

Experimental Climate Monitoring and Prediction

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Highlights

- The IRI weekly rainfall forecast predicts total rainfall between 150-200 mm in Badulla district during 25-30 Oct.
- Between 17-22 Oct: Rainfall up to 90 mm was recorded in Colombo, Gampaha and Kegalla districts on the 19th.
- From 15-21 Oct: minimum temperature of 20 °C was recorded from Nuwara Eliya district while most parts of the island recorded a maximum temperature between 30-35 °C.
- From 17-23 Oct: up to 54 km/h, northwesterly winds were experienced by the southern regions of the country and up to 36 km/h in the central and northern.
- 0.5 °C above average sea surface temperature was observed in the seas around Sri Lanka.

Monitoring

Rainfall

Weekly Monitoring: On October 17th Anuradhapura, Polonnaruwa, Badulla, Ampara and Batticaloa districts received up to 30 mm of rainfall; Vavuniya, Trincomalee, Puttalam, Kurunegala, Kegalla, Matale, Kandy and Nuwara Eliya districts up to 20 mm; and many of the northern and central parts of the island up to 10 mm. On the 18th Kuliyaipitiya region in Kurunegala district received up to 70 mm of rainfall; and Ratnapura, Kalutara, Galle and Matara districts up to 20 mm. On the 19th Colombo, Gampaha and Kegalla districts received up to 90 mm of rainfall; Yala region in Hambantota district up to 60 mm; Matara town region up to 50 mm; Galle, Kalutara, Kurunegala and Ratnapura districts up to 40 mm; Kandy and Matale districts up to 30 mm; and Badulla district up to 20 mm. On the 20th, Kalutara, Galle, Matara, Ratnapura, Monaragala and Hambantota districts received up to 20 mm of rainfall. On the 21st, Galle town region received up to 30 mm of rainfall; and coastal regions of Moratuwa up to 20 mm. On the 22nd, Avissawella region received up to 30 mm of rainfall; and areas close to the district border of Kegalla and Ratnapura up to 20 mm.

Total Rainfall for the Past Week: The RFE 2.0 tool shows total rainfall of 75-100 mm in Vavuniya, Anuradhapura, Polonnaruwa, Ampara, Monaragala, Gampaha, Colombo and Ratnapura districts; up to 50-75 mm Trincomalee, Batticaloa, Hambantota, Badulla, Matara, Kalutara, Matale, Kegalla and Kandy districts; and up to 25-50 mm in Kilinochchi, Mannar, Puttalam and Nuwara Eliya districts. It shows above average rainfall up to 25-50 mm in northern regions of Anuradhapura and Monaragala districts. It also shows below average rainfall up to 50-100 mm in Jaffna, Mannar, Puttalam, Kegalla, Kurunegala and Kalutara districts; and up to 25-50 mm in Kilinochchi, western regions of Anuradhapura, Nuwara Eliya, Ratnapura, Colombo and Matara districts.

Monthly Monitoring: During September - below average rainfall conditions were experienced in the eastern and southern regions of the island and above average rainfall in western and northern regions. Mullaitivu, Trincomalee, Polonnaruwa, Batticaloa, Matale, Ampara, Badulla, Nuwara Eliya, Ratnapura, Monaragala, Galle, Matara and Hambantota districts received up to 150 mm below average rainfall. Colombo district received up to 180 mm of above average rainfall; and Puttalam, Kurunegala, Colombo, Kegalla and Kalutara districts up to 150 mm. The CPC Unified Precipitation Analysis tool shows ~300 mm of total rainfall in Gampaha, Colombo and Kalutara districts; up to ~200 mm in Kegalla, Ratnapura and Galle districts; up to 100 mm in Puttalam, Kurunegala, Matale. Ampara, Monaragala, Badulla, Kandy and Matara districts; and up to 50 mm in many parts of the island.

Ocean State (Text Courtesy IRI)

Pacific sea state: October 19, 2017

In mid-October 2017, the tropical Pacific remained in an ENSO-neutral state but near the borderline of weak La Niña, as SSTs in the east-central tropical Pacific have cooled to the threshold for La Niña and the atmosphere has also shown patterns suggestive of near-La Niña conditions. The collection of latest ENSO prediction models indicates weak La Niña as a likely scenario during Northern Hemisphere fall and winter. The official CPC/IRI outlook favors La Niña development, and carries a La Niña watch.

Indian Ocean State

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

Predictions

Rainfall

14-day prediction:

NOAA NCEP models:

From 25th Oct – 31st Oct: Total rainfall between 105-115 mm in Ratnapura district; between 95-105 mm in Gampaha, Colombo districts; between 85-95 mm in Puttalam, Kurunegala, Kegalle and Kalutara districts; between 65-75 mm in Galle and Matara districts; between 55-65 mm in Matale, Kandy, Nuwara Eliya, Matara and Hambantota districts; and up to 55 mm total rainfall rest of the island.

From 01st – 07th Nov : Total rainfall between 115-125 mm in Colombo district; between 105-115 mm in Gampaha, Kegalle and Ratnapura districts; between 95-105 mm in Puttalam and Kurunegala districts; between 75-85 mm in Kandy, Nuwara Eliya, Kalutara and Galle districts; between 65-75 mm in Anuradhapura and Matale districts; between 65-75 mm in Mannar, Mullaitivu, Trincomalee, Polonnaruwa, Batticaloa, Badulla, Matara and Hambantota districts; and up to 55 mm total rainfall rest of the island.

IMD WRF Forecast:

27th Oct: Up to 35.6 mm of rainfall in Matale district; Up to 7.6 mm in Kurunegala, Anuradhapura districts; and up to 2.5 mm in rest of the island.

28th Oct: Up to 7.6 mm of rainfall in Jaffna, Mullaitivu, Mannar and Puttalam districts; and up to 2.5 mm in rest of the island.

IRI Model Forecast:

25th – 30th Oct: Total rainfall between 150-200 mm in Badulla district; between 100-150 mm in Polonnaruwa, Matale, Kandy, Nuwara Eliya, Ratnapura and Monaragala, Ampara districts; between 75-100 mm in Anuradhapura, Trincomalee, Batticaloa and Kegalle districts; between 50-75 mm in Jaffna, Kilinochchi, Mullaitivu, Vavuniya, Trincomalee, Hambantota and Kurunegala districts; and up to 50 mm total rainfall rest of the island.

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 BLOG

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Weekly Hydro- Meteorological Report for Sri Lanka

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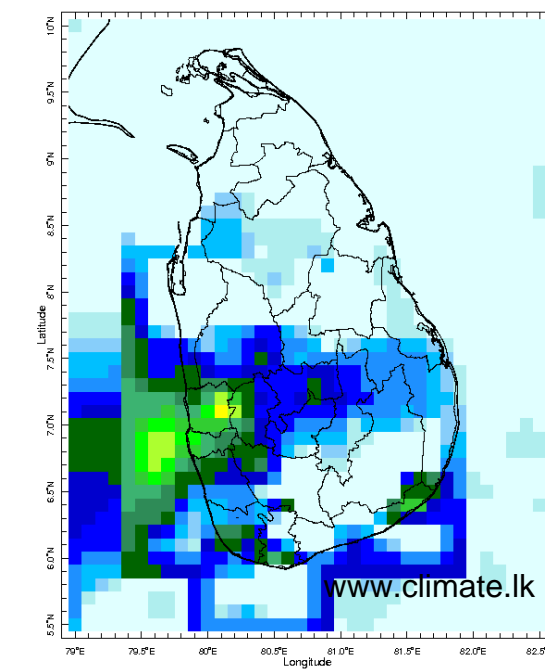
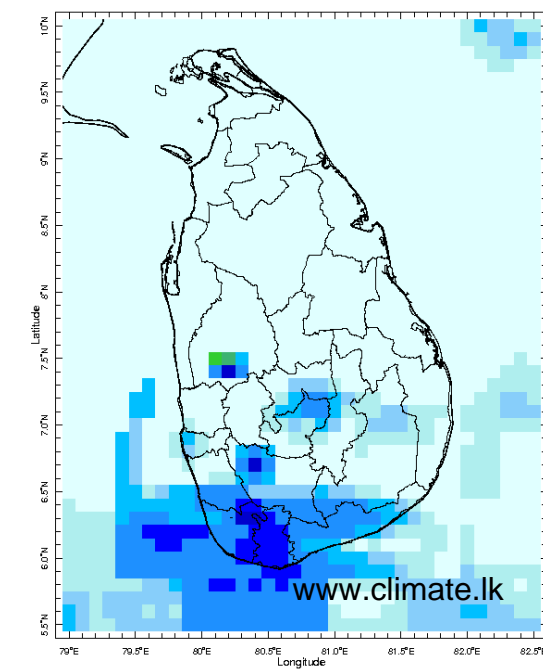
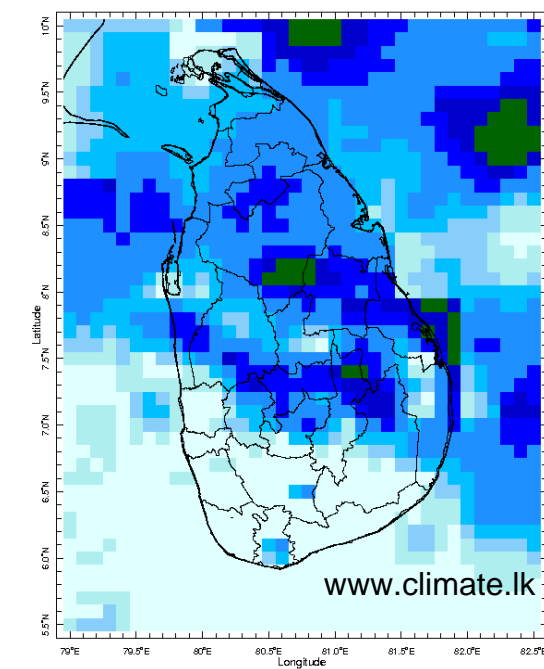
2. Predictions

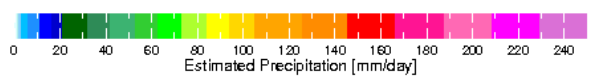
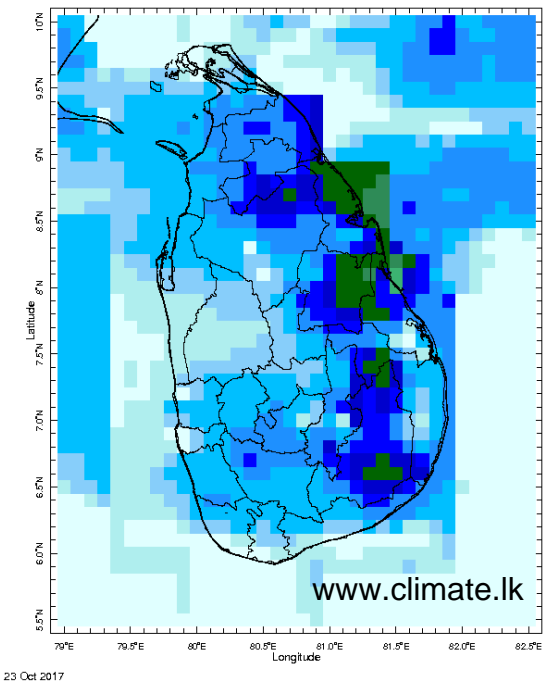
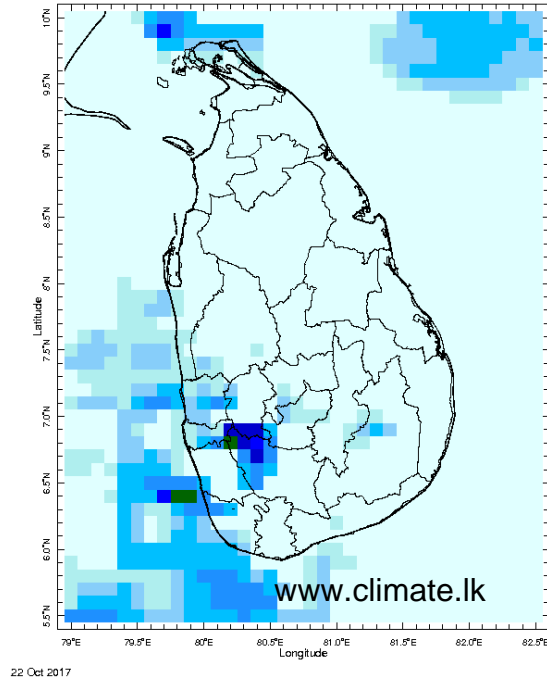
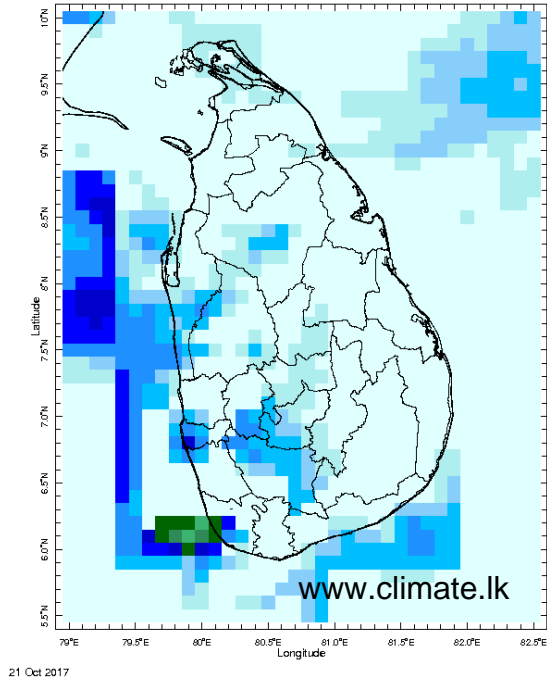
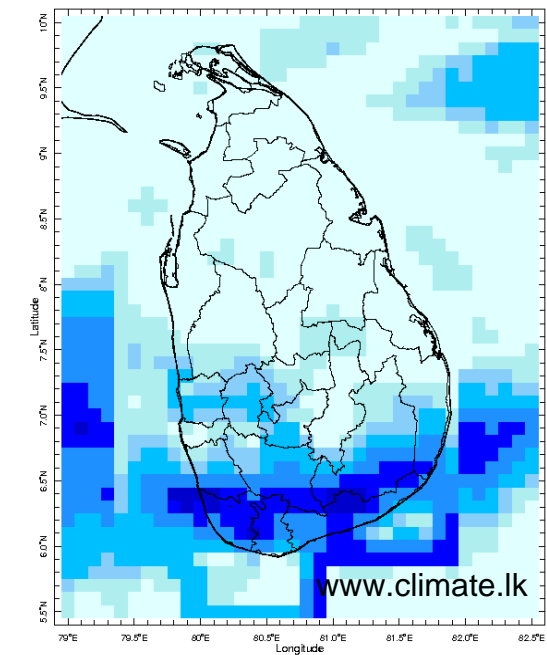
- a. NCEP GFS Ensemble 1-14 day Rainfall Predictions
- b. WRF Model Rainfall Forecast from IMD Chennai
- c. Weekly Precipitation Forecast from IRI
- d. Seasonal Predictions from IRI

MONITORING

Daily Rainfall Monitoring

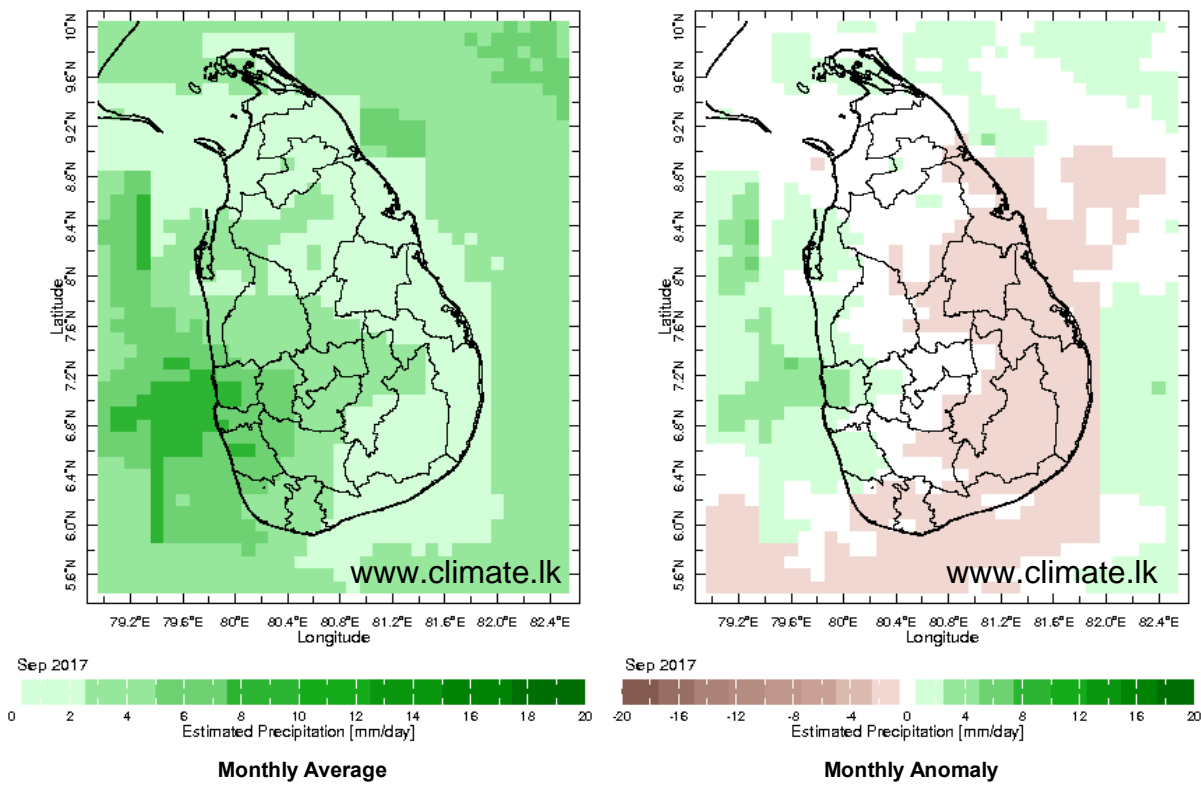
The following figures show the satellite observed rainfall in the last 7 days in Sri Lanka.



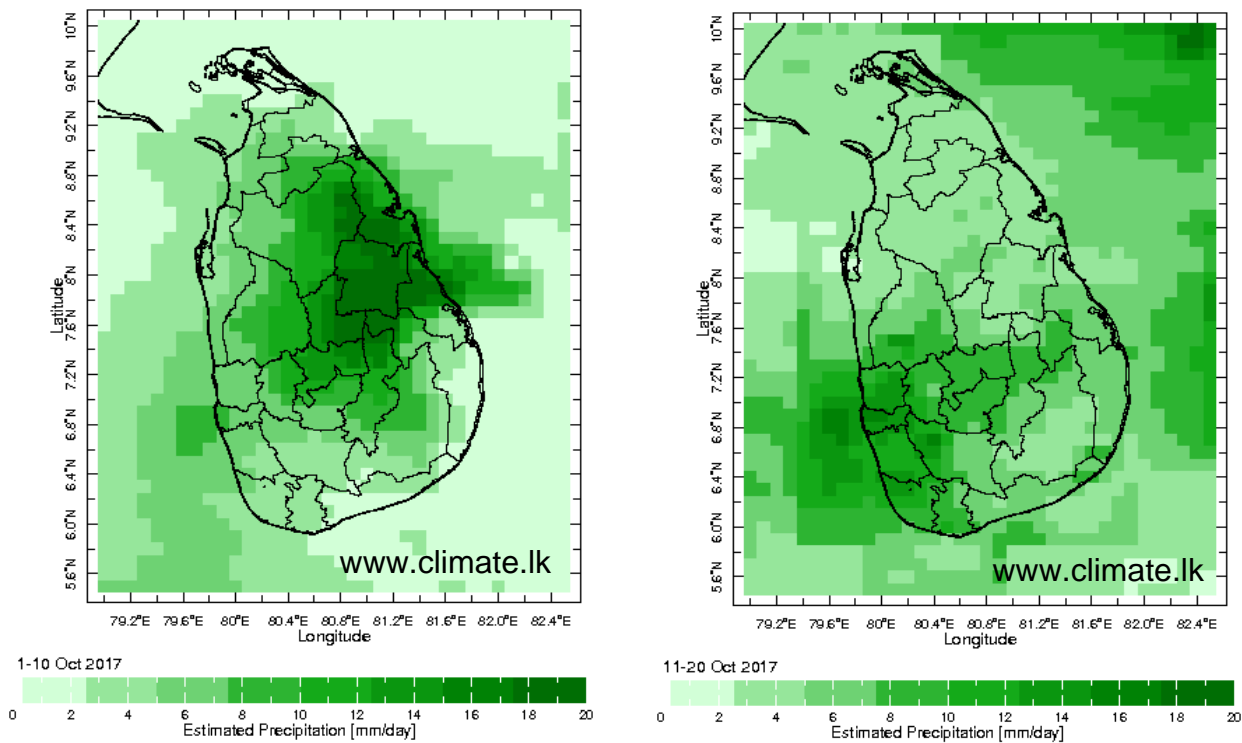


Monthly Rainfall Monitoring

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

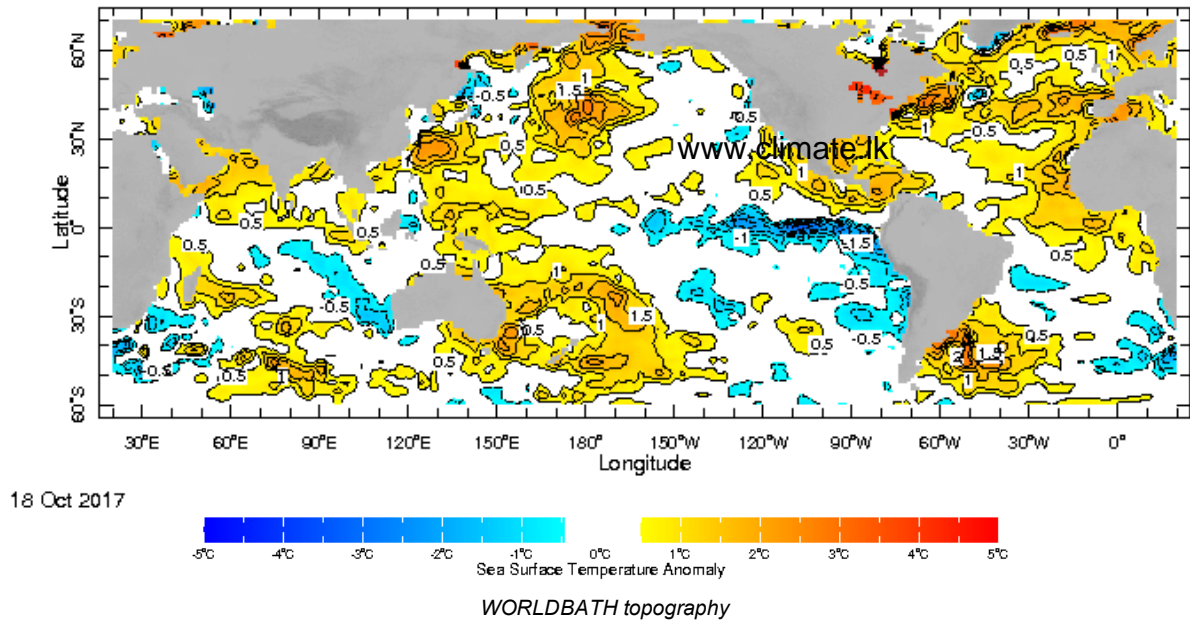


Dekadal (10 Day) Satellite Derived Rainfall Estimates

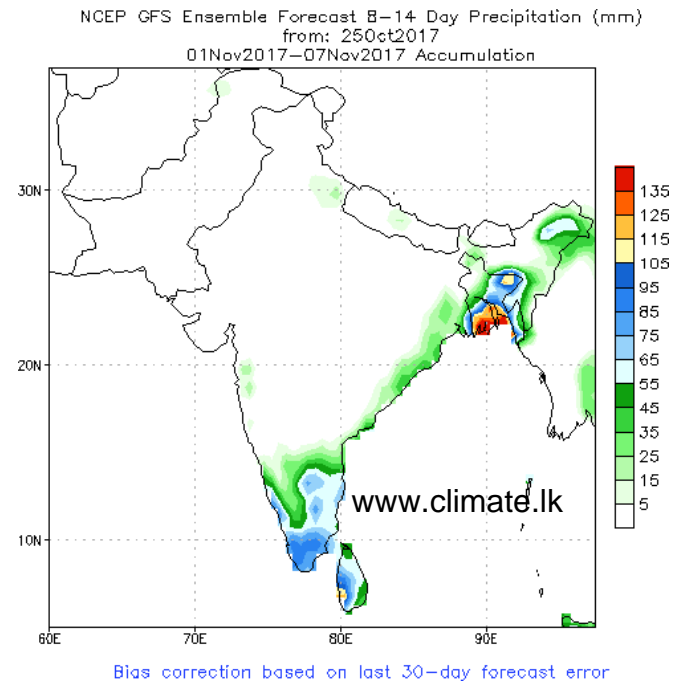
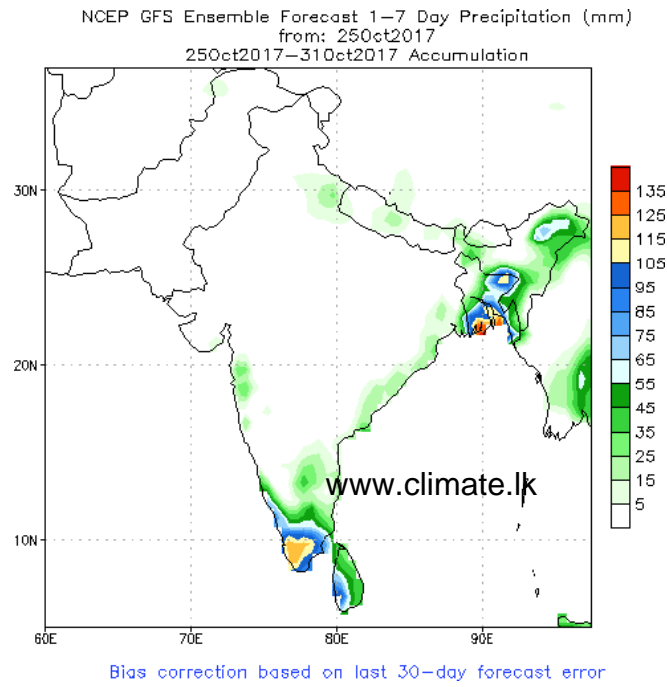


Weekly Average SST Anomalies

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

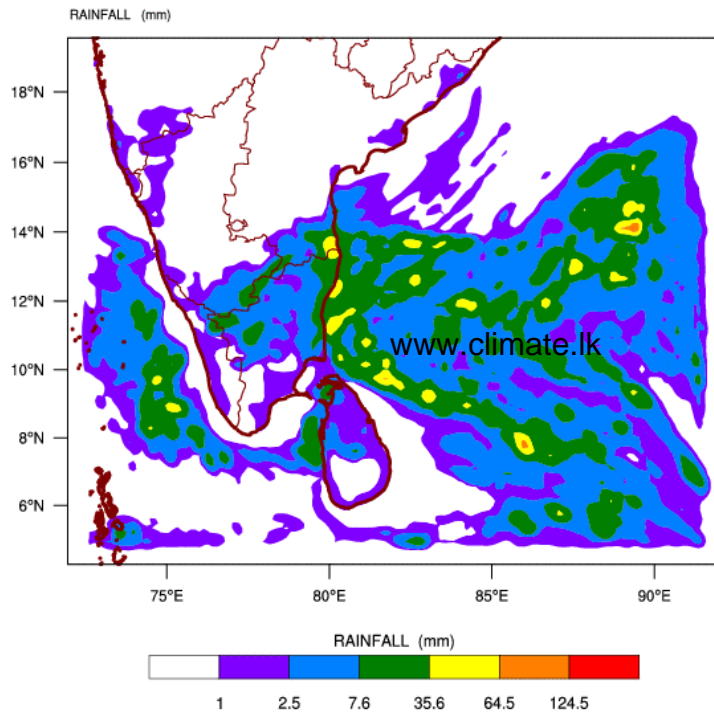


NCEP GFS 1- 14 Day prediction

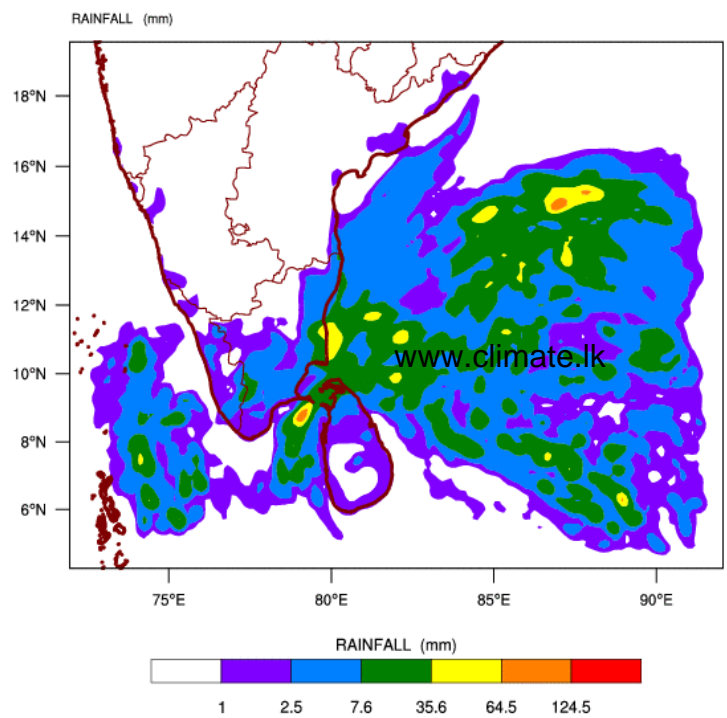


WRF Model Forecast (from IMD Chennai)

WRF MODEL FORECAST (48 HR.) RAINFALL(mm)\
based on 00 UTC of 26-10-2017 valid for 03 UTC of 28-10-2017

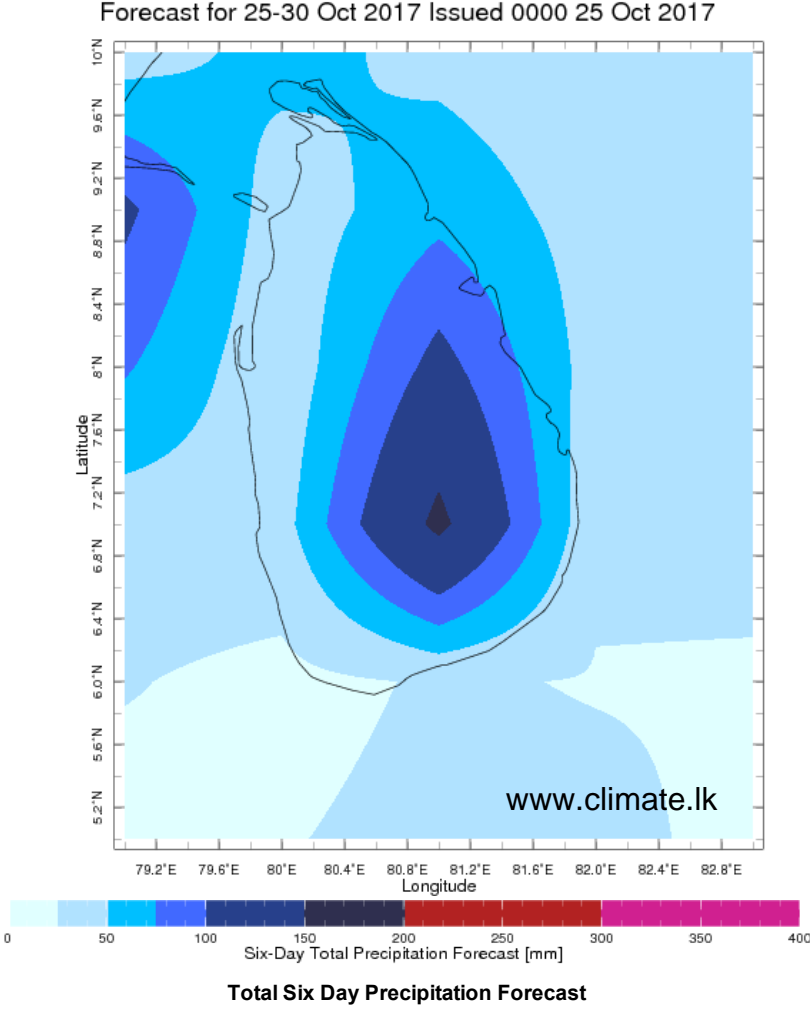
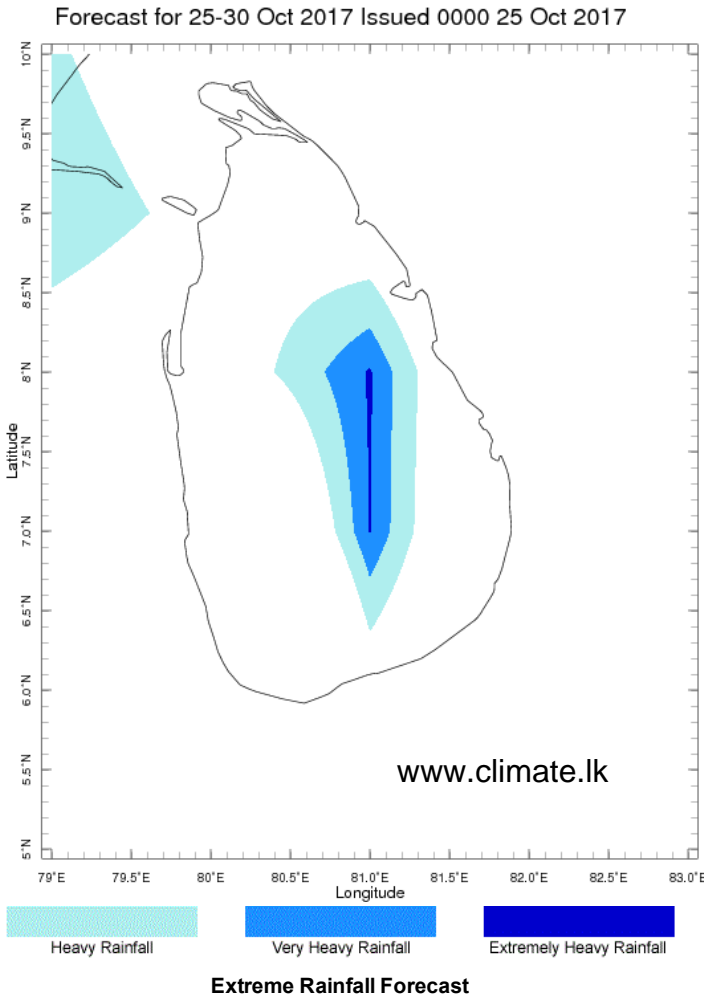


WRF MODEL FORECAST (72 HR.) RAINFALL(mm)\
based on 00 UTC of 26-10-2017 valid for 03 UTC of 29-10-2017



Weekly Rainfall Forecast from IRI

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.



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