Federation for Environment, Climate and Technology

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6 February 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 5 - 10 Feb.*

Monitored Rainfalls

- *Between 29 Jan - 3 Feb: up to 5 mm of rainfall was recorded in southern regions of the island on the 3rd.*

Monitored Wind

- *From 28 Jan - 3 Feb: up to 18 km/h, northeasterly winds were experienced by the entire island.*

Monitored Sea Surface

- *1 ^{0}C above average sea surface temperature was observed in the seas around Sri Lanka.*

Monitoring

Rainfall

Weekly Monitoring

Date	Rainfall
29th January	No Rainfall.
30th January	No Rainfall.
31st January	No Rainfall.
1st February	No Rainfall.
2nd February	No Rainfall.
3rd February	Up to 5 mm in Ratnapura, Galle, Matara and Hambantota district.

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Total Rainfall for the Past Week

The RFE 2.0 tool shows total up to 2-5 mm in Hambantota district. Below average rainfall up to 50-100 mm is shown for Polonnaruwa, Batticaloa and Ampara districts; up to 25-50 mm in Mullaitivu, Anuradhapura, Trincomalee, Kurunegala, Matale, Kandy, Badulla, Monaragala, Nuwara Eliya, Kegalle, Ratnapura, Puttalam, Gampaha, Colombo and Kalutara 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

1 ^{0}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 5th – 11th Feb: No Rainfall.

From 12th – 18th Feb: Total rainfall up to 25 mm in Colombo, Kegalle, Ratnapura, Galle, Matara, Batticaloa and Ampara districts.

NOAA Model Forecast:

From 5th – 10th Feb: Total rainfall up to 25 mm is expected in the entire island.

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.

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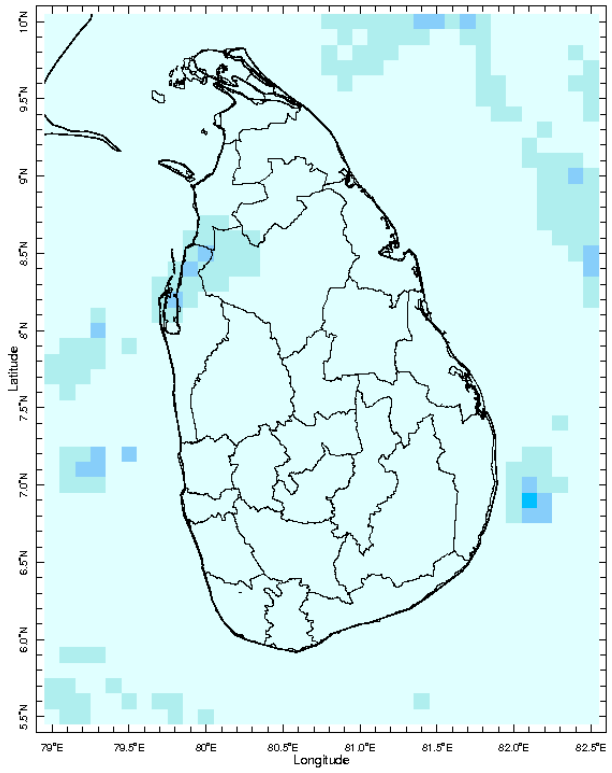
Weekly Hydro- Meteorological Report for Sri Lanka

Inside This Issue

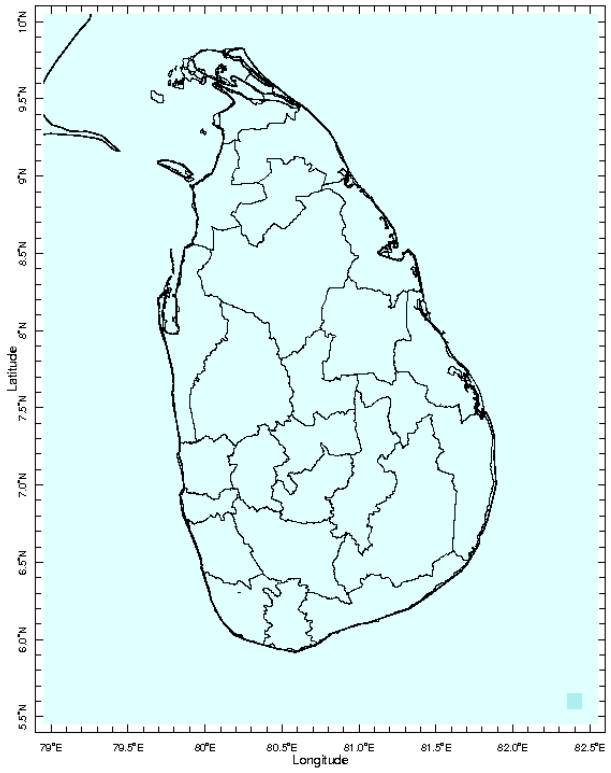
MONITORING

Daily Rainfall Monitoring

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



28 Jan 2020



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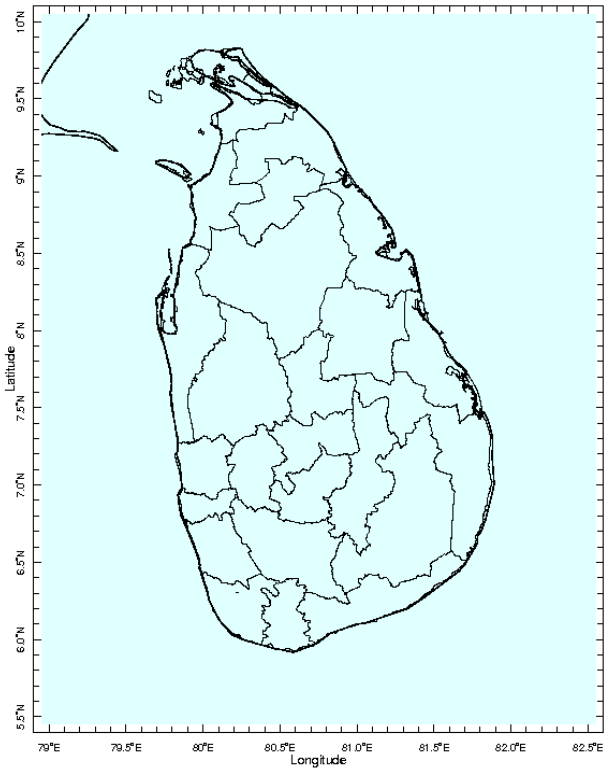

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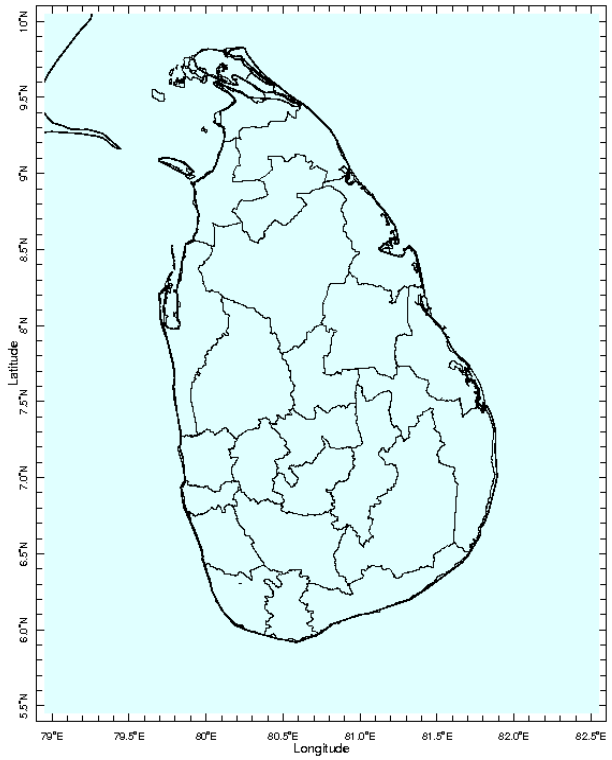

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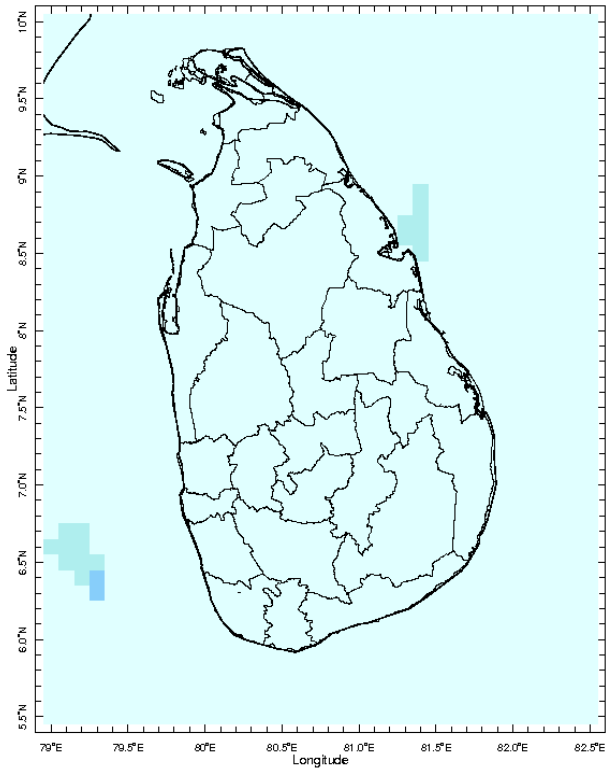
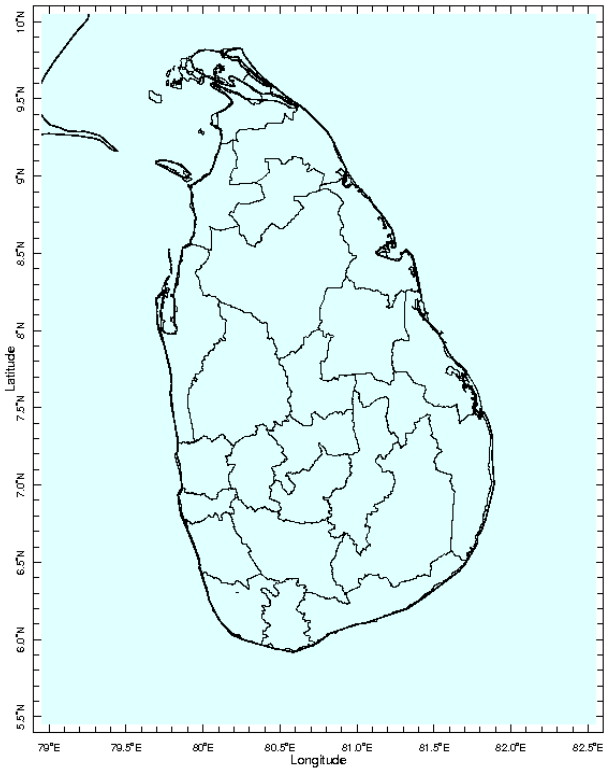
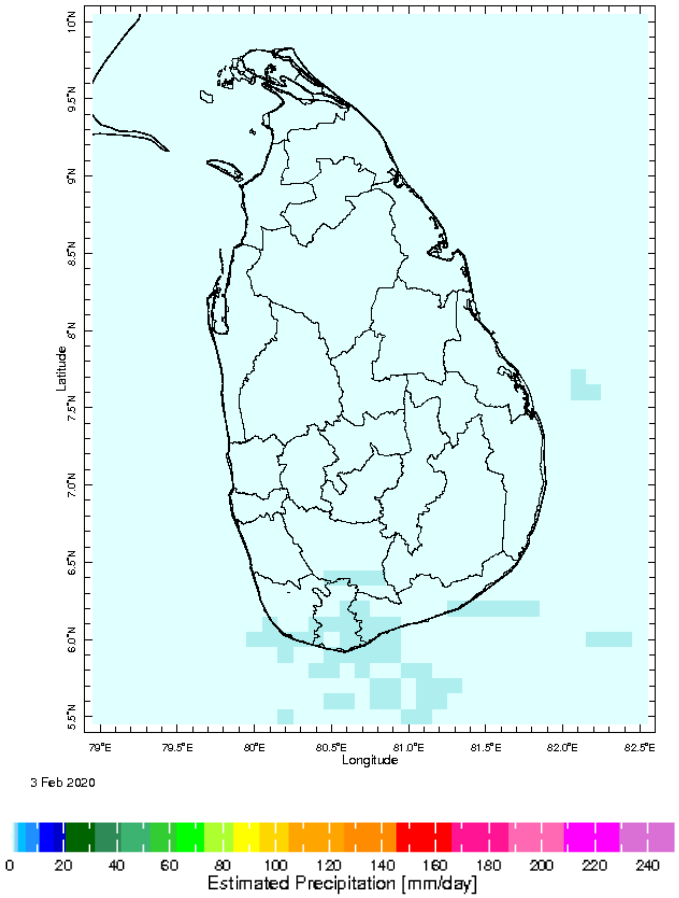


1 Feb 2020

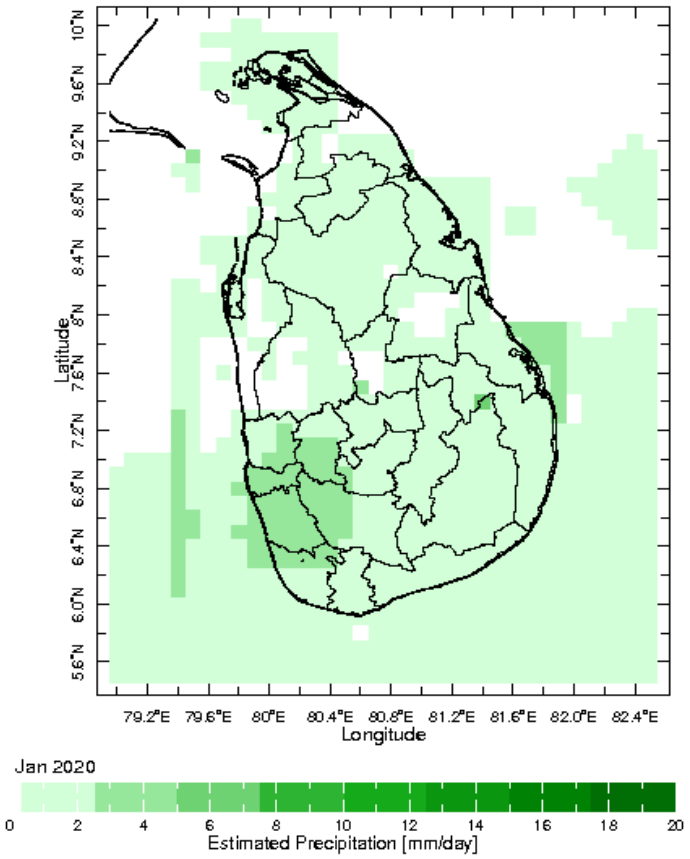


2 Feb 2020

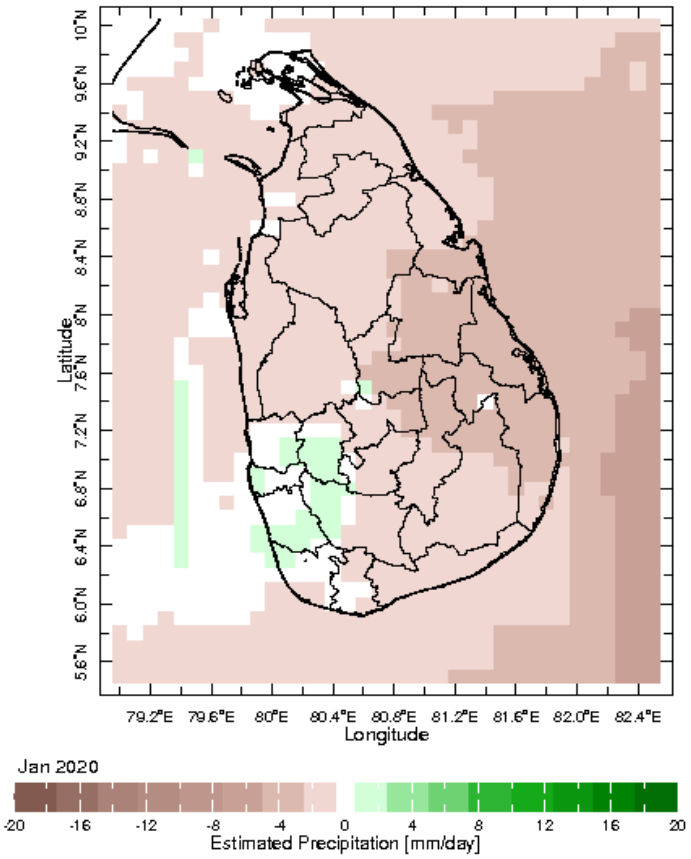


Monthly Rainfall Monitoring

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

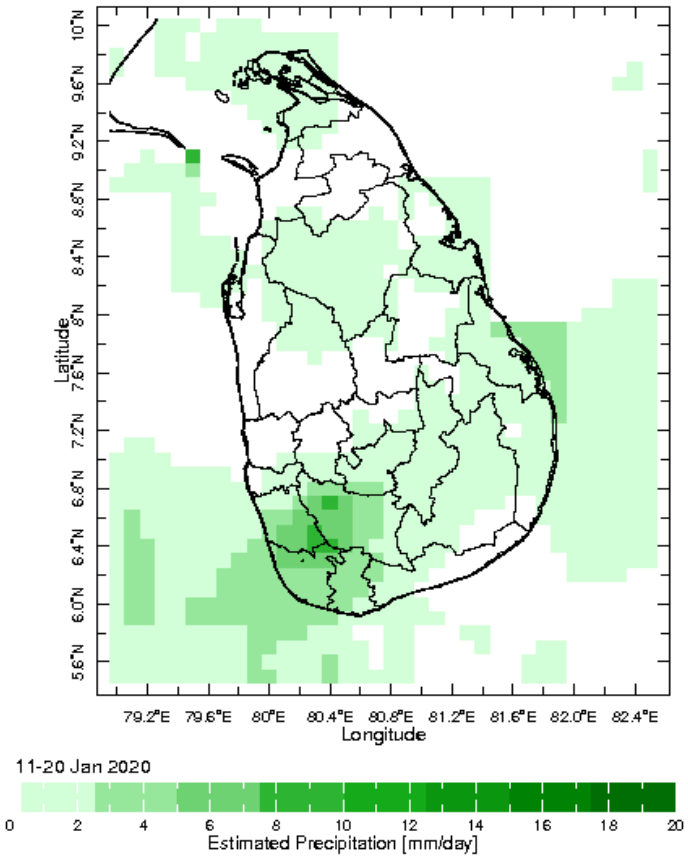


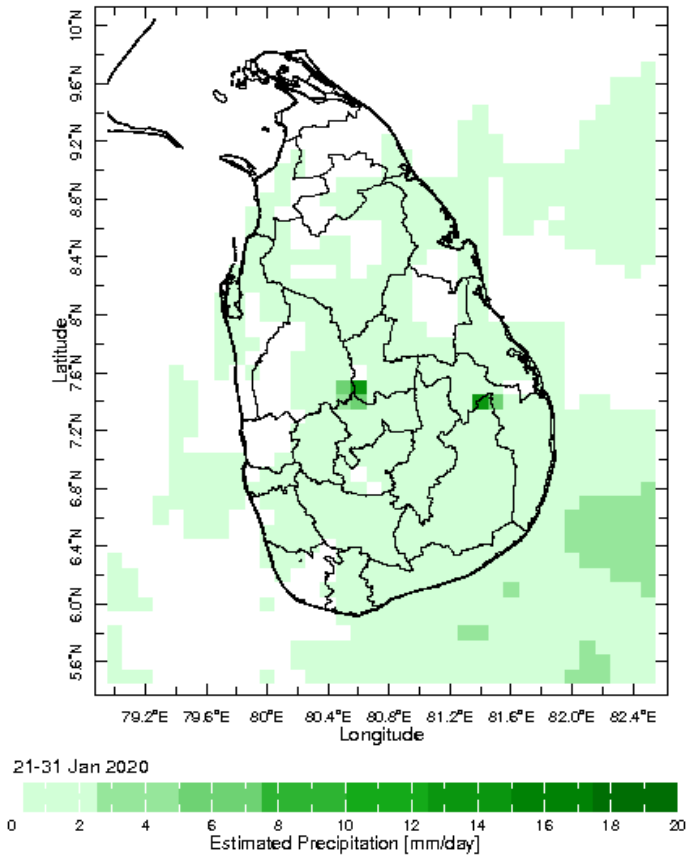
Monthly Average



Monthly Anomaly

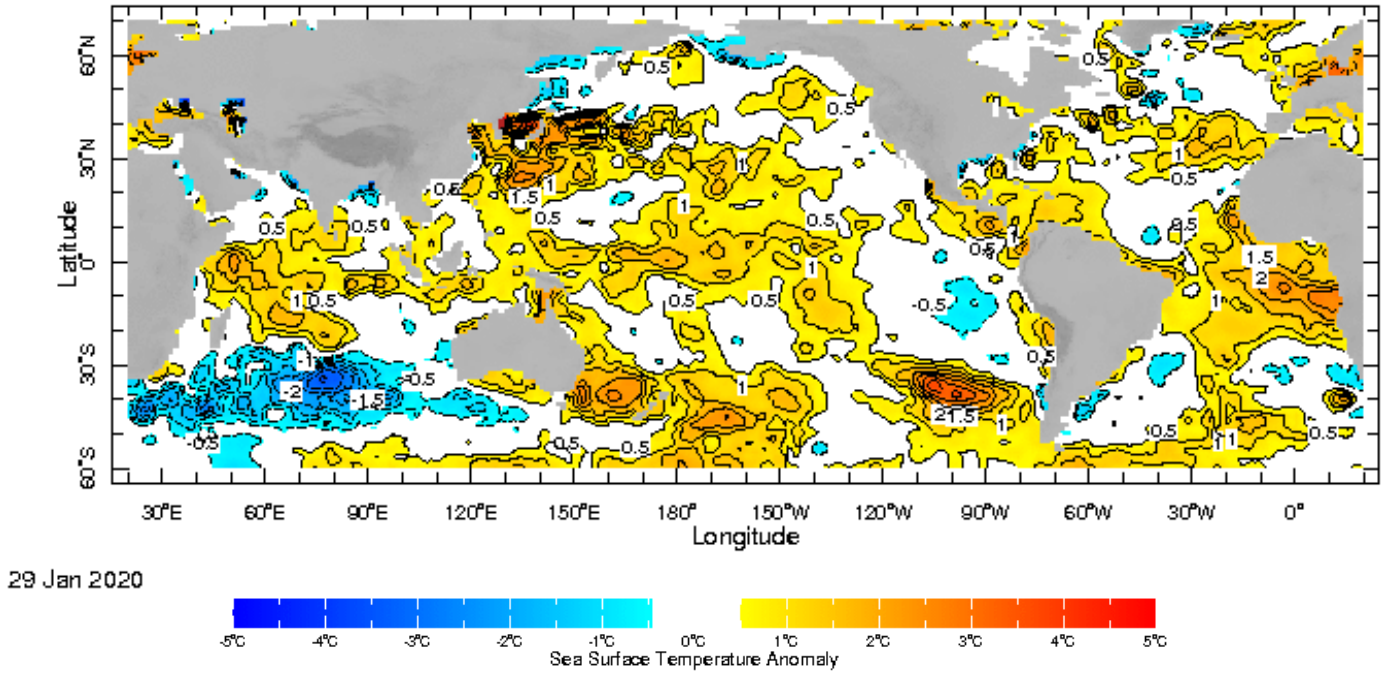
Dekadal (10 Day) Satellite Derived Rainfall Estimates





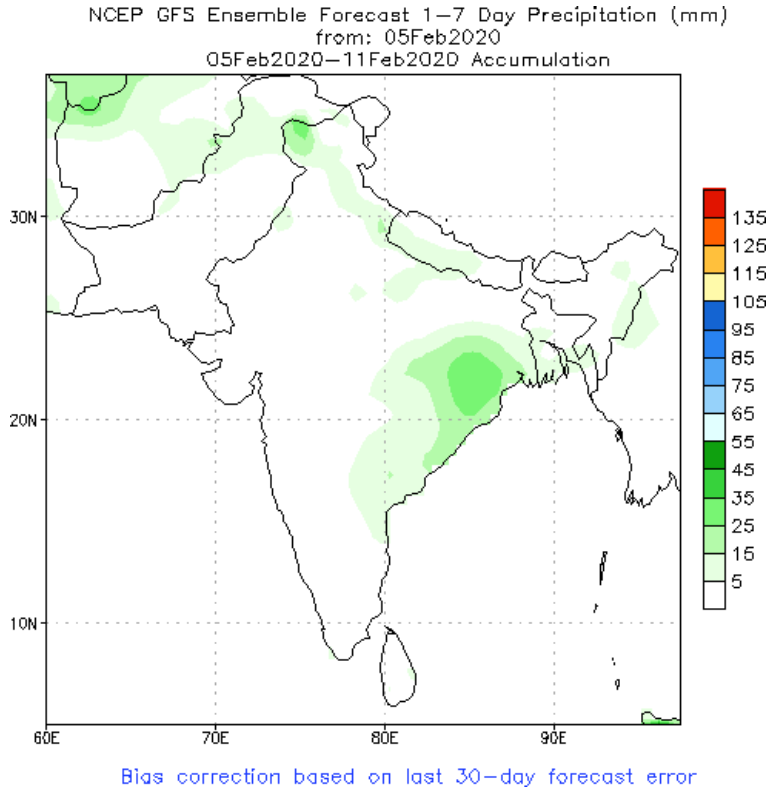
Weekly Average SST Anomalies

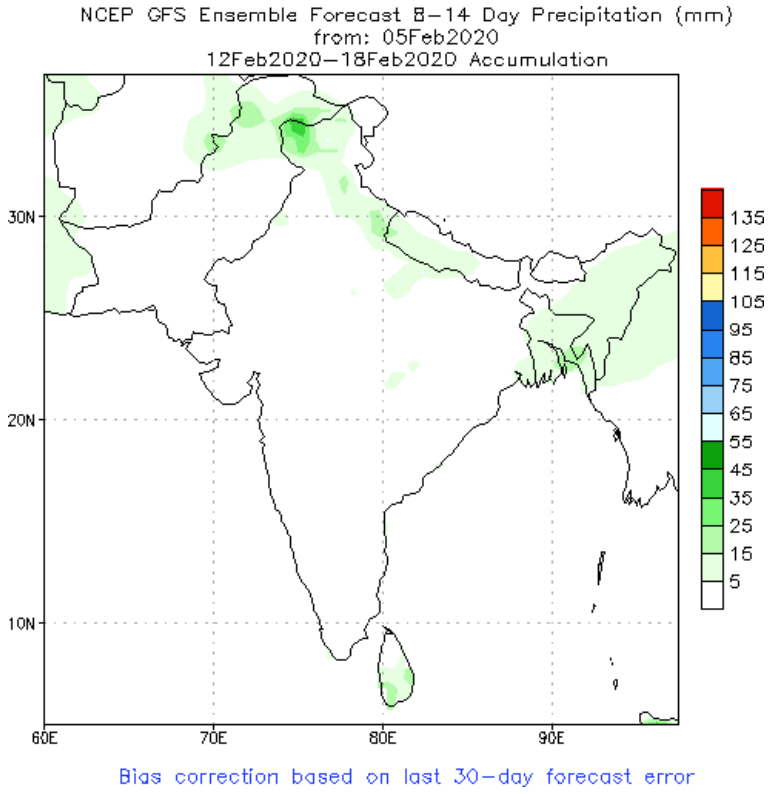
Weekly average Sea Surface Temperature (SST) anomaly in the world from NOAA NCEP



PREDICTIONS

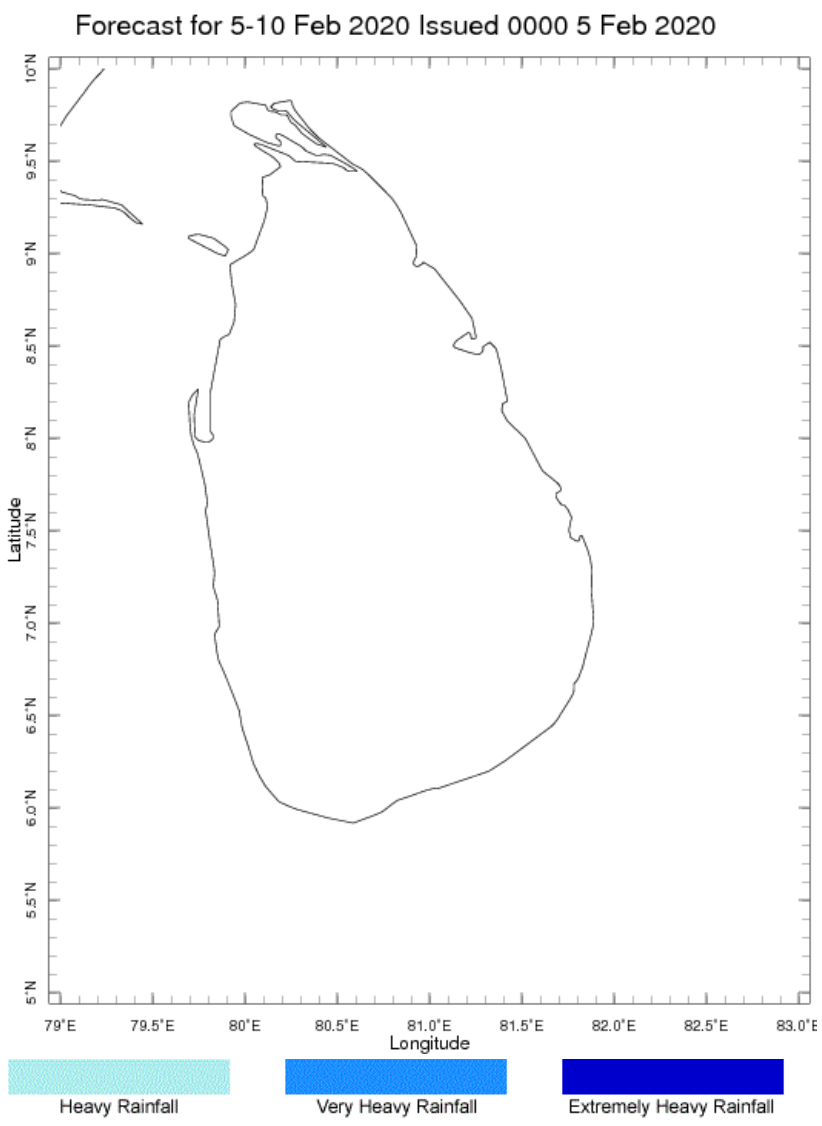
NCEP GFS 1- 14 Day prediction



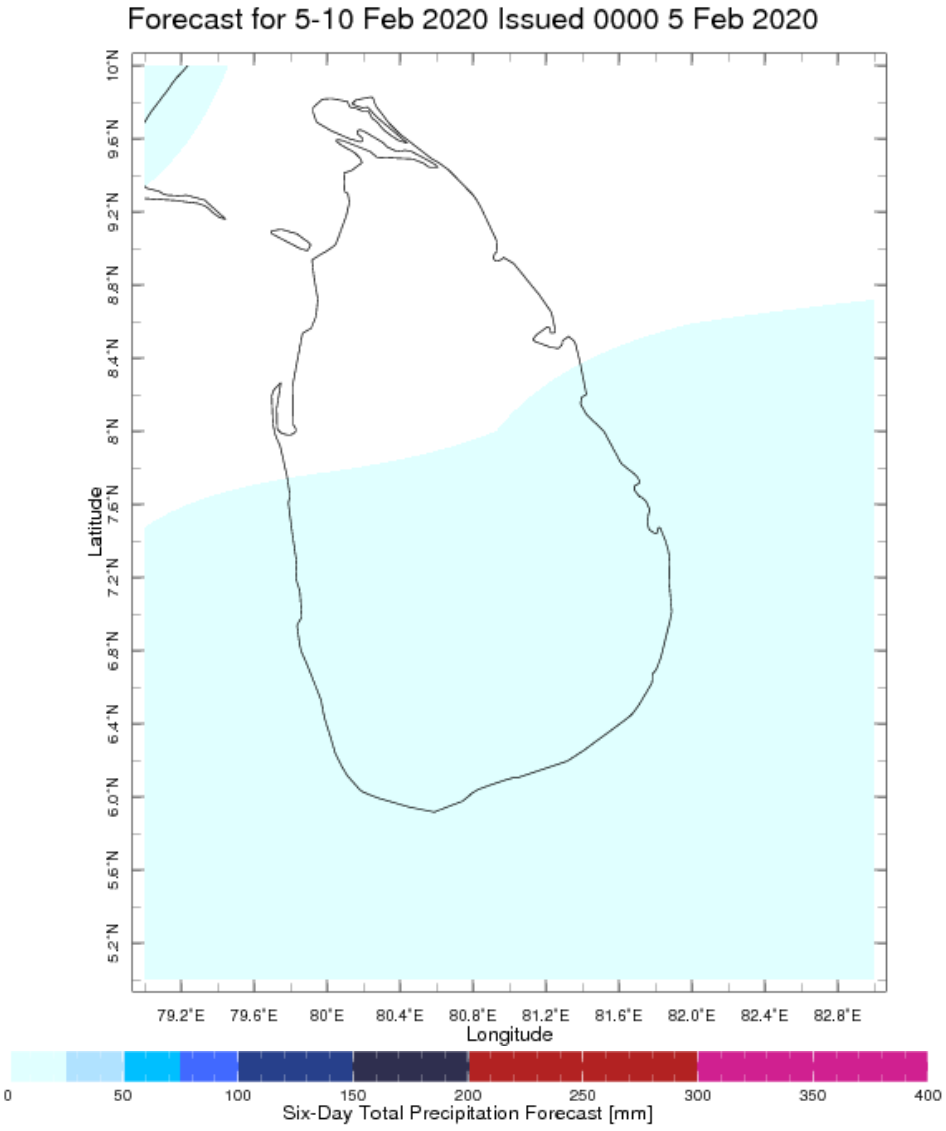


WRF Model Forecast (from IMD Chennai)

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.



Extreme Rainfall Forecast



Total Six Day Precipitation Forecast