

Experimental Climate Monitoring and Prediction

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Highlights

- The NCEP weekly rainfall forecast predicts between 85-95 mm of total rainfall in Colombo, Gampaha and Ratnapura districts during 25-31st Oct.
- Between 11-17 Oct: Rainfall up to 50 mm was recorded in Colombo, Gampaha and Ratnapura districts on the 14th.
- From 8-14 Oct: minimum temperature of 20 °C was recorded from Nuwara Eliya district while northeastern coastal regions recorded a maximum temperature between 35-40 °C.
- From 10-16 Oct: up to 54 km/h, northwesterly winds were experienced by the southern half of the country and up to 36 km/h in the northern half.
- Average sea surface temperature was observed in the seas around Sri Lanka.

Monitoring

Rainfall

Weekly Monitoring: On October 11th Kurunegala, Badulla, Monaragala and Ampara districts received up to 30 mm; and rest of the island up to 20 mm. On the 12th Kurunegala, Puttalam, Kalutara and Galle districts received up to 30 mm of rainfall; Jaffna, Ratnapura and Matara districts up to 20 mm; and rest of the country up to 10 mm. On the 13th, Kurunegala, Batticaloa, Kalutara, and Galle districts received up to 30 mm of rainfall; Jaffna, Kilinochchi, Mullaitivu, Mannar, Anuradhapura, Matale, Gampaha, Colombo, Kegalla, Nuwara Eliya and Matara districts up to 20 mm; and rest of the country up to 10 mm. On the 14th Colombo, Gampaha and Ratnapura districts received up to 50 mm of rainfall; Kalutara, Galle, Nuwara Eliya and Badulla districts up to 40 mm; Jaffna, Matale, Kandy, Kegalla Monaragala and Ampara districts up to 30 mm; and Kilinochchi, Batticaloa, Puttalam, Kurunegala, Matara, Hambantota and Polonnaruwa districts up to 20 mm. On the 15th, Gampaha, Colombo, Kalutara and Ratnapura districts received up to 30 mm of rainfall; and Gampaha, Kegalla, Nuwara Eliya, Galle, Matara and Hambantota districts up to 20 mm. On the 16th, Trincomalee and Batticaloa districts received up to 10 mm of rainfall. On the 17th, Anuradhapura, Polonnaruwa, Batticaloa, Badulla and Ampara districts received up to 30 mm of rainfall; Vavuniya, Trincomalee, Puttalam, Kurunegala, Kegalla, Kandy, Matale, Nuwara Eliya and Monaragala districts up to 20 mm.

Total Rainfall for the Past Week: The RFE 2.0 tool shows total rainfall of 75-100 mm in Kurunegala, Kegalla, Kandy, Batticaloa, Ampara, Monaragala, Kalutara, Ratnapura, Galle and Matara districts; up to 50-75 mm Anuradhapura, Polonnaruwa, Puttalam, Matale, Nuwara Eliya, Gampaha, Colombo and Hambantota districts; and up to 25-50 mm in rest of the island. It shows above average rainfall up to 50-100 mm in Ampara, Kalutara and Galle districts; and 25-50 mm in Trincomalee, Batticaloa, Colombo and Ratnapura districts. It also shows below average rainfall up to 50-100 mm in Anuradhapura and Badulla districts; and up to 25-50 mm in Mannar, Vavuniya, Kurunegala, Polonnaruwa, Matale and Monaragala 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 12, 2017

In early 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

Average sea surface temperature was observed in the seas around Sri Lanka.

Predictions

Rainfall

14-day prediction:

NOAA NCEP models:

From 18th Oct – 24th Oct: Total rainfall between 45-55 mm in Colombo and Ratnapura districts; between 35-45 mm in Gampaha and Kegalle districts; between 25-35 mm in Puttalam, Kurunegala and Galle districts; between 15-25 mm in Anuradhapura, Polonnaruwa, Matale, Kandy, Nuwara Eliya, Badulla, Ampara and Batticaloa districts; Up to 15 mm total rainfall in rest of the island.

From 25th – 31st Oct: Total rainfall between 85-95 mm in Colombo, Gampaha, Kegalle and Ratnapura districts; between 75-85 mm in Puttalam and Kurunegala districts; between 65-75 mm in Kandy and Nuwara Eliya districts; between 55-65 mm in Kalutara and Galle districts; between 45-55 mm in Anuradhapura and Matale districts; between 35-45 mm in Polonnaruwa, Ampara and Badulla districts; Up to 35 mm total rainfall rest of the island.

IMD WRF Forecast:

20th Oct: Up to 35.6 mm of rainfall in Jaffna Mannar, Puttalam, Gampaha, Colombo, Kalutara, Galle and Matara districts; Up to 7.6 mm in Kilinochchi, Mullaitivu, Vavuniya, Anuradhapura, Polonnaruwa, Trincomalee, Kurunegala, Kegalle, Ratnapura, Hambantota and Monaragala districts; Up to 2.5 mm in Batticaloa, Ampara, and Badulla districts.

21st Oct: Up to 35.6 mm of rainfall in Jaffna Mannar, Kilinochchi, Puttalam, Kalutara and Galle districts; Up to 7.6 mm in Mullaitivu, Vavuniya, Anuradhapura, Ratnapura, Hambantota, Monaragala and Ampara districts; Up to 2.5 mm in Polonnaruwa, Trincomalee, Batticaloa, Kurunegala, Kegalle and Badulla districts.

IRI Model Forecast:

18th – 23th Oct: Total rainfall between 25-50 mm in Gampaha, Colombo, Kalutara, Galle, Kegalle, Ratnapura, Kandy, Nuwara Eliya, Badulla, Monaragala, Ampara and Batticaloa districts; Up to 25 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

Past reports available at <http://fectsl.blogspot.com/> and <http://fectsl.wordpress.com/>

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Weekly Hydro- Meteorological Report for Sri Lanka

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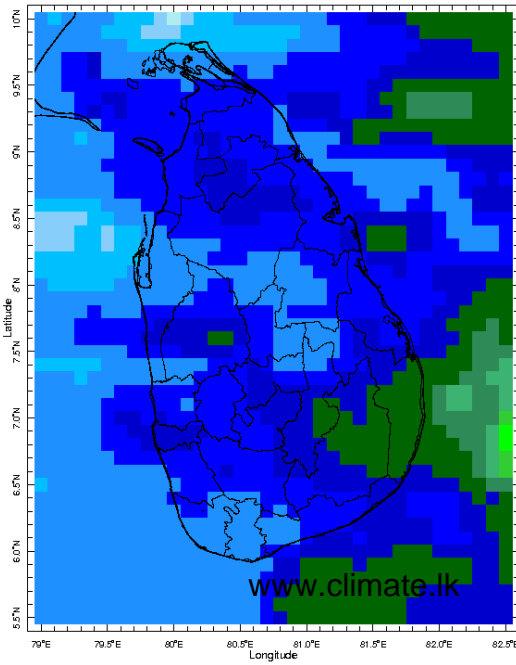
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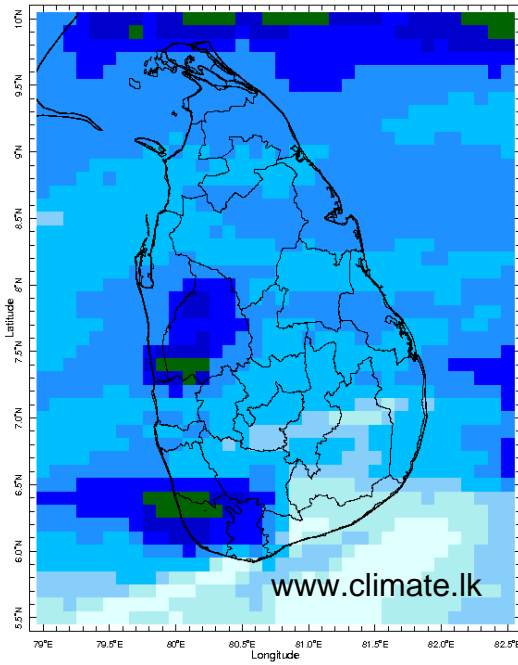
MONITORING

Daily Rainfall Monitoring

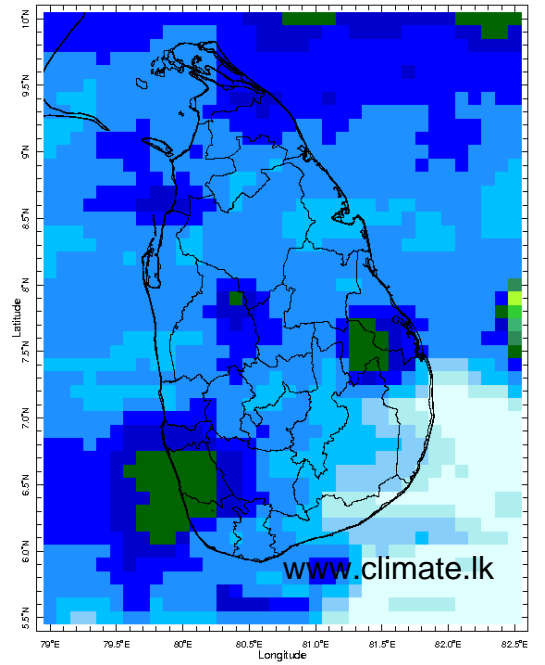
The following figures show the satellite observed rainfall in the last 7 days in Sri Lanka.



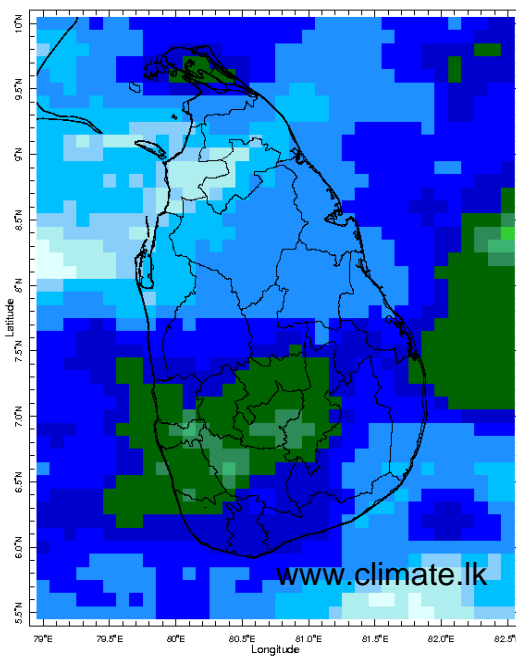
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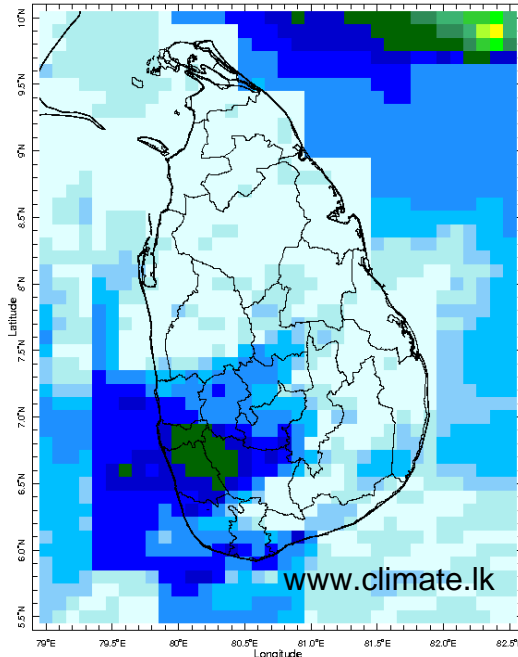
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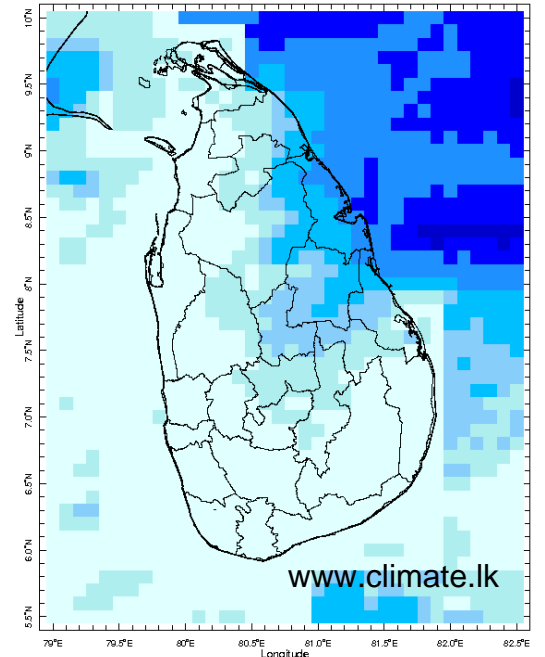
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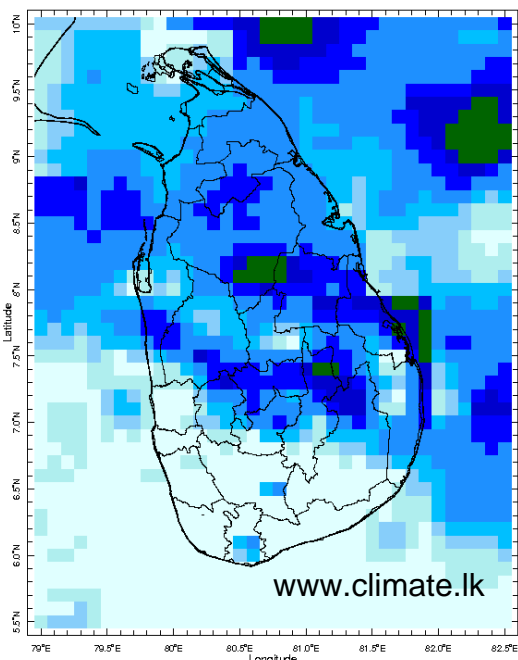
14 Oct 2017



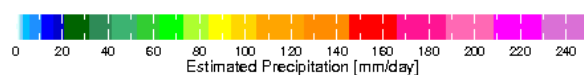
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16 Oct 2017

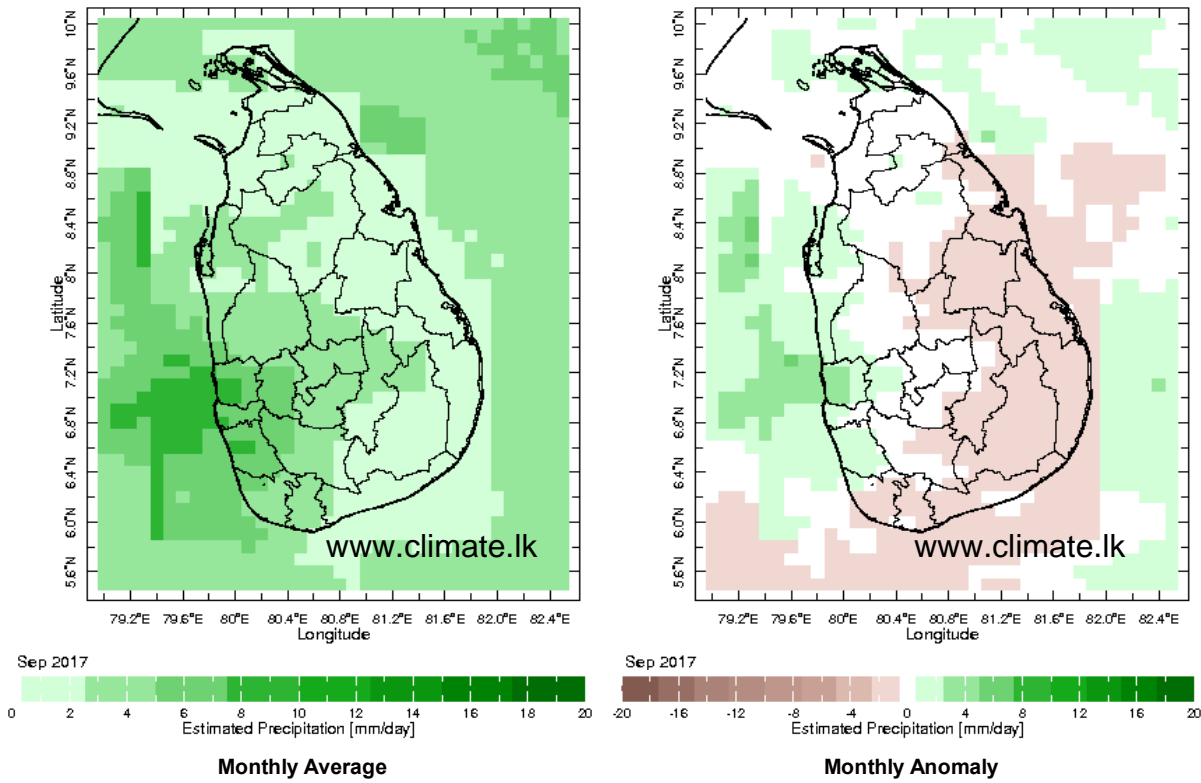


17 Oct 2017

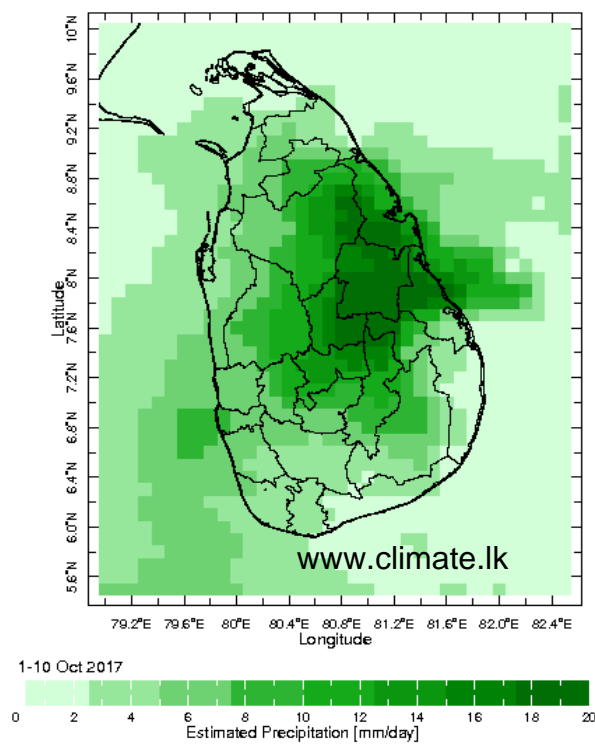
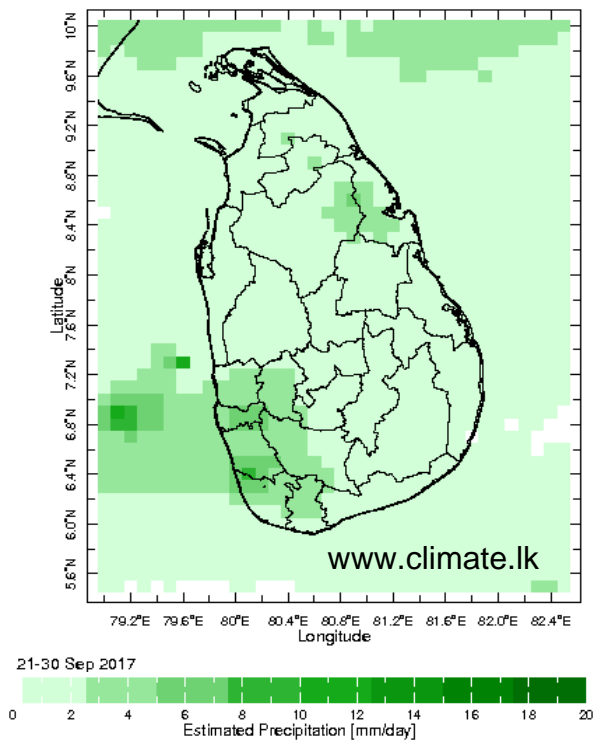


Monthly Rainfall Monitoring

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

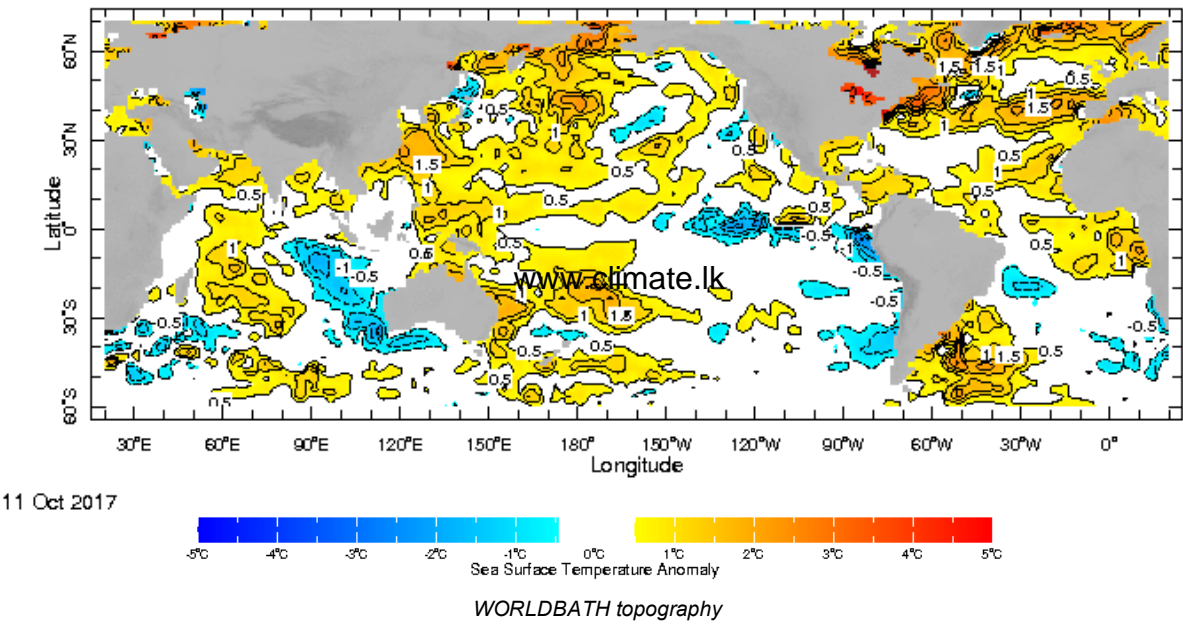


Dekadal (10 Day) Satellite Derived Rainfall Estimates

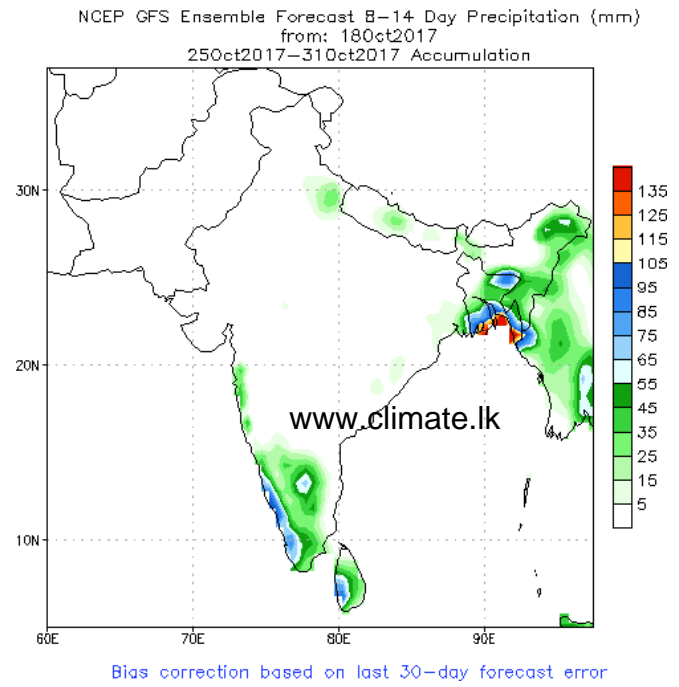
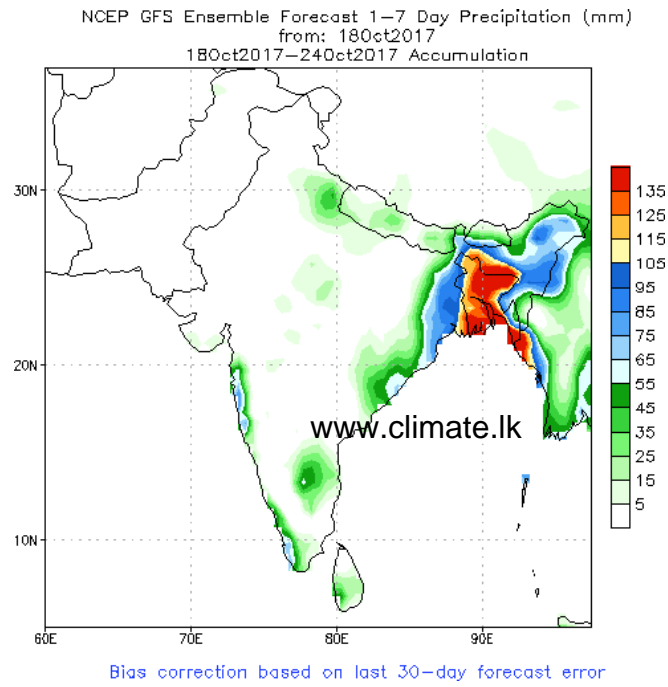


Weekly Average SST Anomalies

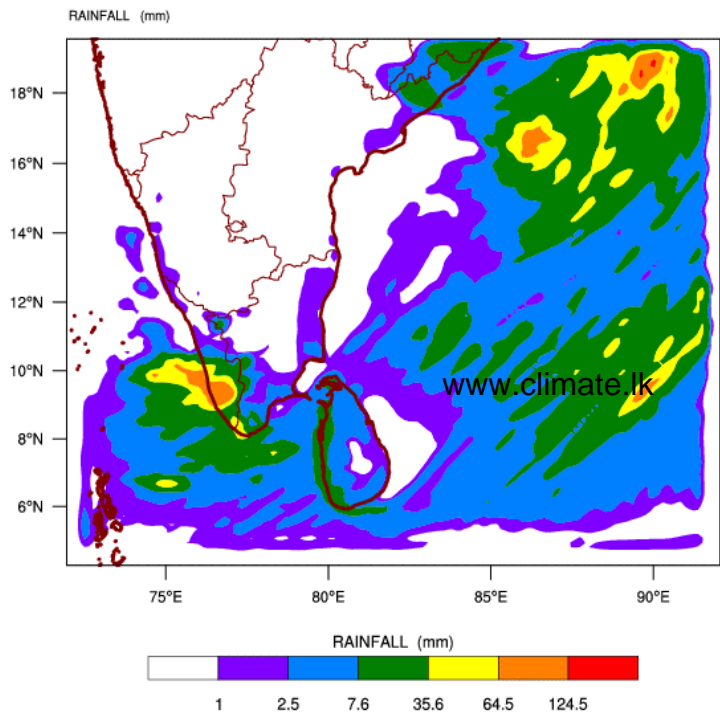
Weekly average Sea Surface Temperature (SST) anomaly in the world from NOAA NCEP



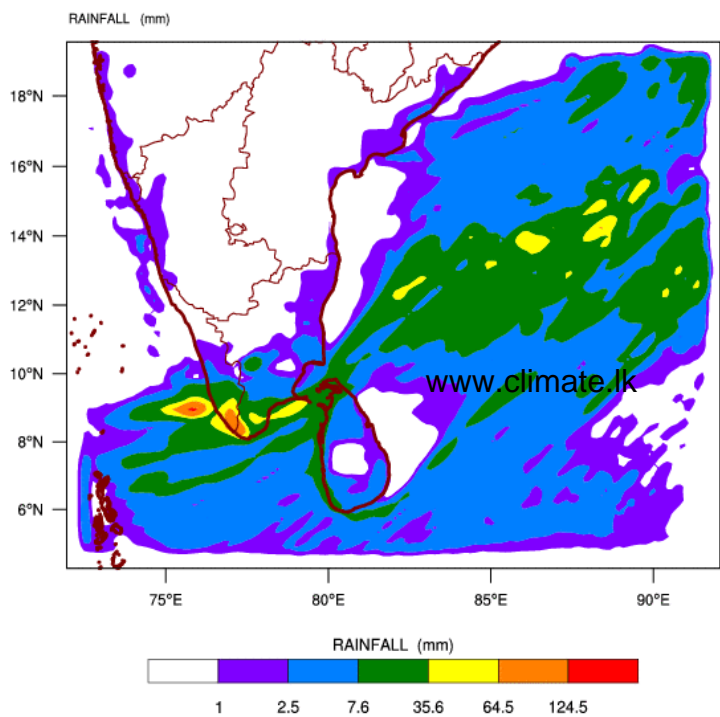
NCEP GFS 1- 14 Day prediction



WRF MODEL FORECAST (48 HR.) RAINFALL(mm)\
based on 00 UTC of 18-10-2017 valid for 03 UTC of 20-10-2017

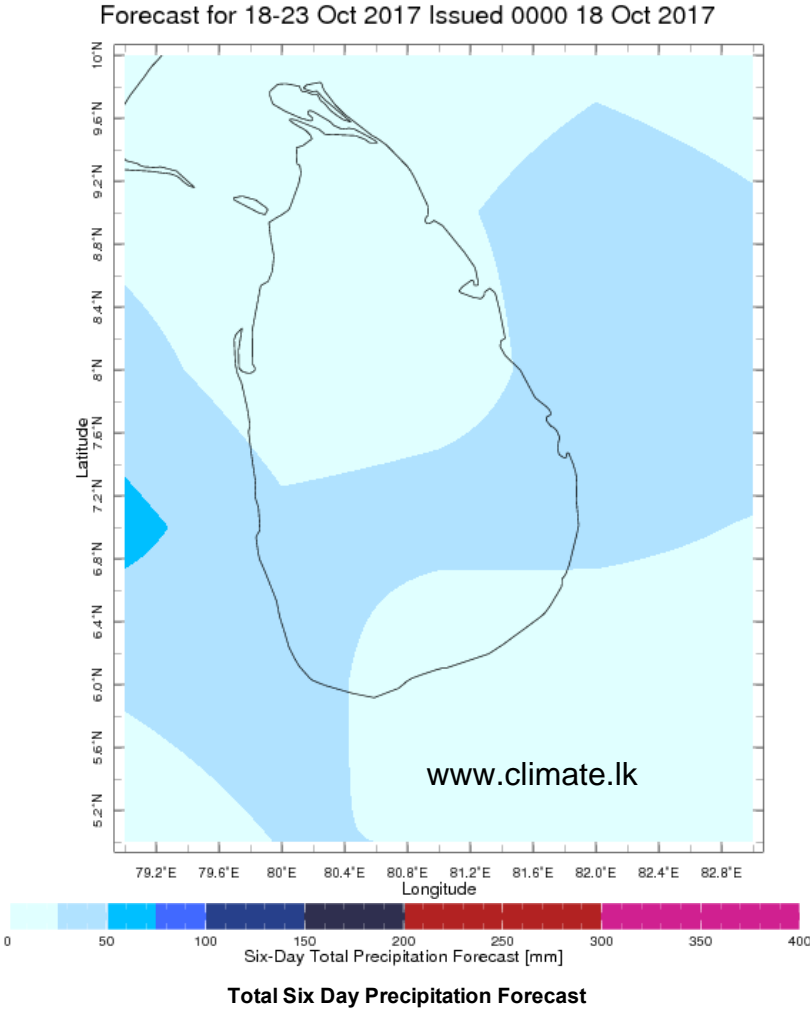
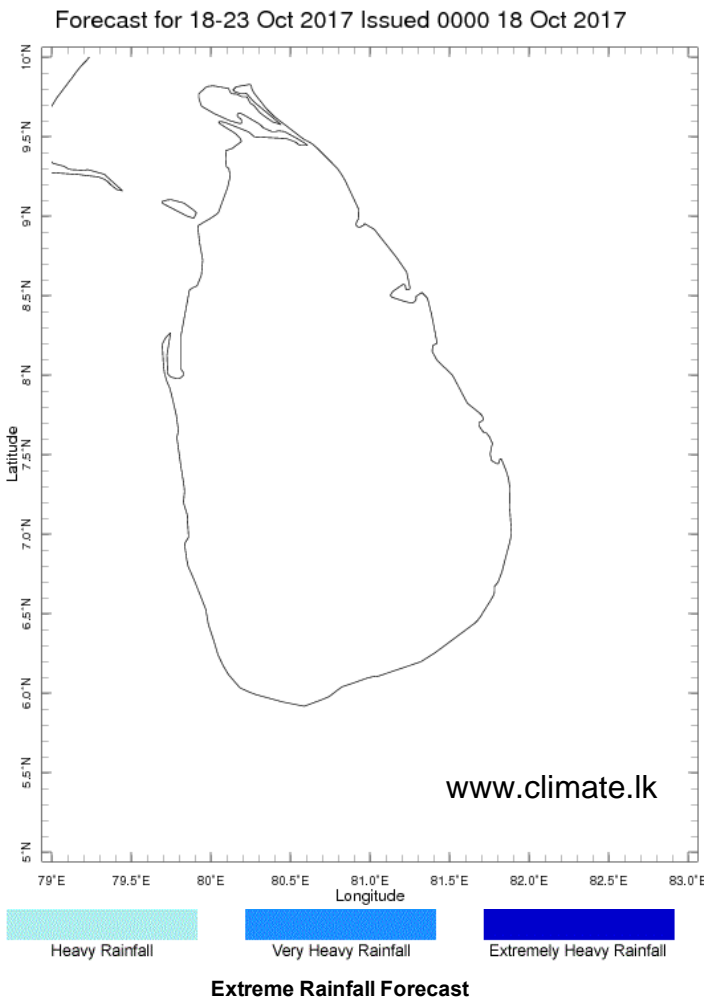


WRF MODEL FORECAST (72 HR.) RAINFALL(mm)\
based on 00 UTC of 18-10-2017 valid for 03 UTC of 21-10-2017



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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