

Experimental Climate Monitoring and Prediction

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16 February 2017

Highlights

- The NOAA NCEP model predicts up to 25 mm of total rainfall in the Southern province during 15th – 21st February.
- Between 7-13 Feb: highest rainfall of 50 mm was recorded in Kilinochchi district on the 13th.
- From 5-11 Feb: minimum temperature of 15 °C was recorded from Nuwara Eliya district while most parts of the island recorded a maximum temperature between 30-35 °C.
- From 7-13 Feb: up to 18 km/h northeasterly winds were experienced by the entire Island.

Monitoring

Rainfall

Weekly Monitoring: No rainfalls were recorded within the island during the period February 7th – 12th. On the 13th, Kilinochchi district and Ratmale region near the district border of Anuradhapura and Trincomalee received up to 50 mm of rainfall; and Jaffna and Mullaitivu districts up to 30 mm.

Total Rainfall for the Past Week: The RFE 2.0 tool shows total rainfall up to 100 mm for Anuradhapura and Vavuniya districts; up to 75 mm in Matale, Kandy and Badulla districts; and up to 50 mm in Polonnaruwa, Ampara, Nuwara Eliya, Monaragala, Colombo and Kalutara districts; and up to 25 mm in rest of the districts. It shows above average rainfall of 50-100 mm for Anuradhapura, Matale, Badulla and Vavuniya districts; and 25-50 mm for Polonnaruwa and Monaragala districts; and below average rainfall of 10-25 mm in Batticaloa, Kurunegala, Puttalam and Galle districts.

Monthly Monitoring: During January - above average rainfall conditions were experienced in Jaffna, Kilinochchi, Mannar, and several regions of Anuradhapura, Polonnaruwa, Matale, Puttalam, Matara and Hambantota districts. These regions received up to 60 mm above average rainfall. Batticaloa, Ampara and Badulla districts received up to 150 mm below average rainfall; and up to 90 mm below average rainfall in many parts of the island. Monthly average rainfall for Anuradhapura, Polonnaruwa, Batticaloa, Ampara, Ratnapura, Galle, Matara and Hambantota amounted to 150 mm/month; and 90 mm/month for many parts of the island. The CPC Unified Precipitation Analysis tool shows ~100 mm of total rainfall in Mannar, Anuradhapura, Polonnaruwa, Galle, Batticaloa, Ampara, Hambantota, Ratnapura and Matale districts; and up to ~75 mm for many parts of the island.

Ocean State (Text Courtesy IRI)

Pacific sea state: February 8, 2017

During early February 2017 the tropical Pacific SST anomaly was between 0 and -0.5°C, in the cool ENSO-neutral range. Some of the atmospheric variables across the tropical Pacific still show a weak La Niña pattern, while others have weakened to a neutral condition. The upper and lower atmospheric winds only weakly suggest a strengthened Walker circulation, but the pattern of cloudiness and rainfall remains suggestive of La Niña. The collection of ENSO prediction models indicates SSTs, no longer at the threshold of La Niña, are likely to remain neutral through May 2017, with a chance of El Niño development later in the year.

Indian Ocean State

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

Predictions

Rainfall

14-day prediction:

NOAA NCEP models:

From 15th – 21st Feb: Up to 25 mm rainfall in Southern province.

From 22nd – 28th Feb: Up to 15 mm rainfall in Northern Province

IMD WRF & IRI Model Forecast:

17th Feb: Rainfall up to 7.6 mm of rainfall in Polonnaruwa, Batticaloa, Matale, Kandy, Nuwara Eliya and Badulla districts and up to 2.5 mm of rainfall in Trincomalee, Monaragala and Ampara districts.

18th Feb: Rainfall up to 7.6 mm of rainfall in Polonnaruwa, Batticaloa, Matale, Kandy and Nuwara Eliya districts and up to 2.5 mm of rainfall in Trincomalee, Monaragala, Badulla and Ampara districts.

Seasonal Prediction: IRI Multi Model Probability Forecast

March to May: the total 3-month precipitation shall be climatological for the whole island. The 3-month temperature has more than 70-80% likelihood in the southern region and 60-70% likelihood in the northern region of being in the above-normal tercile.

MJO based OLR predictions

For the next 15 days:

MJO shall heavily suppress the rainfall of Sri Lanka in the next 5 days and shall enhance the rainfall in the following 10 days.

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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

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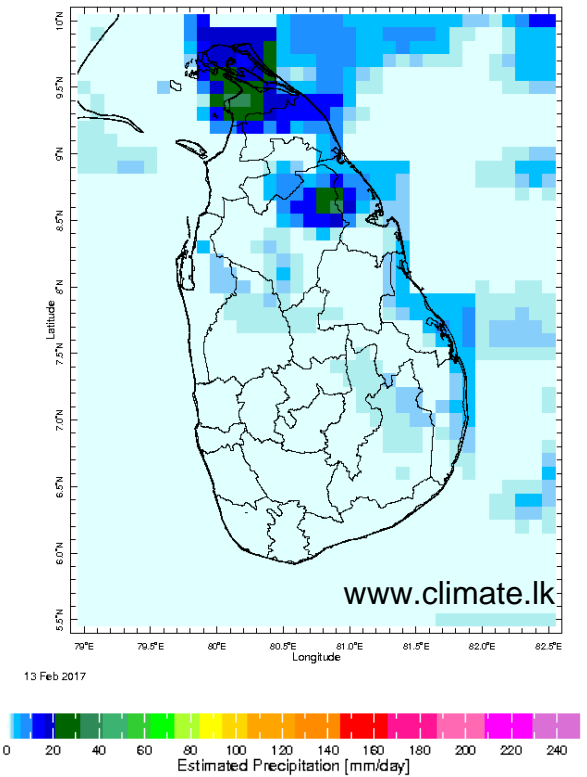
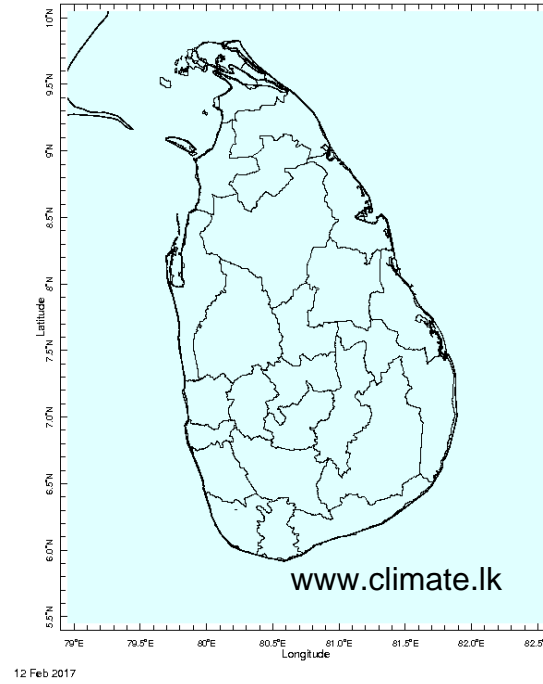
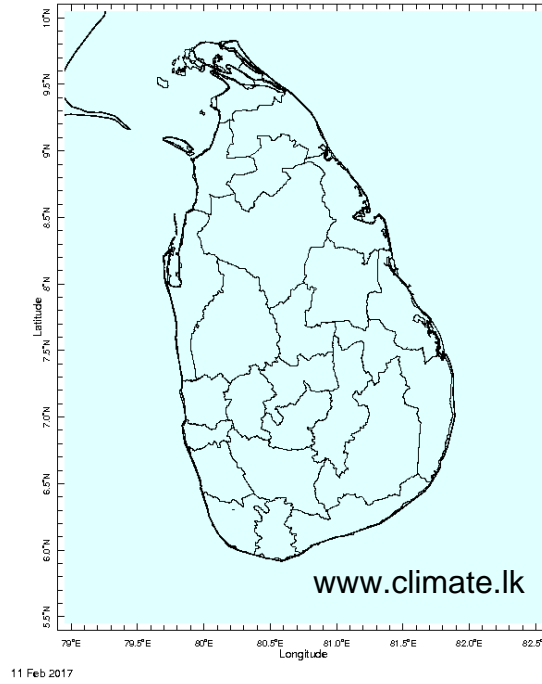
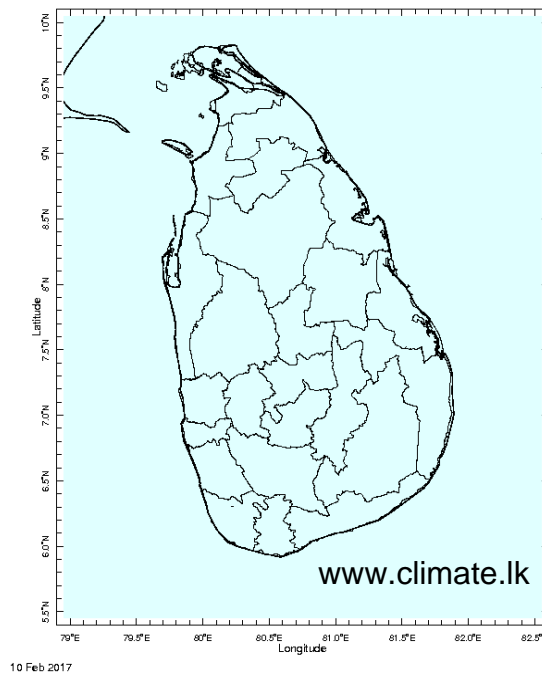
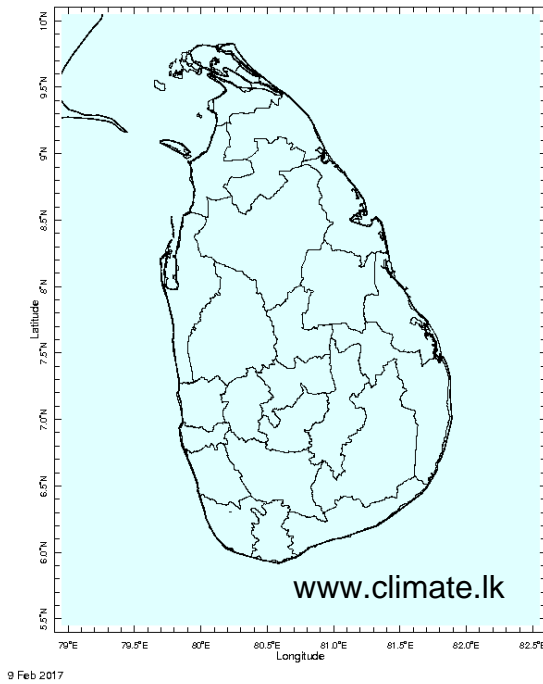
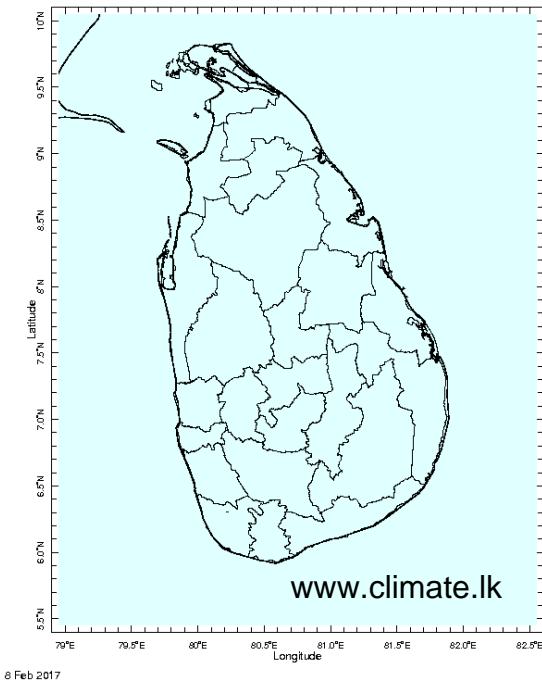
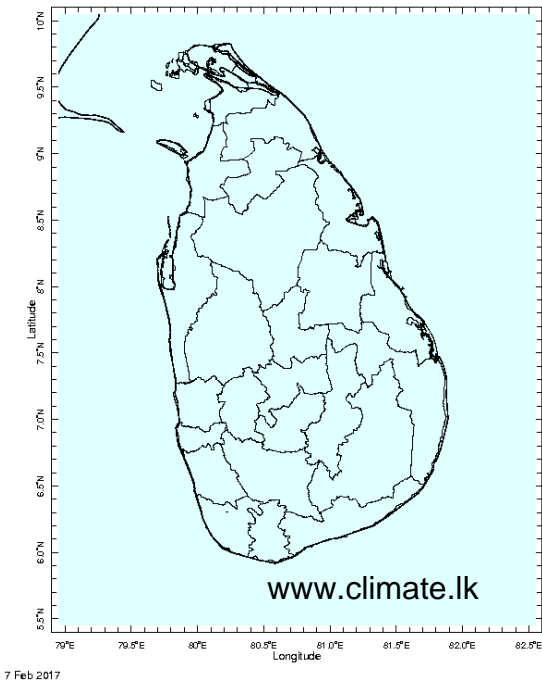
- a. Daily Rainfall Monitoring
- b. Monthly Rainfall Monitoring
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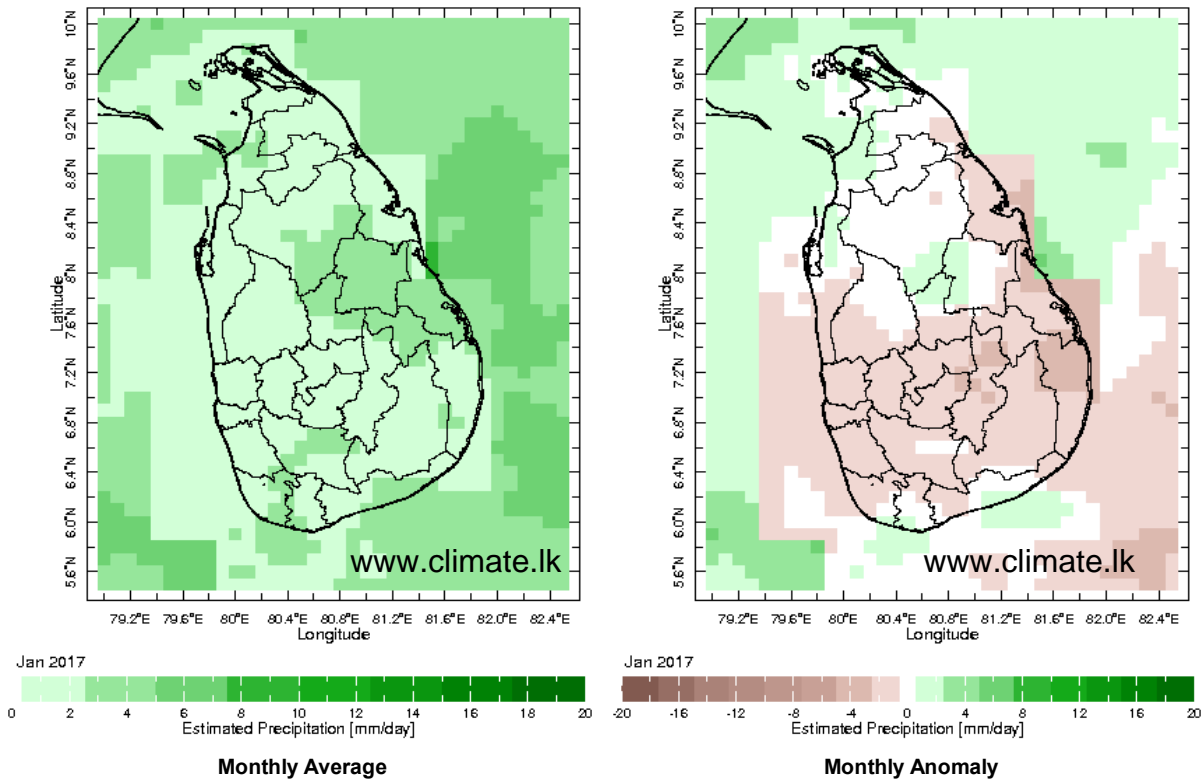
Daily Rainfall Monitoring

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

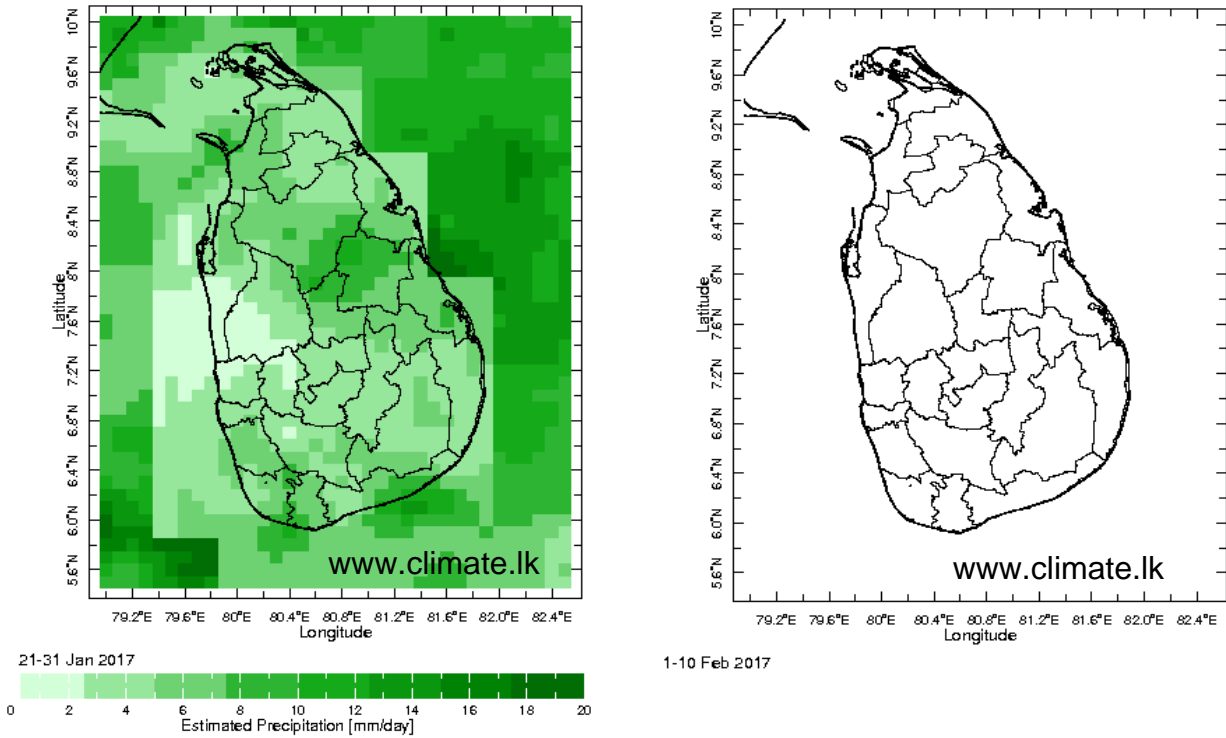


Monthly Rainfall Monitoring

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

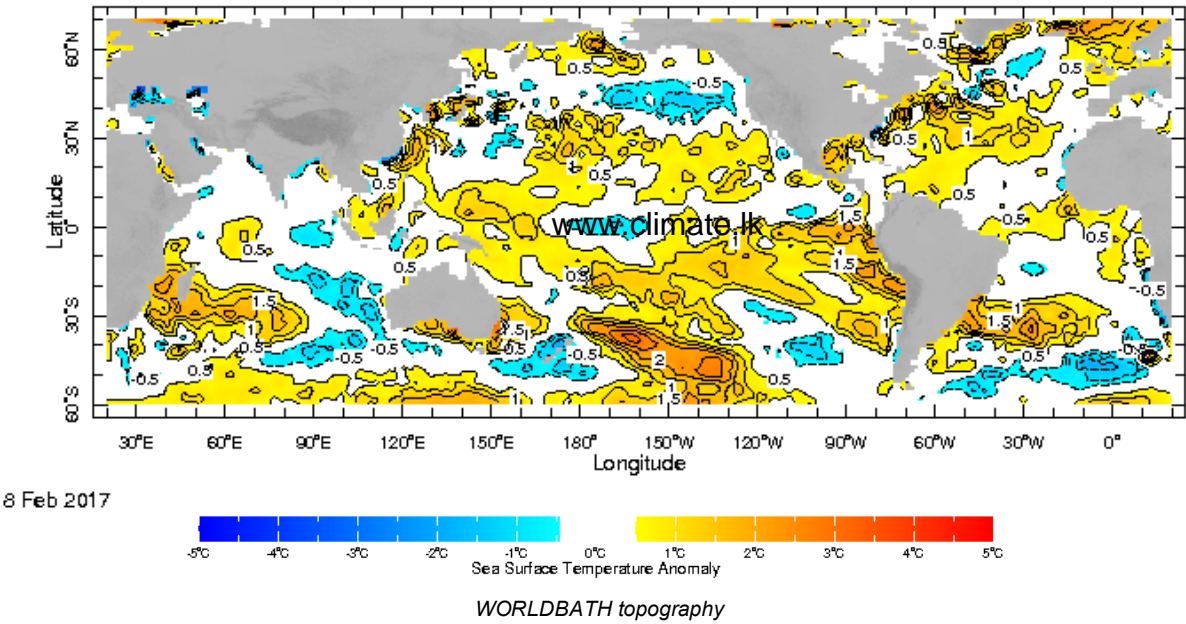


Dekadal (10 Day) Satellite Derived Rainfall Estimates

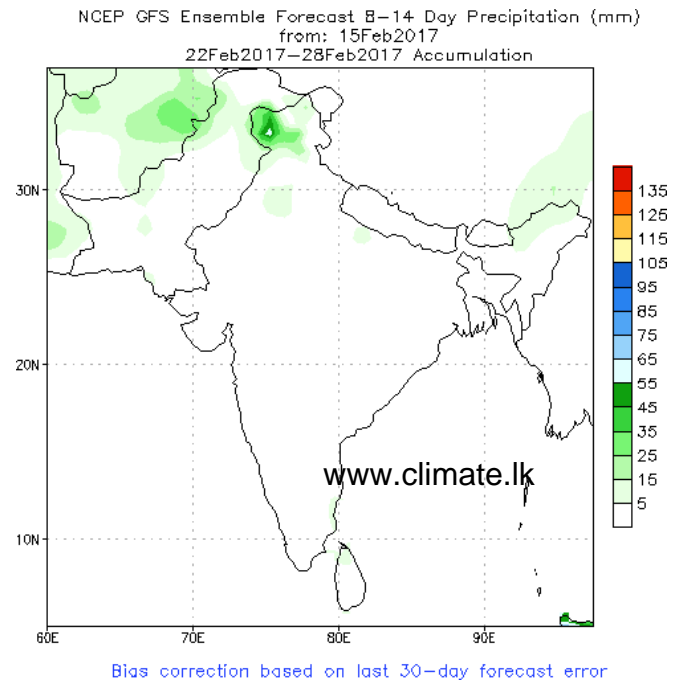
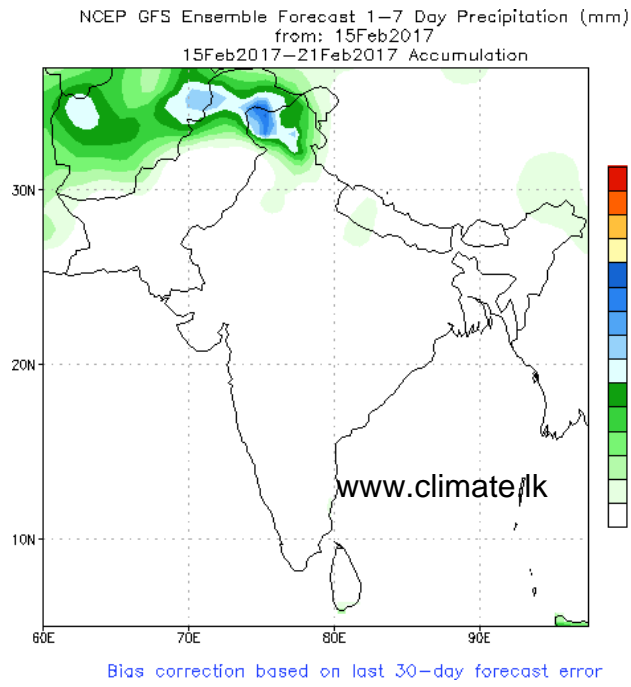


Weekly Average SST Anomalies

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

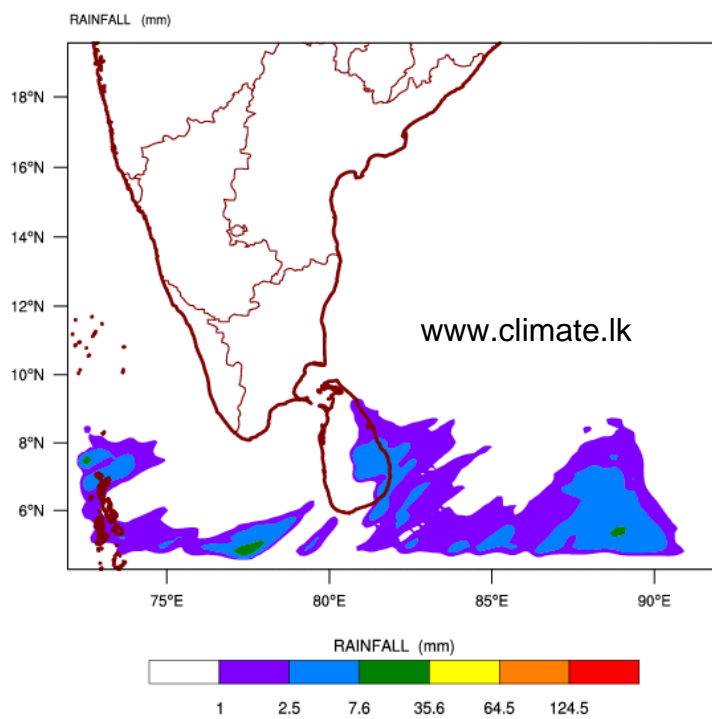


NCEP GFS 1- 14 Day prediction

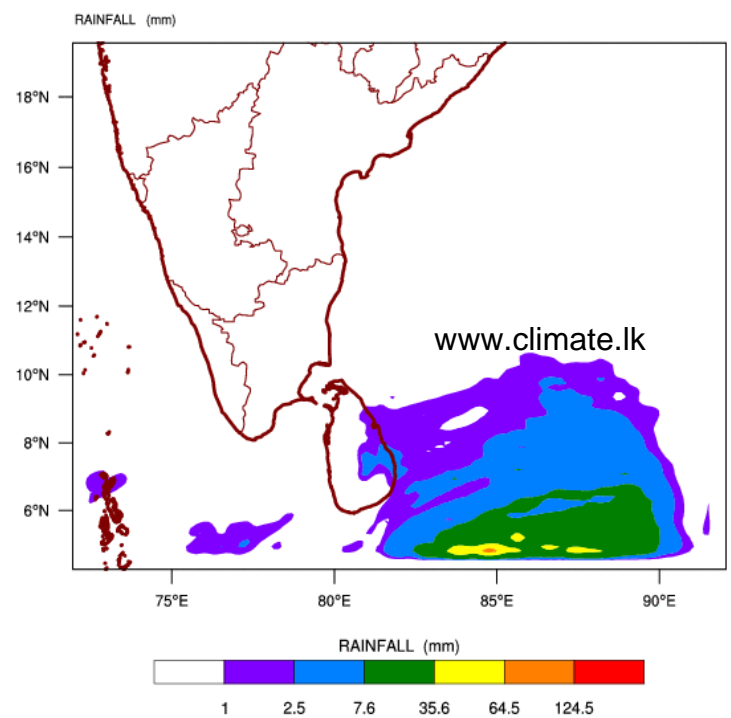


WRF Model Forecast (from IMD Chennai)

WRF MODEL FORECAST (48 HR.) RAINFALL(mm)\
based on 00 UTC of 15-02-2017 valid for 03 UTC of 17-02-2017

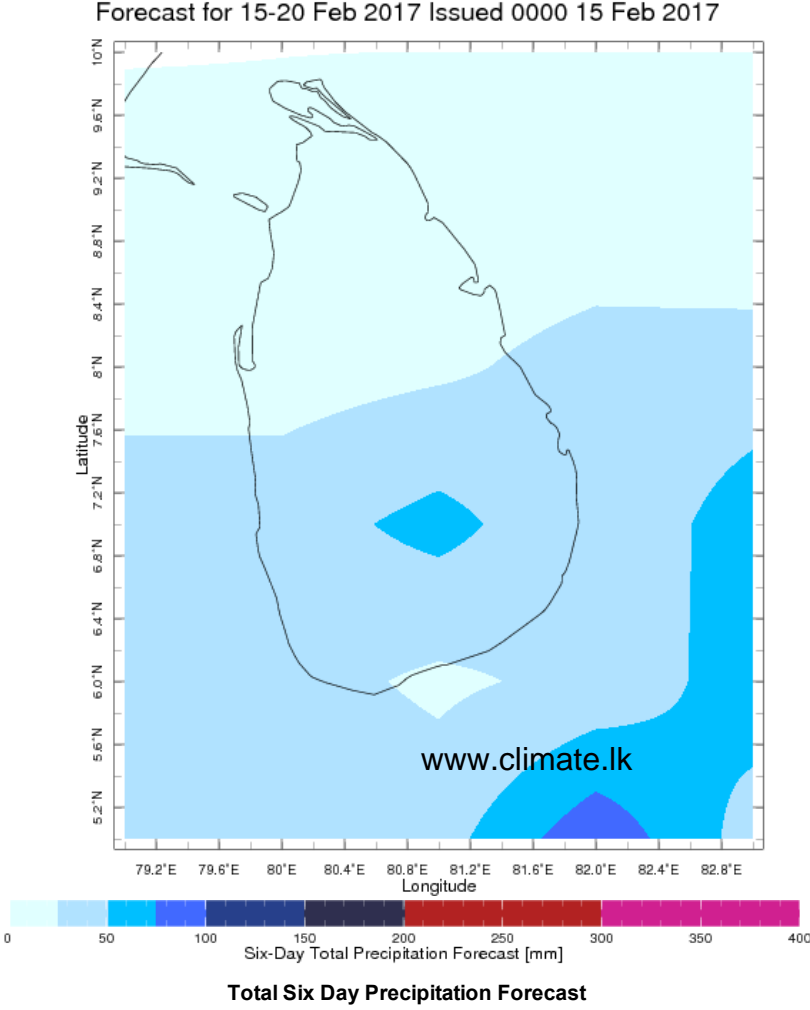
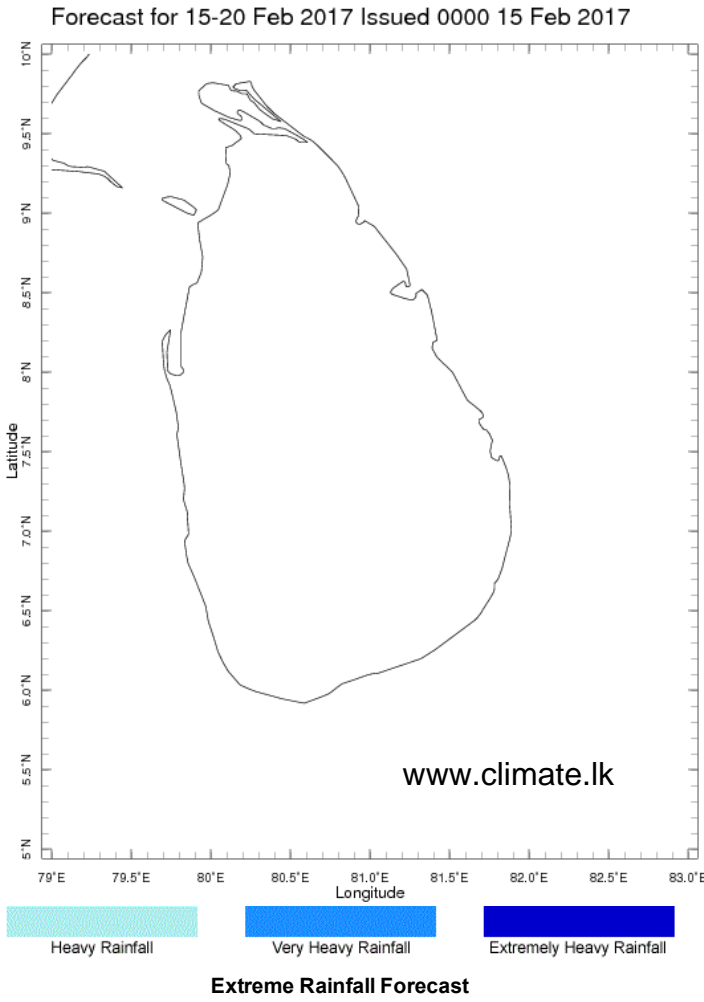


WRF MODEL FORECAST (72 HR.) RAINFALL(mm)\
based on 00 UTC of 15-02-2017 valid for 03 UTC of 18-02-2017



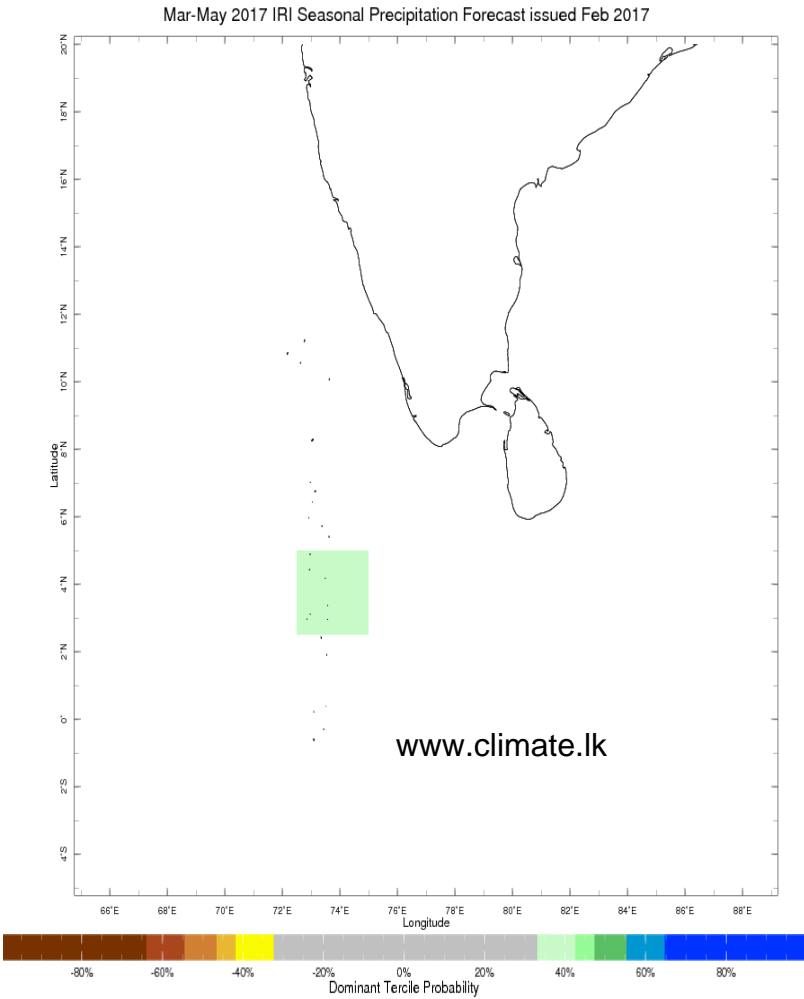
Weekly Rainfall Forecast from IRI

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.

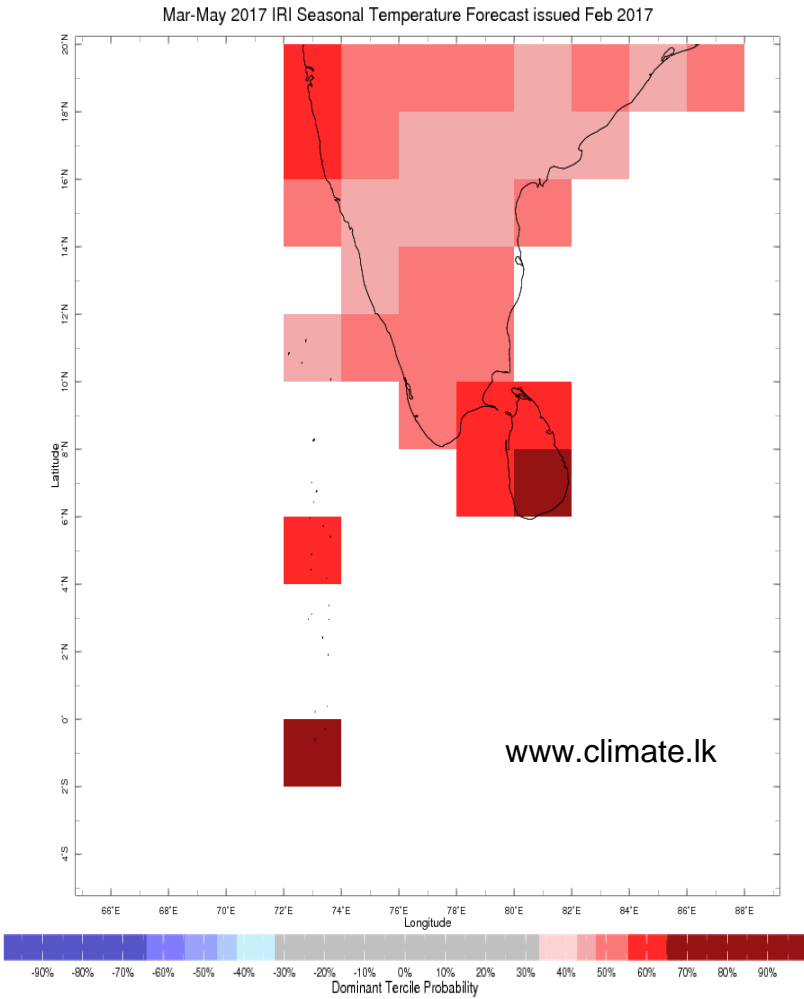


Seasonal Rainfall and Temperature Forecast

Following is the latest seasonal precipitation and temperature prediction for the next 3 months by the IRI. The color shading indicates the probability of the most dominant tercile -- that is, the tercile having the highest forecast probability. The color bar alongside the map defines these dominant tercile probability levels. The upper side of the color bar shows the colors used for increasingly strong probabilities when the dominant tercile is the above-normal tercile, while the lower side shows likewise for the below-normal tercile. The gray color indicates an enhanced probability for the near-normal tercile (nearly always limited to 40%).



Precipitation Forecast



Temperature Forecast

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