

Experimental Climate Monitoring and Prediction for the Maldives – September 2015

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)

21 September 2015

PACIFIC SEAS STATE

September 10,
2015

During late August through early-September 2015 the SST was at a strong El Niño level. All atmospheric variables support the El Niño pattern, including weakened trade winds and excess rainfall in the east-central tropical Pacific. The consensus of ENSO prediction models indicate continuation of strong El Niño conditions during the August-October 2015 season in progress. Some further strengthening into fall is likely, with the event lasting into spring 2016.

(Text Courtesy IRI)

INDIAN OCEAN STATE

Sep 9, 2014

~1 C° Warmer than usual
Sea surface temperature
was observed around
Maldives

Follow news of FECT at
[www.tropicalclimate.org/
Maldives](http://www.tropicalclimate.org/Maldives)

Highlights

The monthly average rainfall during August was about 200 mm in central islands and about 150 mm in southern islands. These amounts are the highest rainfall observed during this year. However, the rainfall in the northern islands once again below average rainfall in August. The high August rainfall in southern islands has compensated for the cumulative rainfall deficit. In the central islands the high rainfall has contributed to bring down the rainfall deficit by about 50%. During the next 3 months there is a high chance of having above average rainfall in central islands. But in the Southern islands below average rainfall is more likely in the next 3 months. This pattern predicted by climate models is consistent with historical data during El Nino events which is likely to prevail for the next 6 months.

Summary

CLIMATOLOGY

Monthly Climatology: In July, August, September and October the rainfall is about 150 mm in northern islands and about 200 mm in central and southern islands. In July, August, September and October the entire country usually do not receive strong wind. The wind direction is usually easterly.

MONITORING

Weekly Rainfall Monitoring: During 4th- 7th September no rainfall was observed in any part of the Maldives. On 8th and 9th light rainfall was observed in northern islands. Up to 30 mm rainfall was observed in north central islands on the 10th. Once again rainfall decreased during 11th- 13. Light rainfall was observed in northern and central islands during this period. Then on 14th and 15th the entire country except for northern-most atolls received rainfall up to 40 mm and no rainfall was observed on the 16th. Up to 30 mm rainfall was observed on the 17th in northern and central islands and the rainfall increased up to 100 mm on the 18th. Up to 140 mm rainfall was observed in the north western sea on the same day.

Monthly and Seasonal Rainfall Monitoring: In August 2015, central and southern islands received more rainfall than northern and north central islands. Rainfall received in southern and central islands were above average while other islands received below average rainfall. Central islands received significantly high rainfall in August. This amount is the highest rainfall received this year in this region. Southern islands too received high rainfall which helped to reduce the rainfall deficit.

PREDICTIONS

Weekly Rainfall Forecast: According to NOAA CFS models, heavy rainfall is not expected in the Maldives during 20- 25th September 2015.

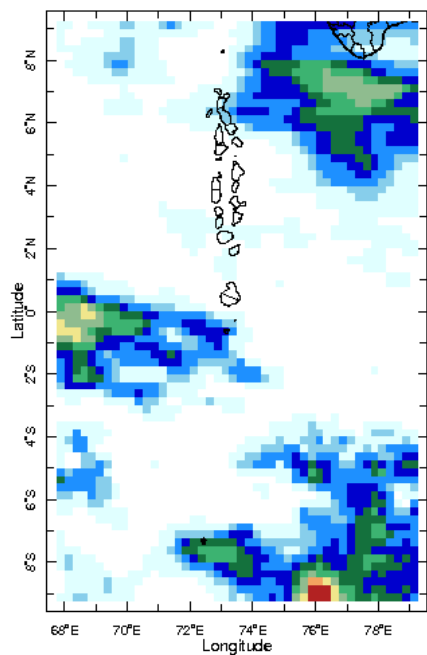
Seasonal Rainfall and Temperature Prediction: As per IRI Multi Model Probability Forecast for October to December, there is 80% probability for total 3 month precipitation shall be above average in central islands but in southern islands there shall be below average rainfall with a probability of 40%. The 3 month average temperature has a 70- 80% likelihood for north central and southern islands to be in the above-normal tercile during these 3 months.

Inside this Issue

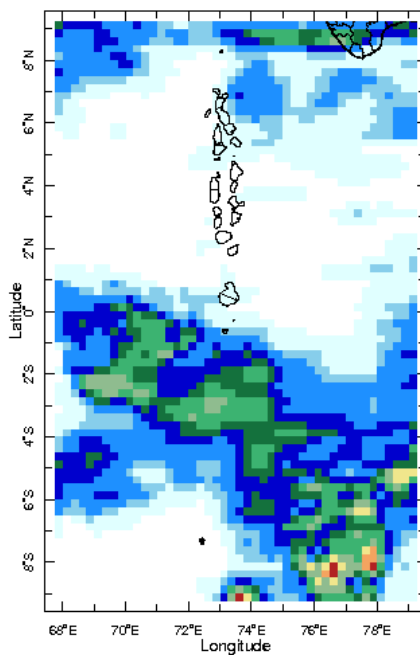
1. Monthly Climatology
2. Rainfall Monitoring
 - a. Daily Satellite derived Rainfall Estimates
 - b. Monthly Rainfall derived from Satellite Rainfall Estimate
 - c. Monthly and Seasonal Monitoring
3. Ocean Surface Monitoring
4. Rainfall Predictions
 - a. Weekly Predictions from NOAA/NCEP
 - b. Seasonal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

Daily Rainfall Monitoring

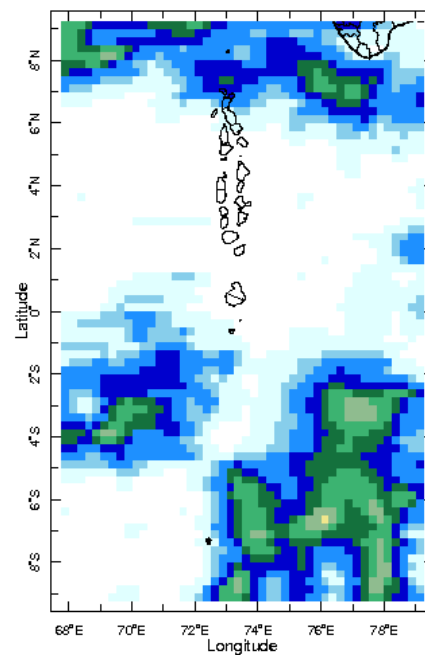
The following figures show the observed rainfall in the last 15 days in Maldives.



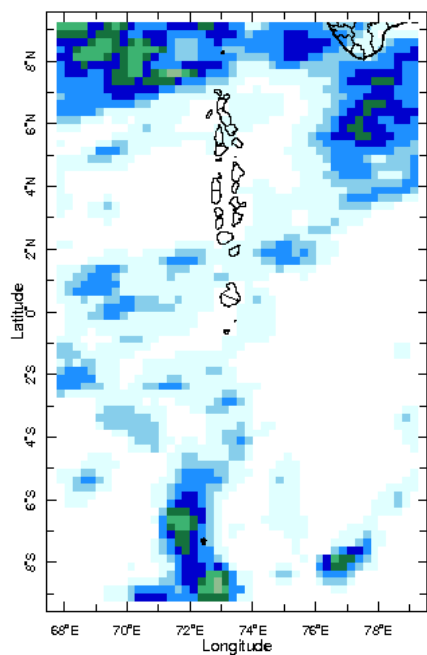
4 Sep 2015



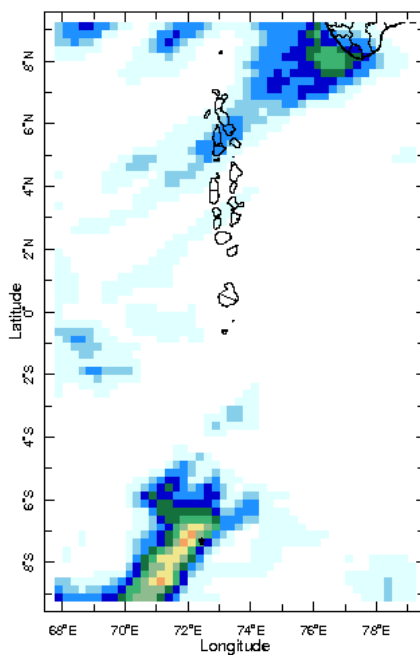
5 Sep 2015



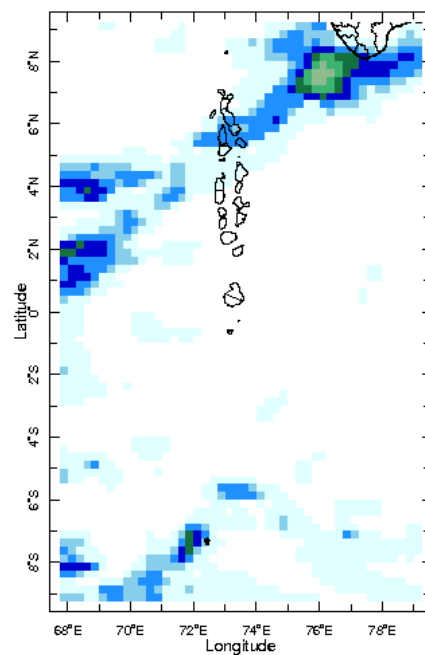
6 Sep 2015



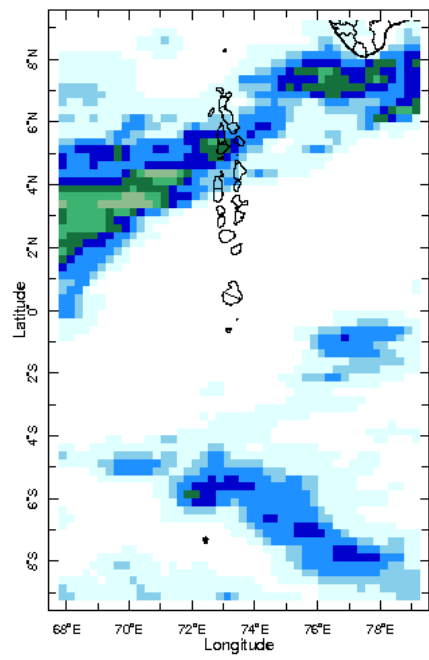
7 Sep 2015



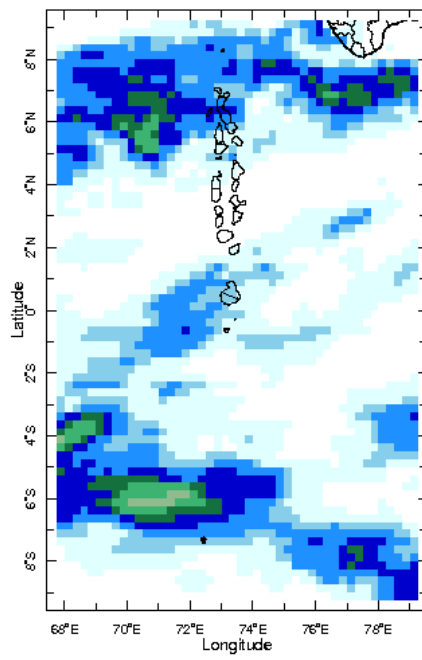
8 Sep 2015



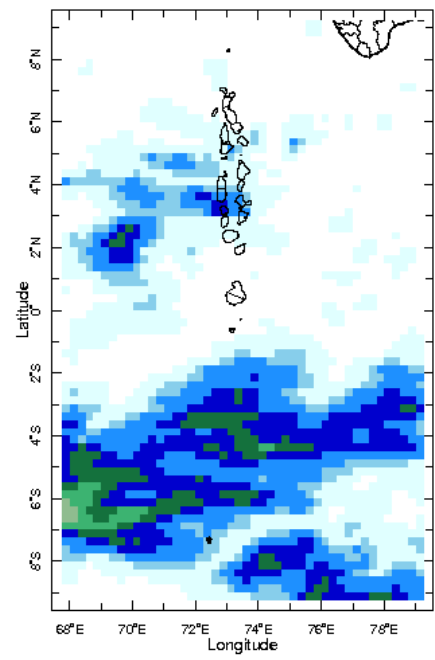
9 Sep 2015



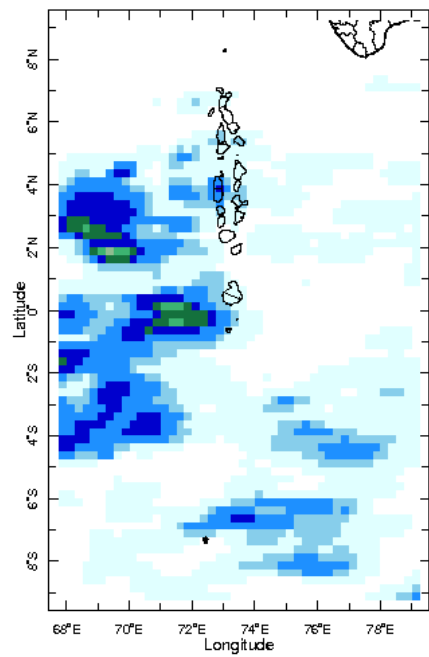
10 Sep 2015



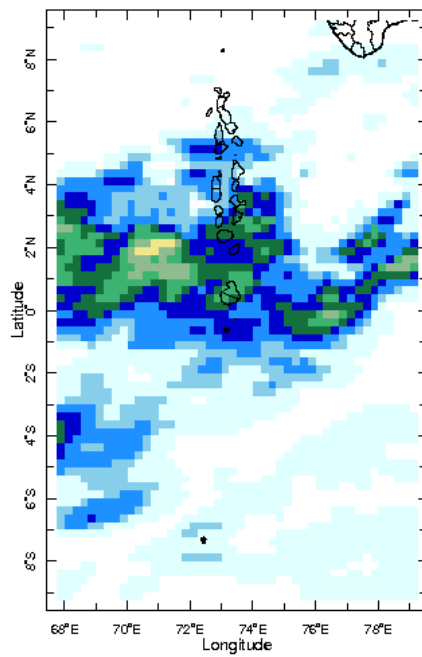
11 Sep 2015



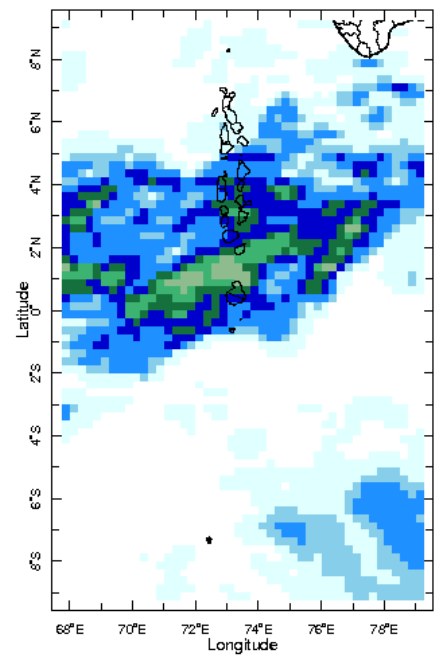
12 Sep 2015



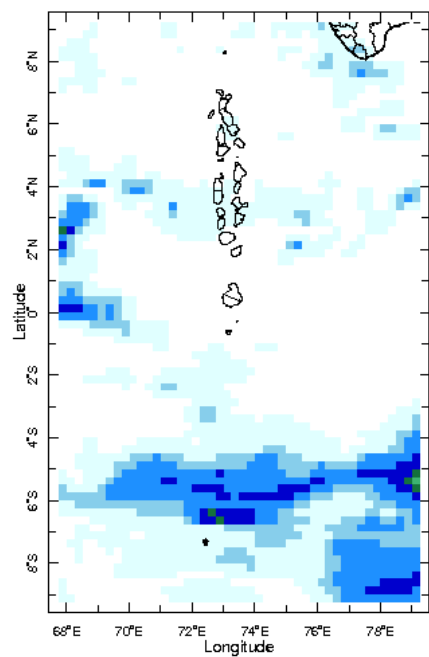
13 Sep 2015



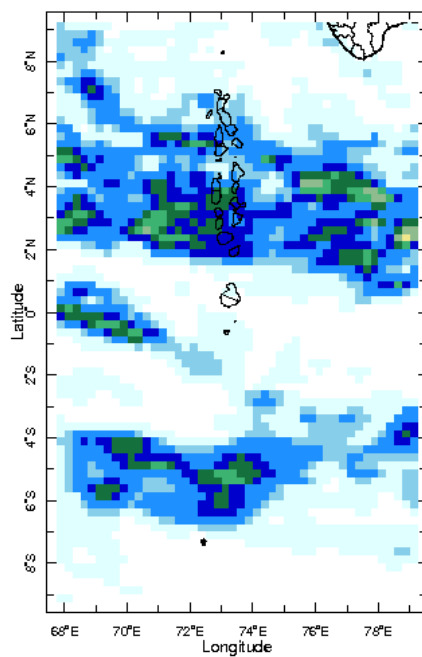
14 Sep 2015



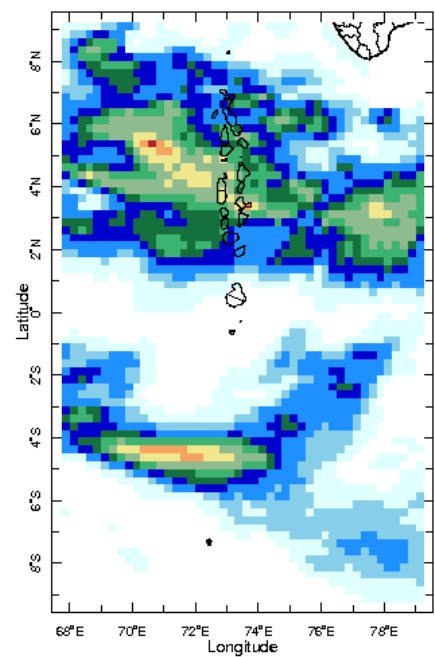
15 Sep 2015



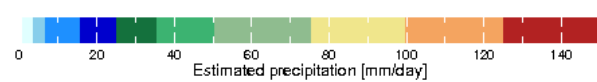
16 Sep 2015



17 Sep 2015

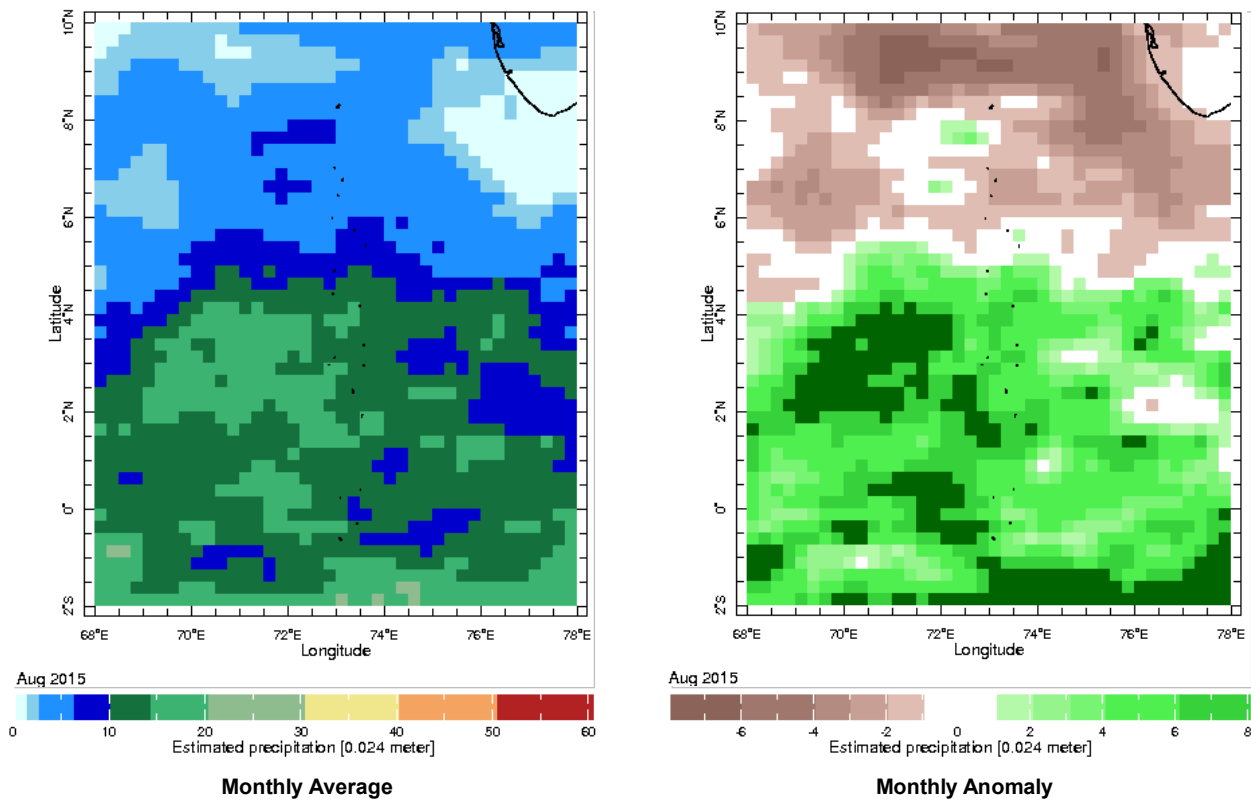


18 Sep 2015



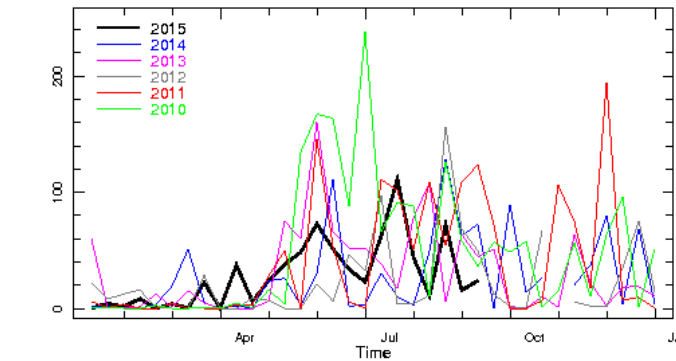
Monthly Rainfall Monitoring

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

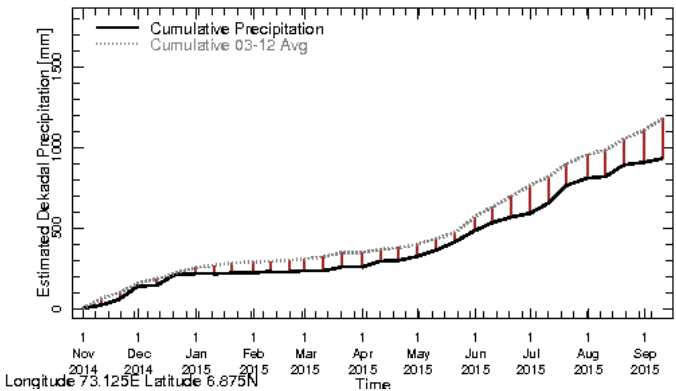


Monthly and Seasonal Monitoring

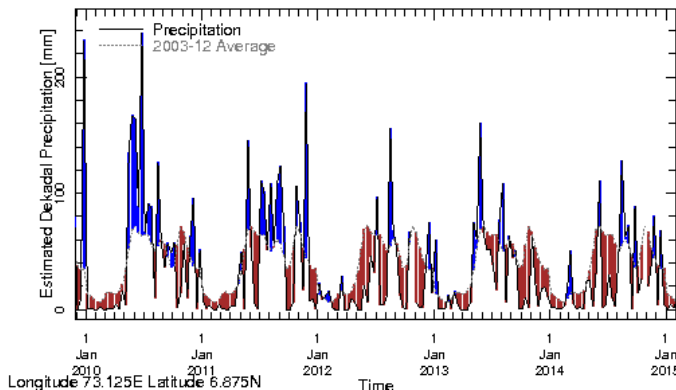
Northern Maldives:



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

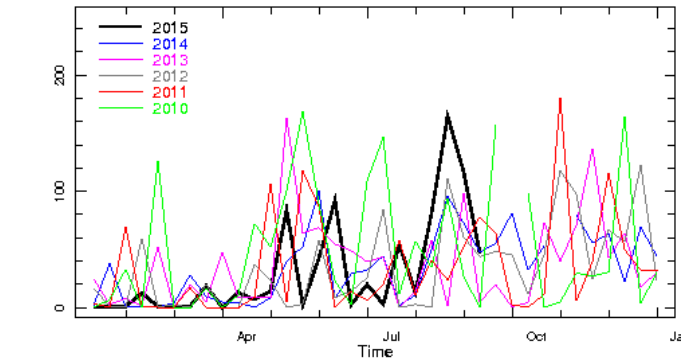


Rainfall of past 365 days (black) compared to average rainfall in previous 8 years.

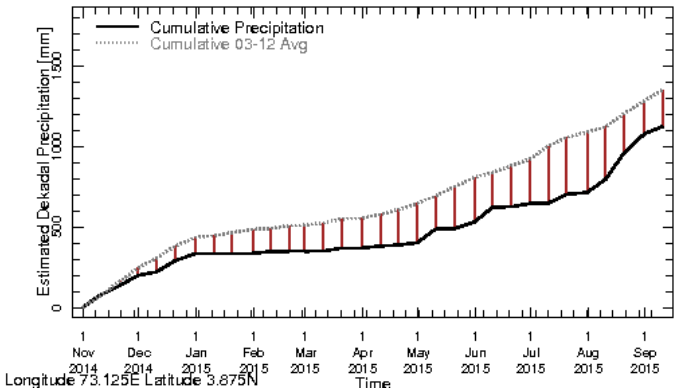


Rainfall in the past 5 years with above-average rainfall hatched in blue and below-average hatched in brown

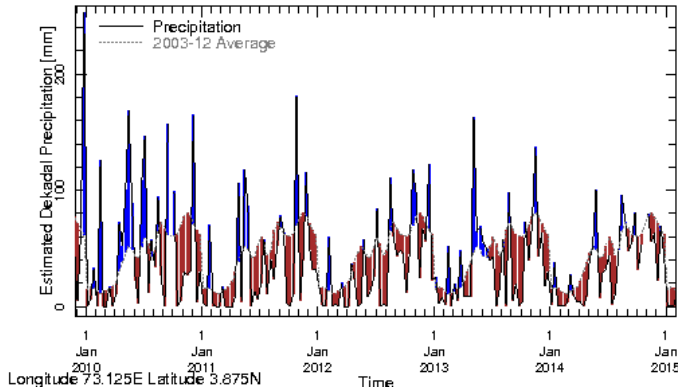
Central Maldives:



Longitude 73.125E Latitude 3.875N
Rainfall in the current year (black) compared to rainfall in previous 5 years

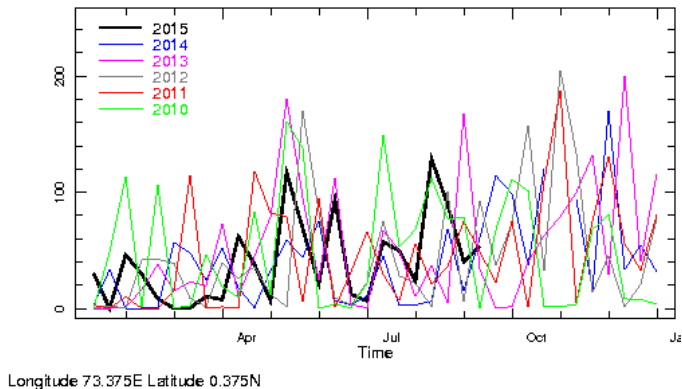


Rainfall of past 365 days (black) compared to average rainfall in previous 8 years.

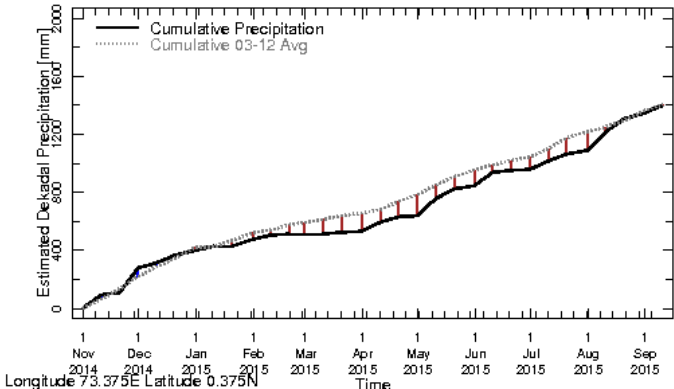


Rainfall in the past 5 years with above-average rainfall hatched in blue and below-average rainfall hatched in brown

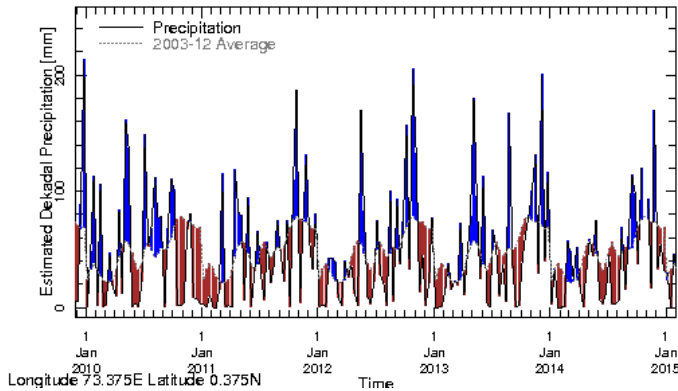
Southern Maldives:



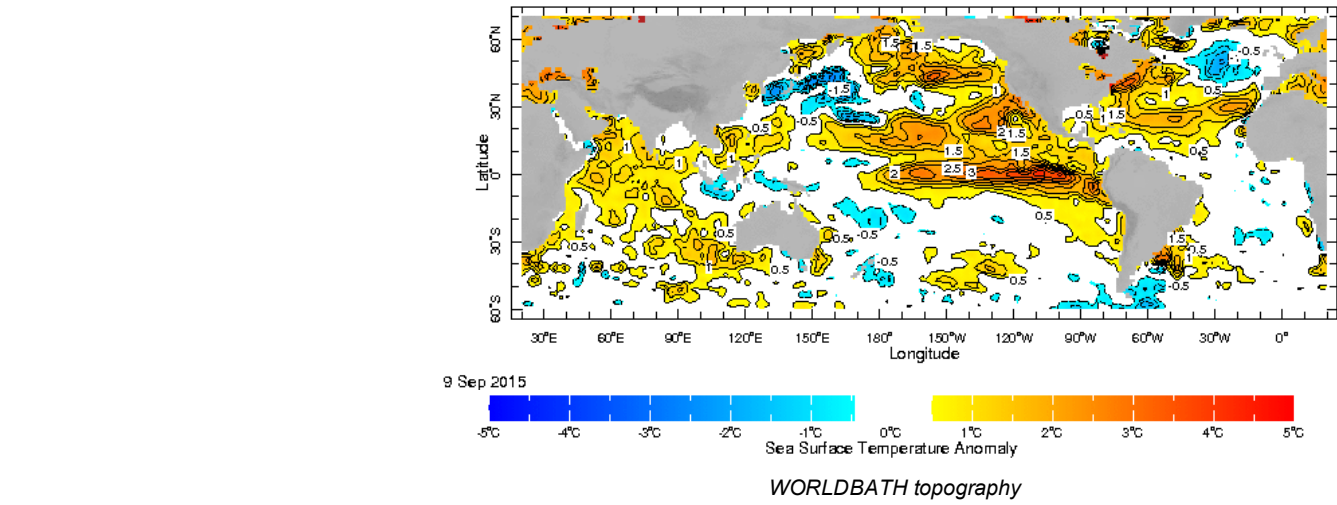
Longitude 73.375E Latitude 0.375N
Rainfall in the current year (black) compared to rainfall in previous 5 years



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

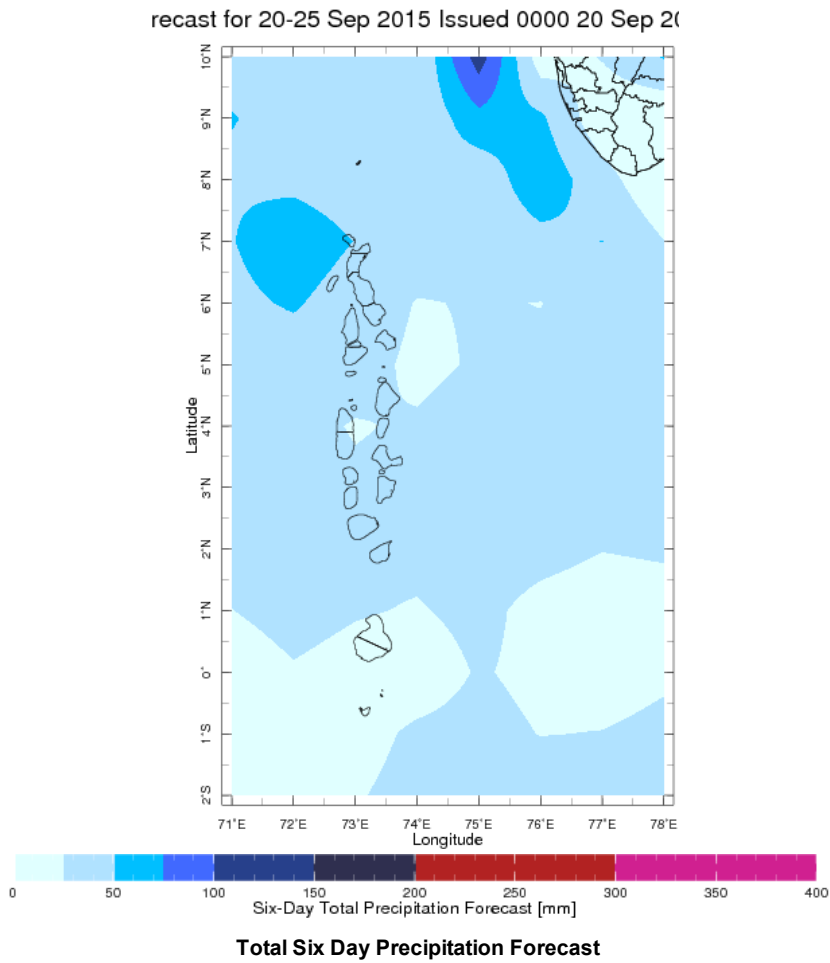
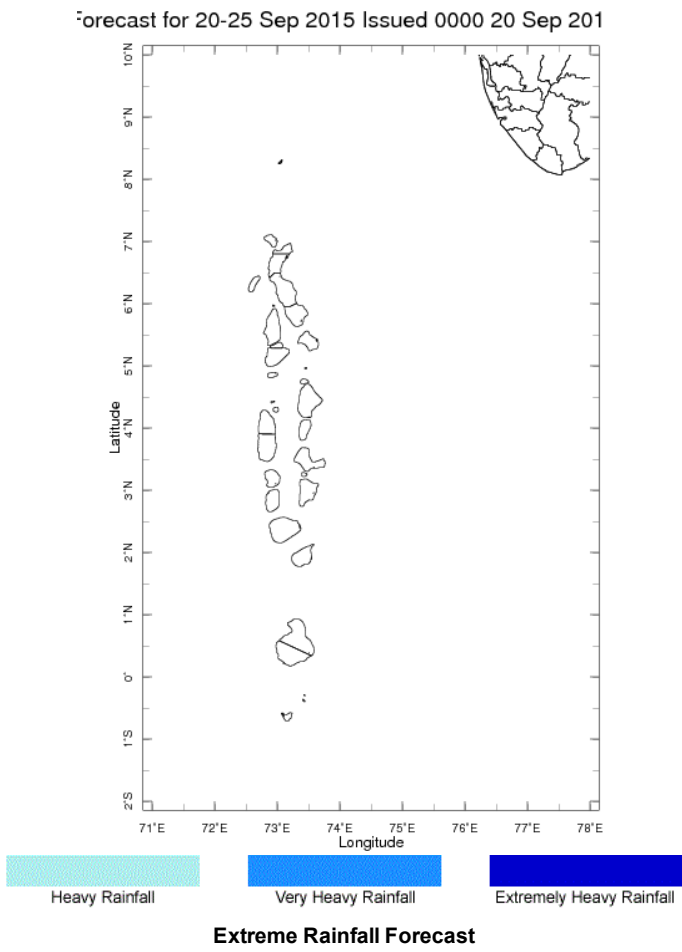


Rainfall in the past 5 years with above-average rainfall hatched in blue and below-average rainfall hatched in brown



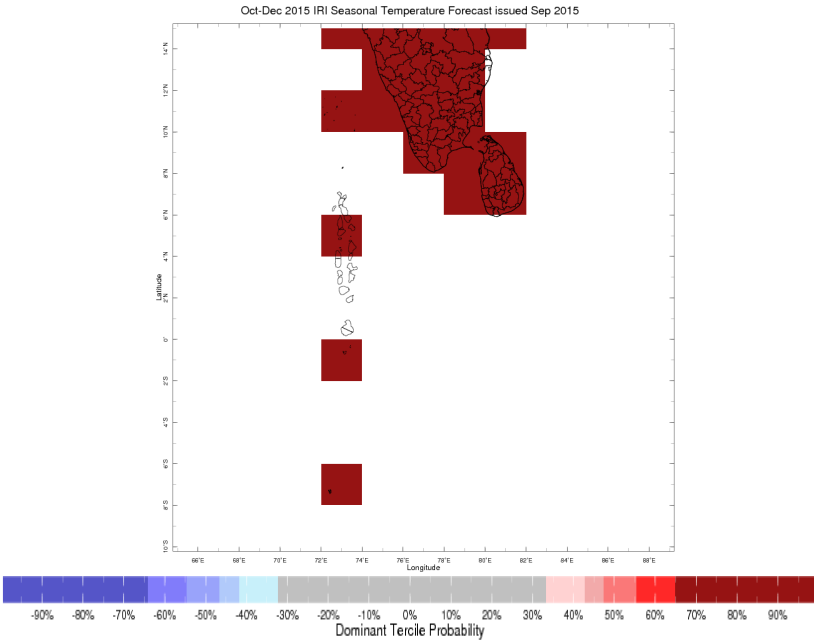
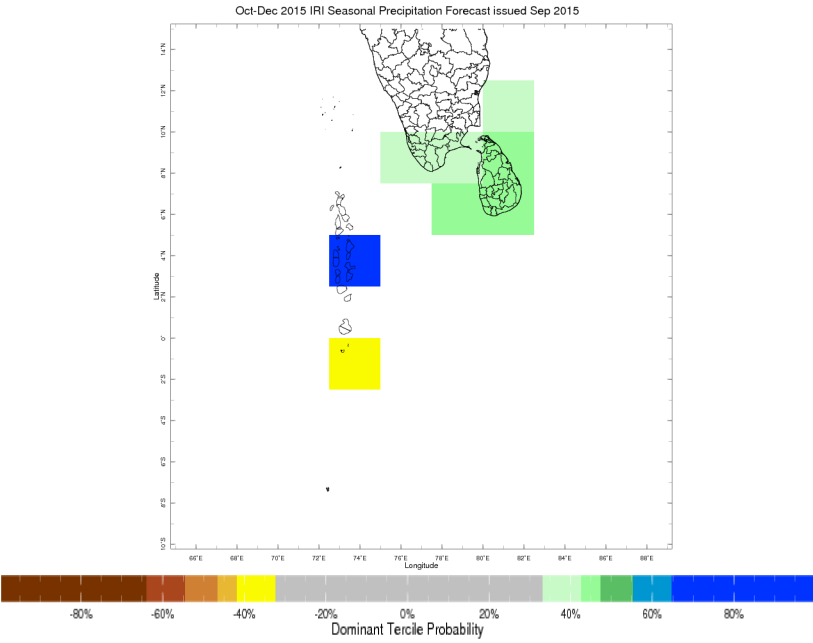
Weekly Rainfall Forecast

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.



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%).



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