

Climate Monitoring and Prediction for the Maldives – May 2018

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June 8, 2018

PACIFIC SEAS STATE May 18, 2018

In mid-May 2018, the east-central tropical Pacific waters reflected ENSO-neutral conditions. The official CPC/IRI outlook calls for neutral conditions through the September–November season, with a nearly 50% chance of El Niño development by year's end. The latest forecasts of statistical and dynamical models collectively favor weak El Niño development by year's end, but forecasters hedge on this due to low confidence at this time of year. (Text Courtesy IRI)

INDIAN OCEAN STATE May 30, 2018

Neutral SST Anomalies was observed around Maldives.

MJO INDEX

The MJO was significant in Phase 2 from 16-26 May and in Phase 3 from 27-29 May. Usually rainfall in Maldives is augmented in Phase 2.



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Highlights

Monitored: During May, some Northern and Central Islands received an excess of rainfall than is normal for the season by upto 180 mm. However the Northern Islands which had been having a rainfall deficit in the last year is not fully recovered from the below normal rainfall. The Central Islands have made up for the deficit while the Southern Islands are having a good year.

The sea surface temperature around Maldives is average.

Predictions: IMD GFS model predicts up to 40 mm of rainfall in the northern islands; and up to 10 mm in the central and southern islands on the 11th. Long Range Weather prediction models simulations anticipate total rainfall up to 75 mm for the central islands during June 4th-9th.

Summary

CLIMATOLOGY

Monthly Climatology: In June, average rainfall usually is about 250 mm in the northern islands and 150 mm in the southern islands. Wind direction in June is usually westerly but with low speeds. In July, the entire country receives up to 200 mm average rainfall and the wind speed and direction does not change. In August, the rainfall in southern and central islands increases to 250 mm while in northern islands it remains about 200 mm. The wind direction and speed is similar to previous months.

MONITORING

Weekly Rainfall Monitoring:

Date	Rainfall
21 st May 2018	Up to 30 mm in central and southern islands and up to 10 mm in northern islands.
22 nd May 2018	Up to 30 mm in northern and central islands and up to 20 mm in southern islands.
23 rd – 24 th May 2018	Up to 50 mm in northern and central islands and up to 30 mm in southern islands.
25 th May 2018	Up to 20 mm in central and southern islands and up to 10 mm in northern islands.
26 th May 2018	Up to 20 mm in northern and central islands.
27 th May 2018	Up to 20 mm in central islands and up to 10 mm in southern islands.
28 th May 2018	Up to 10 mm in northern islands.
29 th May 2018	Up to 30 mm in southern islands.
30 th May 2018	Up to 20 mm in southern islands.
31 st May 2018	Up to 5 mm in northern and southern islands.

Monthly and Seasonal Rainfall Monitoring: In May, Northern islands and Male atoll received rainfall more than 240 mm above the monthly average; and southern islands up to 180 mm below the average. The northern islands and Male and Addu atolls received up to 600 mm of total rainfall; and rest of the country up to 450 mm.

PREDICTIONS

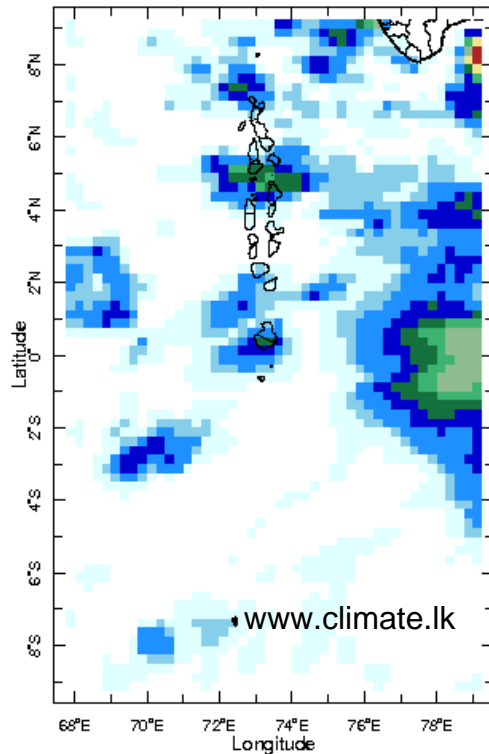
Weekly Rainfall Forecast: According to IMD GFS model up to 20 mm of daily rain is expected in central and up to 10 mm in the northern and southern islands on June 7th. Up to 10 mm of rainfall is expected in the entire country on the 8th. On the 9th and 10th up to 20 mm rainfall is expected in the northern and central islands and up to 10 mm in the southern islands. Up to 40 mm of rainfall is expected in the northern islands; and up to 10 mm in the central and southern islands on the 11th. On the 12th up to 20 mm rainfall is expected in the northern and central islands and up to 10 mm in the southern islands

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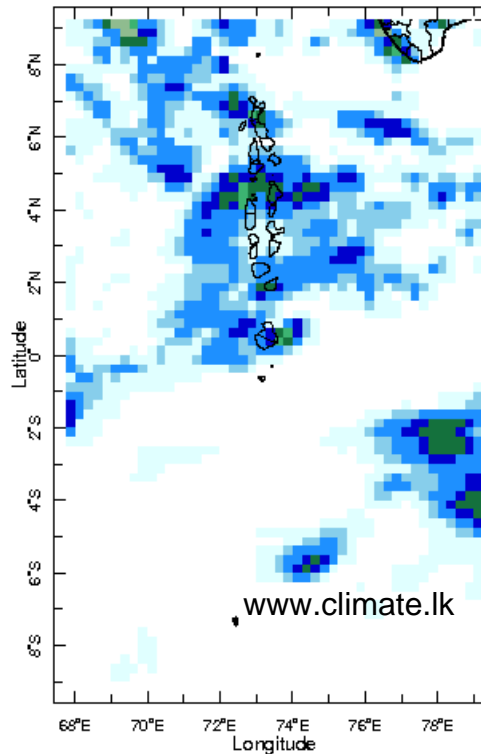
1. Rainfall Monitoring
 - a. Daily Satellite derived Rainfall Estimates
 - b. Monthly Rainfall derived from Satellite Rainfall Estimate
 - c. Monthly and Seasonal Monitoring
2. Ocean Surface Monitoring
3. Rainfall Predictions
 - a. Weekly Predictions from NOAA/NCEP
 - b. Seasonal Predictions from IRI¹

Daily Rainfall Monitoring

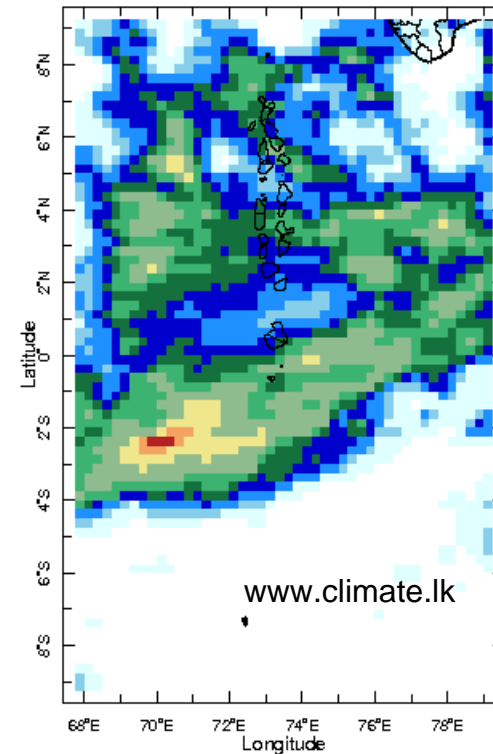
The following figures show the observed rainfall in the last 15 days in Maldives.



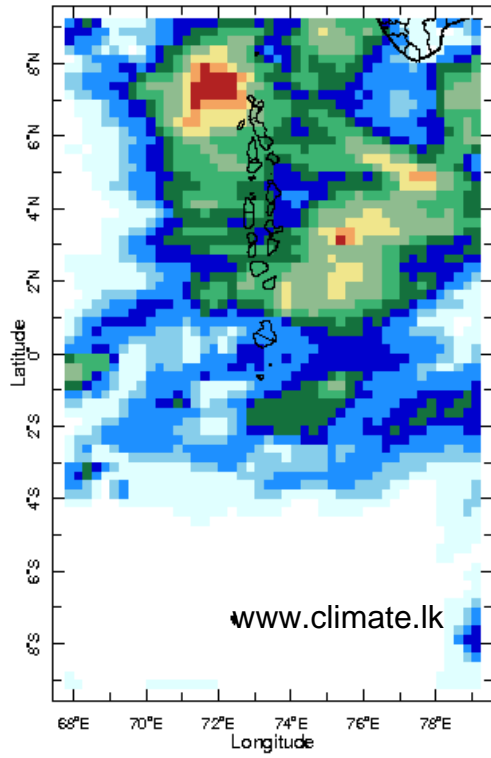
21 May 2018



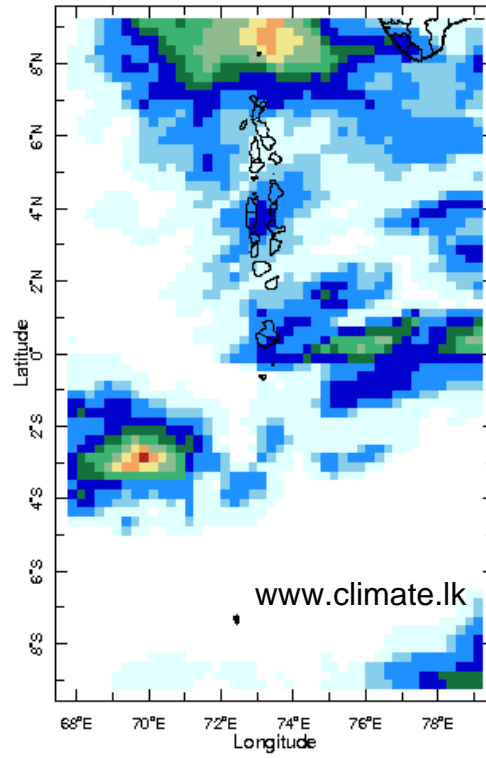
22 May 2018



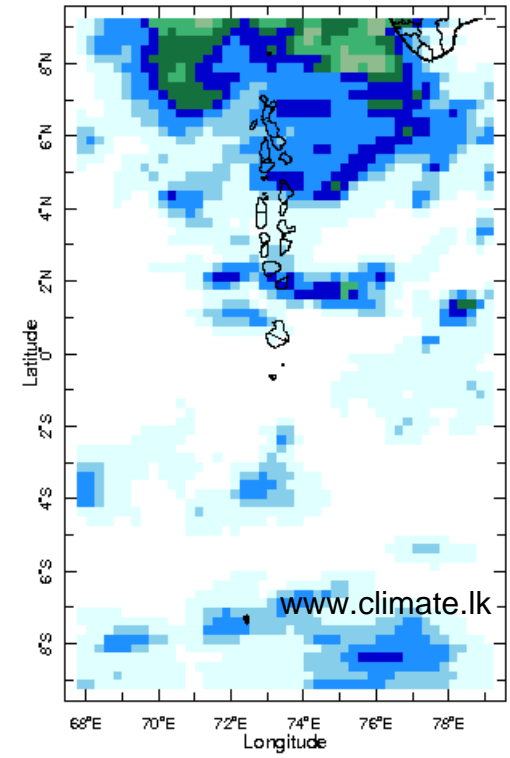
23 May 2018



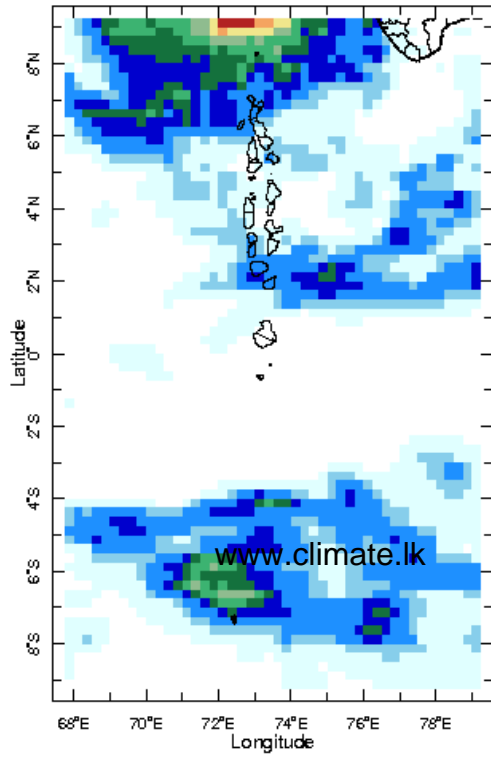
24 May 2018



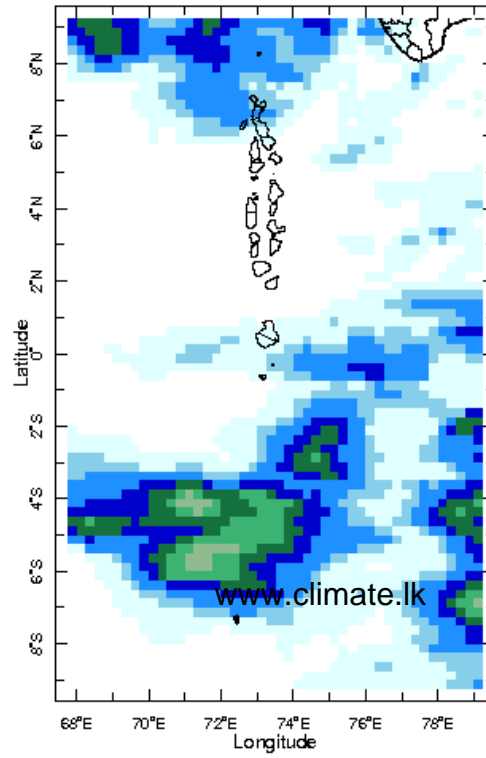
25 May 2018



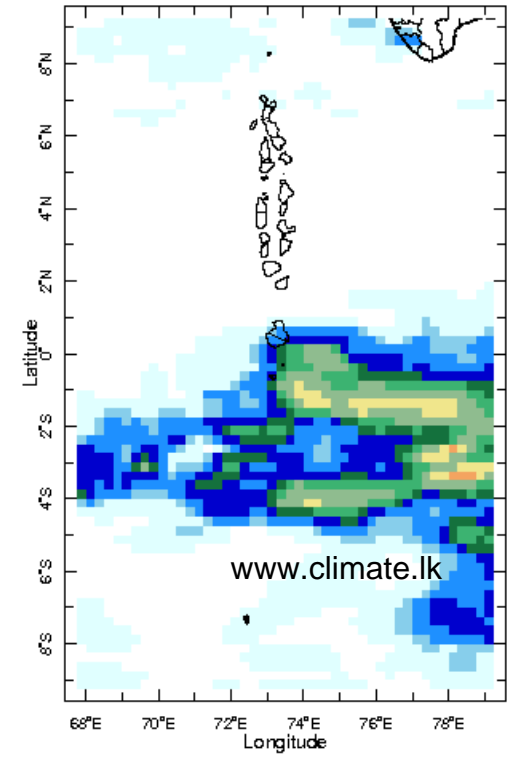
26 May 2018



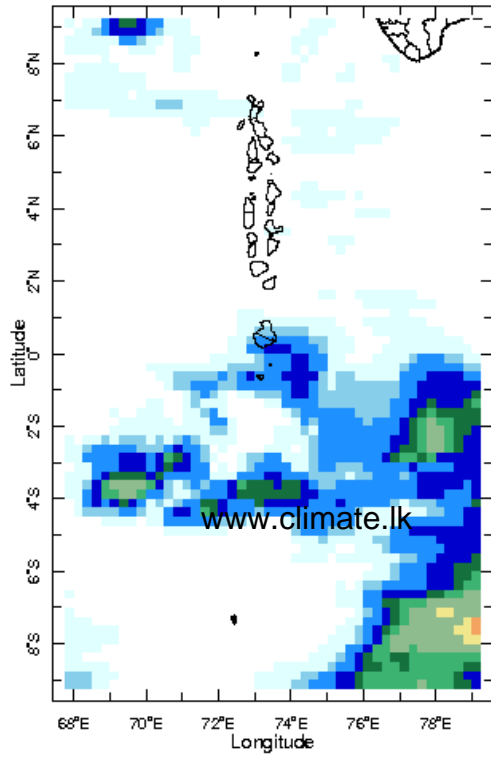
27 May 2018



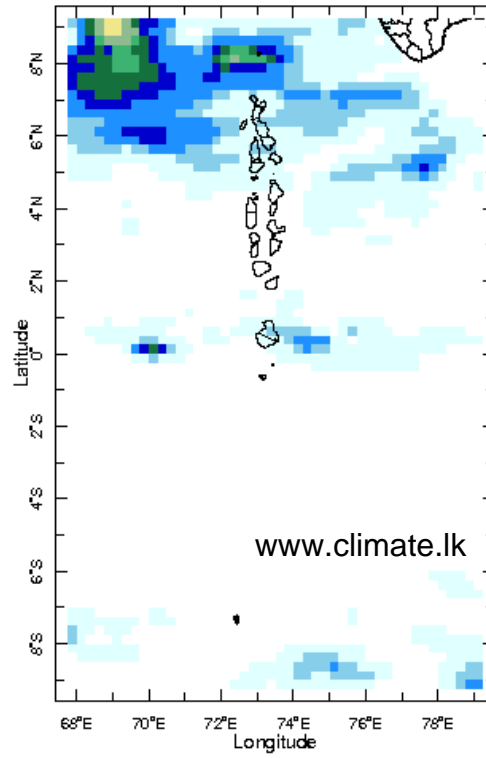
28 May 2018



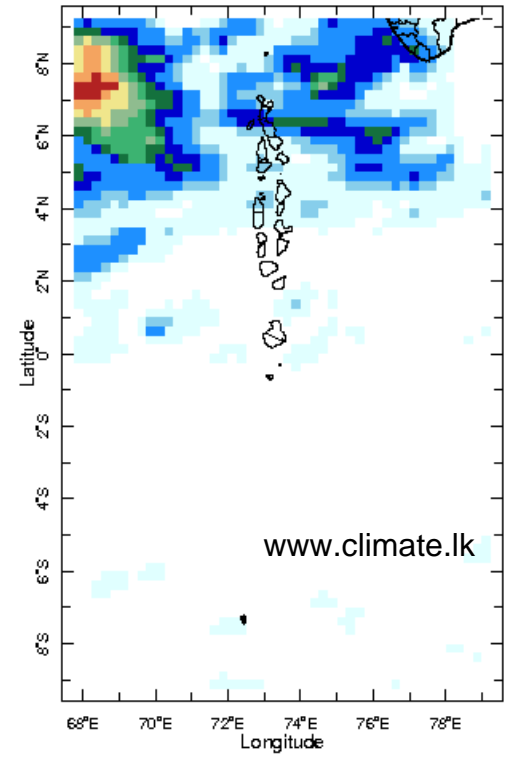
29 May 2018



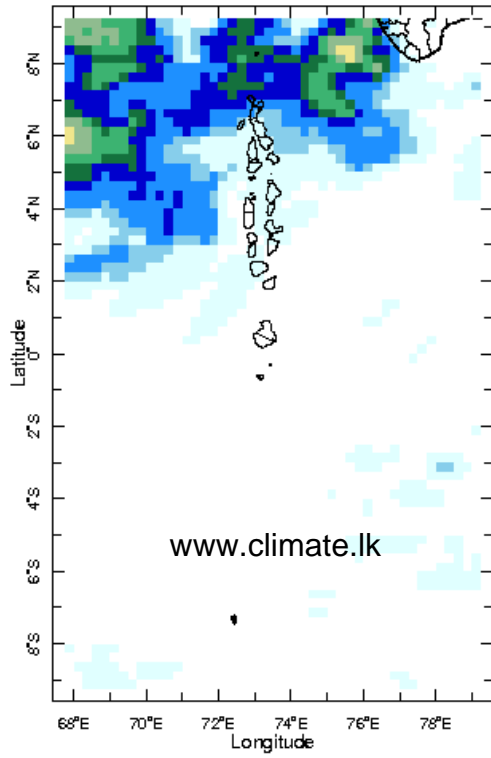
30 May 2018



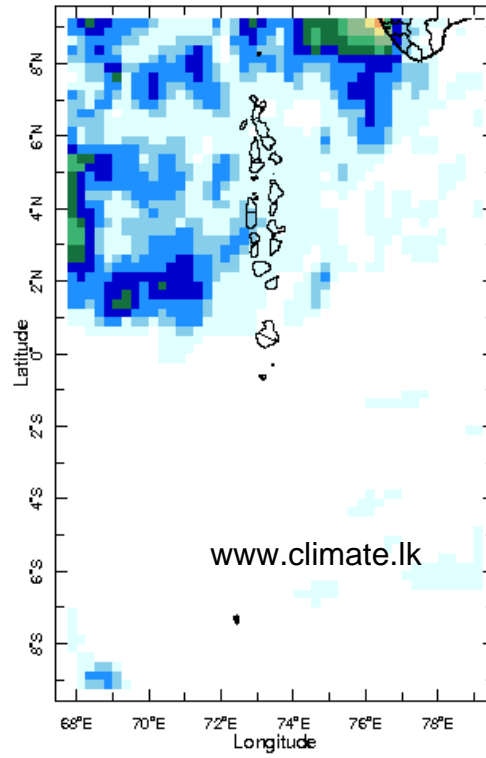
31 May 2018



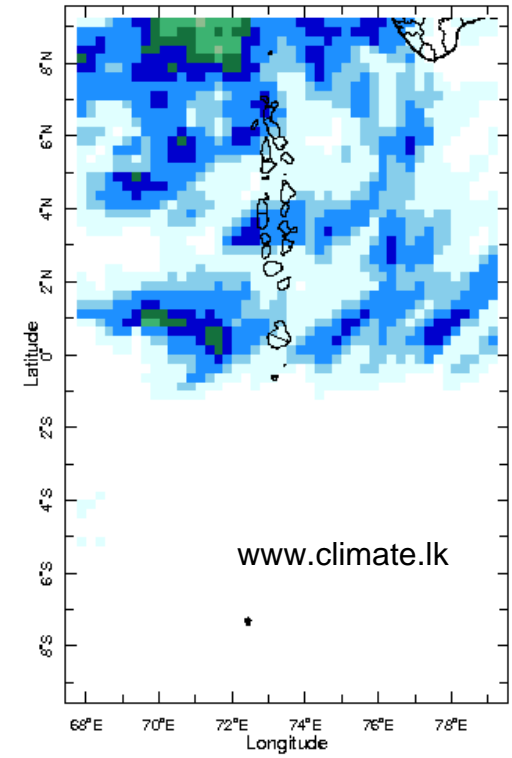
1 Jun 2018



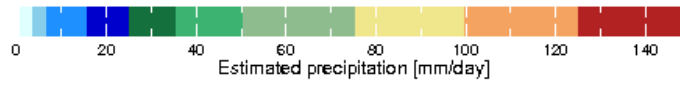
2 Jun 2018



3 Jun 2018

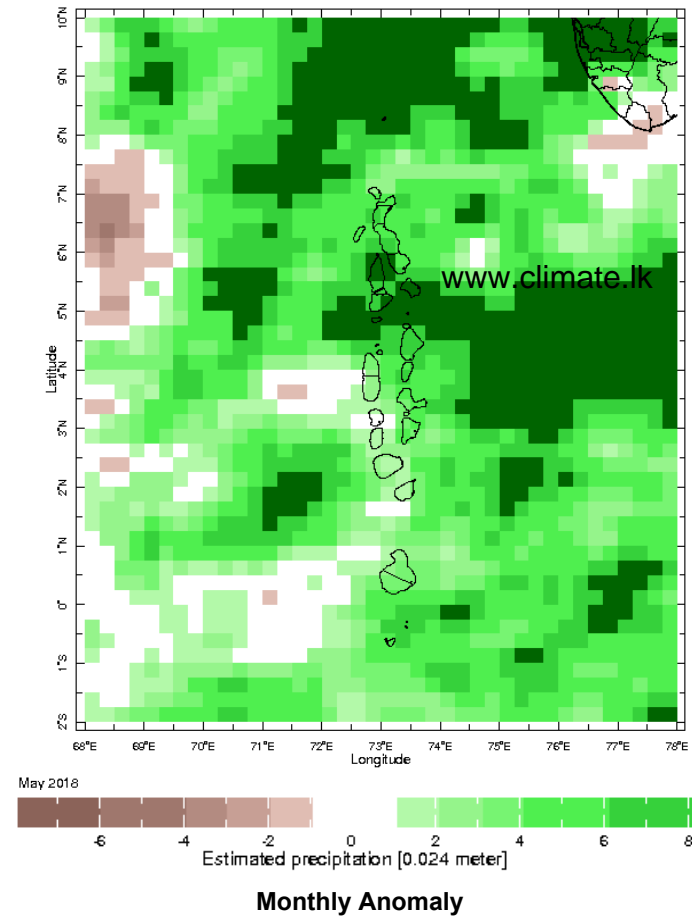
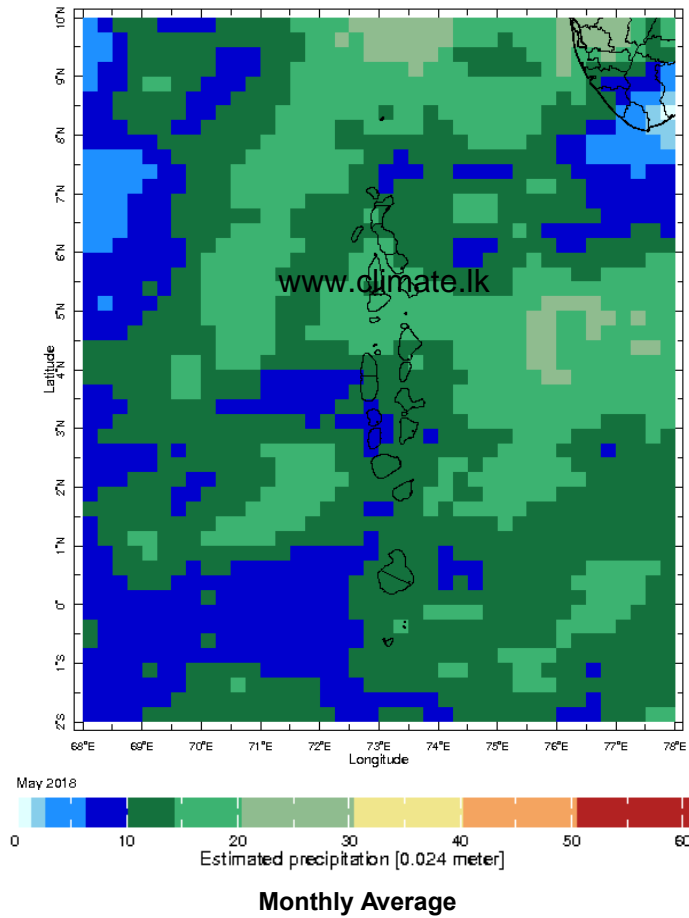


4 Jun 2018



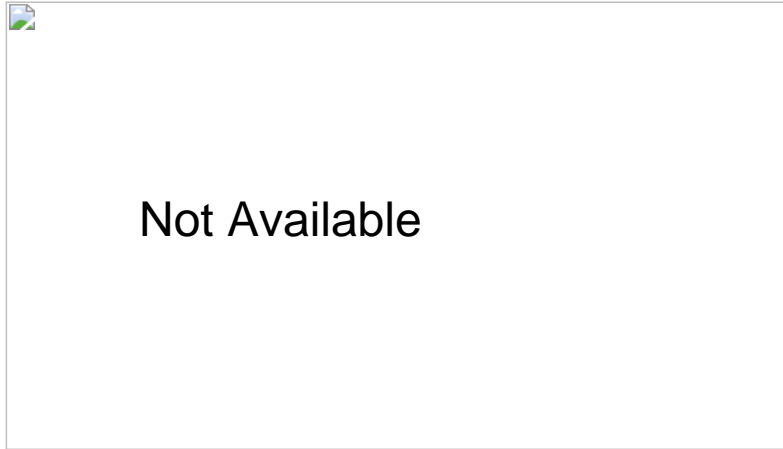
Monthly Rainfall Monitoring

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

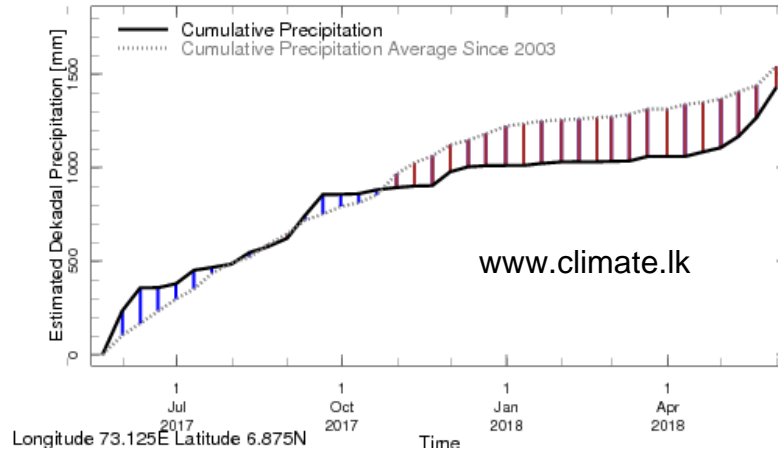


Monthly and Seasonal Monitoring

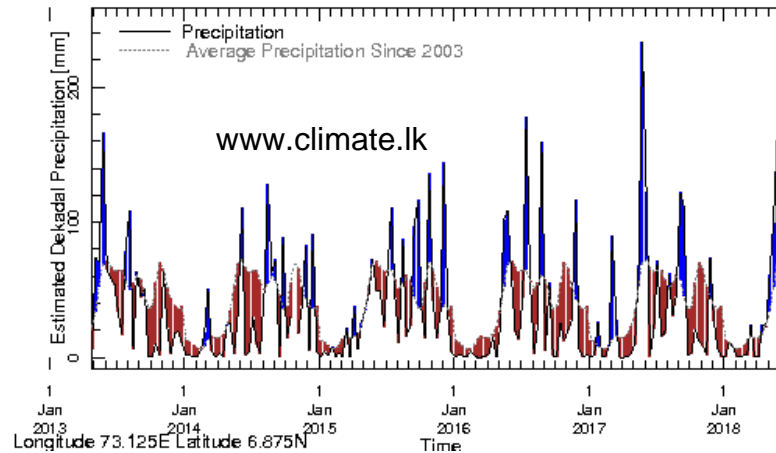
Northern Maldives:



Rainfall in the current year (black) compared to rainfall in previous 5 years

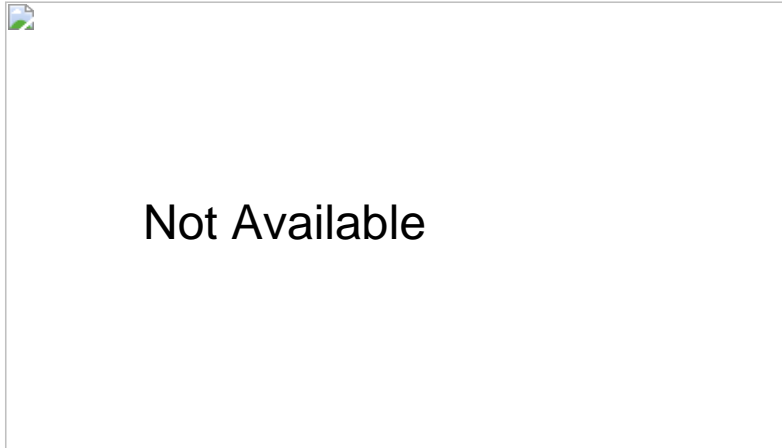


Rainfall of past 365 days (black) compared to average rainfall since 2003.

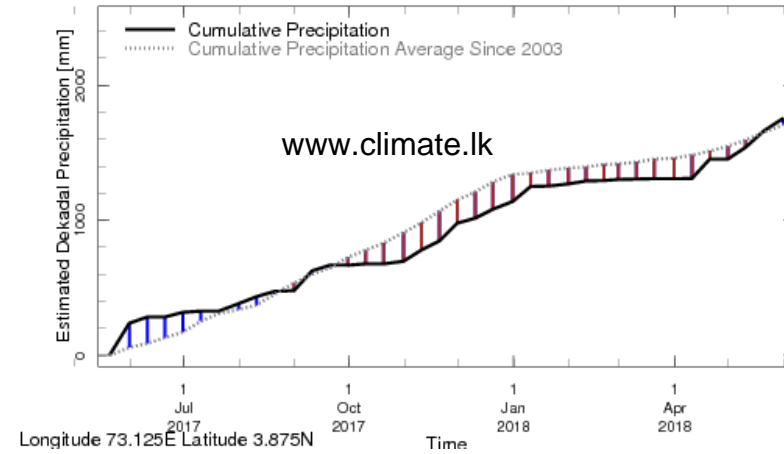


Rainfall in the past 5 years with above-average rainfall hatched in blue and below-average hatched in brown

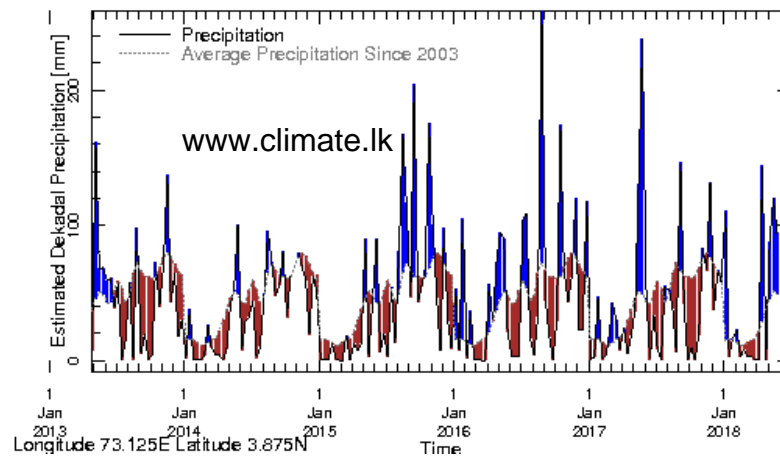
Central Maldives:



Rainfall in the current year (black) compared to rainfall in previous 5 years

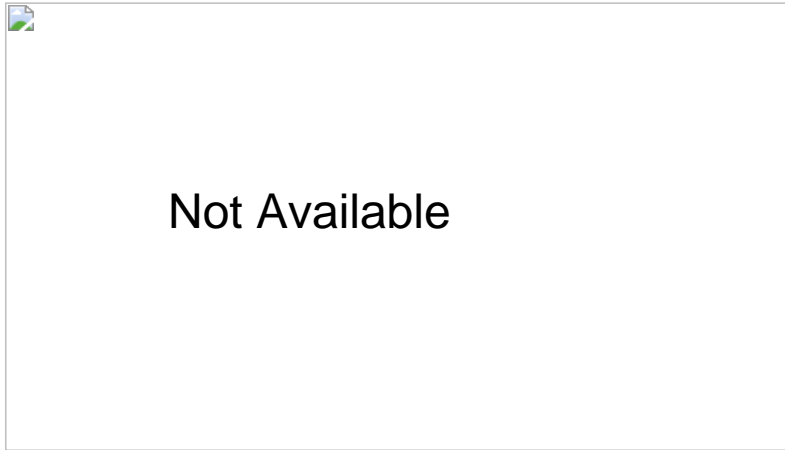


Rainfall of past 365 days (black) compared to average rainfall since 2003.

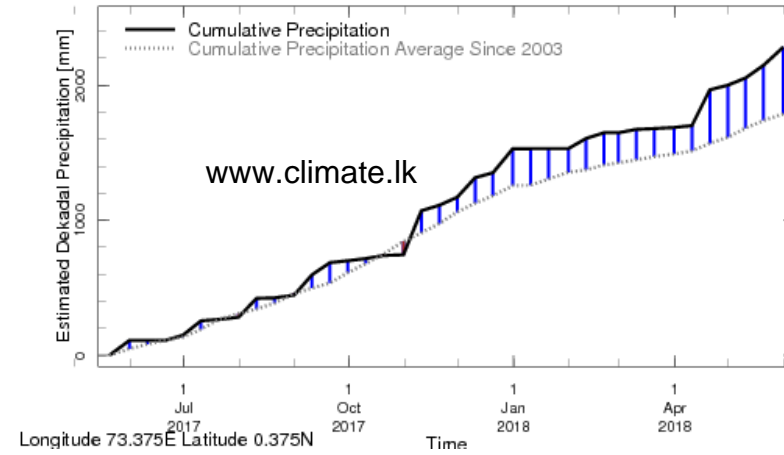


Rainfall in the past 5 years with above-average rainfall hatched in blue and below-average hatched in brown

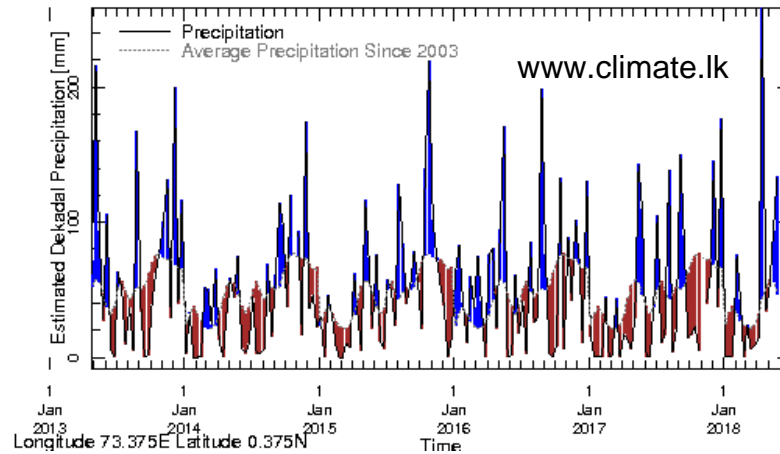
Southern Maldives:



Rainfall in the current year (black) compared to rainfall in previous 5 years

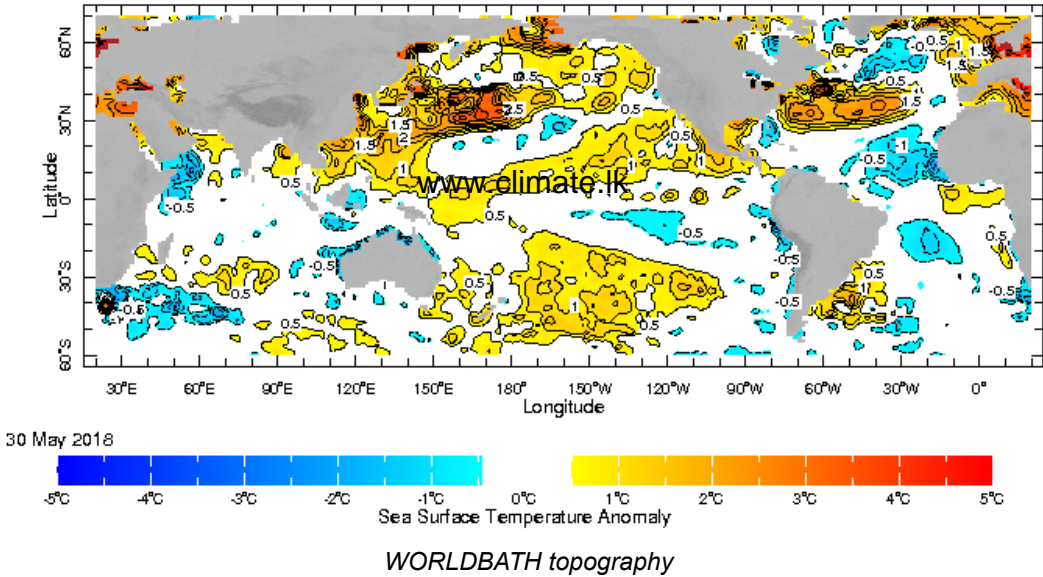


Rainfall of past 365 days (black) compared to average rainfall since 2003.



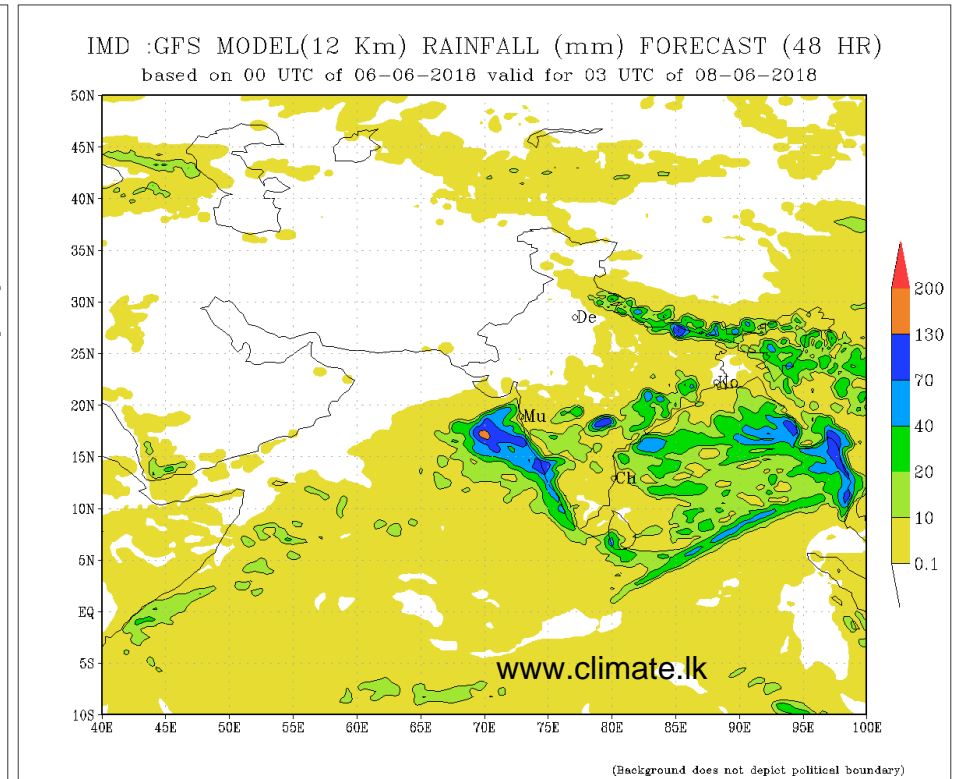
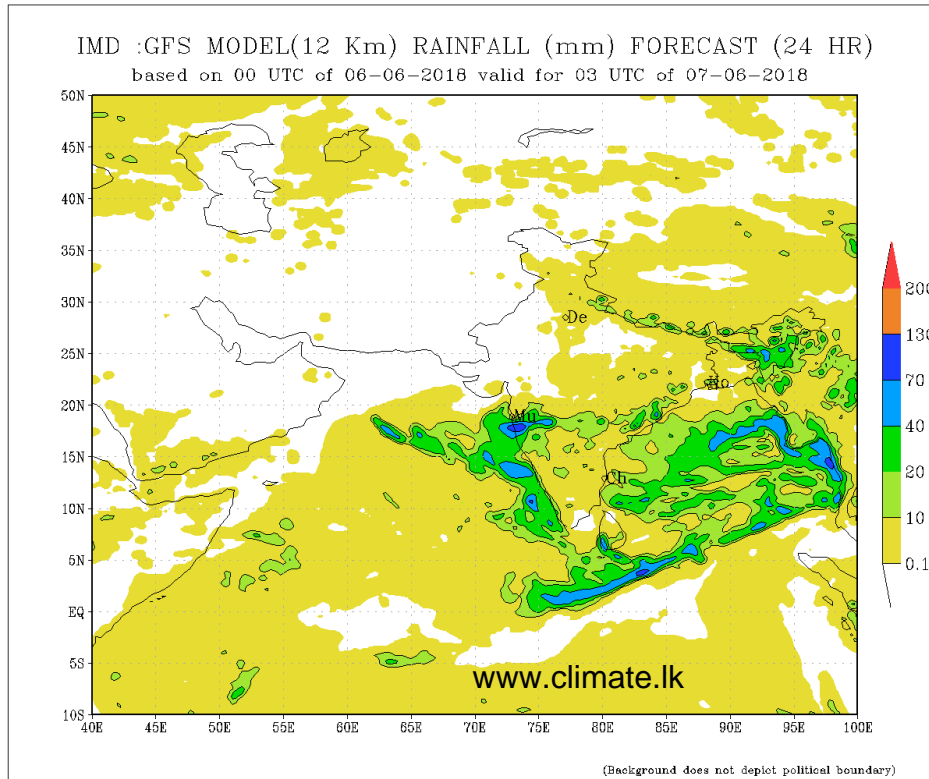
Rainfall in the past 5 years with above-average rainfall hatched in blue and below-average hatched in brown

Ocean Surface Monitoring

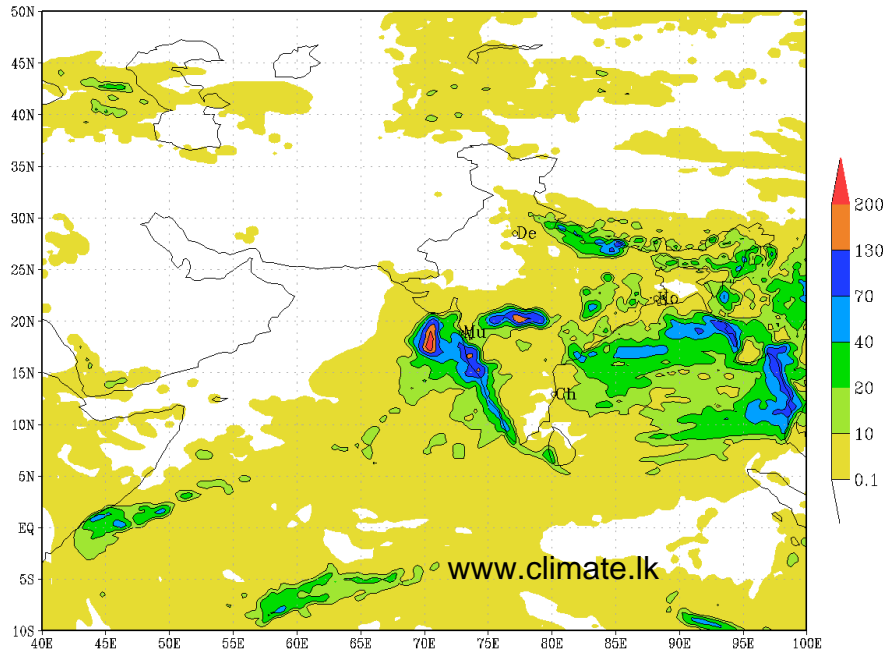


Daily Rainfall Forecast

Daily Rainfall forecasts (up to 7 days ahead) from the IMD is provided in figures below. These predictions are from the GFS (T1534) model covering the entire south Asian region.

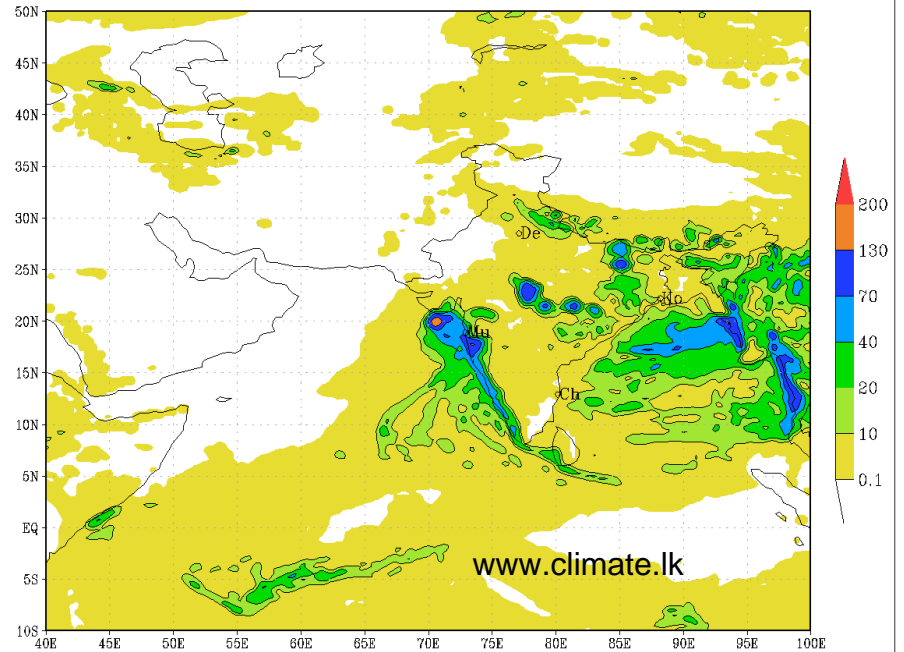


IMD :GFS MODEL(12 Km) RAINFALL (mm) FORECAST (72 HR)
based on 00 UTC of 06-06-2018 valid for 03 UTC of 09-06-2018



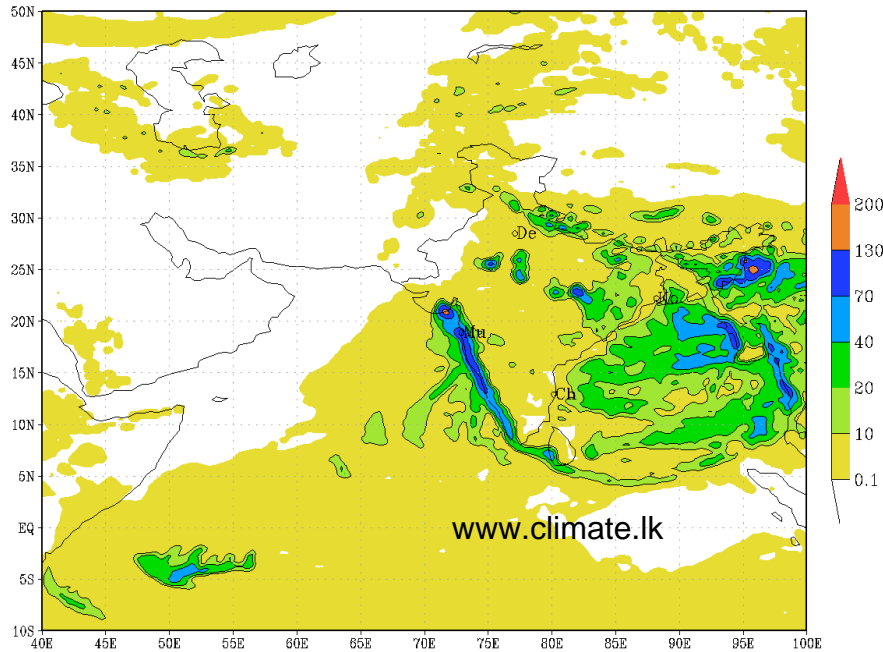
(Background does not depict political boundary)

IMD :GFS MODEL(12 Km) RAINFALL (mm) FORECAST (96 HR)
based on 00 UTC of 06-06-2018 valid for 03 UTC of 10-06-2018



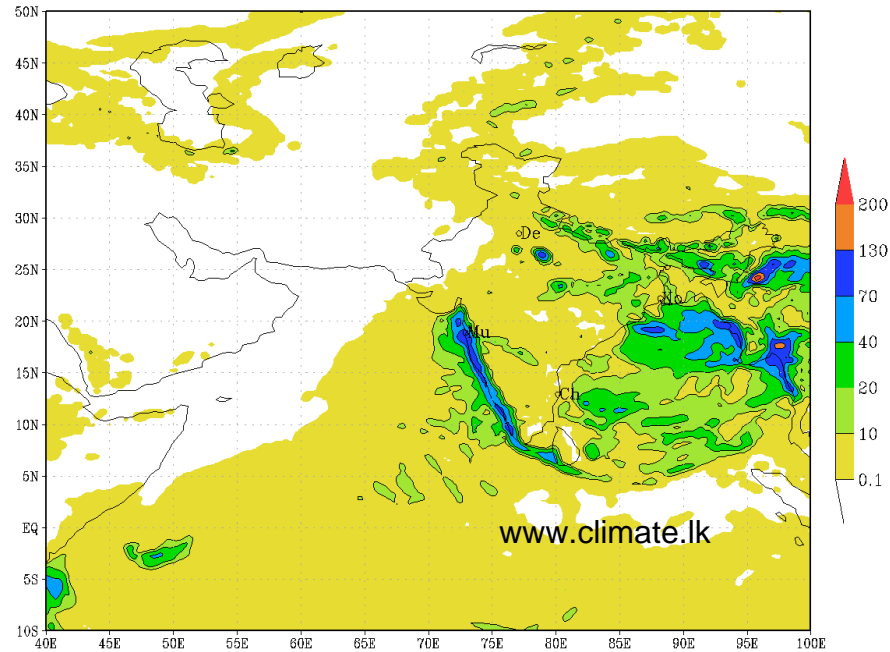
(Background does not depict political boundary)

IMD :GFS MODEL(12 Km) RAINFALL (mm) FORECAST (120 HR)
based on 00 UTC of 06-06-2018 valid for 03 UTC of 11-06-2018



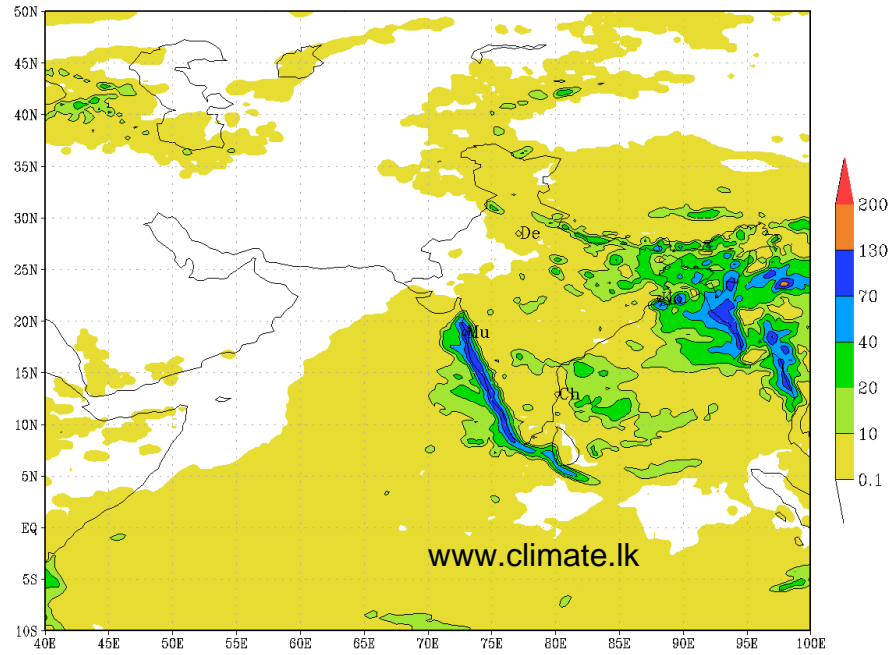
(Background does not depict political boundary)

IMD :GFS MODEL(12 Km) RAINFALL (mm) FORECAST (144 HR)
based on 00 UTC of 06-06-2018 valid for 03 UTC of 12-06-2018



(Background does not depict political boundary)

IMD :GFS MODEL(12 Km) RAINFALL (mm) FORECAST (168 HR)
based on 00 UTC of 06-06-2018 valid for 03 UTC of 13-06-2018

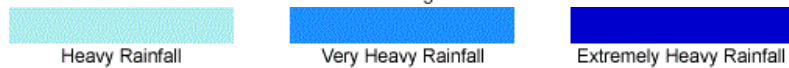
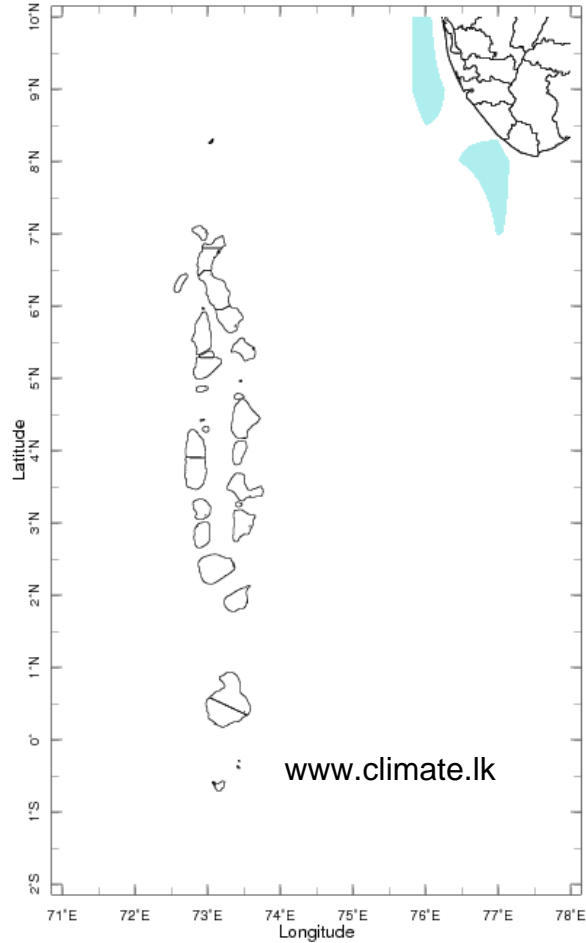


(Background does not depict political boundary)

Weekly Rainfall Forecast

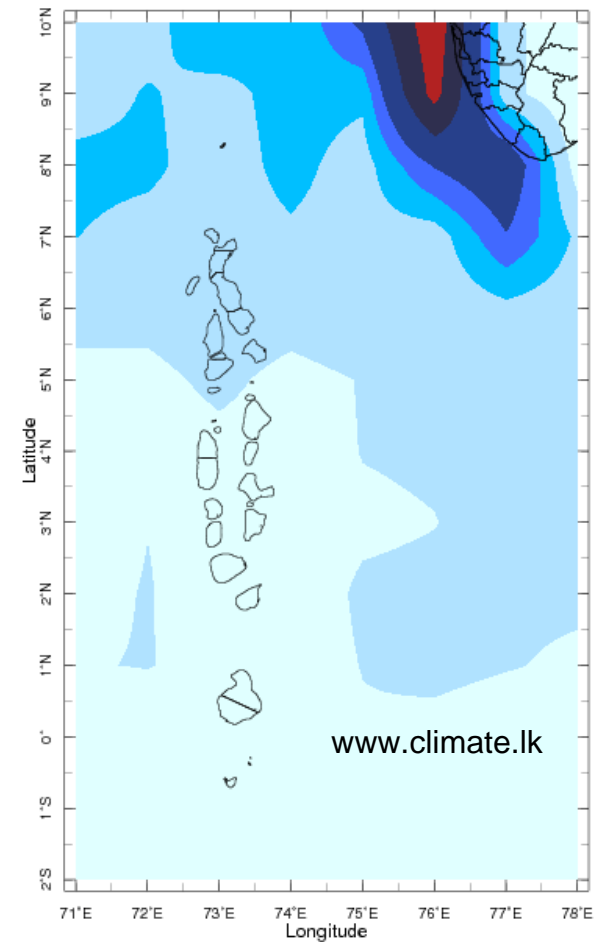
Total rainfall forecast from the IRI for next six days is provided in figures below. The figure to the left shows the expectancy of heavy rainfall events during these six days while the figure to the right is the prediction of total rainfall amount during this period.

Forecast for 4-9 Jun 2018 Issued 0000 4 Jun 2018



Extreme Rainfall Forecast

Forecast for 4-9 Jun 2018 Issued 0000 4 Jun 2018



Total Six Day Precipitation Forecast