# FECT <u>Foundation for Environment</u> Climate and Technology

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### **Experimental Climate Monitoring and Prediction for the Maldives** –November 2013

Prepared by Staff from Foundation for Environment, Climate and Technology, Sri Lanka and USA, Maldives Meteorological Service, and International Research Institute for Climate and Society

### 11 November 2013

**FECT Maldives website** 

www.tropicalclimate.org/ maldives

FECT Maldives blog

www.fectmv.blogspot.com

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### PACIFIC SEAS STATE

### October 17, 2013

Most of the ENSO prediction models indicate a continuation of neutral ENSO through the remainder of 2013 and the first quarter of 2014. A long lasting mean disagreement between statistical and dynamic models (statistical leaning cooler, dynamic warmer) has diminished. The average forecast of all models indicates a gradual warming tendency during the first half of 2014. (Text Courtesy IRI)

### INDIAN OCEAN STATE

Nov 11, 2013

Seas around Maldives show a positive SST anomaly of 0.5 - 1° C.

### Highlights<sup>2</sup>

The Central Maldivian islands continue to show a rainfall deficit. The seas around Maldives are warmer than usual, and warm than usual air temperatures are also likely for the three months ahead.

#### Summarv<sup>2</sup> **CLIMATOLOGY**

Monthly Climatology: The historical average rainfall for the Southern islands is high in November and December and the average declines as it moves North. The winds over the Northern & Central islands are usually north-easterly (from north-East to south-West). For Southern islands higher wind speeds are expected for July and August, but stronger westerly winds in September and October.

#### MONITORING

Weekly Monitoring: During 3rd to 5th November Northern and Central islands received high rainfall and Southern islands received relatively less rainfall. The next day entire Maldives received up to 30 mm rainfall. On 7th and 8th light rainfall was observed in Southern and Central islands.

Monthly and Seasonal Monitoring: Rainfall received in Northern islands is gradually decreasing, but the deficit of the rainfall, compared to the previous 8 years' average, is low. In central islands the deficit of rainfall continues to increase while in Southern islands a small surplus rainfall is observed as usual.

### PREDICTIONS

Weekly Rainfall Forecast: Heavy rainfall events are not expected during 9<sup>th</sup> – 14<sup>th</sup> of November.

Seasonal Rainfall and Temperature Prediction: As per IRI Multi Model Probability Forecast for October to December 2013 rainfall shall remain climatological while temperature this season shall have a 40- 50% of being in the above normal tercile.

### 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
    - Ь Weekly Average SST Anomalies
- 3. Rainfall Predictions
  - Weekly Predictions from NOAA/NCEP a.
  - Seasonal Predictions from IRI<sup>1</sup> b.

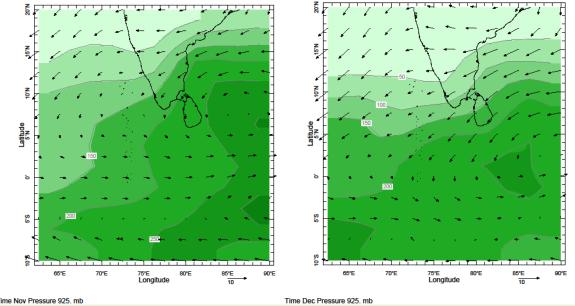
<sup>1</sup> International Research Institute for Climate and Society. <sup>2</sup>These interpretations of climatic conditions are an experimental product. Please consult with the Maldives Meteorological Services for advice on interpretation.

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### 1). Monthly Climatology (CAMS-OPI):

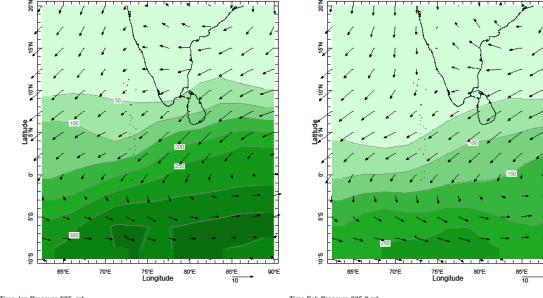
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a) Rainfall: Maps: November, December, January and February

Time Nov Pressure 925. mb

December





Time Feb Pressure 925.0 mb

January

November



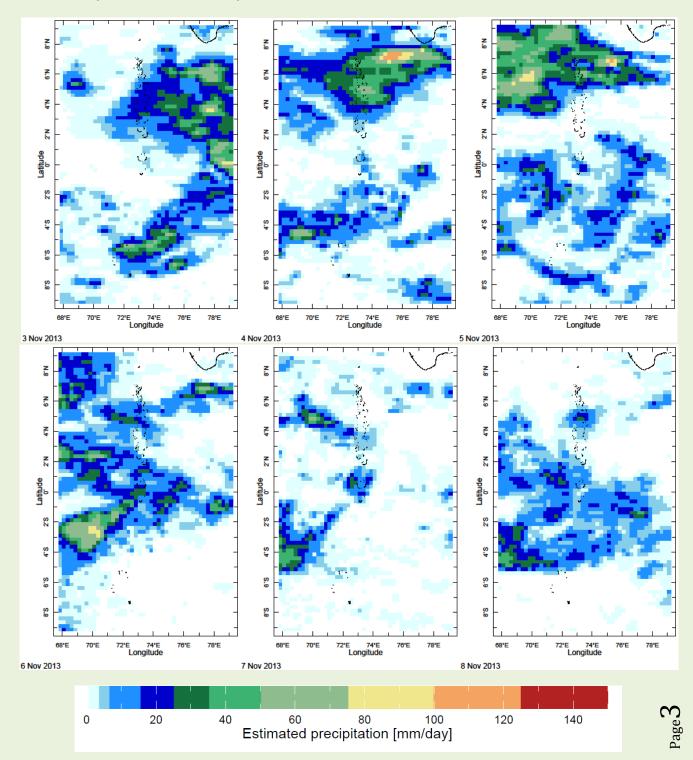
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### 2) Rainfall Monitoring

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a) Daily Satellite Derived Rainfall Estimate Maps: 3<sup>rd</sup> – 8<sup>th</sup> of November, 2013 (Left-Right, Top-Bottom)



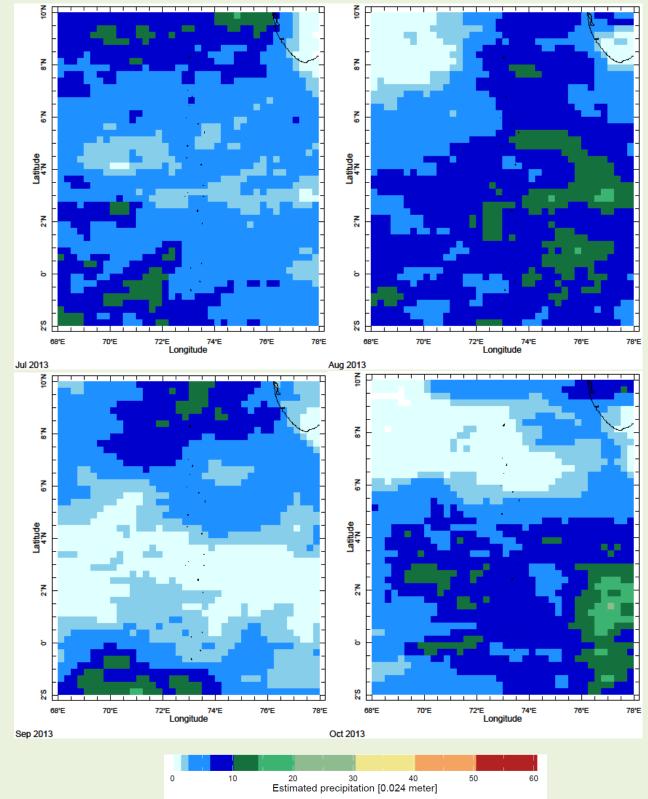
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### b) Monthly Rainfall (July- October 2013), Derived from Satellite Rainfall Estimates

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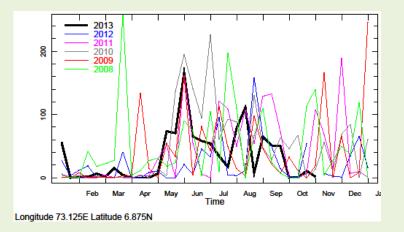
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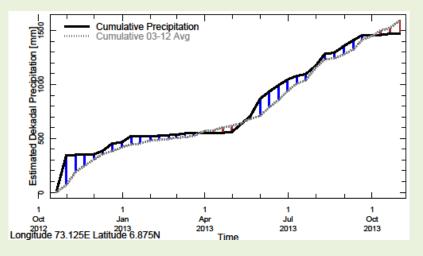
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### c) Seasonal to Annual Rainfall Monitoring

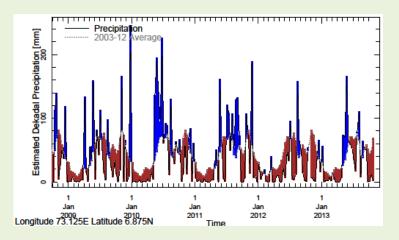
- i) For Northern Maldives
  - 1) Rainfall in 2013 (black) compared to rainfall in previous 5 years



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



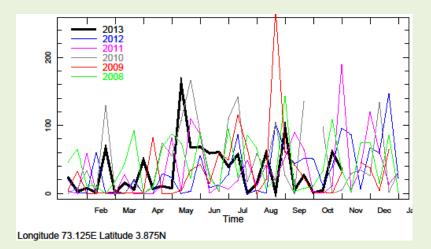
3) Rainfall for the past 5 years with above-average (compared to the last 8 years) hatched in blue and below normal in brown.



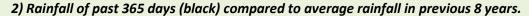
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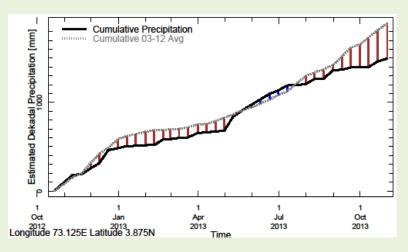


### ii) For Central Maldives

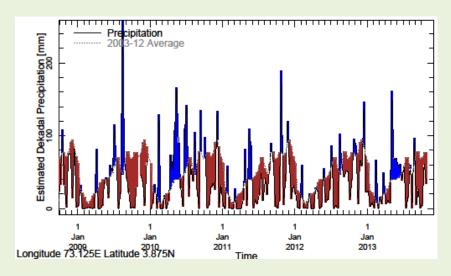


### 1) Rainfall in 2013 (black) compared to rainfall in previous 5 years





*3)* Rainfall for the past 5 years with above-average (compared to the last 8 years) hatched in blue and below normal in brown.

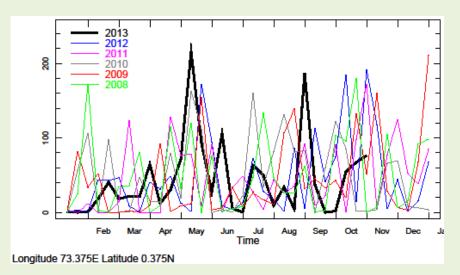




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iii) For Southern Maldives

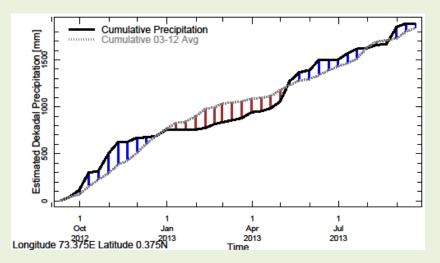
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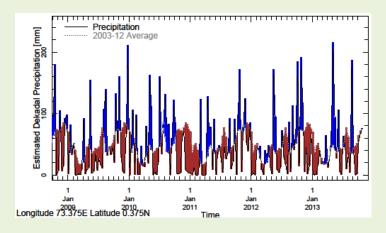
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2) Rainfall of past 365 days (black) compared to average rainfall in previous 8 years.

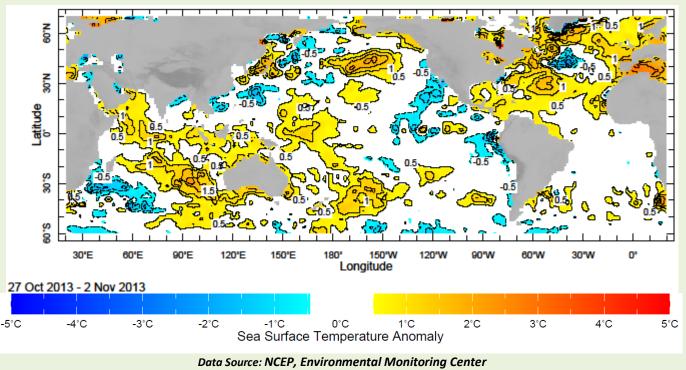


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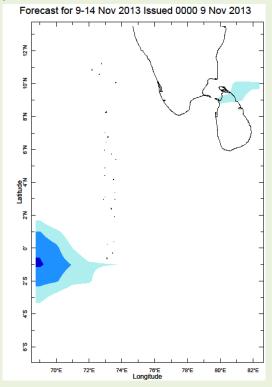
d) Weekly Average SST Anomalies (°C), 27<sup>th</sup> October– 2<sup>nd</sup> November, 2013



Base Period of Climatology: 1971-2000

### 3). Predictions

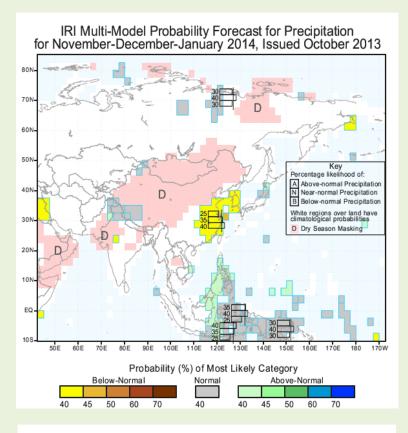
a) Weekly Precipitation Forecast for 9<sup>th</sup> – 14<sup>th</sup> November, 2013: Issued 9<sup>th</sup> November, 2013



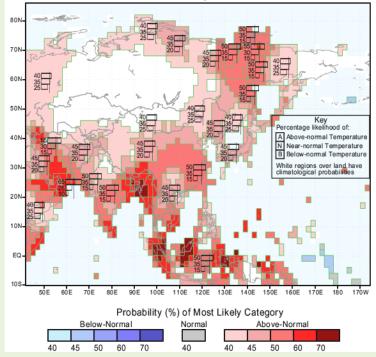
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### b) Seasonal Rainfall and Temperature Predictions from IRI



## IRI Multi-Model Probability Forecast for Temperature for November-December-January 2014, Issued October 2013



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