

## Experimental Climate Monitoring and Prediction for the Maldives

–February 2015

Prepared by Staff from Foundation for Environment, Climate and Technology, Sri Lanka and USA, Maldives Meteorological Service, and Columbia University

### 20 February 2014

FECT Maldives website

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### PACIFIC SEAS STATE

#### February 19, 2015

During December 2014 through early January 2015 the SST exceeded thresholds for weak Niño conditions, although the anomaly level has weakened recently.

Meanwhile, only some of the atmospheric variables indicate an El Niño pattern. Most of the ENSO prediction models indicate weak El Niño conditions during the January-March season in progress, continuing through most or all of northern spring 2015.

(Text Courtesy IRI)

### INDIAN OCEAN STATE

#### Feb 14, 2014

Neutral Sea surface temperature was observed around Northern and Central Maldives and anomalous warm seas close to the Southern Islands.

### Highlights

A continuation of dry weather conditions from the previous month was observed throughout January in the Northern and Central Maldives. The Southern Islands got a significant amount of rainfall on the 12-14<sup>th</sup> of January. The seas to the Southern islands showed a warming which was 0.5C above what is usual. Significant amounts of rainfall are not expected during the next few days as well. On a seasonal time scale, the next three months are expected to bring the usual distribution of rainfall totals although the Southern islands in particular and Central Islands as well shall tend towards warmer temperatures than usual.

### Summary

#### CLIMATOLOGY

**Monthly Climatology:** Usually in February, northern islands receive around 50 mm rainfall and this increases up to 150 mm in southern islands. The same rainfall pattern is expected in March as well. In April rainfall usually increases throughout the country with northern islands receiving rainfall up to 100 mm and southern islands receiving rainfall up to 200 mm. Wind direction is usually south-westerly in February and March and in April northern islands receive south-easterly wind while southern islands receive easterly wind.

#### MONITORING

**Weekly Rainfall Monitoring:** Rainfall up to 30 mm was observed in southern islands during 12<sup>th</sup>- 14<sup>th</sup> February 2015. Thereafter until the 18th no rainfall was observed in Maldives. But during this seven day period very heavy rainfall was observed in the sea south of the country.

**Monthly and Seasonal Rainfall Monitoring:** During January 2015 very less rainfall (below average) was observed in Maldives.

#### PREDICTIONS

**Weekly Rainfall Forecast:** According to NOAA models, significant amount of rainfall is not expected during 19<sup>th</sup>- 24<sup>th</sup> February 2015.

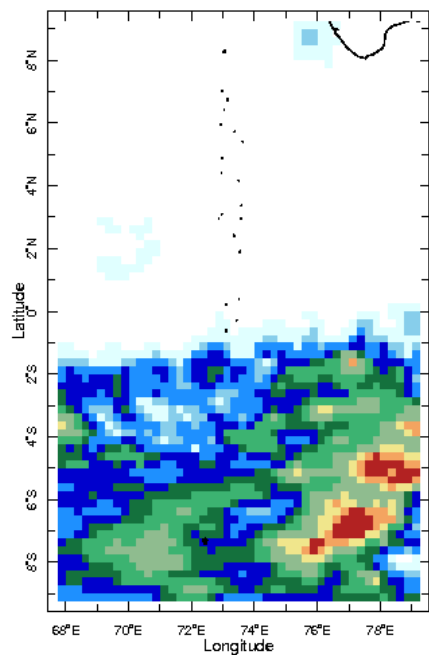
**Seasonal Rainfall and Temperature Prediction:** As per IRI Multi Model Probability Forecast for March to May, the total 3 month precipitation shall climatological. The 3 month average temperature has a 60-70% likelihood for central islands and about 90% likelihood for southern-most islands of being in the above-normal tercile during this period.

### Inside this Issue

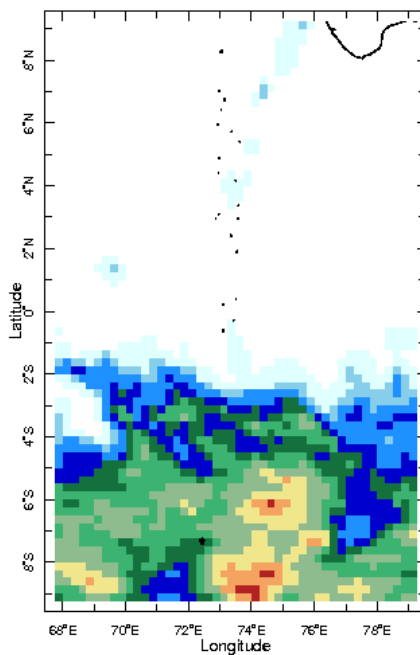
1. Monthly Climatology
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## Daily Rainfall Monitoring

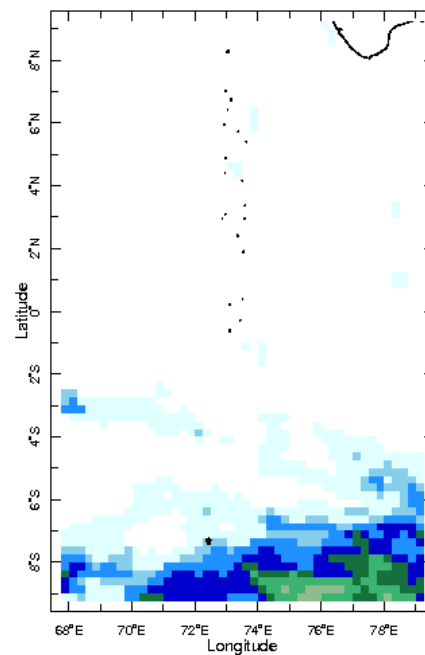
The following figures show the observed rainfall in the last 7 days in Maldives.



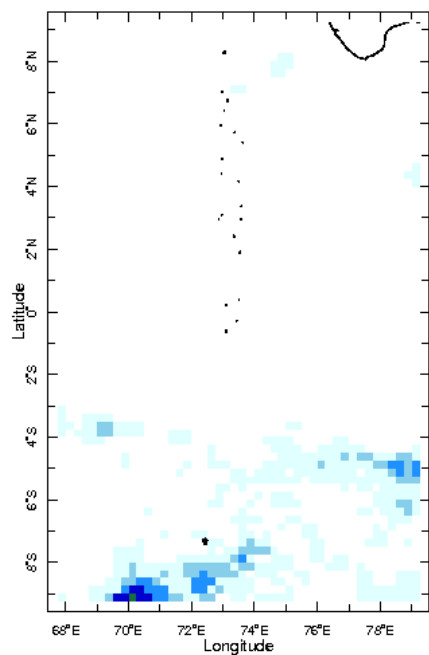
15 Feb 2015



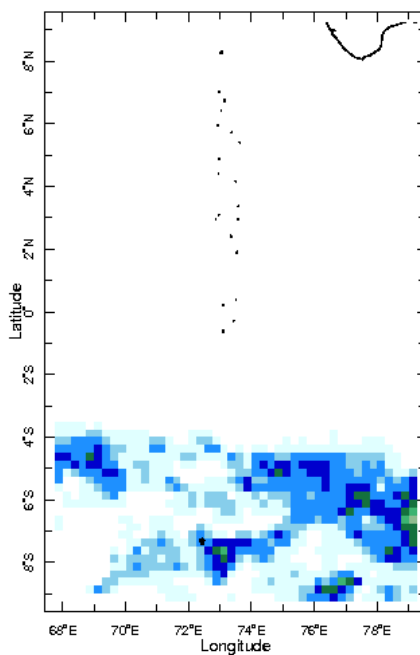
16 Feb 2015



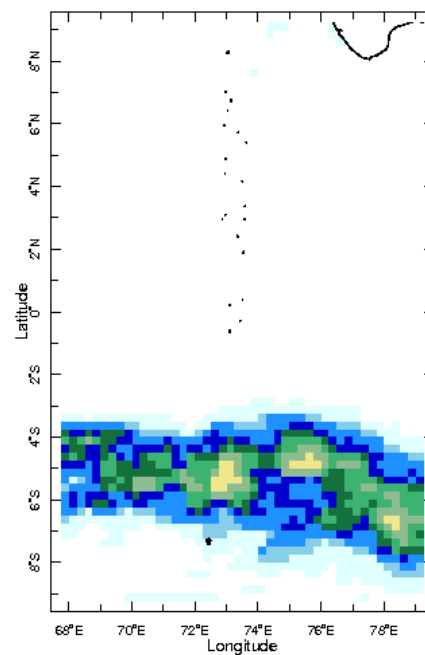
17 Feb 2015



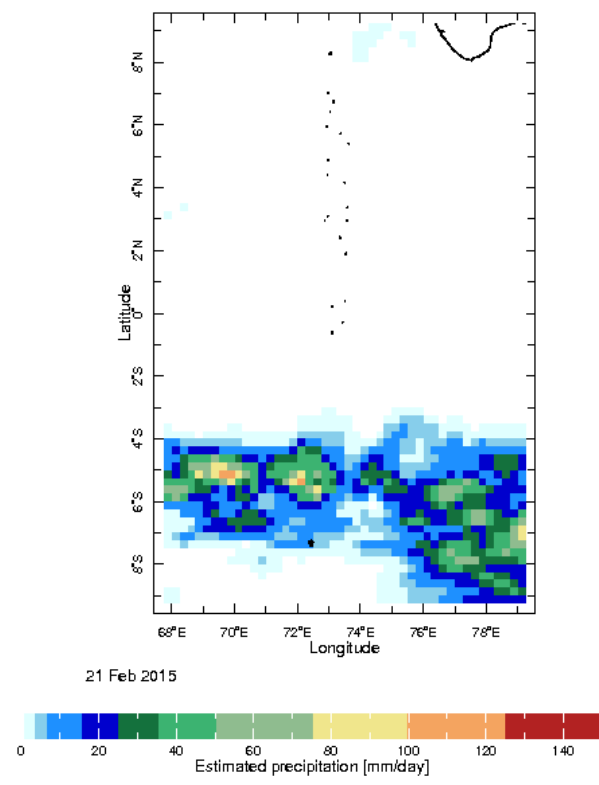
18 Feb 2015



19 Feb 2015

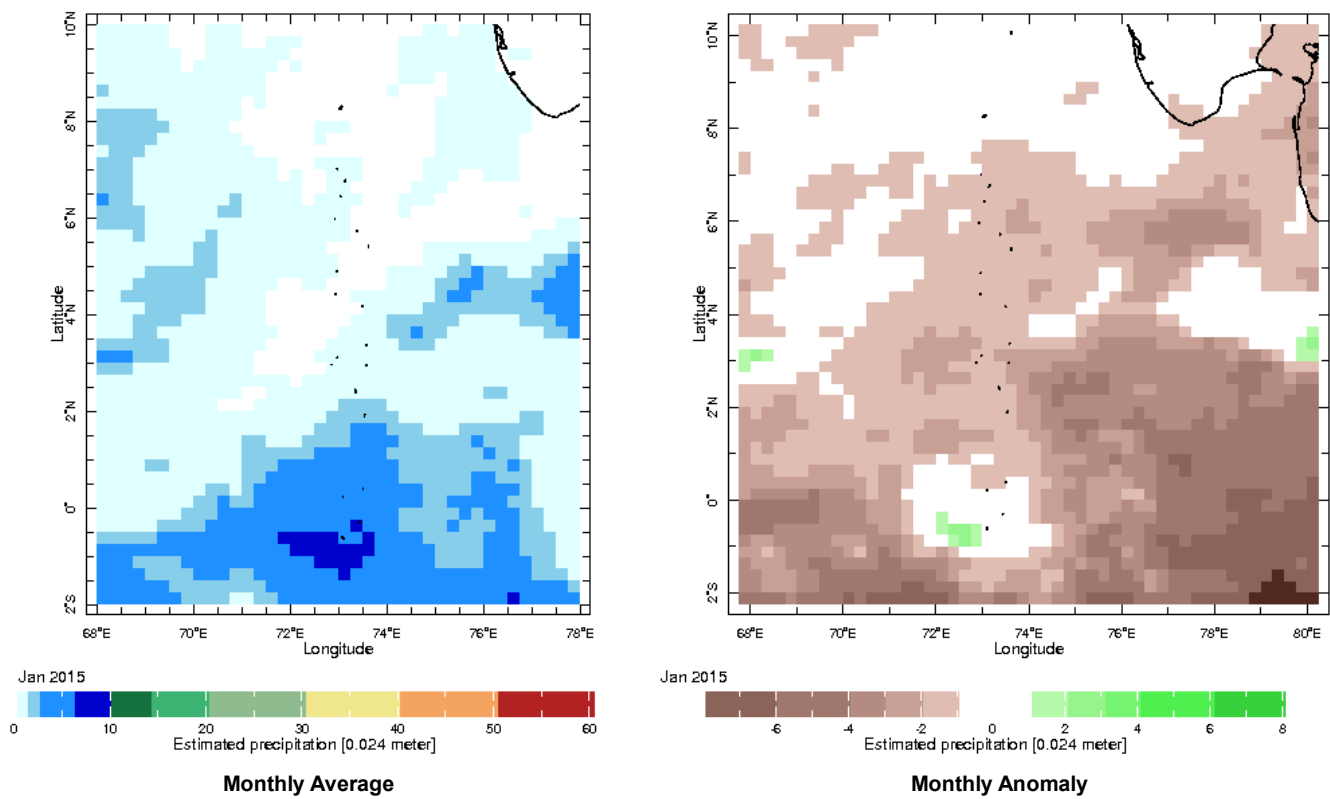


20 Feb 2015



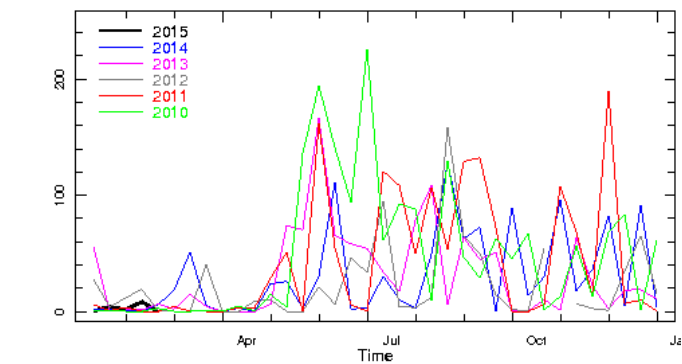
Monthly Rainfall Monitoring

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

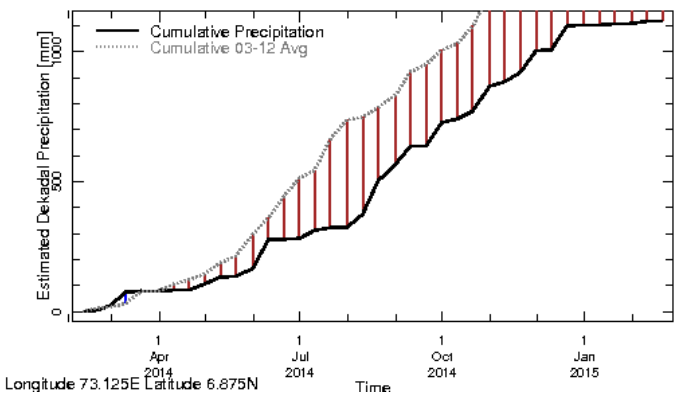


Monthly and Seasonal Monitoring

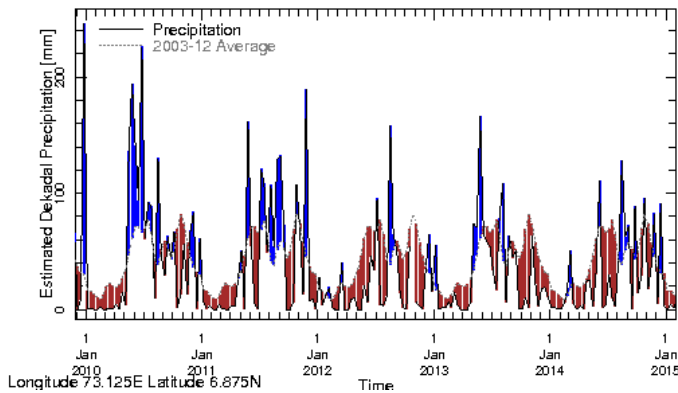
Northern Maldives:



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

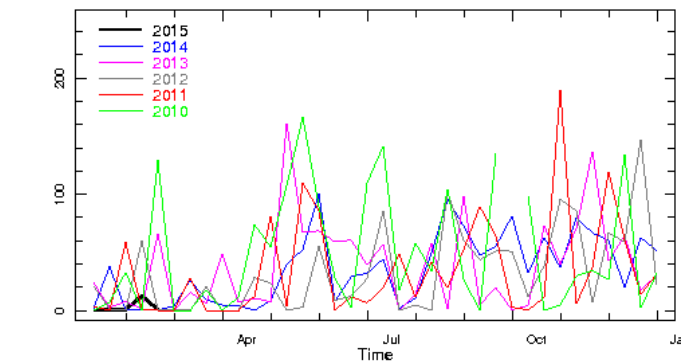


Rainfall of past 365 days (black) compared to average rainfall in previous 8 years.

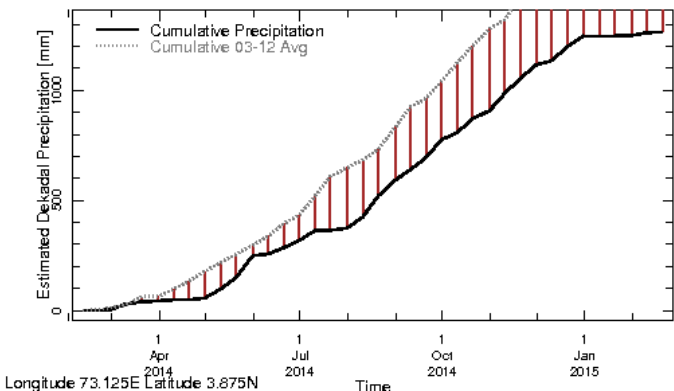


Rainfall in the past 5 years with above-average rainfall hatched in blue and below-average hatched in brown

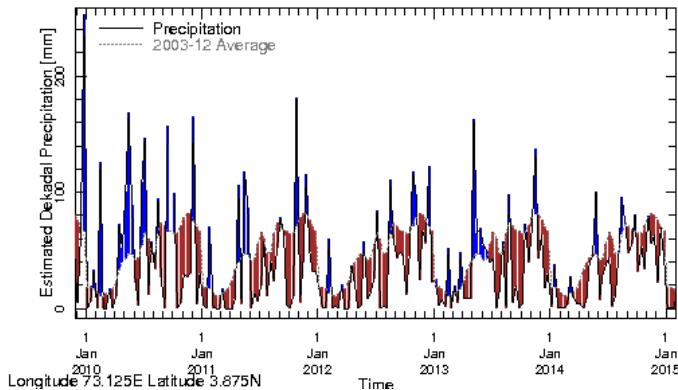
Central Maldives:



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

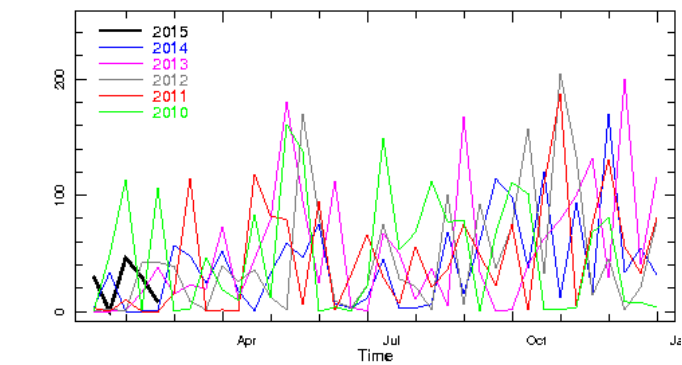


Longitude 73.125E Latitude 3.875N  
Rainfall of past 365 days (black) compared to average rainfall in previous 8 years.

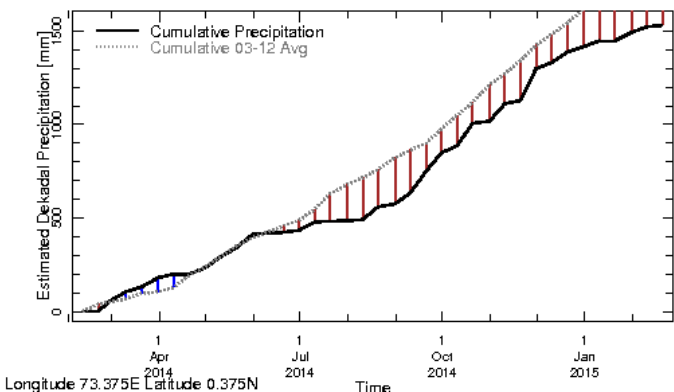


Longitude 73.125E Latitude 3.875N  
Rainfall in the past 5 years with above-average rainfall hatched in blue and below-average hatched in brown

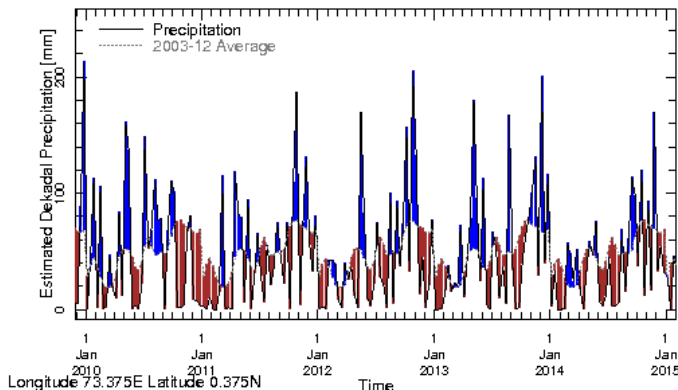
Southern Maldives:



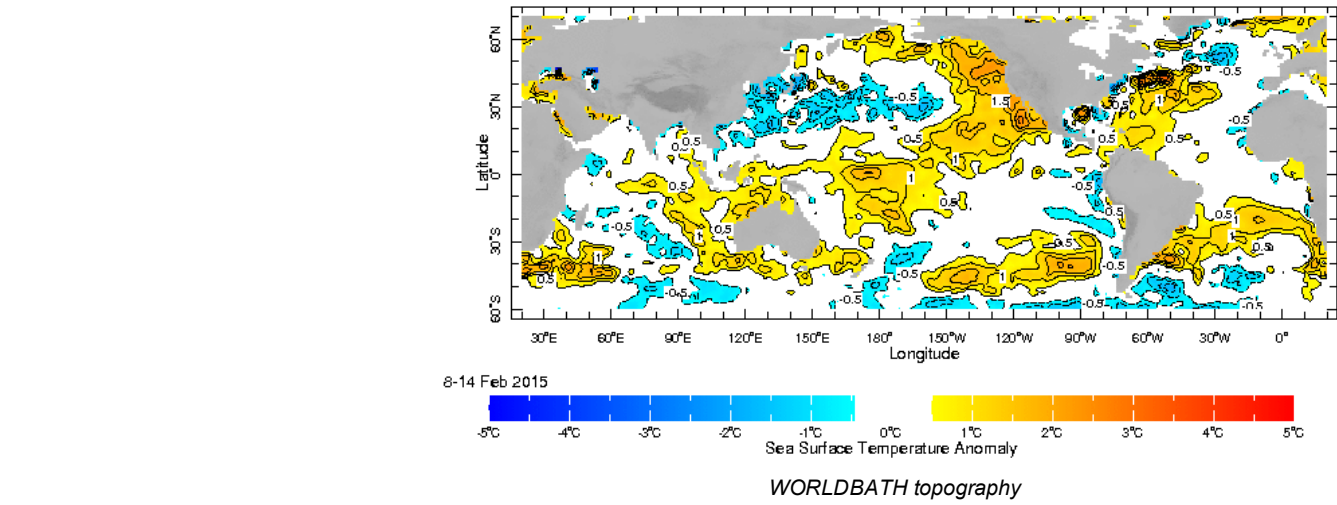
Longitude 73.375E Latitude 0.375N  
Rainfall in the current year (black) compared to rainfall in previous 5 years



Longitude 73.375E Latitude 0.375N  
Rainfall of past 365 days (black) compared to average rainfall in previous 8 years.



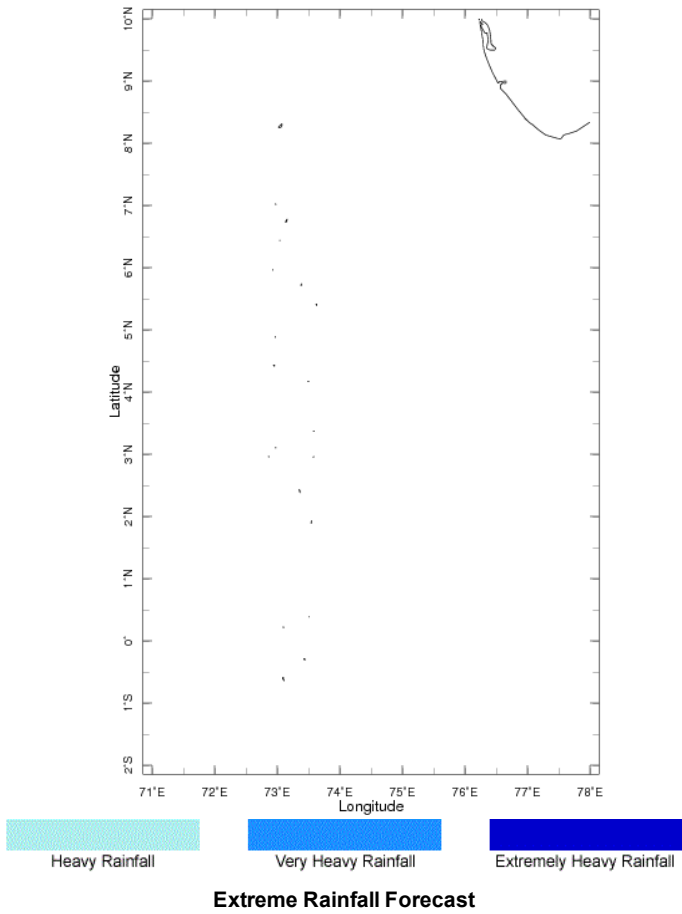
Longitude 73.375E Latitude 0.375N  
Rainfall in the past 5 years with above-average rainfall hatched in blue and below-average hatched in brown



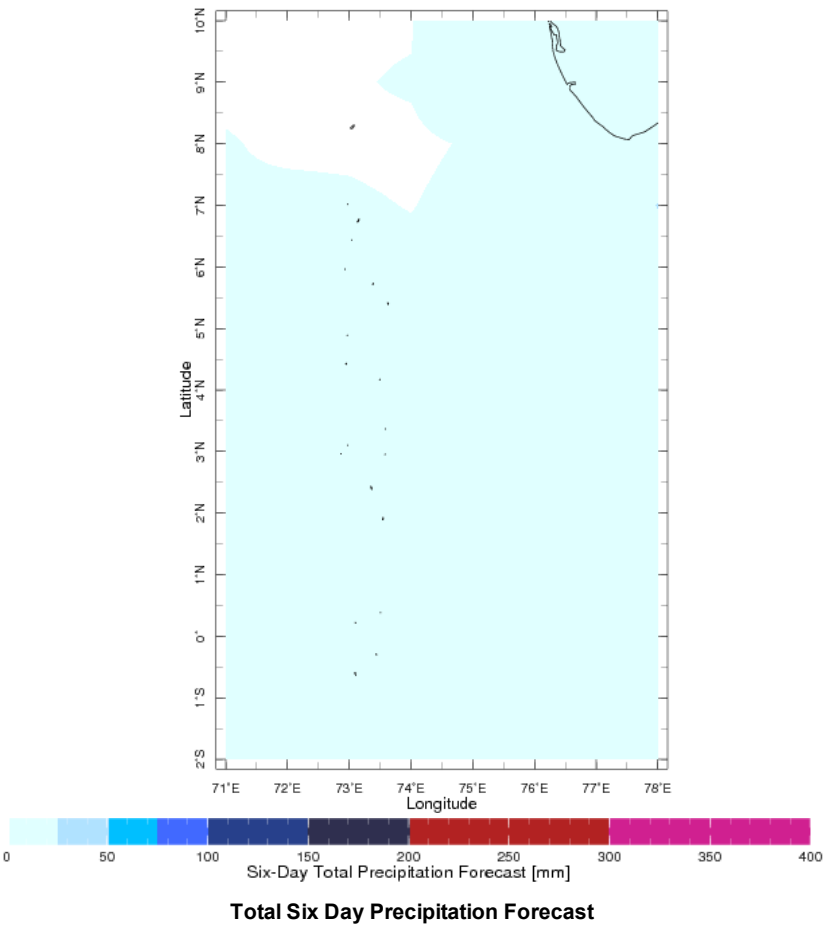
Weekly Rainfall Forecast

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.

Forecast for 22-27 Feb 2015 Issued 0000 22 Feb 2015



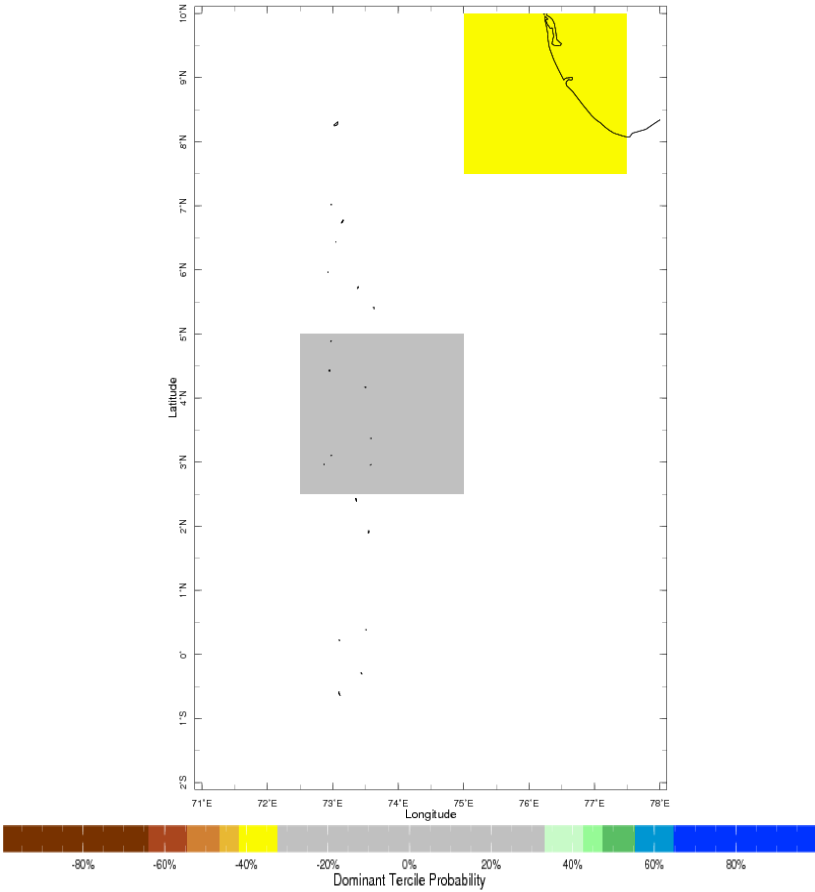
recast for 22-27 Feb 2015 Issued 0000 22 Feb 2015



# Seasonal Rainfall and Temperature Forecast

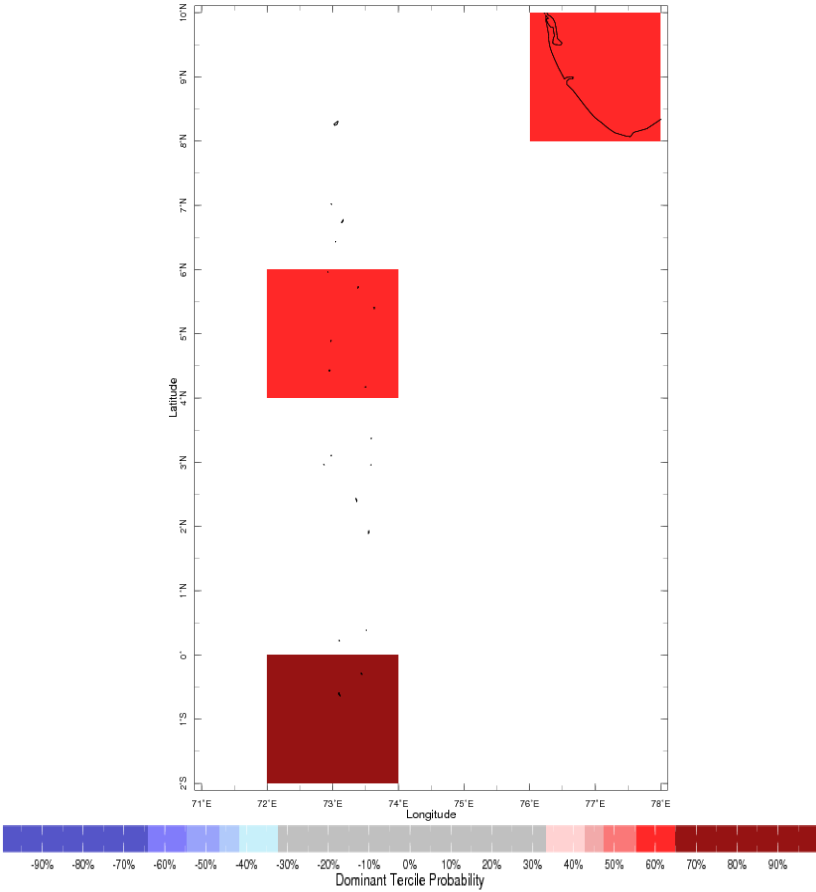
Following is the latest seasonal precipitation and temperature prediction for the next 3 months by the IRI. The color shading indicates the probability of the most dominant tercile -- that is, the tercile having the highest forecast probability. The color bar alongside the map defines these dominant 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%).

Mar-May 2015 IRI Seasonal Precipitation Forecast issued Feb 2015



Precipitation Forecast

Mar-May 2015 IRI Seasonal Temperature Forecast issued Feb 2015



Temperature Forecast

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