FECT Foundation for Environment Climate and Technology
Digana Village,Sri Lanka/ Male,Maldives/ New York, USA
Phone: (+94) 81-2376746 (SL), (+960) 77880(MV)
Web: http://www.tropicalclimate.org/maldives Blog: http://fectmv.blogspot.com E-mail: fectmv@gmail.com

Climate Monitoring and Prediction for the Maldives – August 2016

Prepared by Staff from Foundation for Environment, Climate and Technology, Sri Lanka and USA, Maldives Meteorological Service, and Columbia University
(Prabodha Agalawatte, Zeenas Yahiya, Janan Visvanathan, Lareef Zubair, Zahid and Michael Bell)

August 31, 2016

PACIFIC SEAS STATE
August 18, 2016

During mid-August 2016 the tropical Pacific SST anomaly was close to -0.5C, approaching the weak La Niña threshold. However, most key atmospheric variables continue to indicate neutral ENSO conditions. Although the upper level winds in the tropical Pacific are slightly suggestive of La Niña, the lower level winds remain near average. The Southern Oscillation index and the pattern of cloudiness and rainfall in the equatorial Pacific also indicate neutral ENSO despite a mild tilt toward La Niña. The collection of ENSO prediction models indicates SSTs most likely near the borderline of cool-neutral and weak La Niña from the present through fall and into winter.

(Text Courtesy IRI)

INDIAN OCEAN STATE
Aug 24, 2016

~1^{0}C below average SST was observed in Laccadive sea

www.fb.com/fectmv

@fectmv

Highlights

In July, northern and central islands received up to 200 mm above average rainfall while southern islands received up to 100 mm below average rainfall. The amount of rainfall received by northern and central islands is the highest amount received in past six years in these regions. Since the last week of July a decrease in rainfall throughout the country was visible and the first week of August was mostly dry. Heavy rainfall was received by central islands in late August. During August, the sea and land temperatures remained warmer than climatological. The wind speeds were high due to the SW Monsoon.

Summary

CLIMATOLOGY

Monthly Climatology: In August islands in the northern half of the country receive up to 150 mm rainfall while the southern half receives up to 200 mm rainfall. The same rainfall pattern continues in October and in November the entire country usually receives up to 150 mm rainfall. The wind pattern is usually westerly during these three months.

MONITORING

Weekly Rainfall Monitoring:

Date	Rainfall
15th Aug 2016	No rain
16th Aug 2016	Up to 60 mm in central & southern islands
17th & 18th Aug 2016	Up to 15 mm in south central islands & up to 80 mm in southern islands and sea
19th Aug 2016	Up to 60mm in central islands
20th Aug 2016	Up to 60 mm in the entire country except southern-most islands
21st & 22nd Aug 2016	Up to 60 mm in the entire country
23rd Aug 2016	Up to 40 mm in northern islands and up to 20 mm in central islands
24th Aug 2016	No Rainfall
25th Aug 2016	Up to 10 mm in norther-most islands
26th Aug 2016	Up to 60 mm in central islands and 20 mm in northern islands
27th & 28th Aug 2016	Up to 80 mm in the entire country
29th Aug 2016	Up to 60 mm in central islands 20 mm in southern & 10 mm in northern island

Monthly and Seasonal Rainfall Monitoring: In July 2016 the entire country received ~150 mm rainfall above the climatological average except for Huvadhu atoll which received ~50 mm below the climatological average. In northern islands highest recorded rainfall this year (~200 mm) was received in July. This is the highest ever rainfall observed in northern islands during the past 6 years. Only up to ~30 mm rain was received in August. Central islands too received ~100 mm high rainfall in July and ~30 mm in August. Southern islands received very low amounts of rainfall in July and ~100 mm in early August.

PREDICTIONS

Weekly Rainfall Forecast: According to IRI GFS model up to 50 mm total rain is expected in the Maldives during 30th Aug- 4th Sep. Only up to 10 mm/day rainfall is expected until the 4th and no rainfall is expected on 5th & 6th.

Seasonal Rainfall and Temperature Prediction: As per IRI Multi Model Probability Forecast for September to November 2016, there is a 40% chance than rainfall shall be below average in central islands. The 3-month average temperature has a 50- 60% likelihood in northern islands and 70- 80% in southern islands, to be in the above-normal tercile during these 3 months in the entire country.

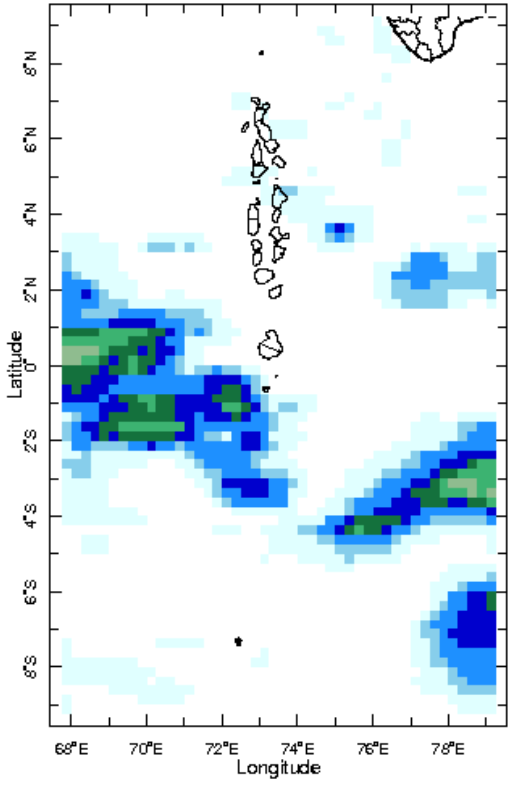
Inside this Issue

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 IRI[1]

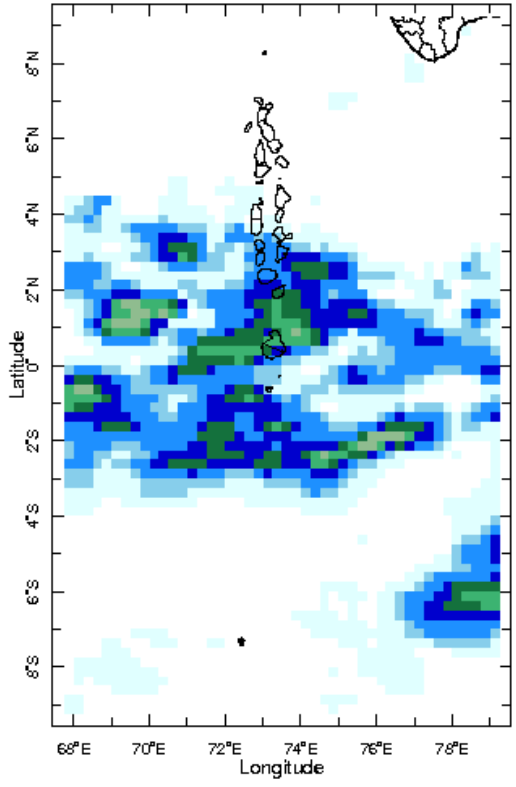
www.climate.lk

Daily Rainfall Monitoring

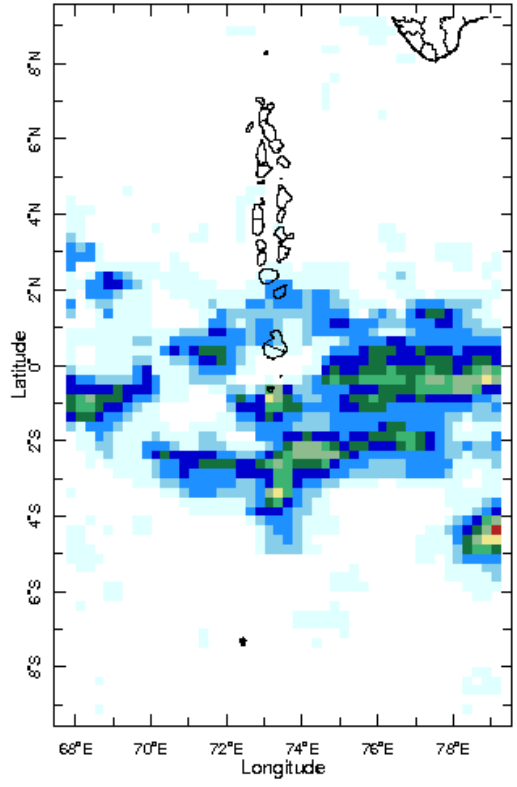
The following figures show the observed rainfall in the last 15 days in Maldives.



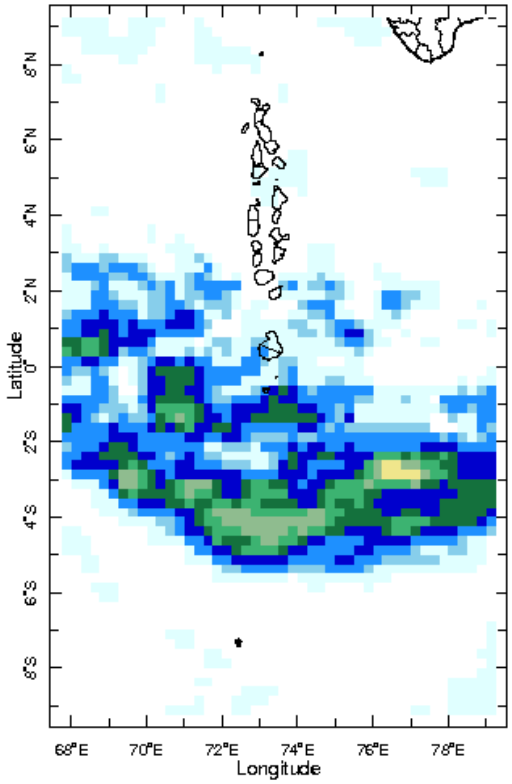
15 Aug 2016



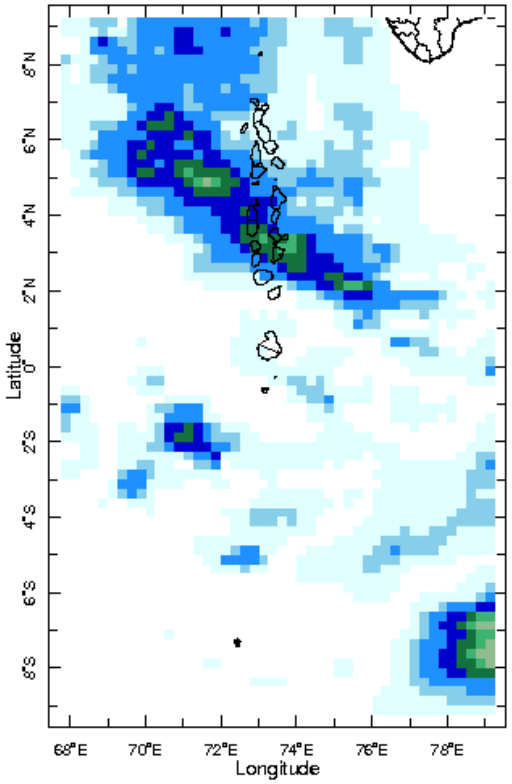
16 Aug 2016



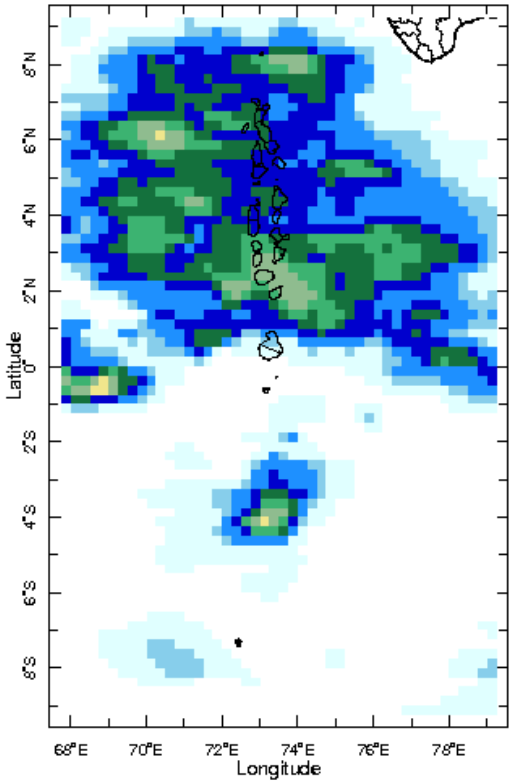
17 Aug 2016



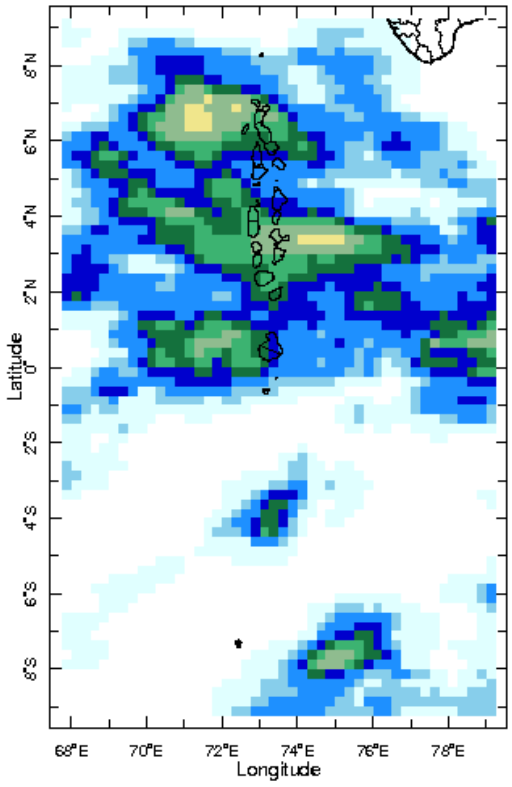
18 Aug 2016



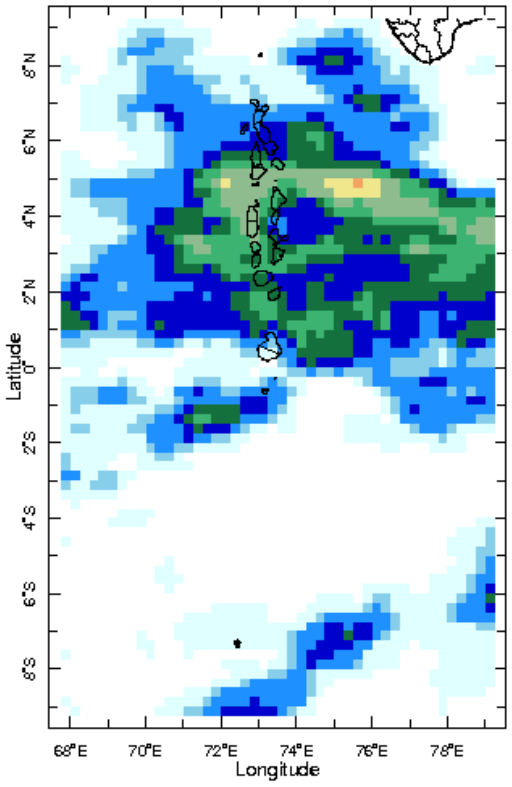
19 Aug 2016



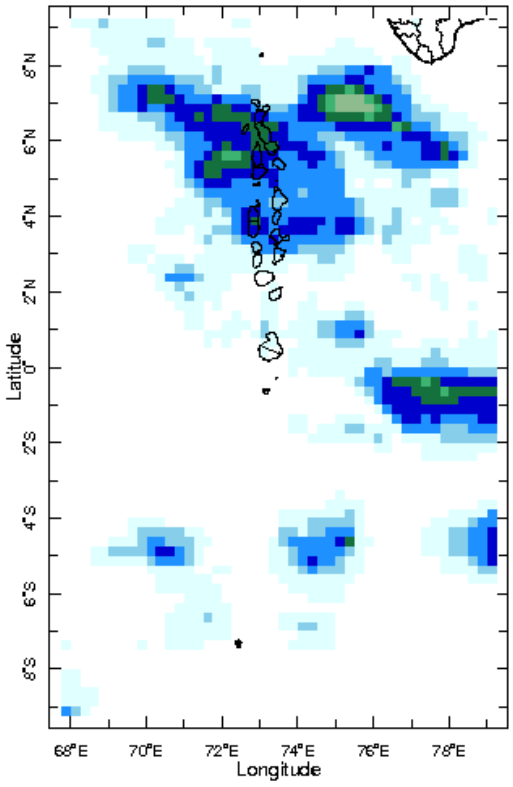
20 Aug 2016



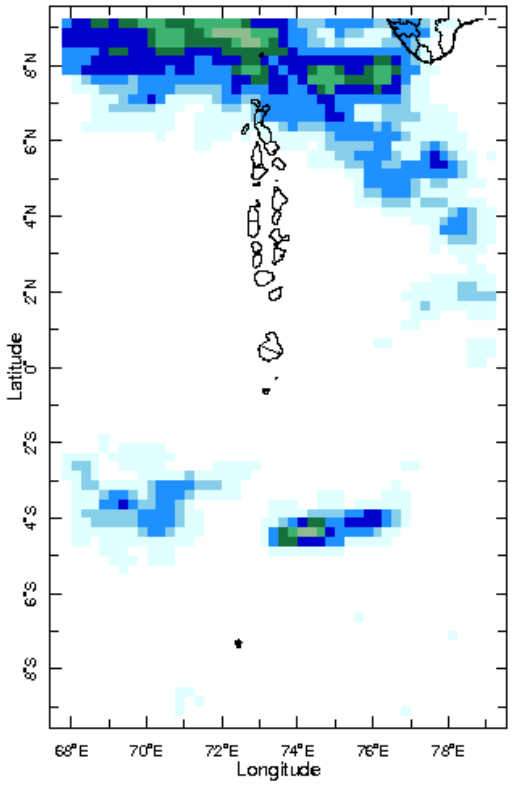
21 Aug 2016



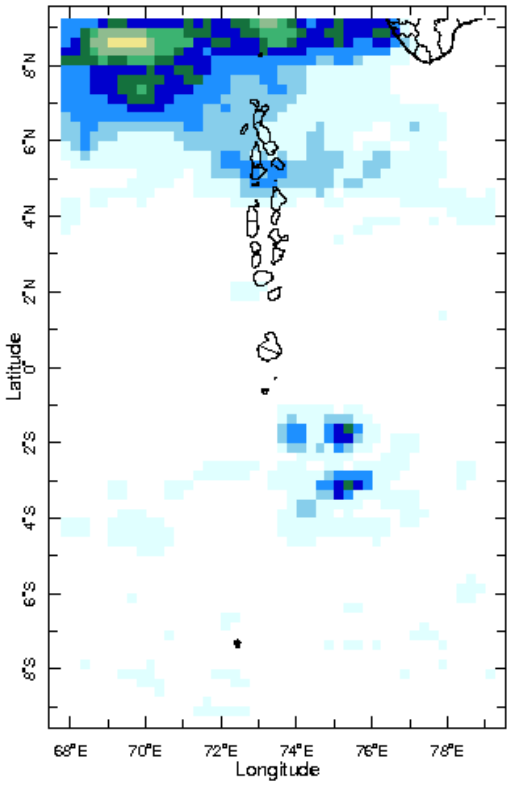
22 Aug 2016



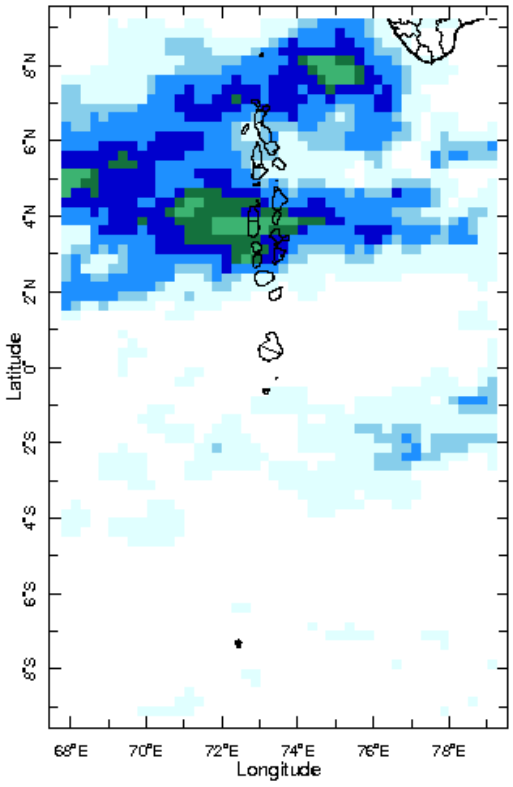
23 Aug 2016



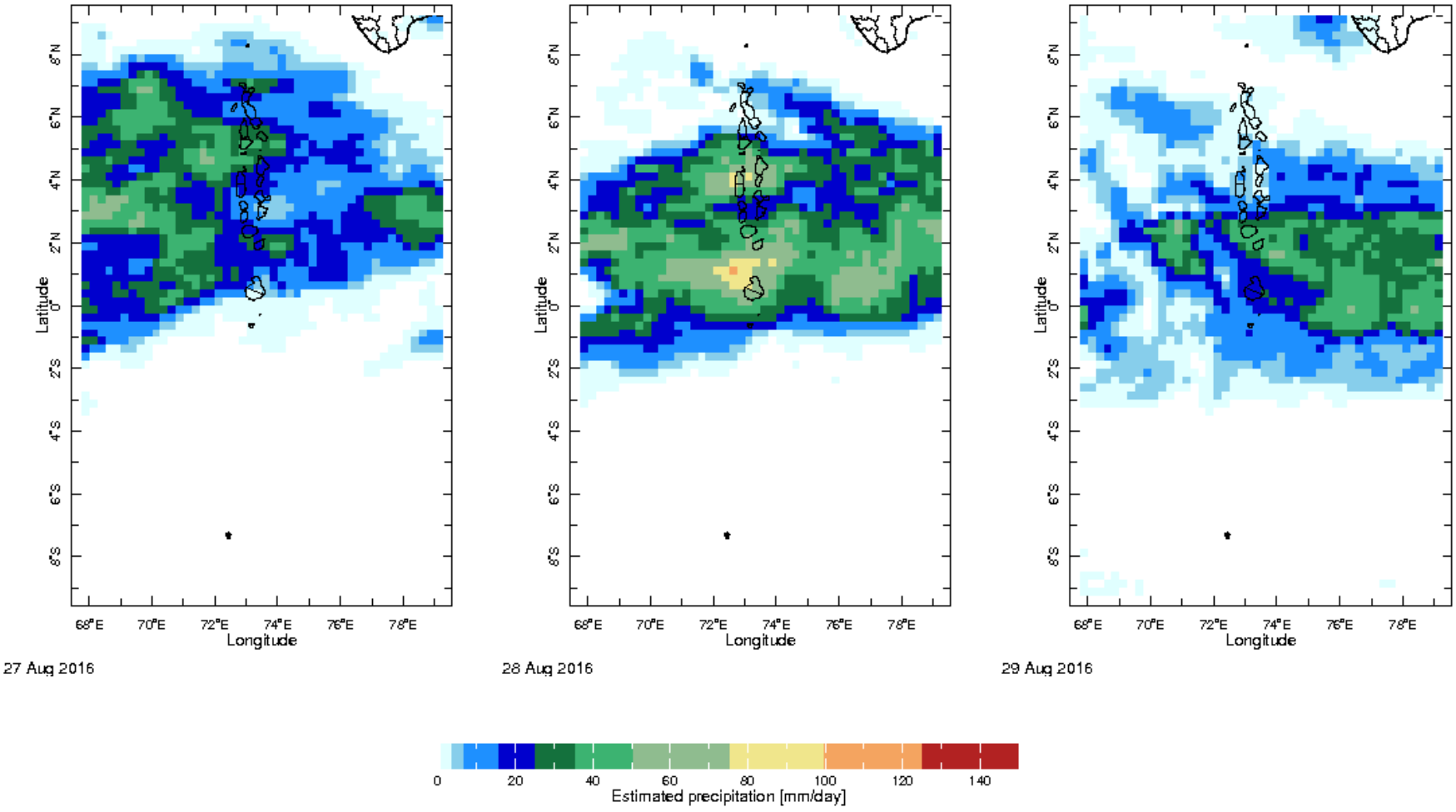
24 Aug 2016



25 Aug 2016

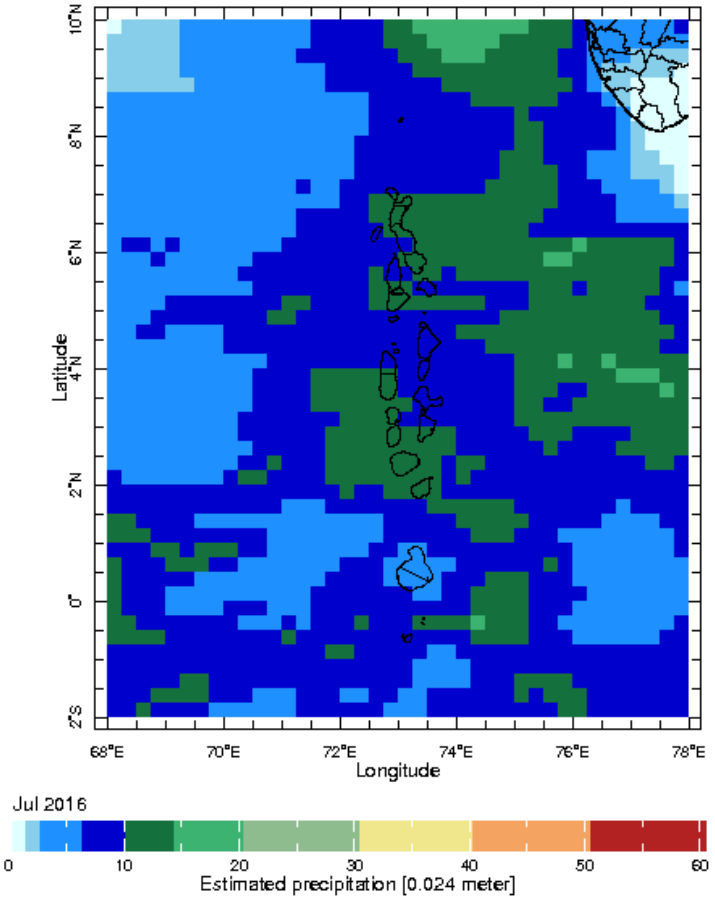


26 Aug 2016

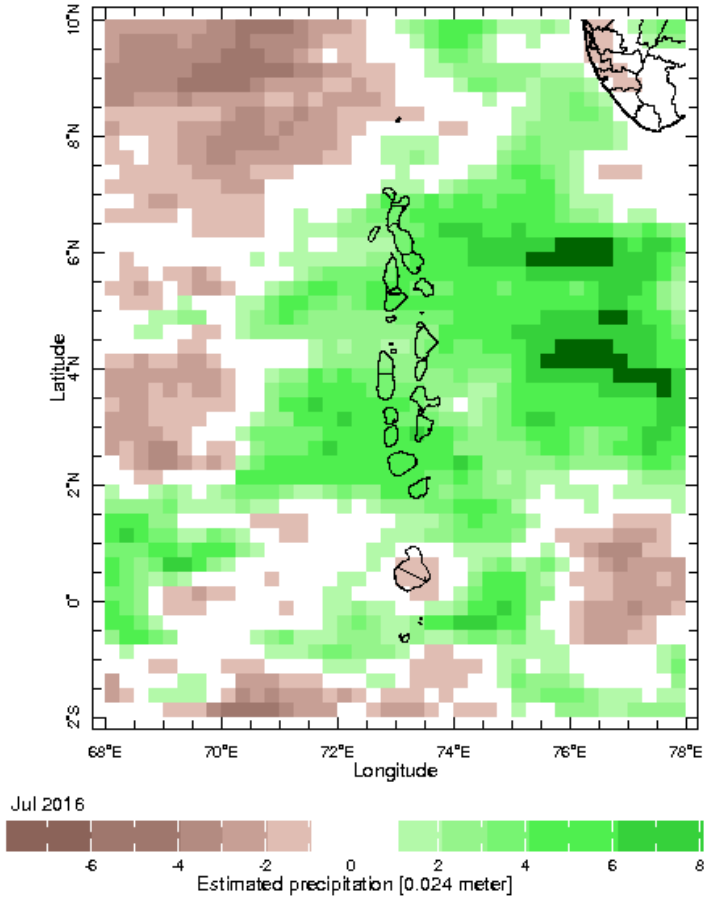


Monthly Rainfall Monitoring

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



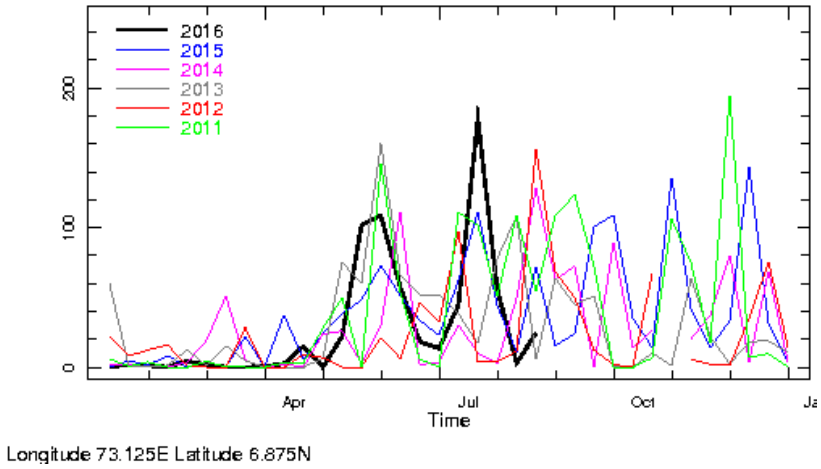
Monthly Average



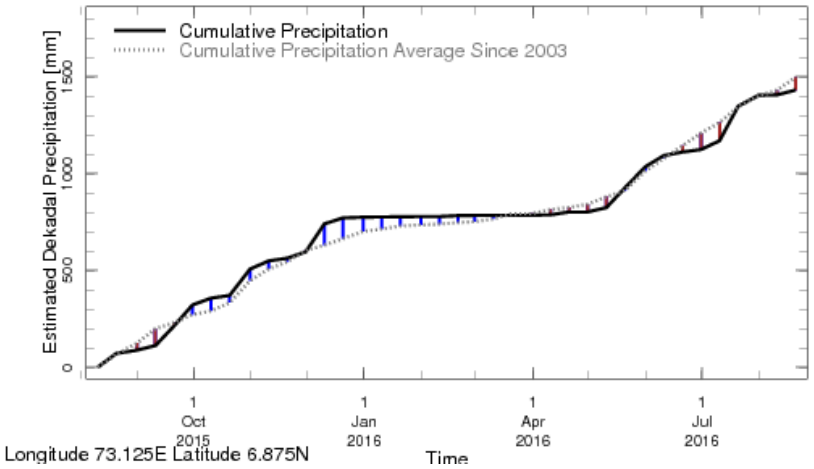
Monthly Anomaly

Monthly and Seasonal Monitoring

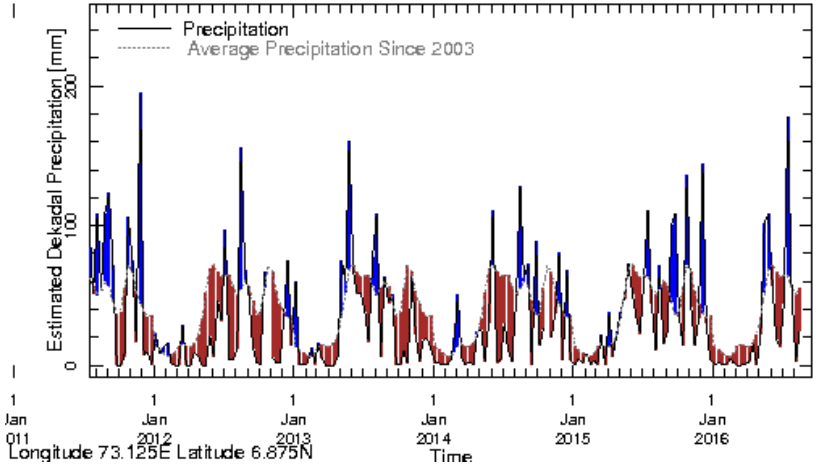
Northern Maldives:



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

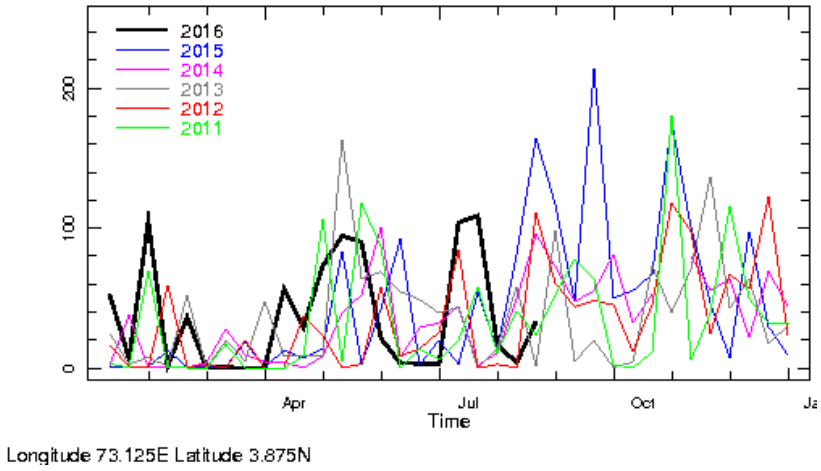


Rainfall of past 365 days (black) compared to average rainfall in previous 8 years.

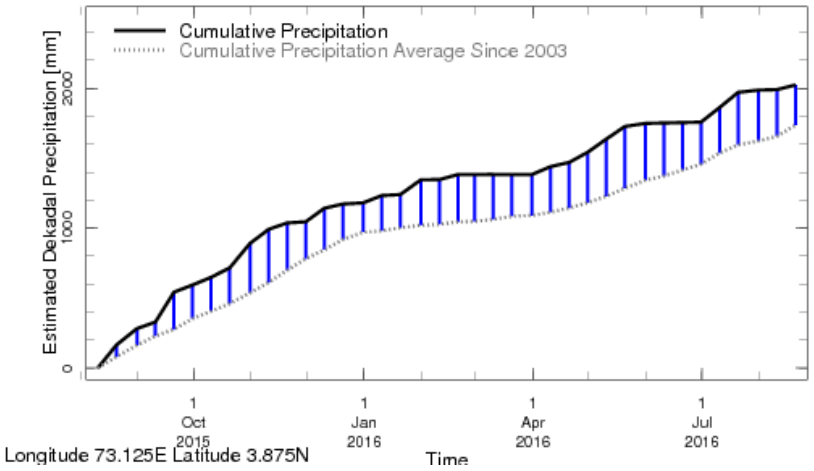


Rainfall in the past 5 years with above-average rainfall hatched in blue and below-average hatched in brown

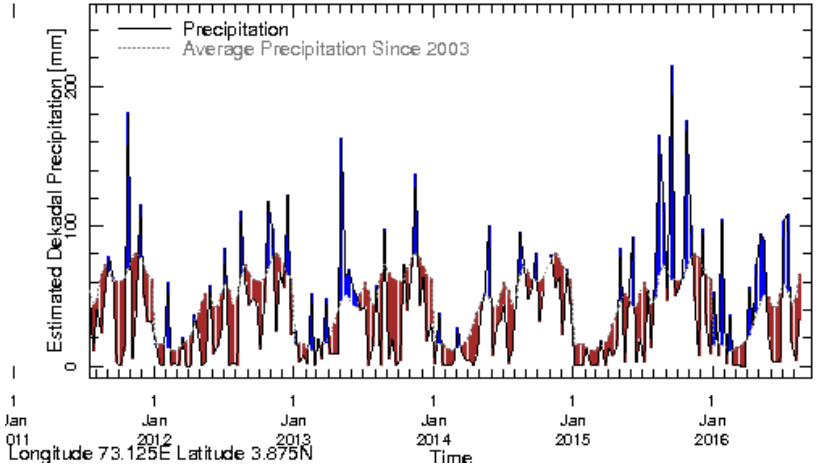
Central Maldives:



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

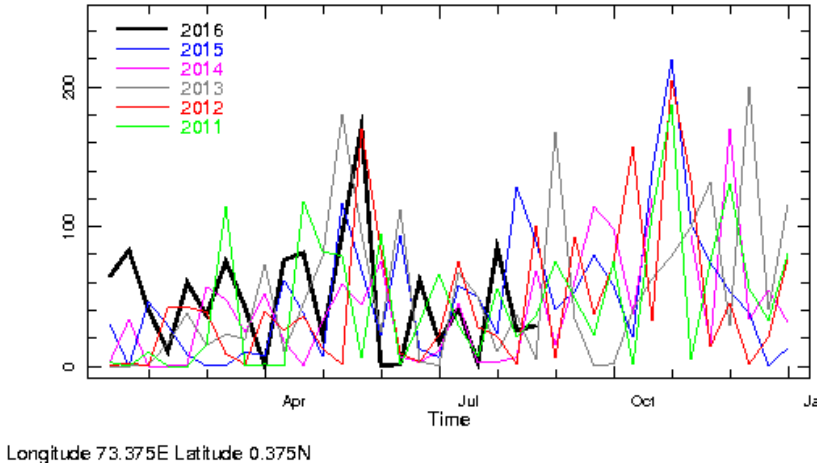


Rainfall of past 365 days (black) compared to average rainfall in previous 8 years.

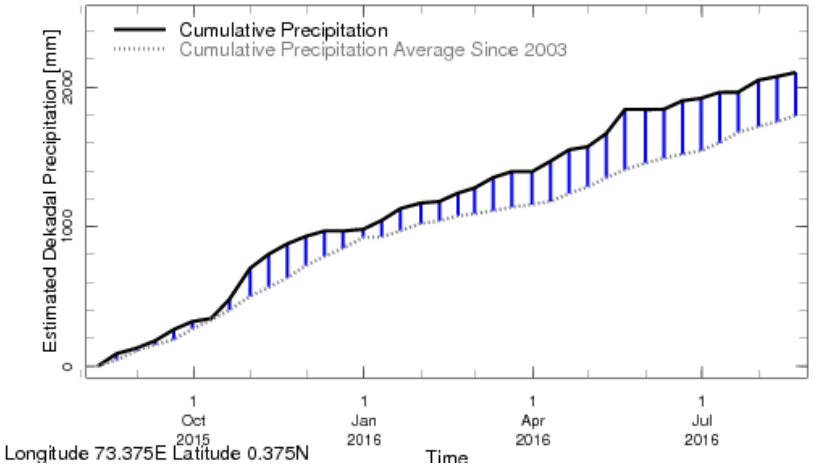


Rainfall in the past 5 years with above-average rainfall hatched in blue and below-average hatched in brown

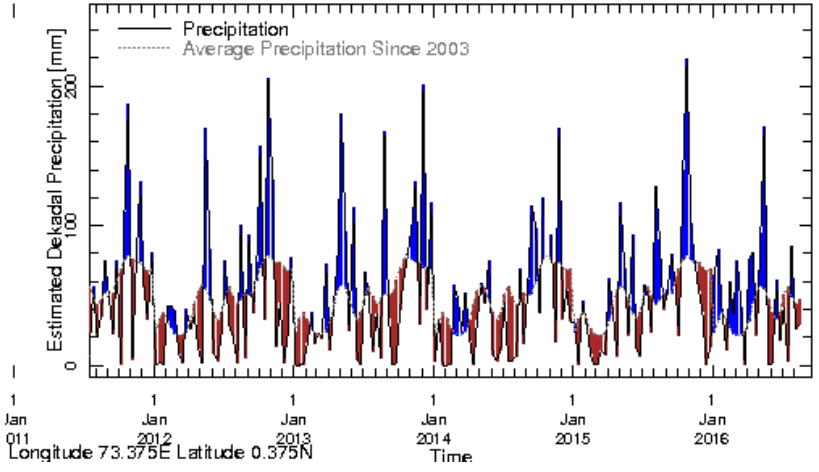
Southern Maldives:



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

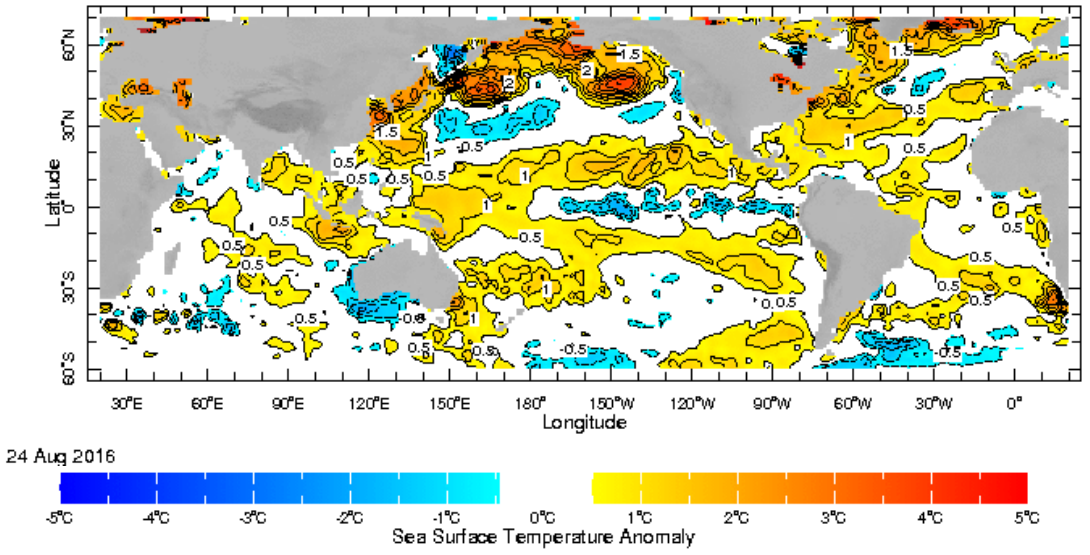


Rainfall of past 365 days (black) compared to average rainfall in previous 8 years.



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

Ocean Surface Monitoring



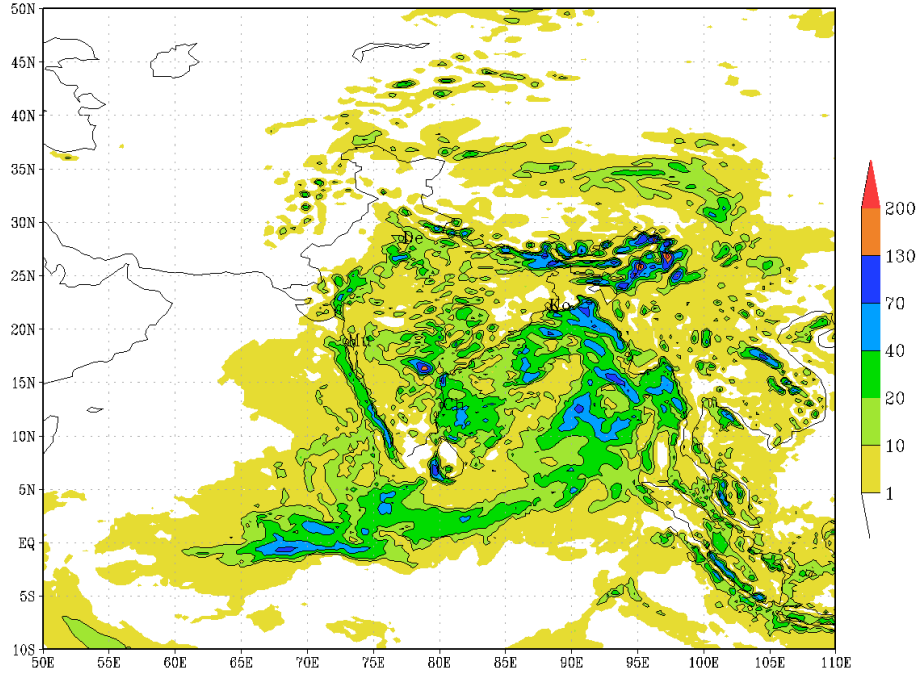
WORLDBATH topography

Daily Rainfall Forecast

Daily Rainfall forecasts (up to 7 days ahead) from the IMD New Delhi is provided in figures below. These predictions are from the GFS (T574) model covering the entire south Asian region.

IMD GFS (T574) RAINFALL (mm) FORECAST (24 HR)

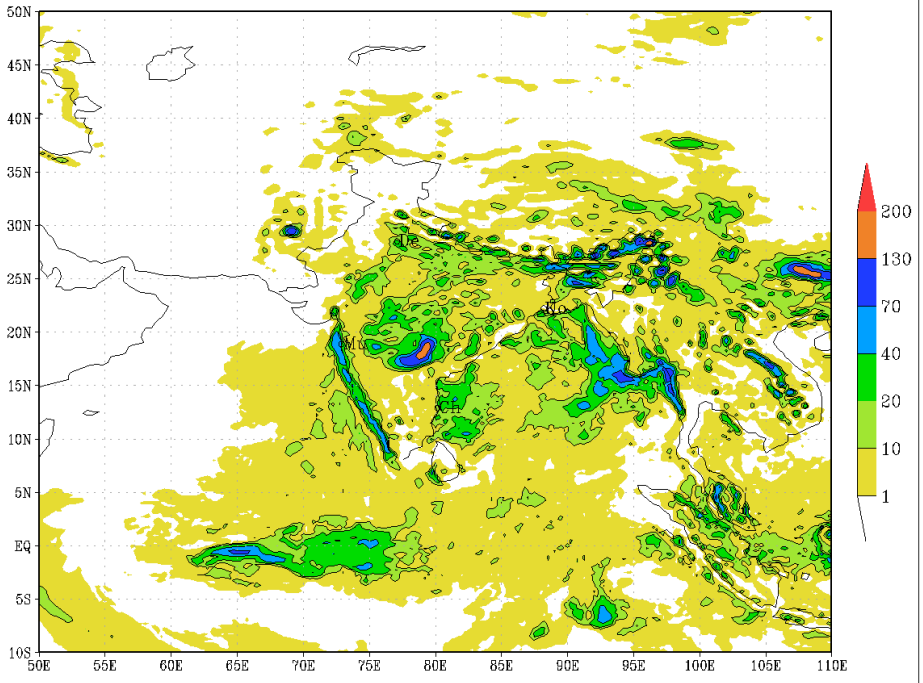
based on 12 UTC of 30-08-2016 valid for 12 UTC of 31-08-2016



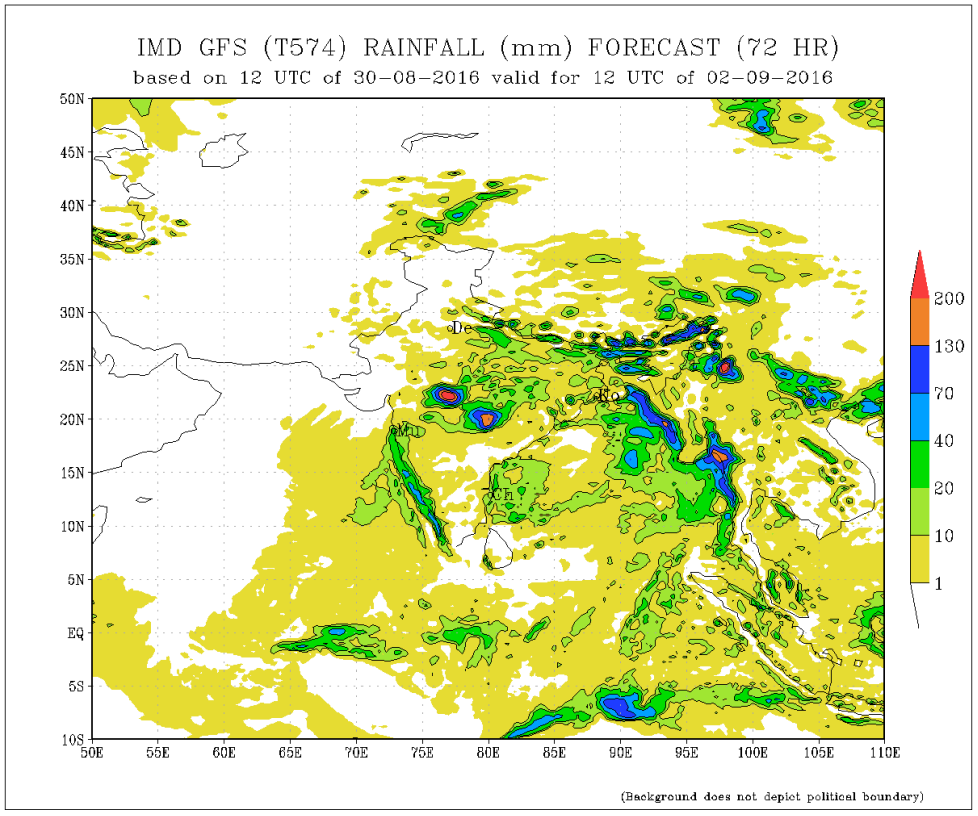
(Background does not depict political boundary)

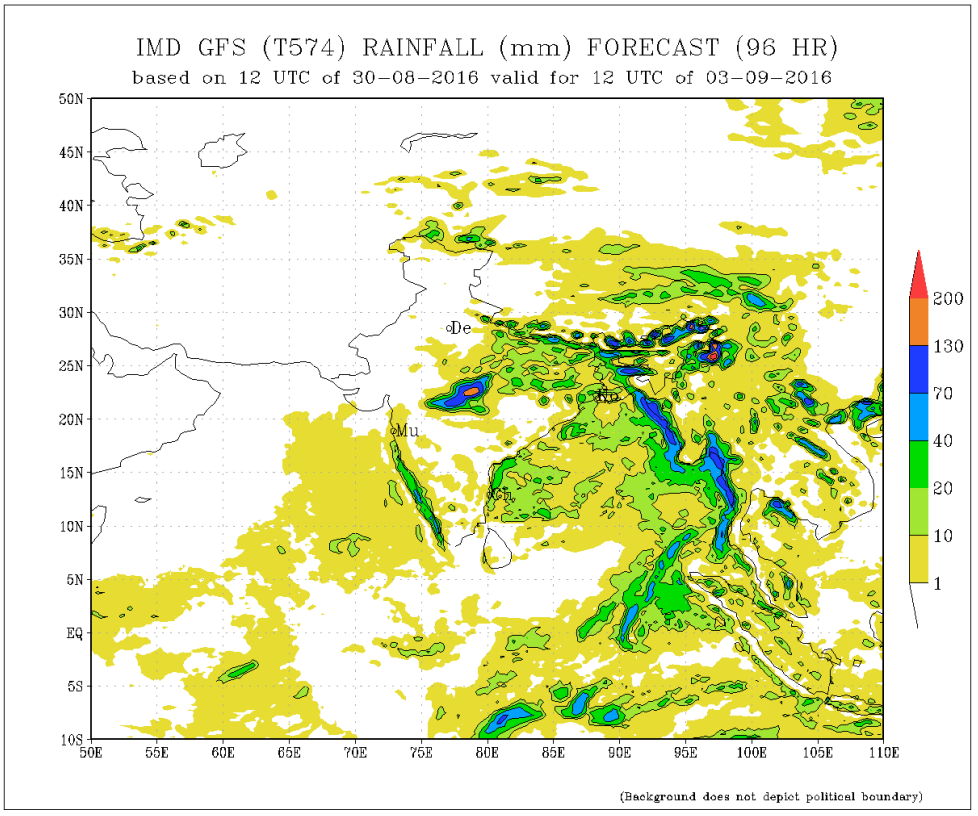
IMD GFS (T574) RAINFALL (mm) FORECAST (48 HR)

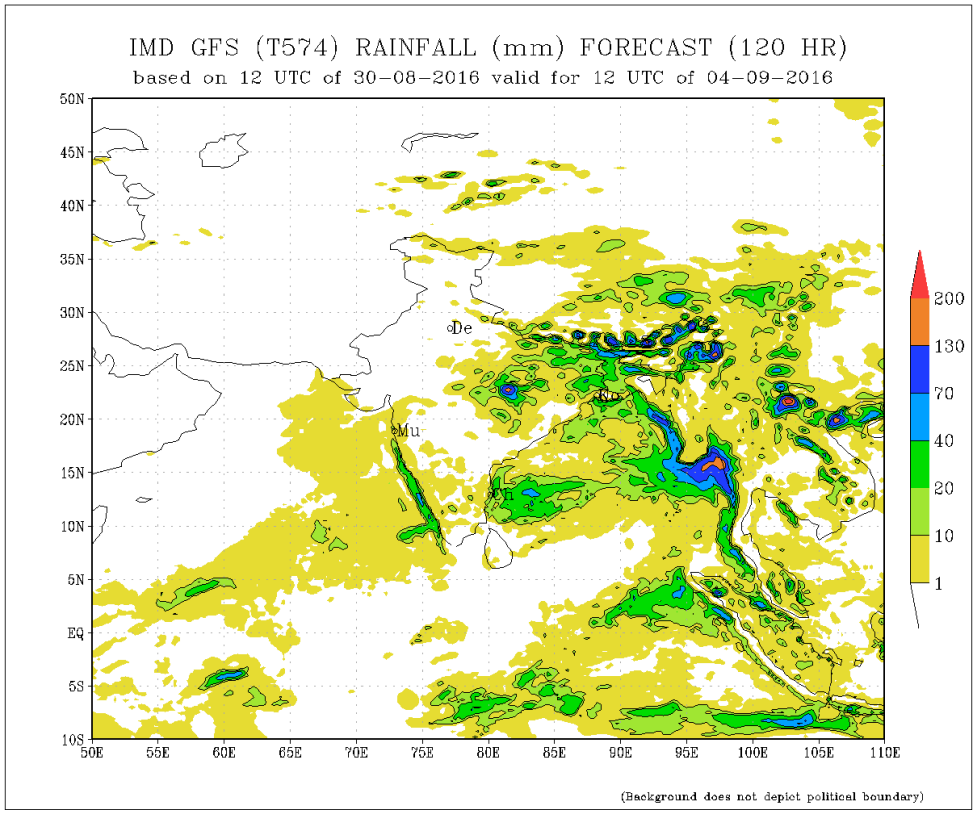
based on 12 UTC of 30-08-2016 valid for 12 UTC of 01-09-2016

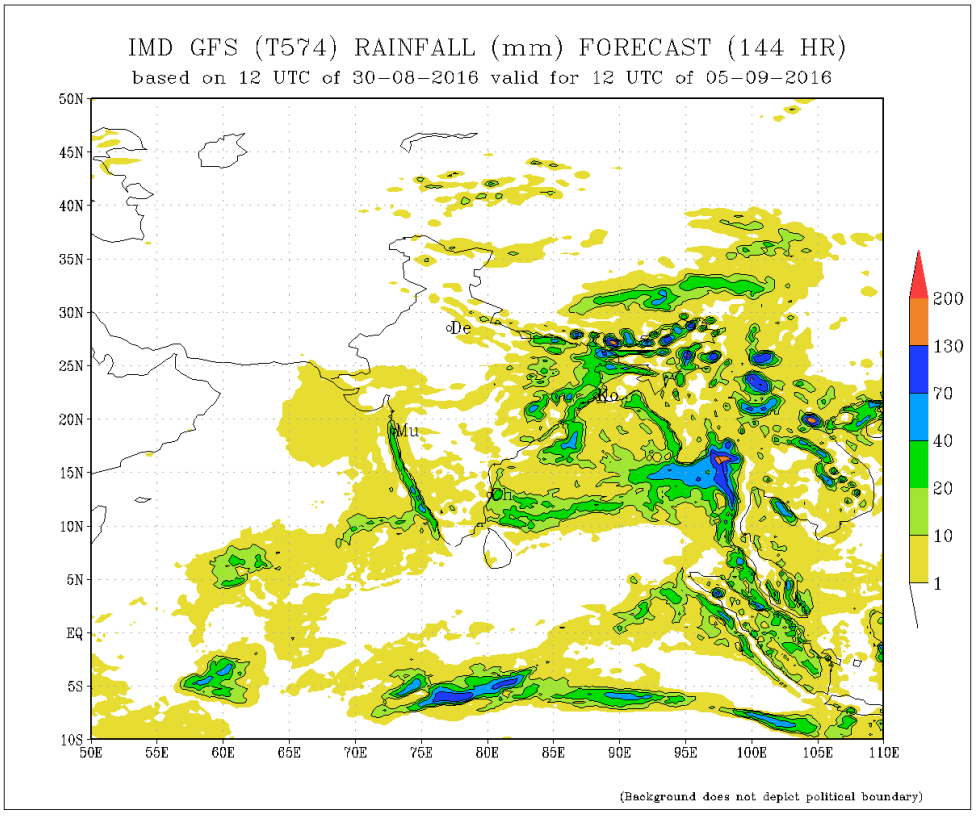


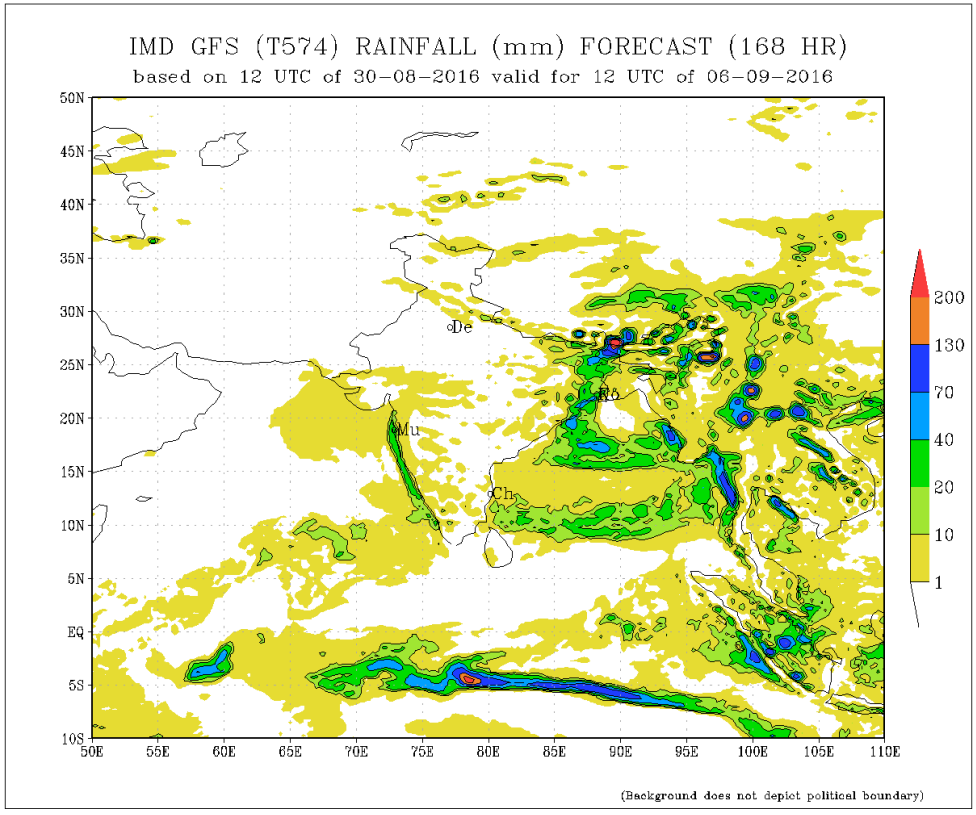
(Background does not depict political boundary)


IMD GFS (T574) RAINFALL (mm) FORECAST (72 HR)
based on 12 UTC of 30-08-2016 valid for 12 UTC of 02-09-2016
50N
45N
40N
35N
30N
25N
20N
15N
10N
5N
EQ
5S
10S
50E
55E
60E
65E
70E
75E
80E
85E
90E
95E
100E
105E
110E
200
130
70
40
20
10
1
(Background does not depict political boundary)


IMD GFS (T574) RAINFALL (mm) FORECAST (96 HR)
based on 12 UTC of 30-08-2016 valid for 12 UTC of 03-09-2016
50N
45N
40N
35N
30N
25N
20N
15N
10N
5N
EQ
5S
10S
50E
55E
60E
65E
70E
75E
80E
85E
90E
95E
100E
105E
110E
200
130
70
40
20
10
1
(Background does not depict political boundary)

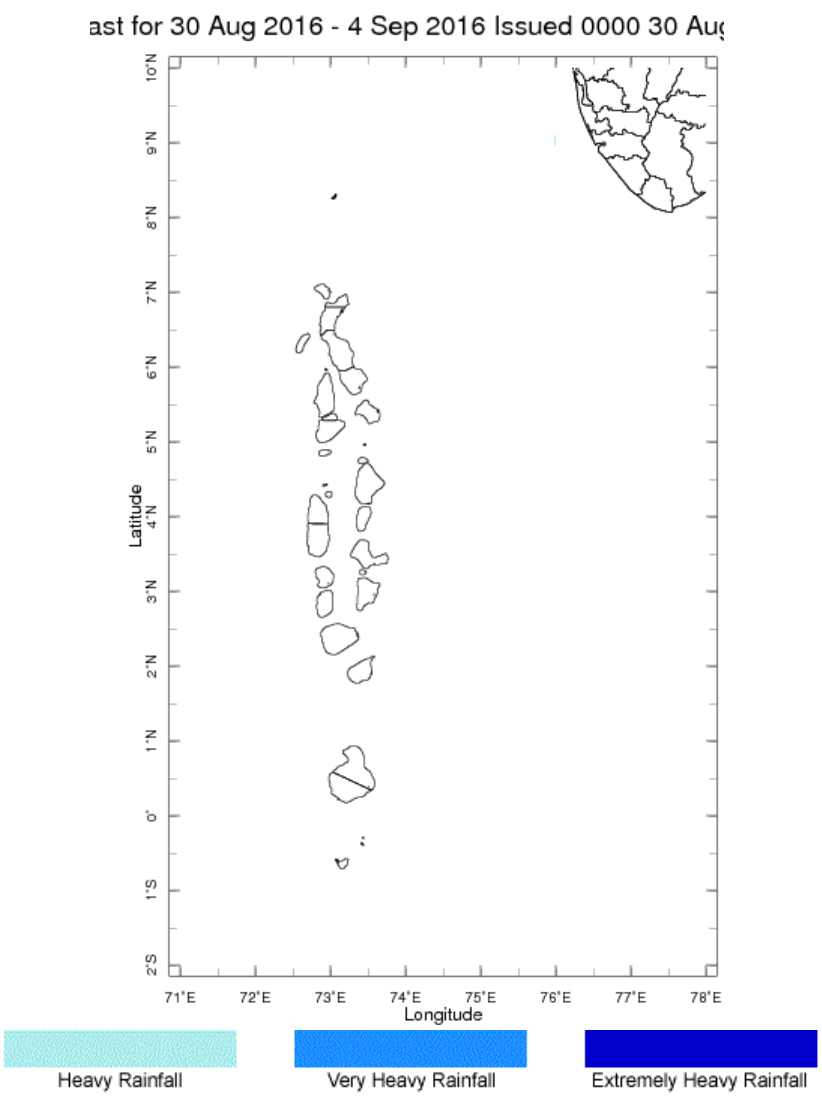

IMD GFS (T574) RAINFALL (mm) FORECAST (120 HR)
based on 12 UTC of 30-08-2016 valid for 12 UTC of 04-09-2016
50N
45N
40N
35N
30N
25N
20N
15N
10N
5N
EQ
5S
10S
50E
55E
60E
65E
70E
75E
80E
85E
90E
95E
100E
105E
110E
De
Mu
Ko
Ch
200
130
70
40
20
10
1
(Background does not depict political boundary)


IMD GFS (T574) RAINFALL (mm) FORECAST (144 HR)
based on 12 UTC of 30-08-2016 valid for 12 UTC of 05-09-2016
50N
45N
40N
35N
30N
25N
20N
15N
10N
5N
EQ
5S
10S
50E
55E
60E
65E
70E
75E
80E
85E
90E
95E
100E
105E
110E
De
Mu
Ko
Ch
200
130
70
40
20
10
1
(Background does not depict political boundary)

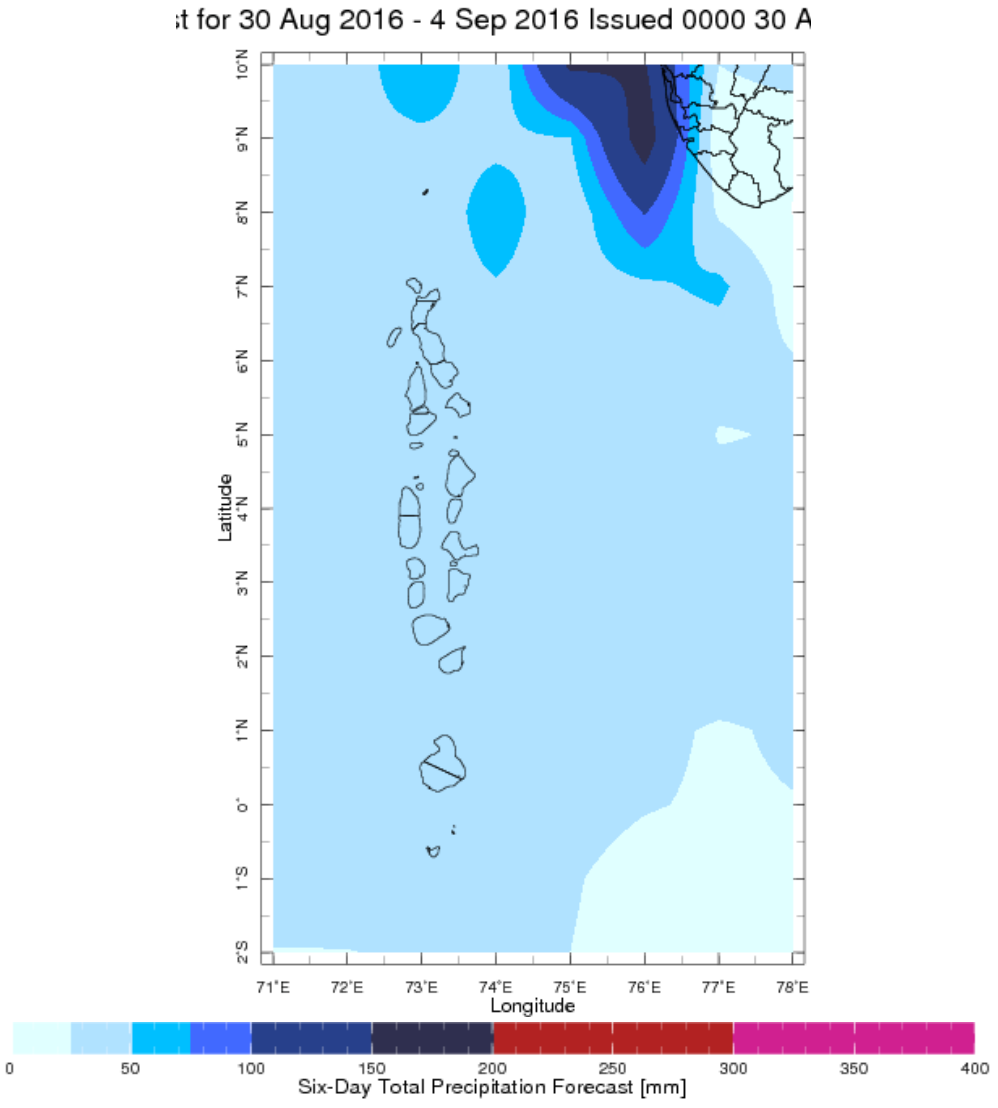


Weekly Rainfall Forecast

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.



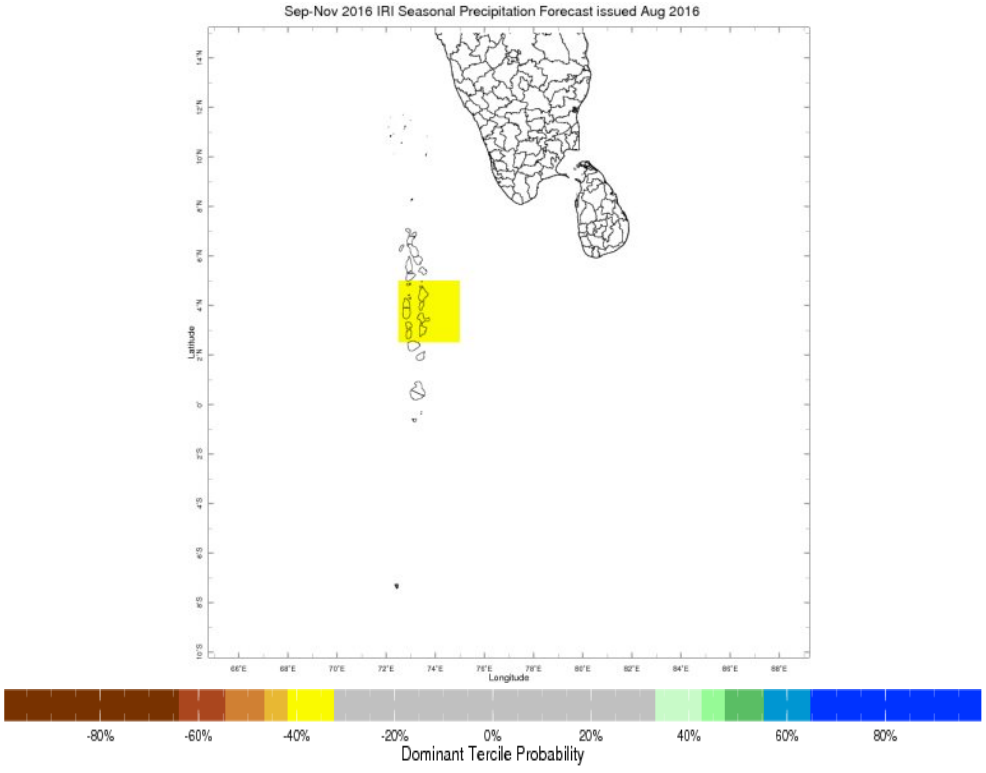
Extreme Rainfall Forecast



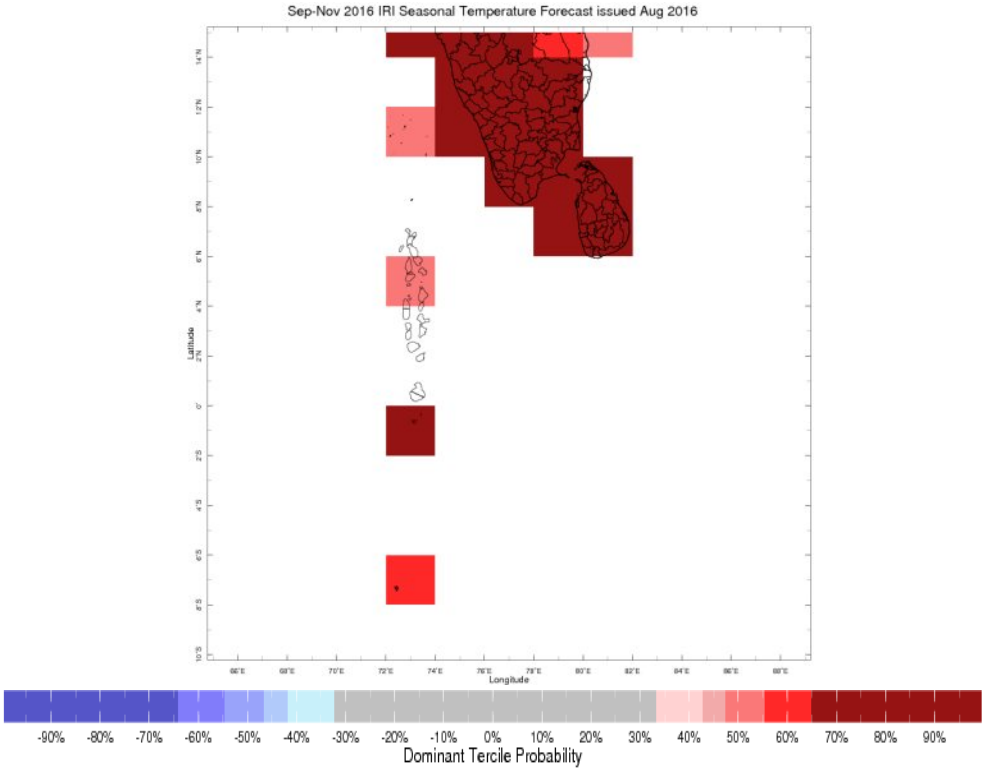
Total Six Day Precipitation Forecast

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

Subscribe to our Monthly Maldives Newsletter

email address

Subscribe

Follow @fectmv

Contact Us
email: fectmv@gmail.com
phone: (+94) 81 2376746
blog: www.fectmv.blogspot.com

Foundation for Environment, Climate & Technology
C/O Mahaweli Authority of Sri Lanka,
Digana Village,
Rajawella,
SRI LANKA