

Experimental Climate Monitoring and Prediction for the Maldives

–December 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

09 December 2013

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PACIFIC SEAS STATE

November 21, 2013

During October through mid-November the observed ENSO conditions remained neutral. Most of the ENSO prediction models indicate a continuation of neutral ENSO into the first quarter of 2014. During northern spring and summer, a warming tendency is seen in both dynamical and statistical models.

(Text Courtesy IRI)

INDIAN OCEAN STATE

Dec 09, 2013

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

Highlights²

Rainfall deficit persists in all of Maldives. The seas around Maldives are warmer than usual, and warm than usual air temperatures are also likely for the three months ahead. ENSO conditions remain neutral and a continuation of neutral conditions is expected through-out the first quarter of 2014. When the whole year is considered, less than average rainfall was observed during 2013 compared to the average of previous 8 years.

Summary²

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: From 1st to 6th December rainfall was observed in all parts of Maldives. Rainfall in northern islands was less than in southern islands. Seas towards the southern side of Maldives received high rainfall during this period.

Monthly and Seasonal Monitoring: The highest rainfall observed this year for central islands of Maldives was observed in November. But this has not compensated for the rainfall deficit observed this year in central islands. In northern islands the rainfall continue to follow the decreasing trend which was evident since late May. Due to this the deficit of rainfall continues to increase. Southern islands received relatively high rainfall in late October to November, but this amount is lesser than rainfall observed in past five years during this time of the year.

PREDICTIONS

Weekly Rainfall Forecast: Heavy rainfall events are not expected during 9th – 14th of December.

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

Inside this Issue

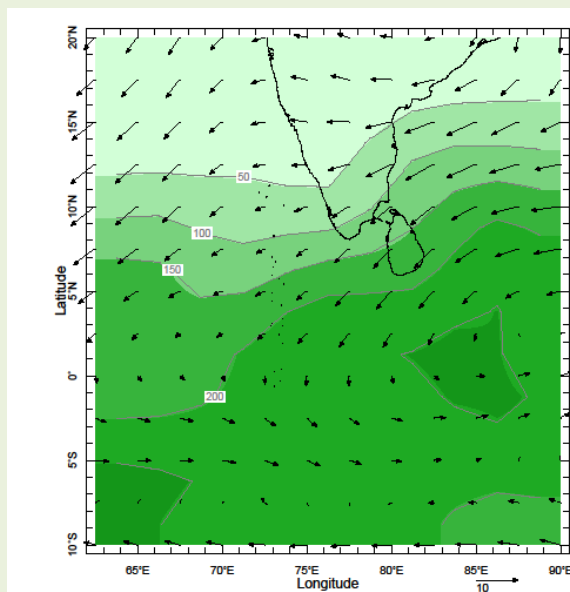
1. Monthly Climatology
2. Rainfall Monitoring
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 - c. Monthly and Seasonal Monitoring
 - d. Weekly Average SST Anomalies
3. Rainfall Predictions
 - a. Weekly Predictions from NOAA/NCEP
 - b. Seasonal Predictions from IRI¹

¹ International Research Institute for Climate and Society.

²These interpretations of climatic conditions are an experimental product. Please consult with the Maldives Meteorological Services for advice on interpretation.

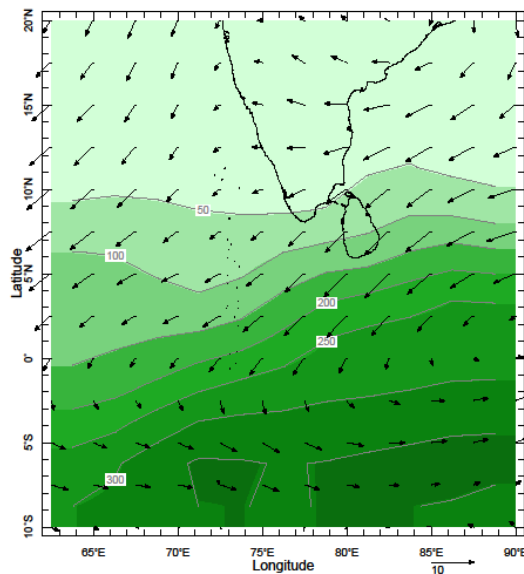
1). Monthly Climatology (CAM5-OPI):

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



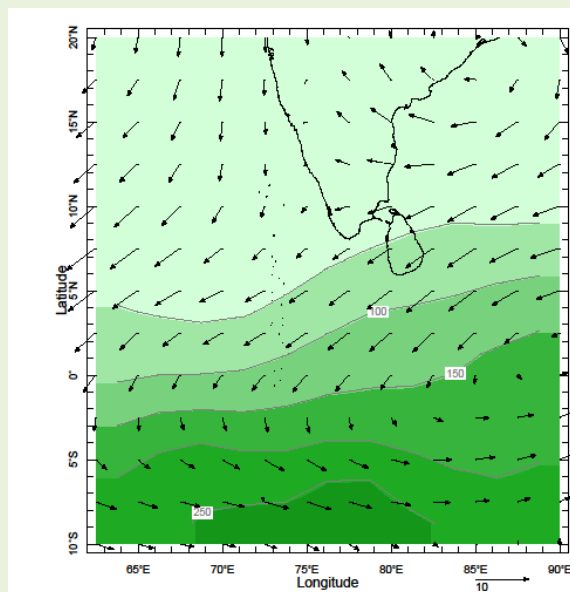
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December



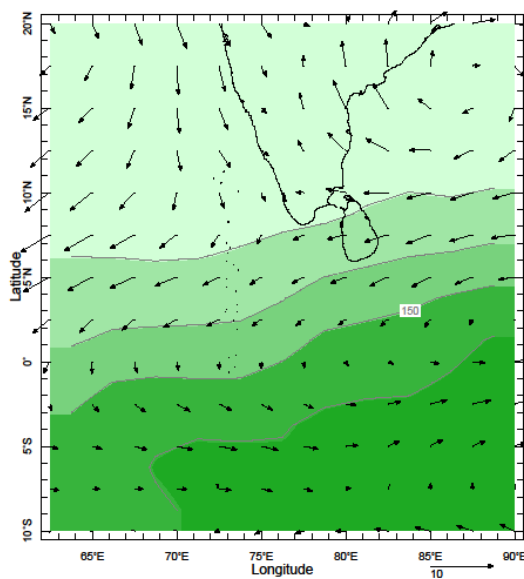
Time Jan Pressure 925. mb

January



Time Feb Pressure 925.0 mb

February

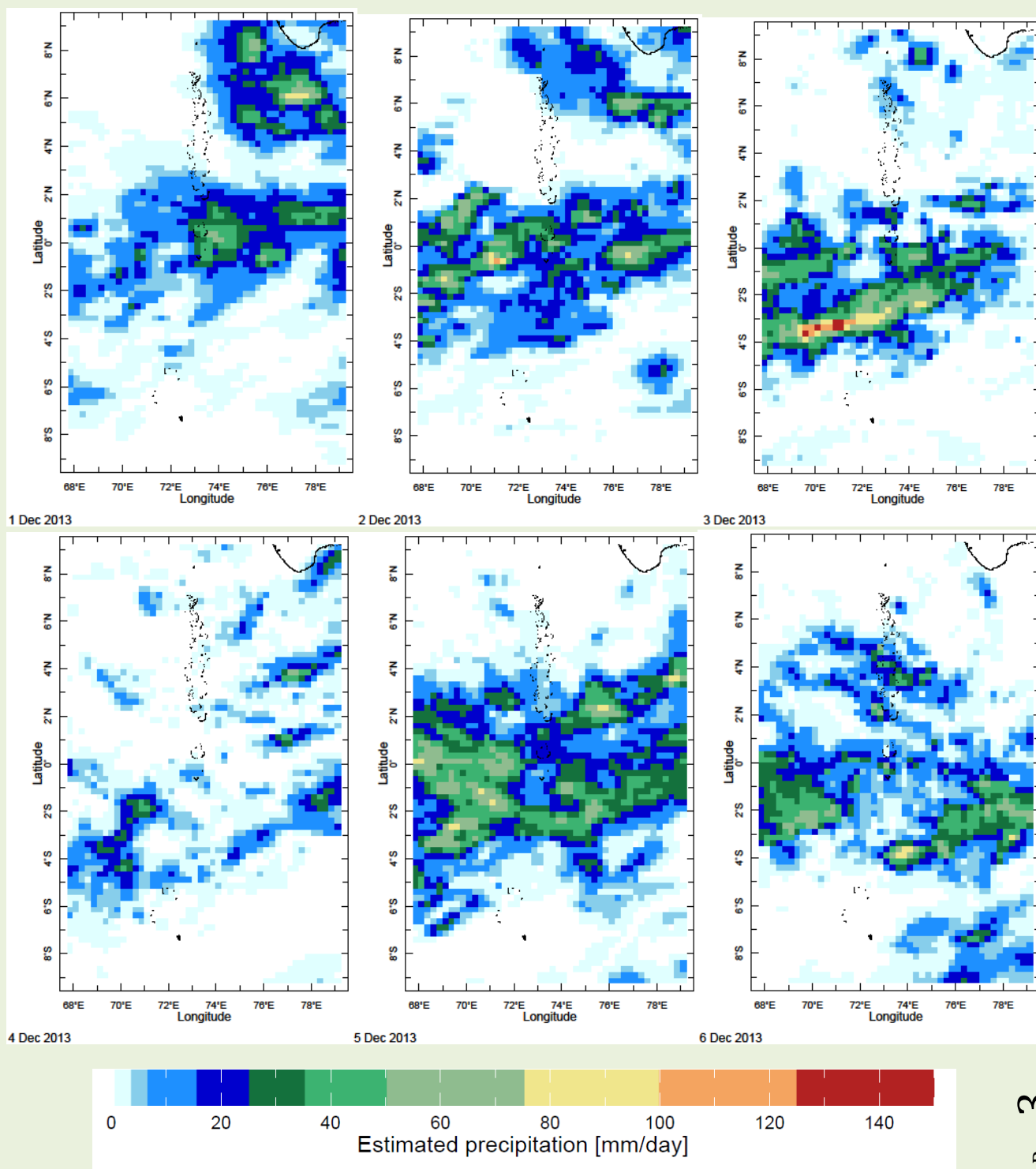


Time Mar Pressure 925.0 mb

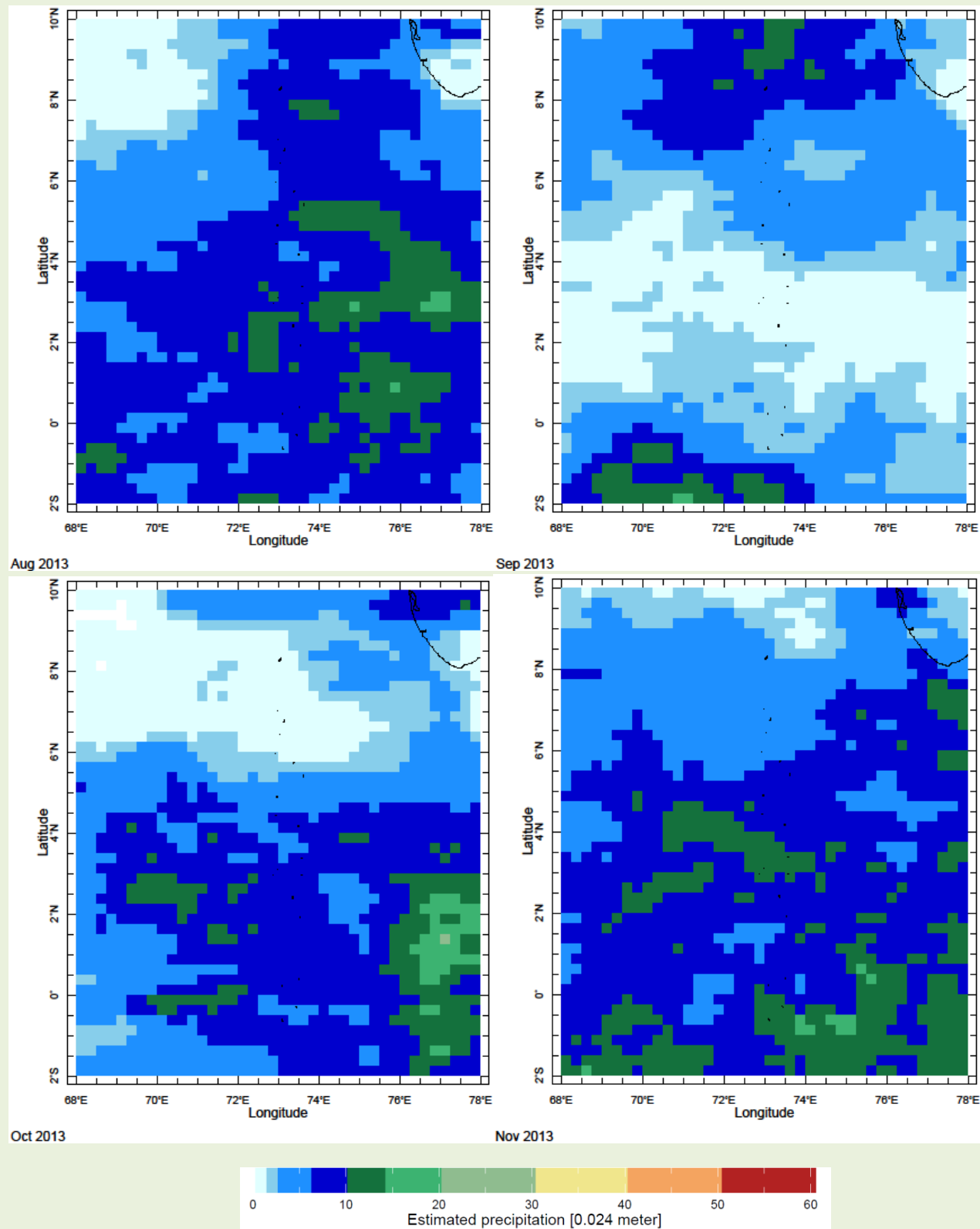
March

2) Rainfall Monitoring

a) Daily Satellite Derived Rainfall Estimate Maps: 1st – 6th of December, 2013 (Left-Right, Top-Bottom)



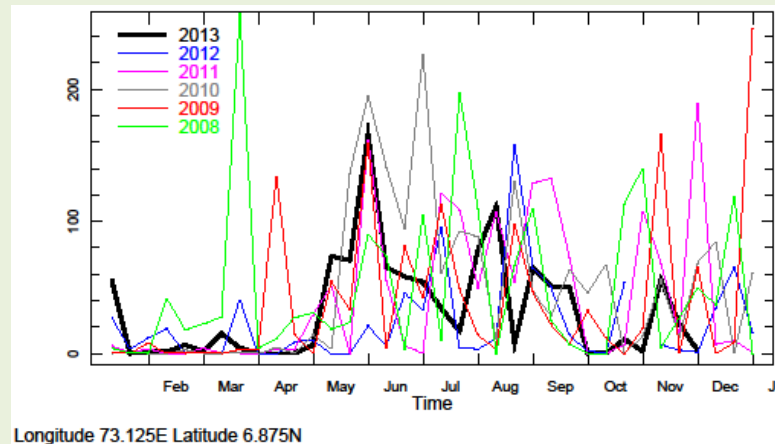
b) Monthly Rainfall (August- November 2013), Derived from Satellite Rainfall Estimates



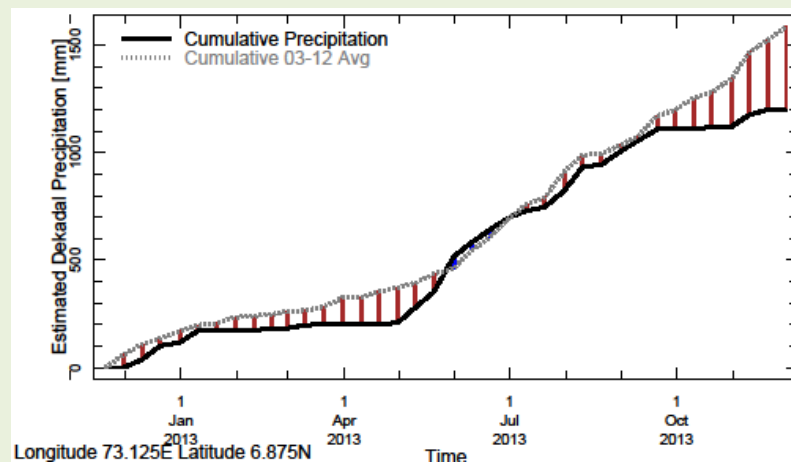
c) Seasonal to Annual Rainfall Monitoring

i) For Northern Maldives

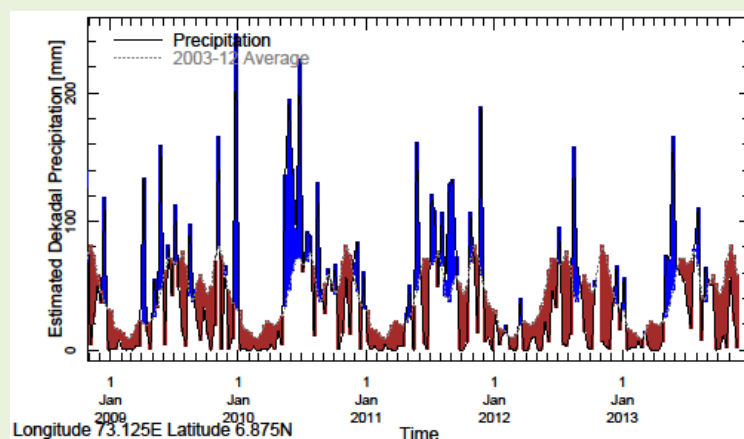
1) Rainfall in 2013 (black) compared to rainfall in previous 5 years



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

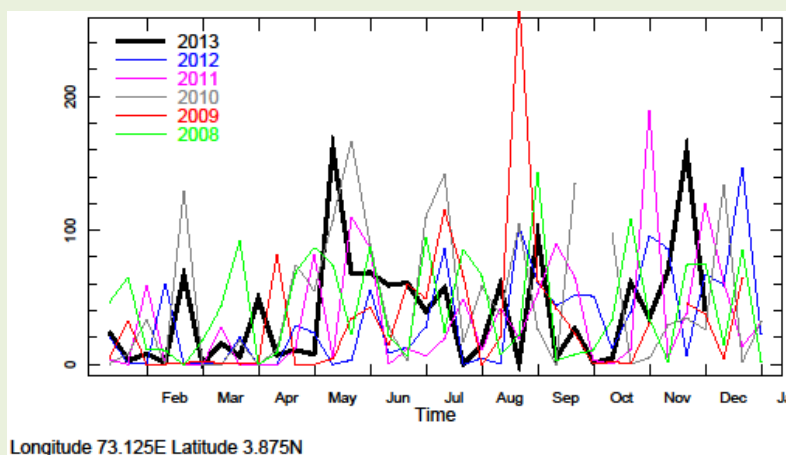


3) Rainfall for the past 5 years with above-average (compared to the last 8 years) hatched in blue and below normal in brown.

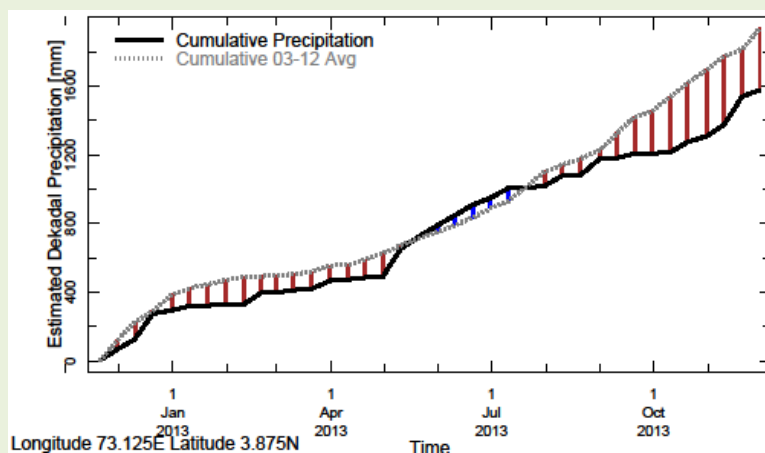


ii) For Central Maldives

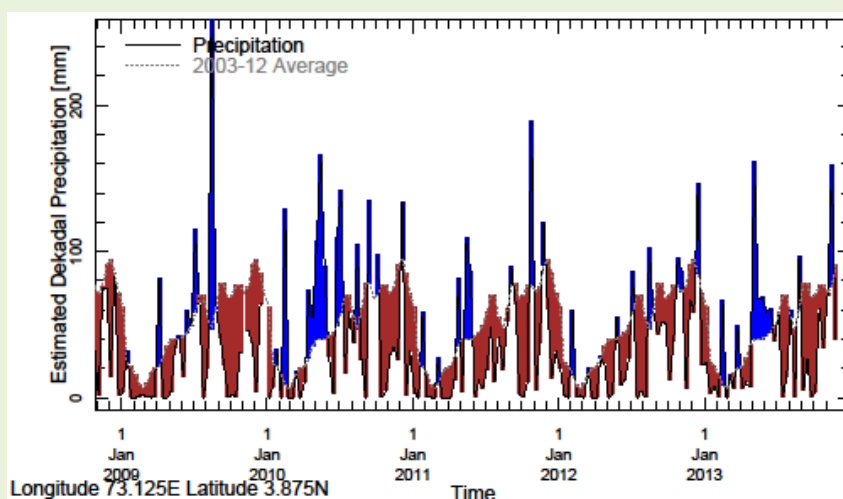
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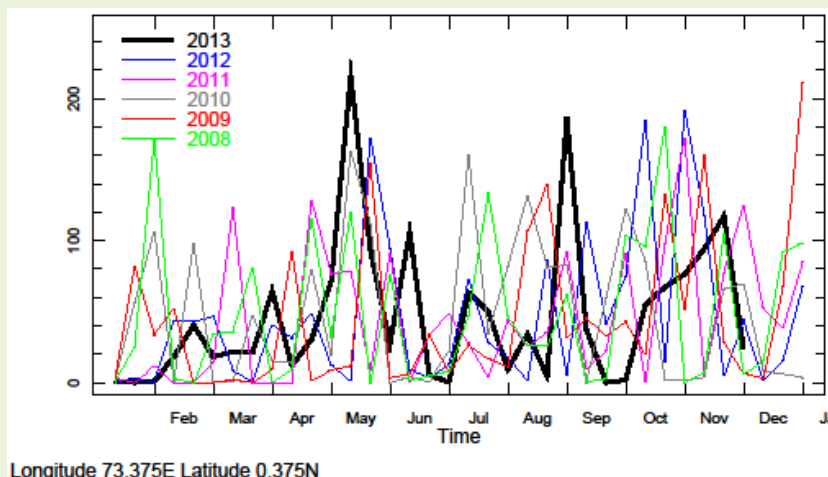


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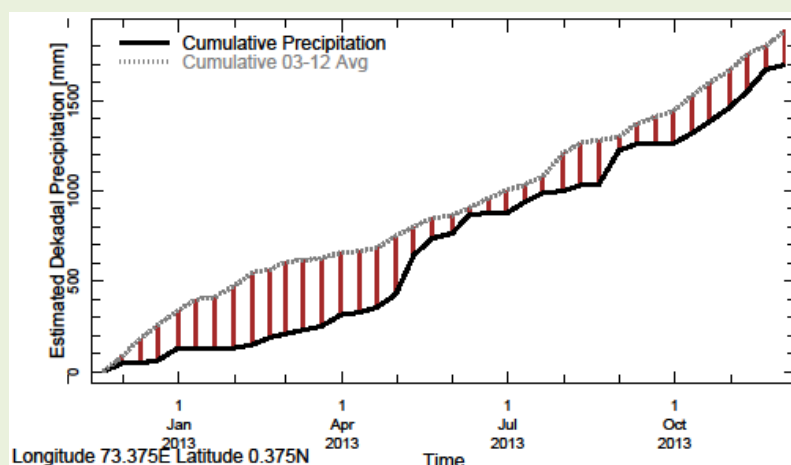


iii) For Southern Maldives

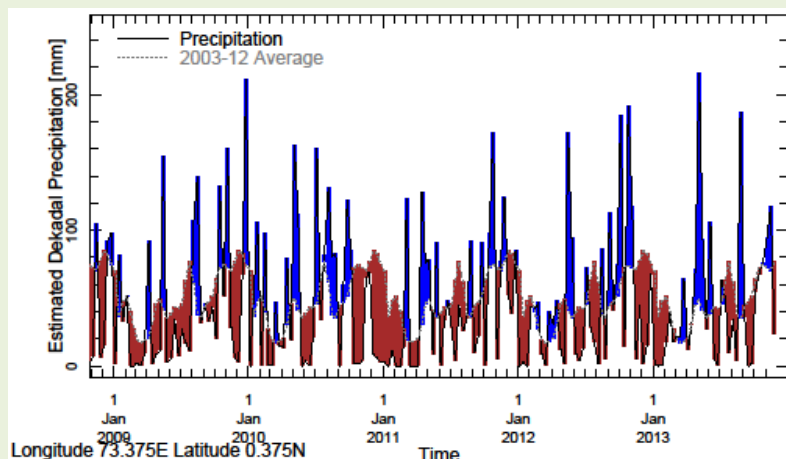
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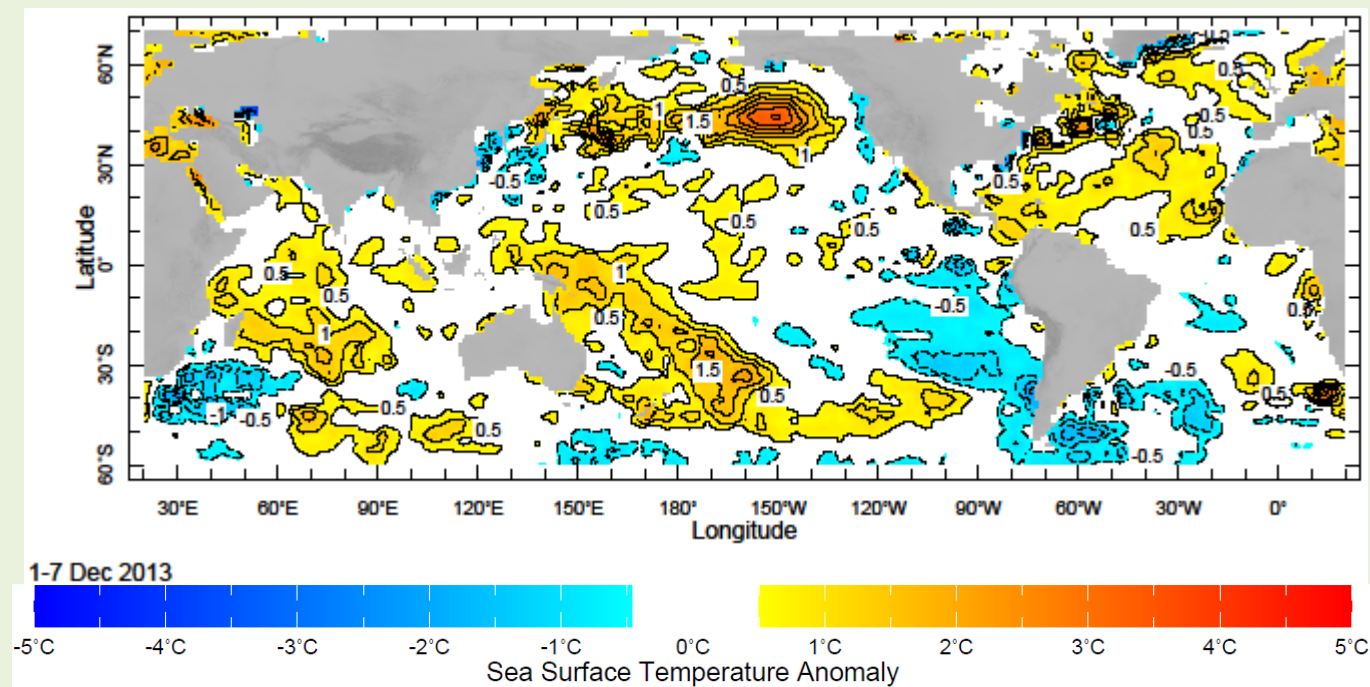
2) Rainfall of past 365 days (black) compared to average rainfall in previous 8 years.



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



d) Weekly Average SST Anomalies ($^{\circ}\text{C}$), 1st – 7th December, 2013

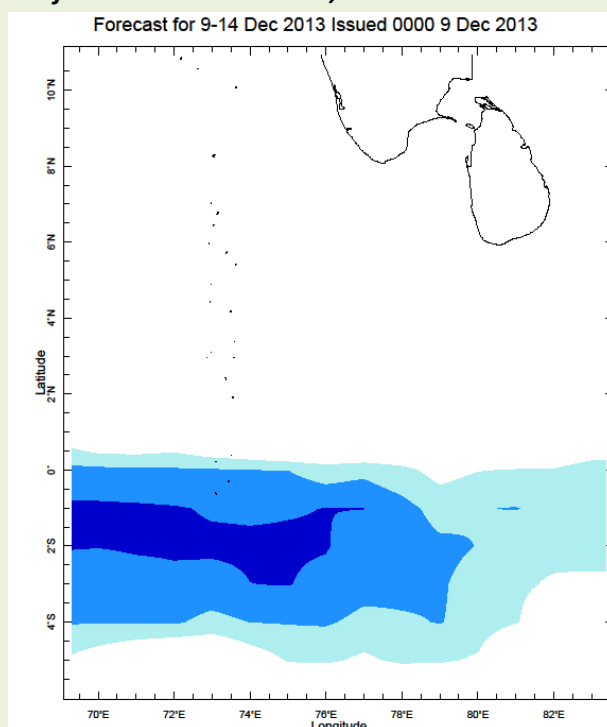


Data Source: NCEP, Environmental Monitoring Center

Base Period of Climatology: 1971- 2000

3). Predictions

a) Weekly Precipitation Forecast for 9th – 14th December, 2013: Issued 9th December, 2013



b) Seasonal Rainfall and Temperature Predictions from IRI

