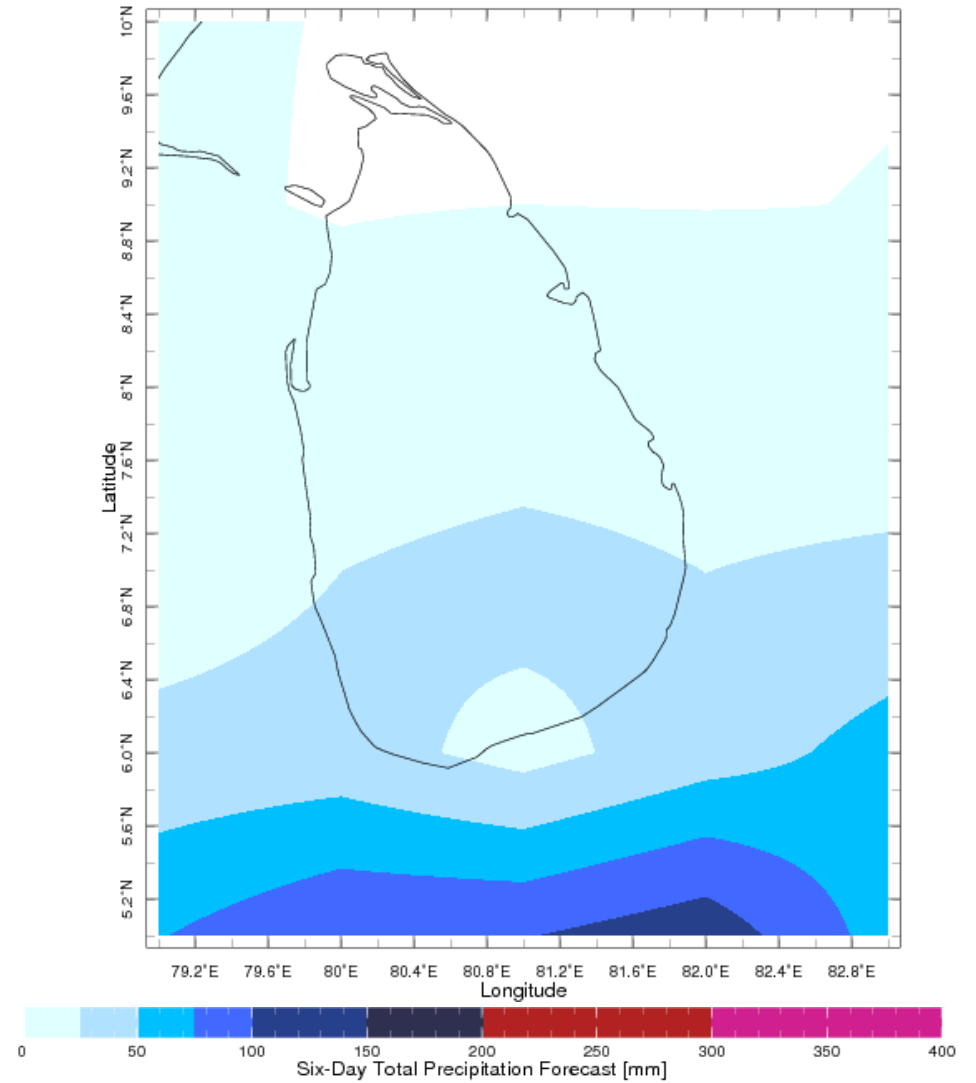
Total rainfall forecast from the IRI for next six days is provided in figures below. The figure to the left shows the expectancy of heavy rainfall events during these six days while the figure to the right is the prediction of total rainfall amount during this period.

Forecast for 12-17 Feb 2020 Issued 0000 12 Feb 2020



Extreme Rainfall Forecast

Forecast for 12-17 Feb 2020 Issued 0000 12 Feb 2020



Total Six Day Precipitation Forecast