

**30 January
2020**

EXPERIMENTAL CLIMATE MONITORING AND PREDICTION

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HIGHLIGHTS

Rainfall Forecast



- The NOAA weekly rainfall forecast predicts up to 25 mm of total rainfall in the entire island during 29 Jan - 3 Feb.

Monitored Rainfalls



- Between 21 - 27 Jan: up to 160 mm of rainfall was recorded in Matale district on the 21st.

Monitored Wind



- From 21- 27 Jan: 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
21st January	Up to 160 mm in Matale district; up to 120 mm in Monaragala and Ampara districts; up to 50 mm in Kurunegala and Kandy districts; up to 30 mm in Ratnapura and Nuwara Eliya districts; and up to 20 mm in Badulla and Hambantota districts.
22nd January	Up to 30 mm in Mannar, Badulla and Monaragala districts; and up to 20 mm in Anuradhapura, Polonnaruwa, Matale, Kandy, Ampara and Hambantota districts.
23rd January	Up to 10 mm in Badulla, Matale and Kandy districts.
24th January	No Rainfall.
25th January	No Rainfall.
26th January	No Rainfall.
27th January	No Rainfall.
28th January	Up to 10 mm in Puttalam district.



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Total Rainfall for the Past Week

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

Monthly Monitoring

During December – Above average rainfall conditions up to 300 mm were experienced by Trincomalee, Anuradhapura and Ampara districts; up to 240 mm in Mullaitivu, Puttalam, Polonnaruwa, Kurunegala, Matale, Kandy, Nuwara Eliya, Badulla, Monaragala, Galle, Colombo, Jaffna and Hambantota districts; and up to 60 mm in Kegalle, Kalutara and Matara districts. The CPC Unified Precipitation Analysis tool shows up to 500 mm were experienced by Mullaitivu, Anuradhapura, Polonnaruwa, Matale, Badulla, Monaragala, Batticaloa and Ampara districts; and up to 200-300 mm in Jaffna, Kilinochchi, Mannar, Puttalam, Kandy, Nuwara Eliya, Ratnapura and Hambantota 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 29th Jan – 4th Feb: Total rainfall up to 15 mm in Colombo Gampaha, Kalutara and Ratnapura districts.

From 5th – 11th Feb: Total rainfall up to 15 mm in Colombo, Gampaha and Ratnapura districts.

NOAA Model Forecast:

From 29th Jan 3rd Feb: Total rainfall up to 25 mm is expected in the entire 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.

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

Inside This Issue

1. Monitoring

- a. Daily Rainfall Monitoring
- b. Monthly Rainfall Monitoring
- c. Dekadal (10 Day) Satellite Derived Rainfall Estimates
- d. Weekly Average SST Anomalies

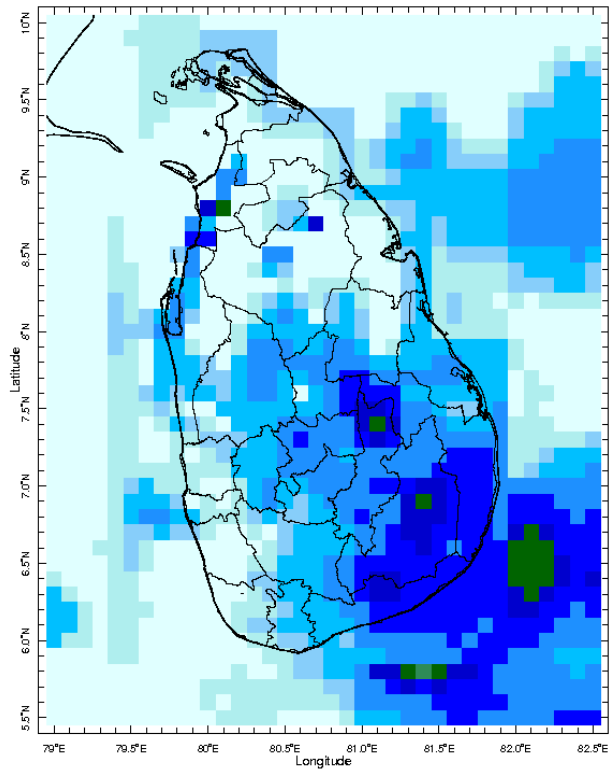
2. Predictions

- a. NCEP GFS Ensemble 1-14 day Rainfall Predictions
- b. WRF Model Rainfall Forecast from IMD Chennai
- c. Weekly Precipitation Forecast from IRI
- d. Seasonal Predictions from IRI

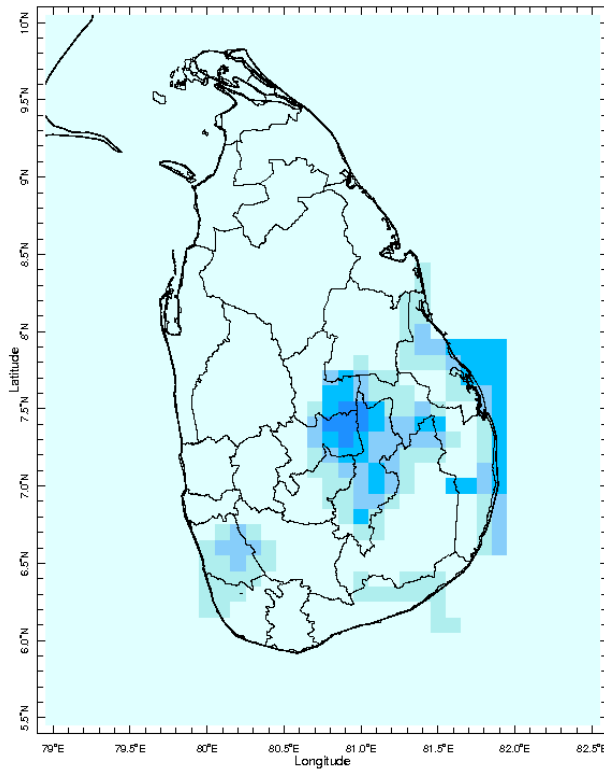
MONITORING

Daily Rainfall Monitoring

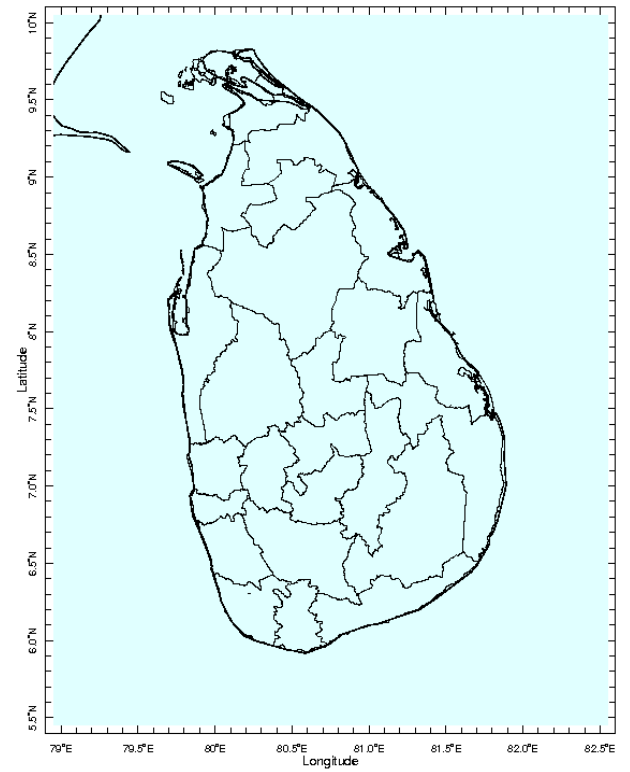
The following figures show the satellite observed rainfall in the last 7 days in Sri Lanka.



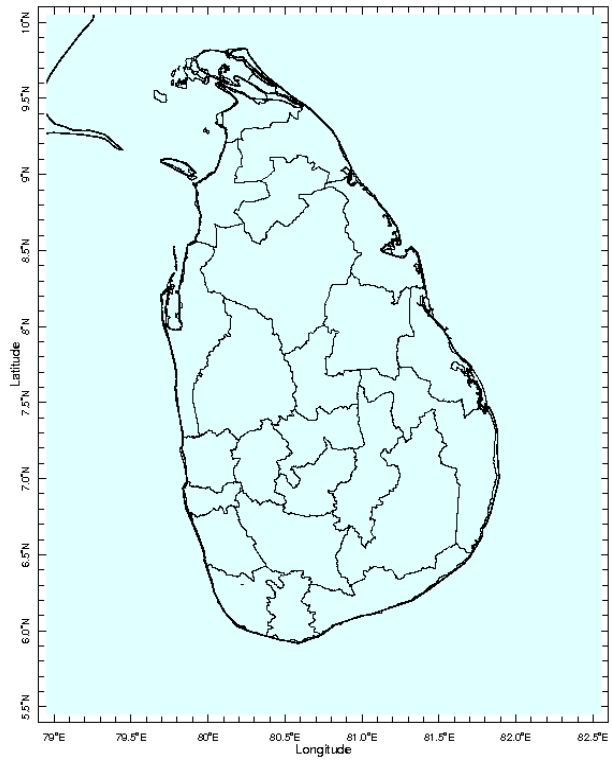
22 Jan 2020



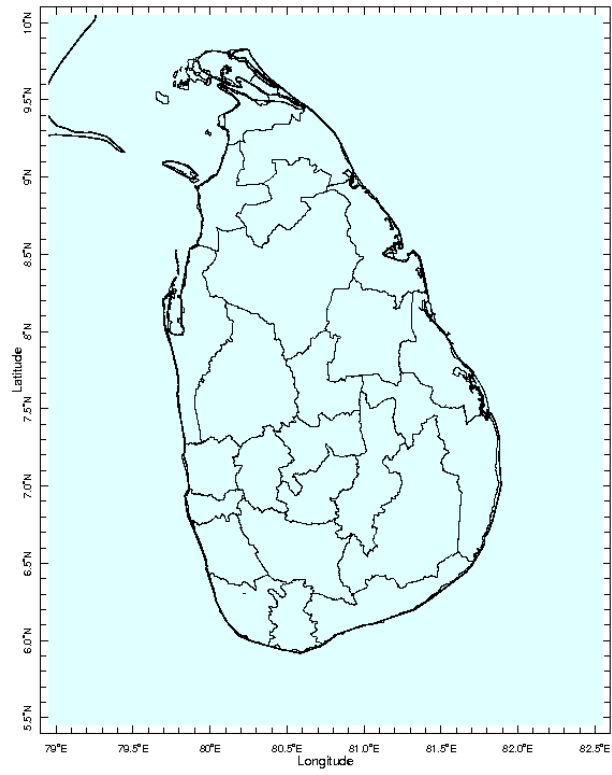
23 Jan 2020



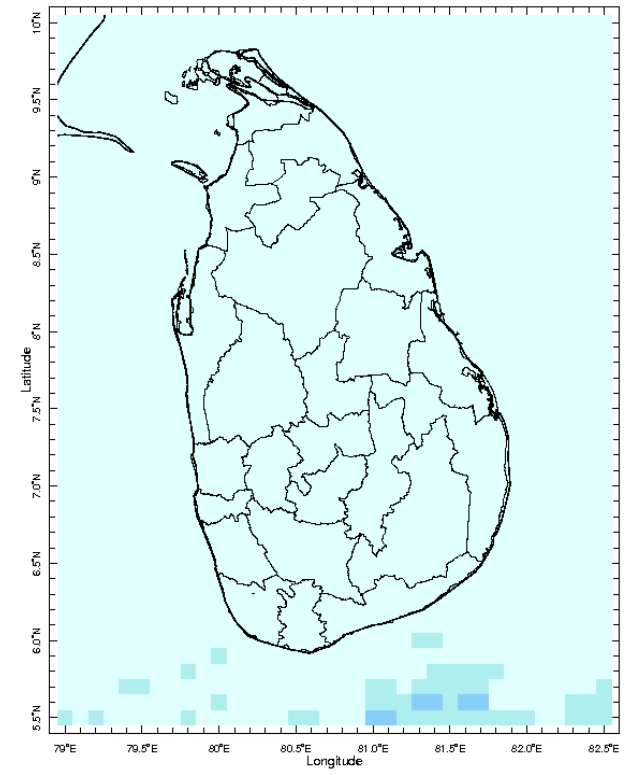
24 Jan 2020



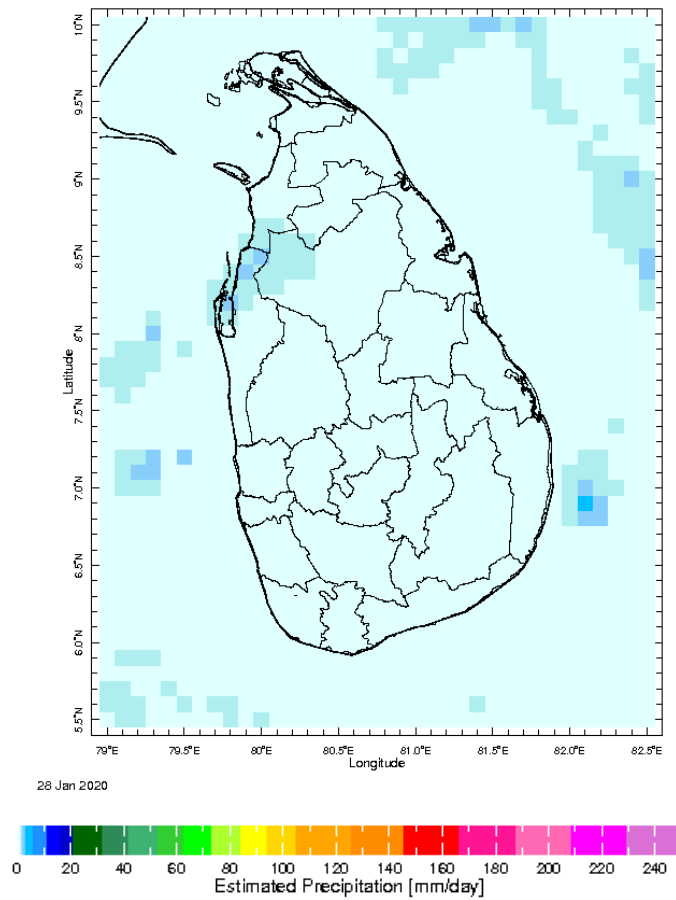
25 Jan 2020



26 Jan 2020

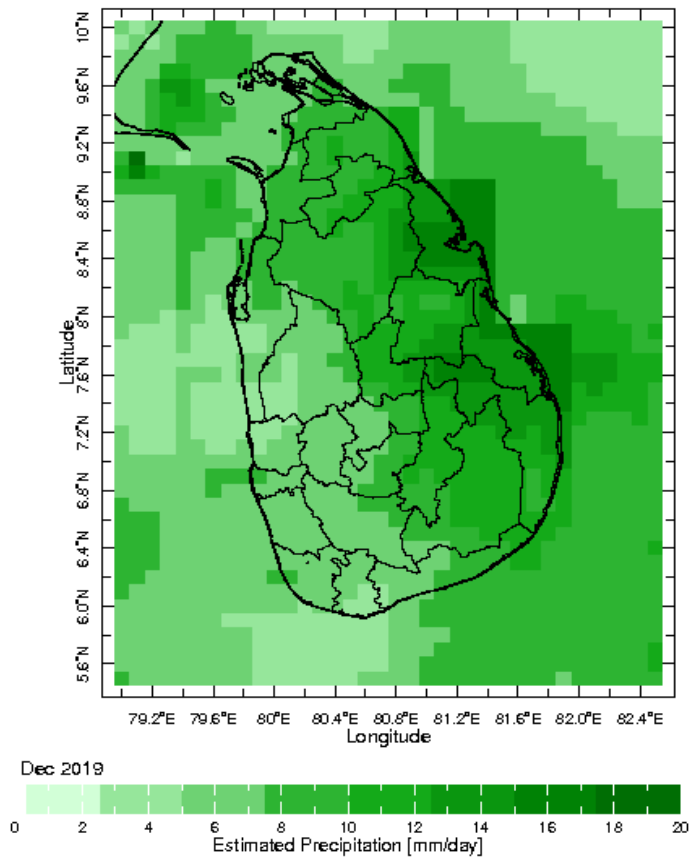


27 Jan 2020

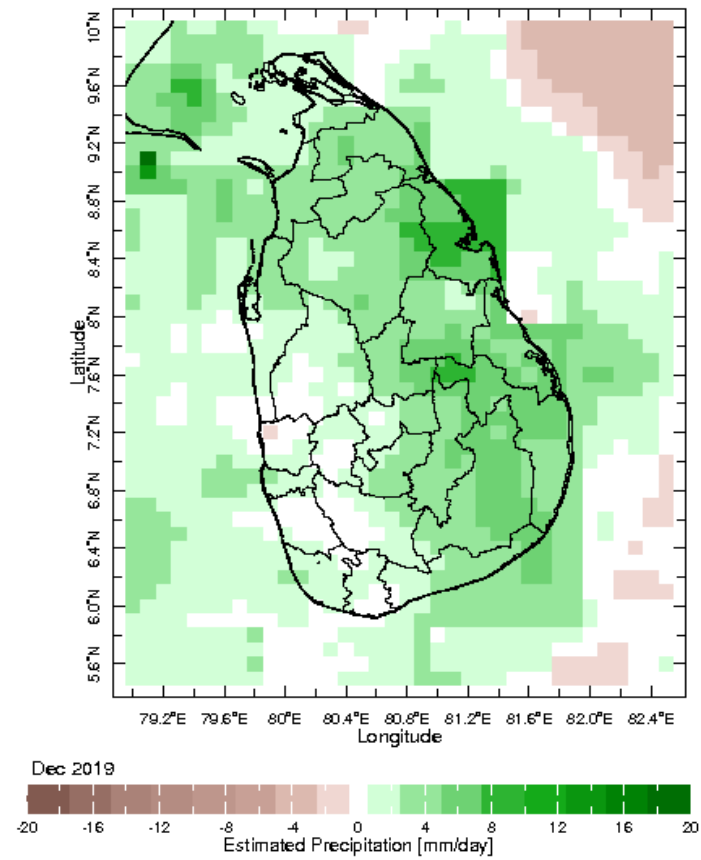


Monthly Rainfall Monitoring

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

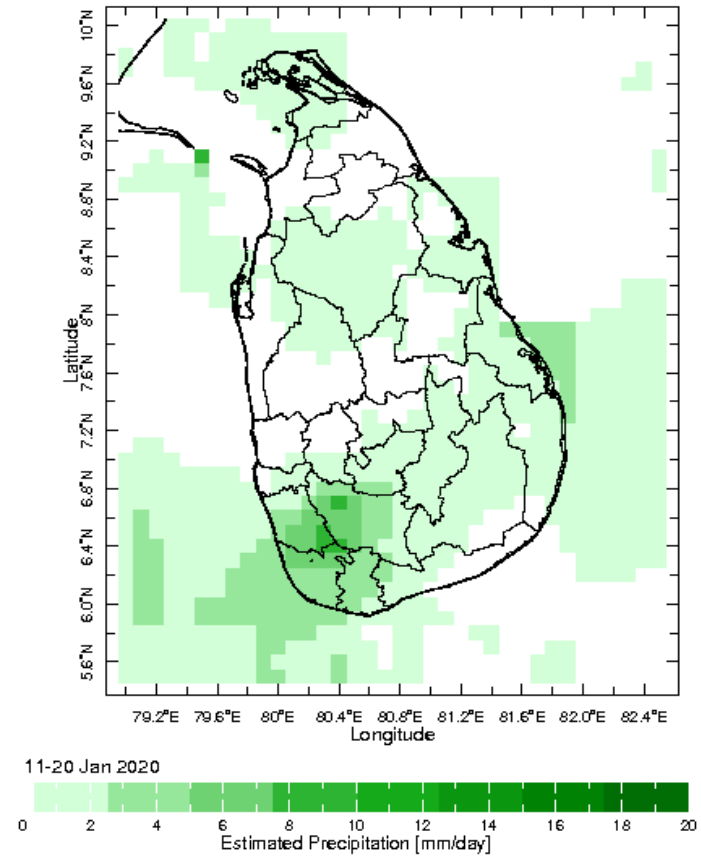
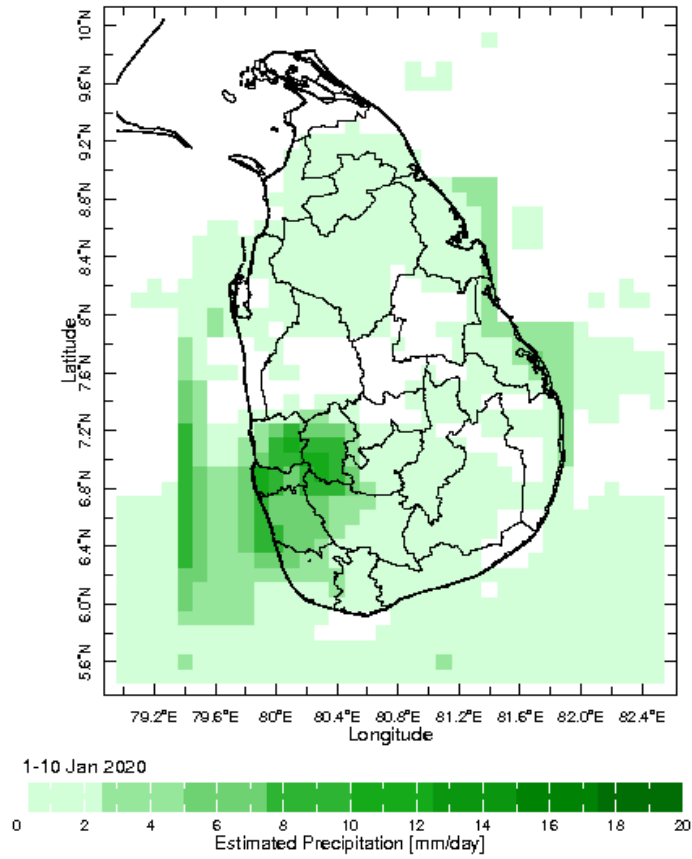


Monthly Average



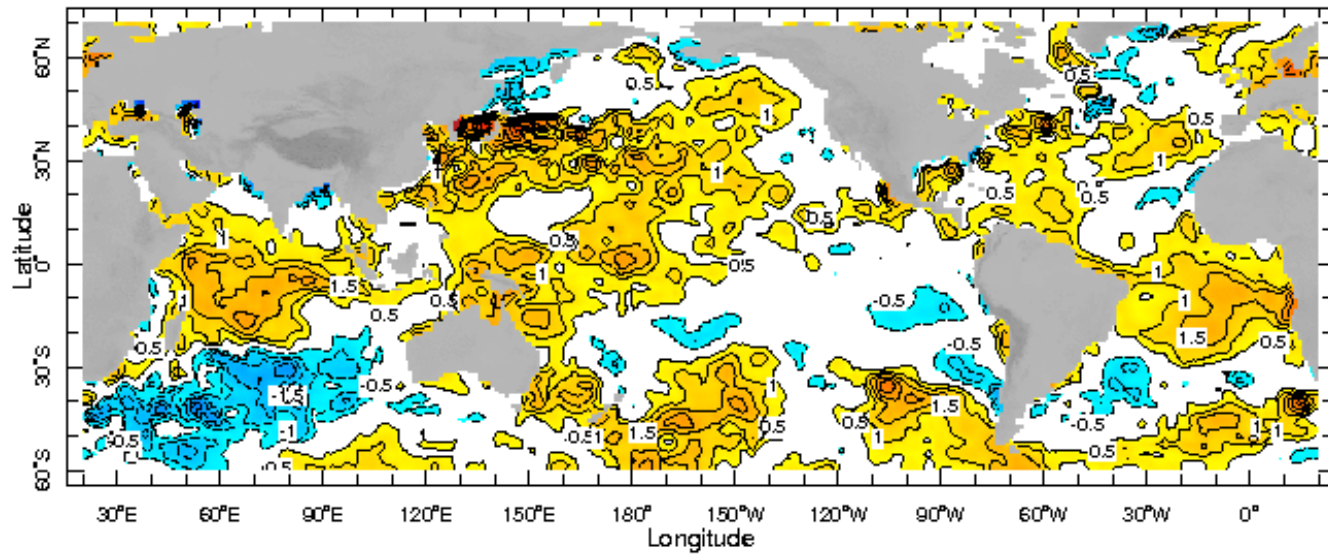
Monthly Anomaly

Dekadal (10 Day) Satellite Derived Rainfall Estimates

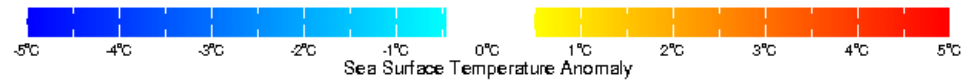


Weekly Average SST Anomalies

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



22 Jan 2020

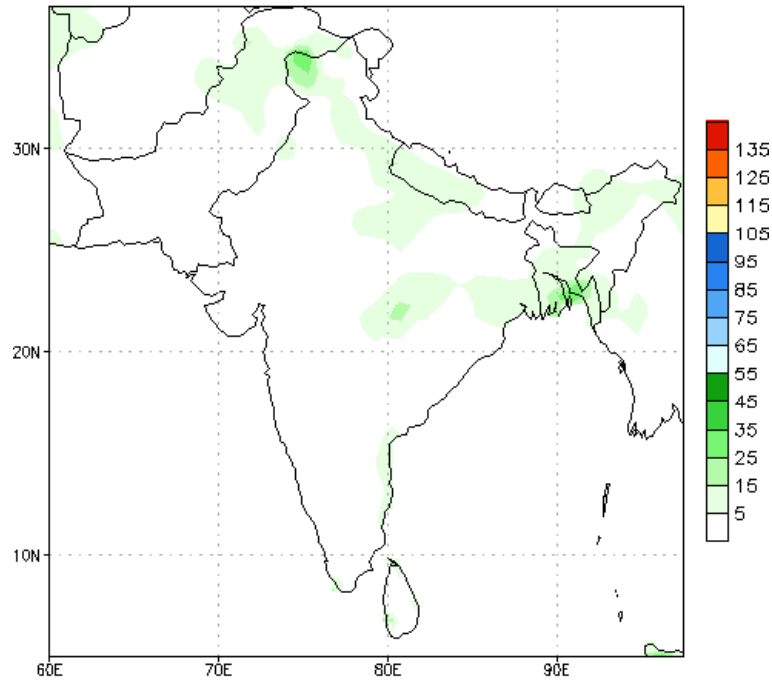


WORLDBATH topography

PREDICTIONS

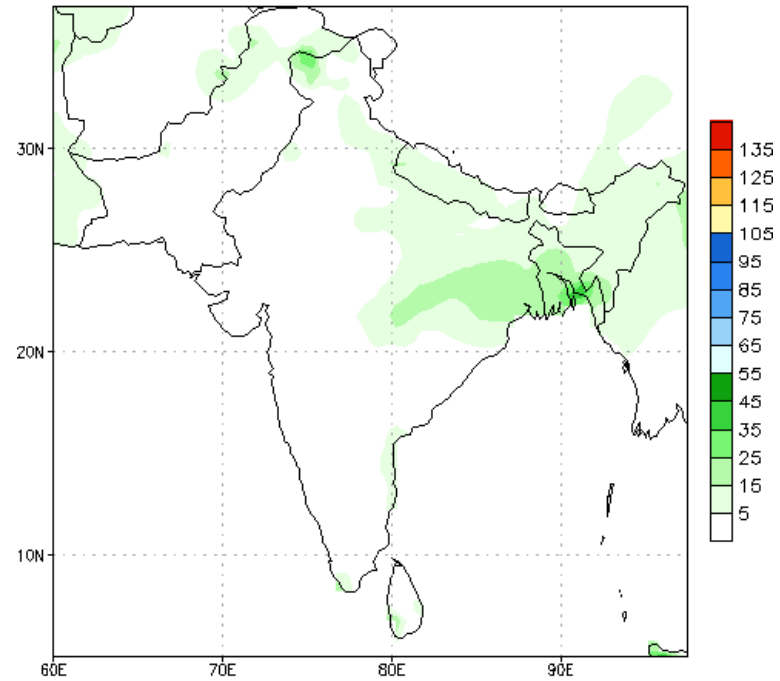
NCEP GFS 1- 14 Day prediction

NCEP GFS Ensemble Forecast 1-7 Day Precipitation (mm)
from: 29Jan2020
29Jan2020-04Feb2020 Accumulation



Bias correction based on last 30-day forecast error

NCEP GFS Ensemble Forecast 8-14 Day Precipitation (mm)
from: 29Jan2020
05Feb2020-11Feb2020 Accumulation

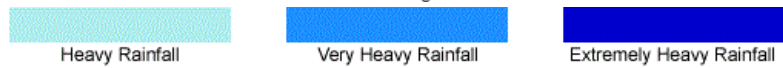
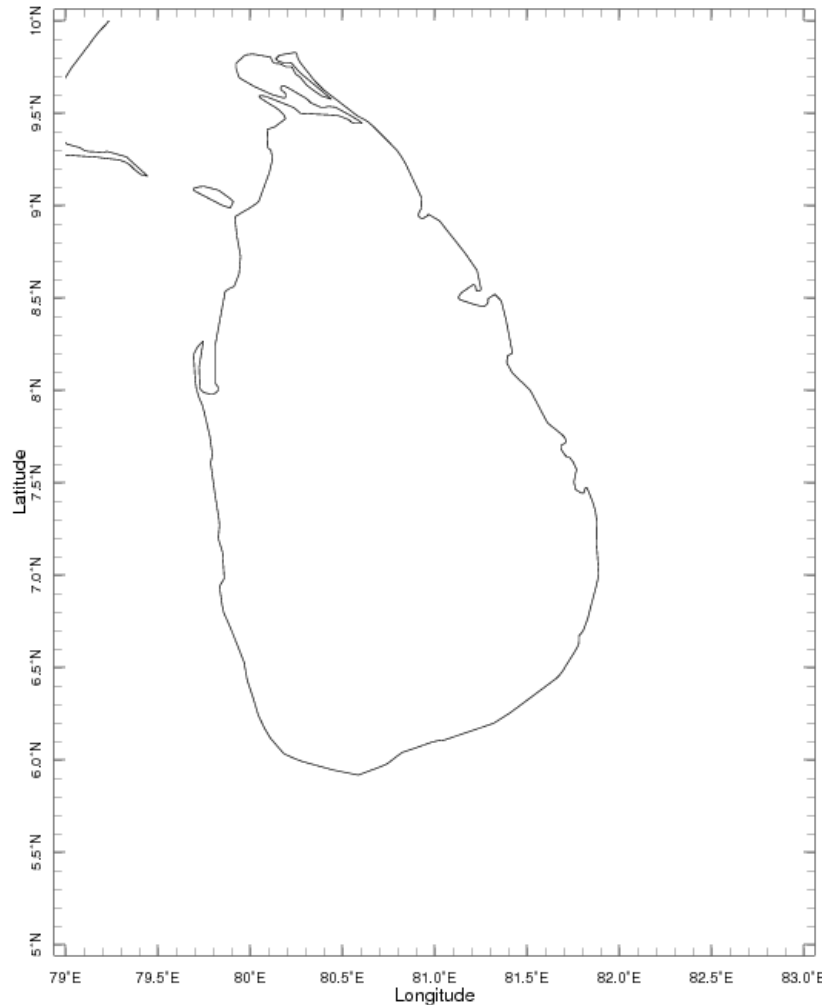


Bias correction based on last 30-day forecast error

WRF Model Forecast (from IMD Chennai)

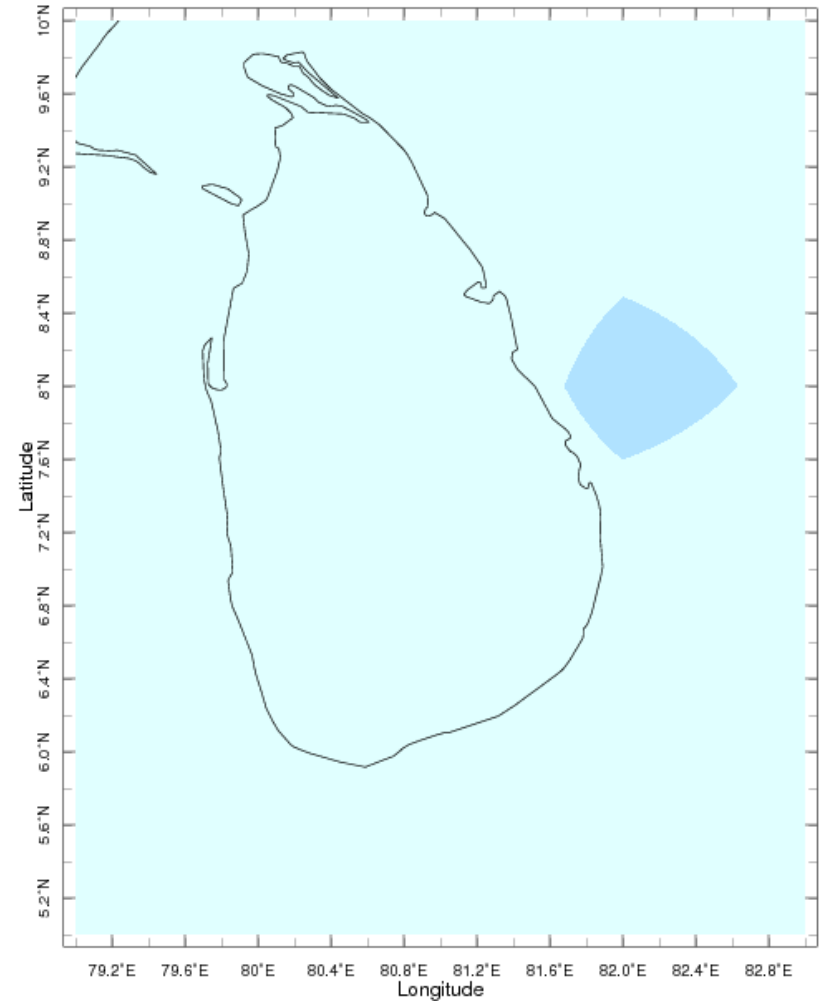
Total rainfall forecast from the IRI for next six days is provided in figures below. The figure to the left shows the expectancy of heavy rainfall events during these six days while the figure to the right is the prediction of total rainfall amount during this period.

Forecast for 29 Jan 2020 - 3 Feb 2020 Issued 0000 29 Jan 2020



Extreme Rainfall Forecast

Forecast for 29 Jan 2020 - 3 Feb 2020 Issued 0000 29 Jan 2020



Total Six Day Precipitation Forecast