

Experimental Climate Monitoring and Prediction for the Maldives

–April 2014

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

7 April 2014

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PACIFIC SEAS STATE

March 20, 2014

During February through mid-March the observed ENSO conditions varied from cool-neutral to the borderline of weak La Niña. However, many of the ENSO prediction models indicate a warming trend, with neutral ENSO during northern spring 2014 and a fairly likely development of weak El Niño conditions by the end of northern summer.

(Text Courtesy IRI)

INDIAN OCEAN STATE

March 29, 2014

Neutral SST conditions are observed around Maldives. The Southern tropical Indian Ocean has a warm anomaly of greater than 0.5°C from the seasonal average.

Highlights²

Seas immediately around Maldives do not show a surface temperature anomaly more than 0.5°C from the seasonal average. While the Rainfall during March over the Northern islands is the highest in the last five last five years, there has been an overall drought when the last six months are considered. Such a drought pattern prevailed in the 6 month period of over the Central islands as well. However, the southern Islands continued to have a wetter than average rainfall over the last season. The predictions from weekly to seasonal scales do not show much departures from climatology.

Summary²

CLIMATOLOGY

Monthly Climatology: The average rainfall for the Southern islands is high in March and April and the average declines as one travels north. The winds are usually north-easterly (from North-East to South-West) for March but changes to Westerly by April. Regional Details by month are provided in section 1.

MONITORING

Weekly Monitoring: No rain was observed during 29th March to 3rd April 2013.

Monthly and Seasonal Monitoring: During March up to 60 mm rainfall was observed in northern islands. Compared to previous five years this amount is the highest observed rainfall in this month. Around 20 mm of rainfall was observed in Central islands during March. But the rainfall deficit is still evident in both Northern and Central islands. In Southern islands rainfall shows an increasing trend so far this year.

PREDICTIONS

Weekly Rainfall Forecast: During 6th to 11th April 2014, Northern and Central islands shall receive up to 20 mm of rainfall while no rainfall is expected in Southern islands during this period.

Seasonal Rainfall and Temperature Prediction: As per IRI Multi Model Probability Forecast for April to June 2014, rainfall shall remain climatological while temperature this season shall have a 40- 45% probability of being in the above normal tercile in the Southern Islands and climatological in the Central Islands.

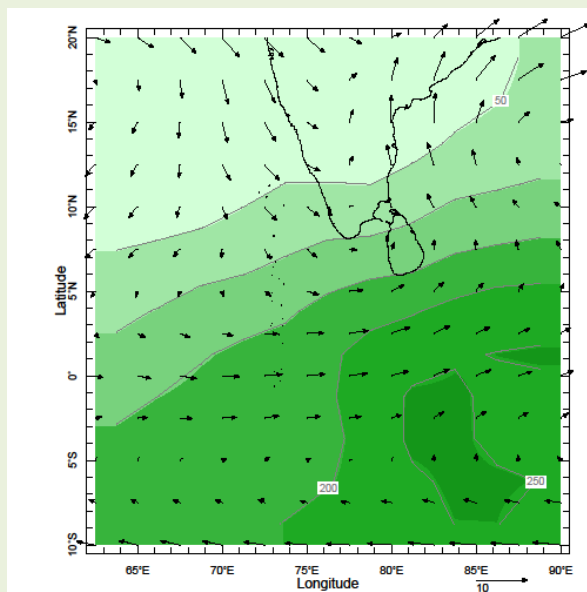
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3. Rainfall Predictions
 - a. Weekly Predictions from NOAA/NCEP
 - b. Seasonal Predictions from IRI¹

¹ International Research Institute for Climate and Society.

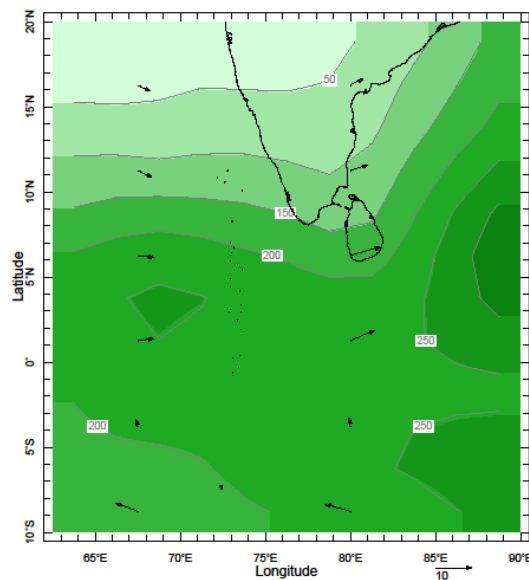
1). Monthly Climatology (CAM5-OPI):

a) Rainfall: Maps: April, May, June and July



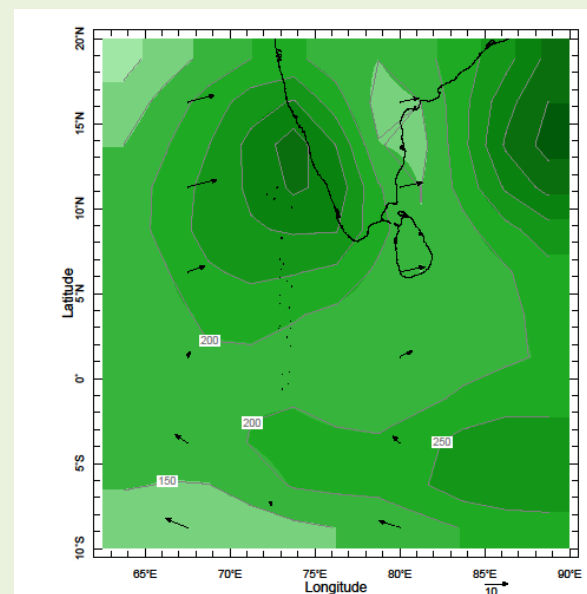
Time Apr Pressure 925.0 mb

April



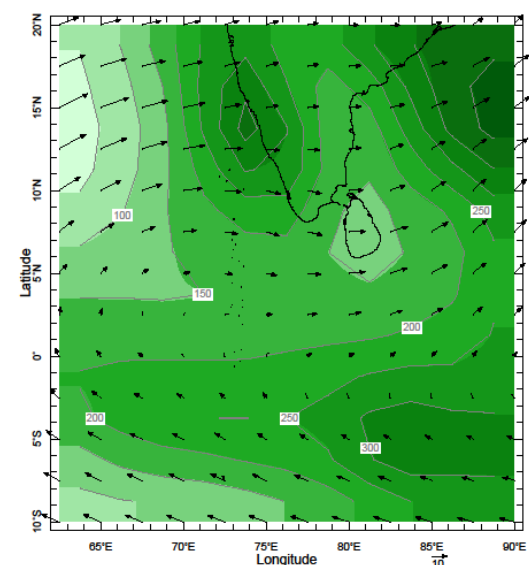
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May



Time Jun Pressure 925. mb

June

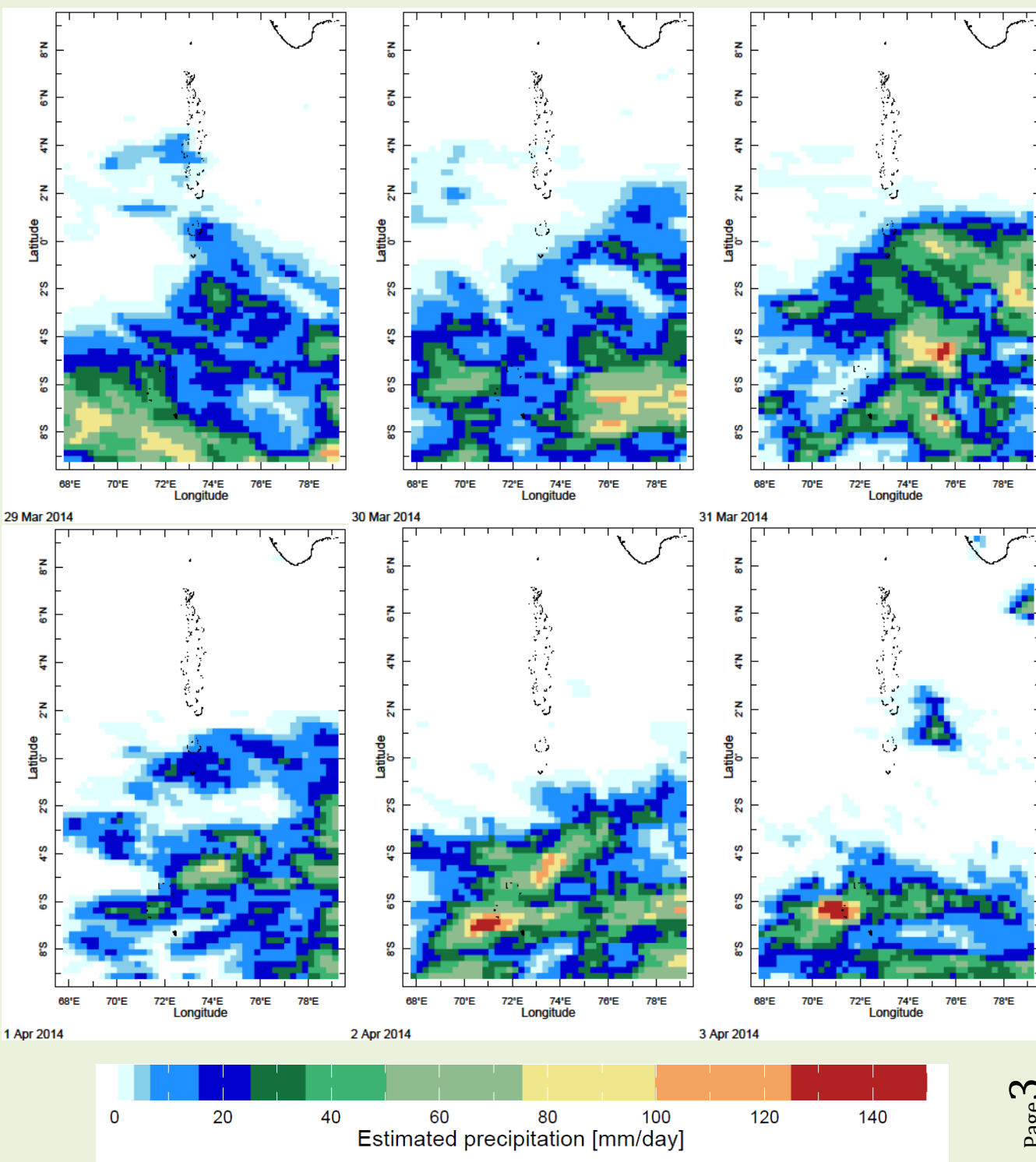


Time Jul Pressure 925.0 mb

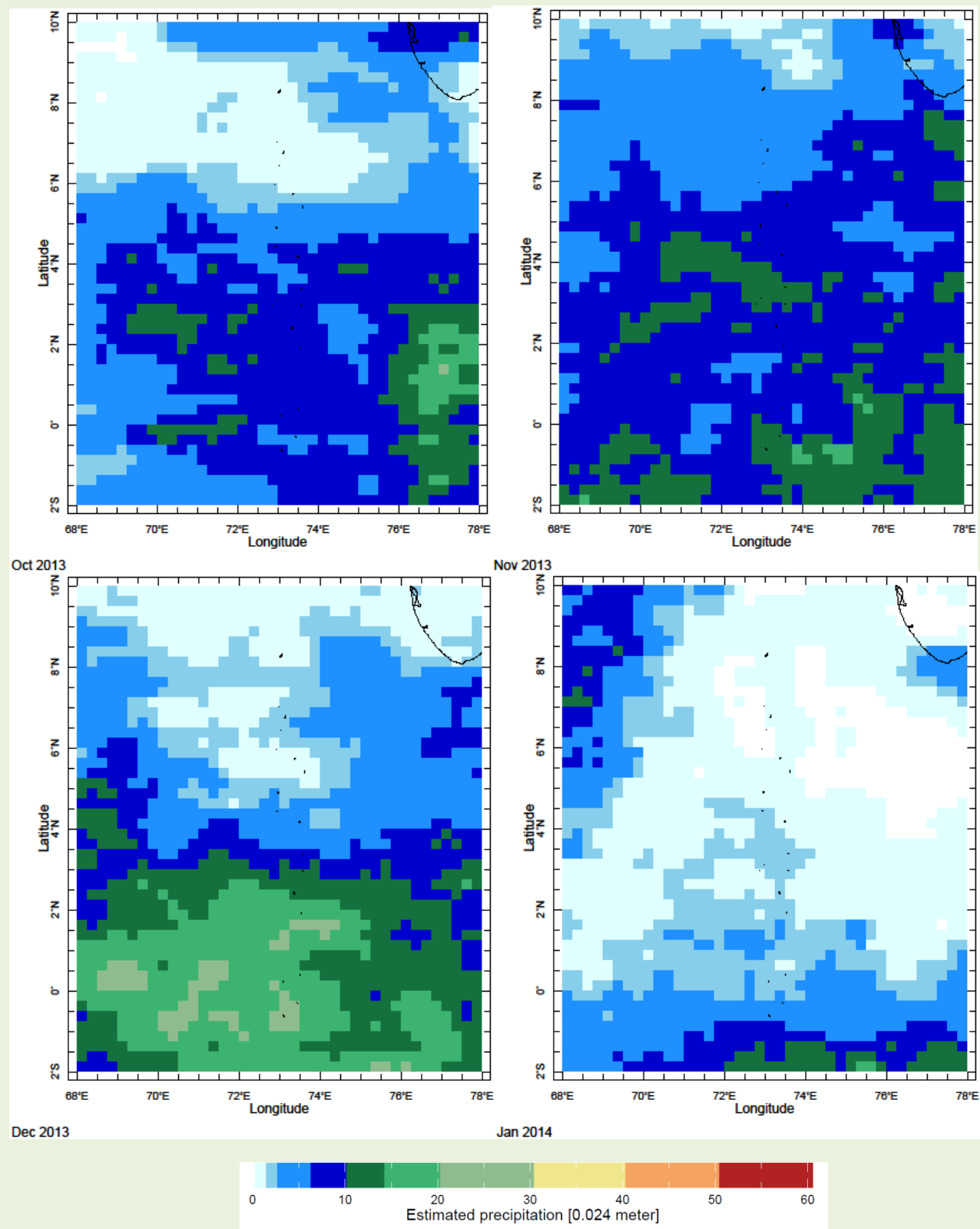
July

2) Rainfall Monitoring

a) Daily Satellite Derived Rainfall Estimate Maps: 29th February- 3rd March, 2014 (Left-Right, Top-Bottom)



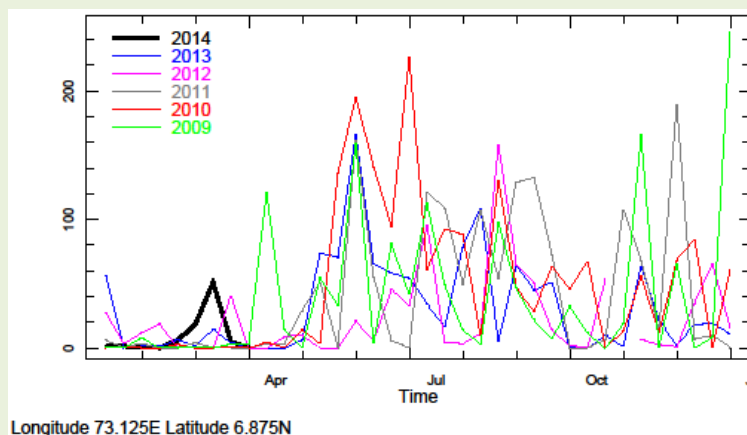
b) Monthly Rainfall (October 2013- January 2014), Derived from Satellite Rainfall Estimates



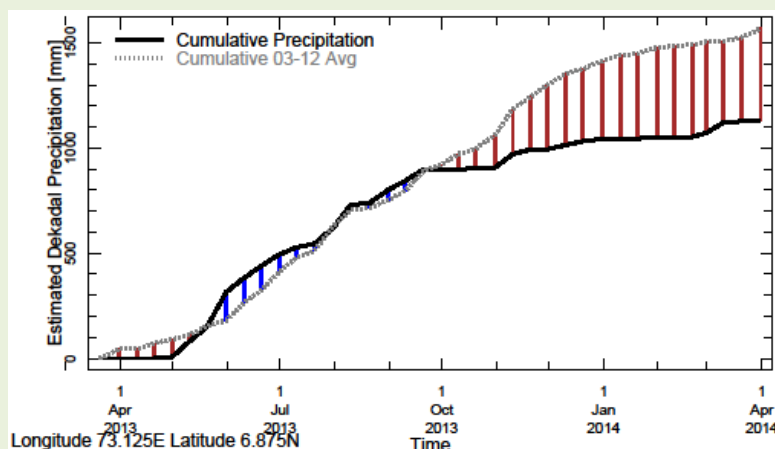
c) Seasonal to Annual Rainfall Monitoring

i) For Northern Maldives

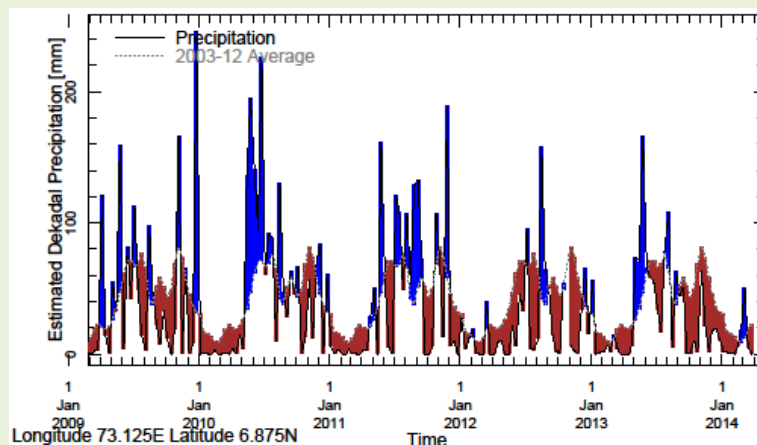
1) Rainfall in 2014 (black) compared to rainfall in previous 5 years



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

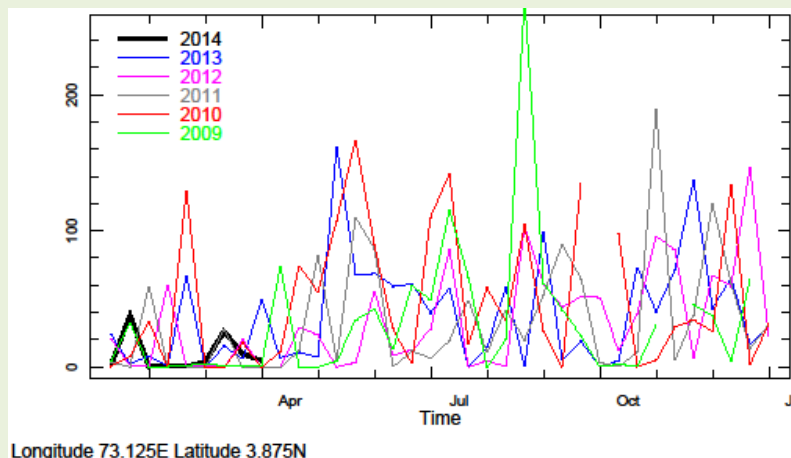


3) Rainfall for the past 5 years with above-average (compared to the last 8 years) hatched in blue and below normal in brown.

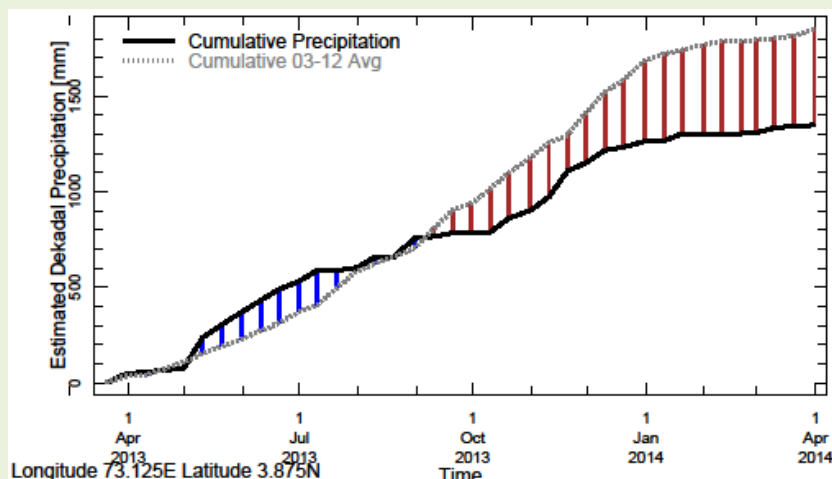


ii) For Central Maldives

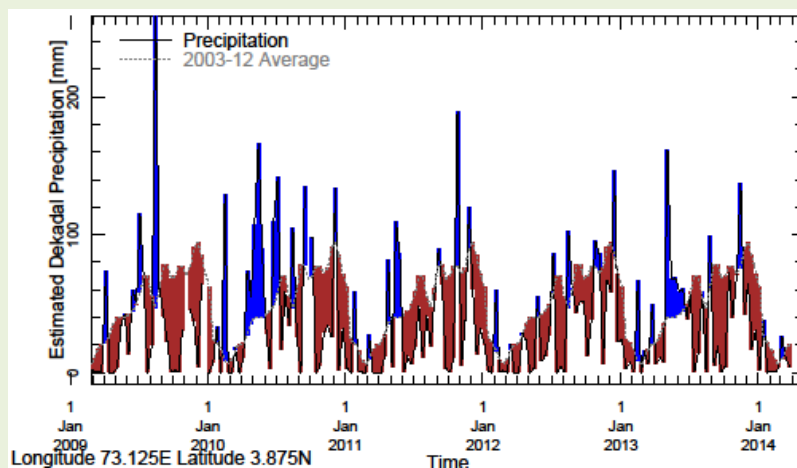
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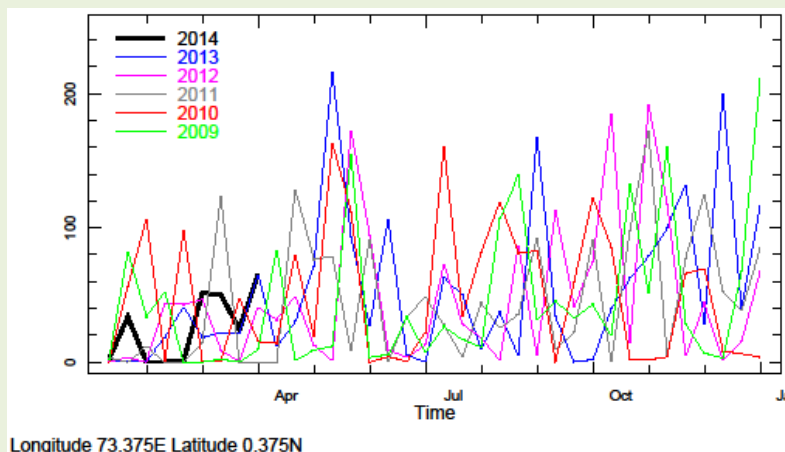


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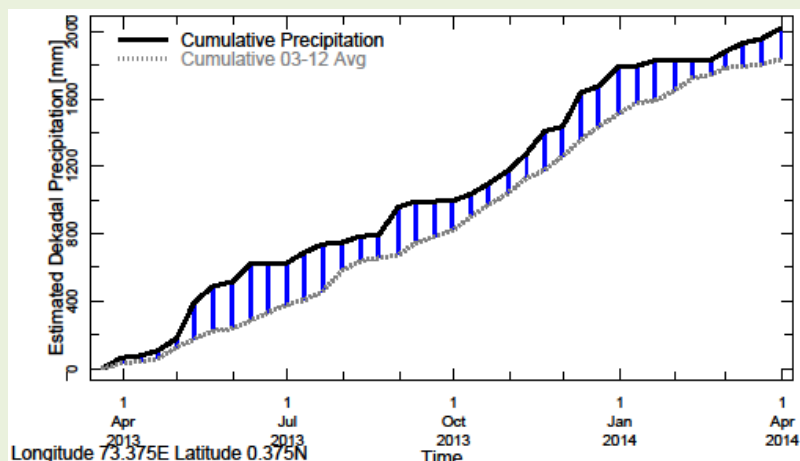


iii) For Southern Maldives

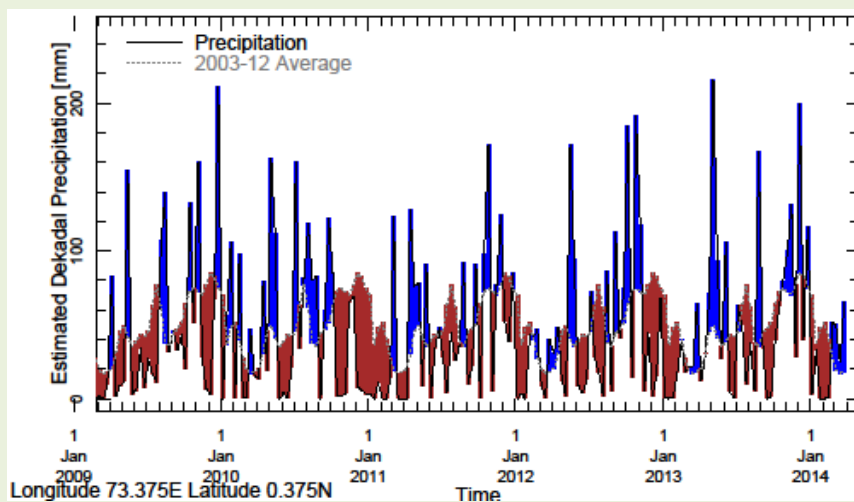
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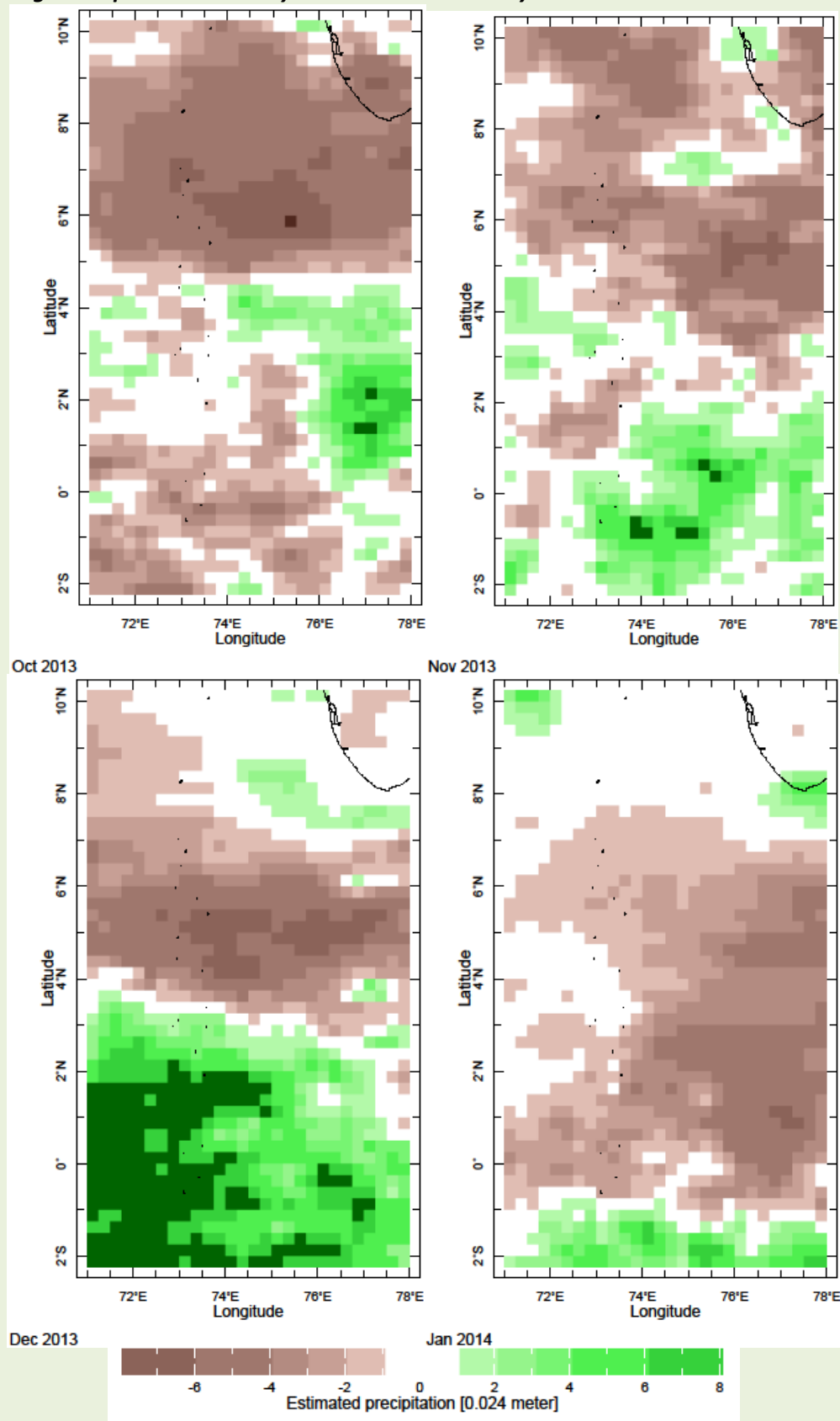
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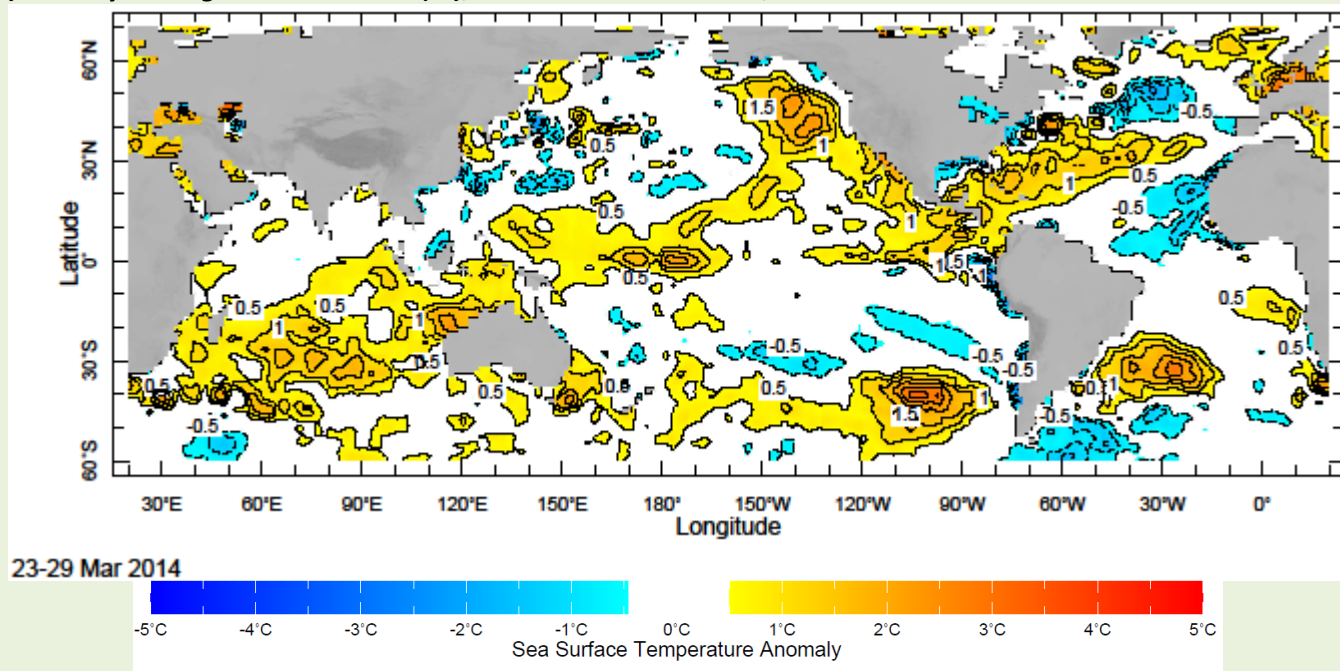
3) Rainfall for the past 5 years with above-average (compared to the last 8 years) hatched in blue and below normal in brown.



d) Monthly Average Precipitation Anomaly-October 2013- January 2014



e) Weekly Average SST Anomalies ($^{\circ}\text{C}$), 23rd March- 29th March, 2014

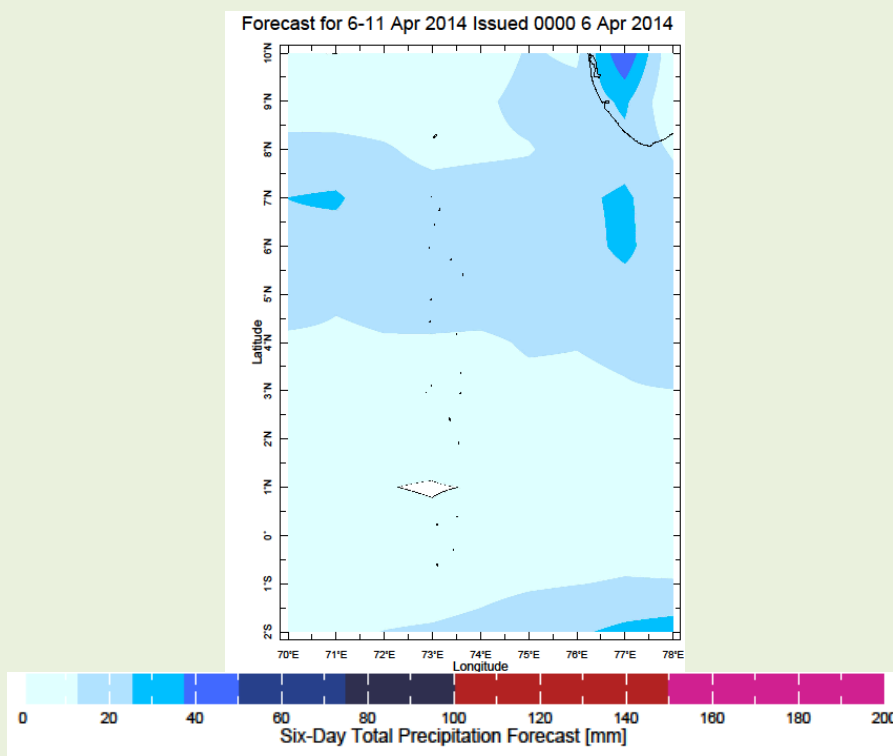


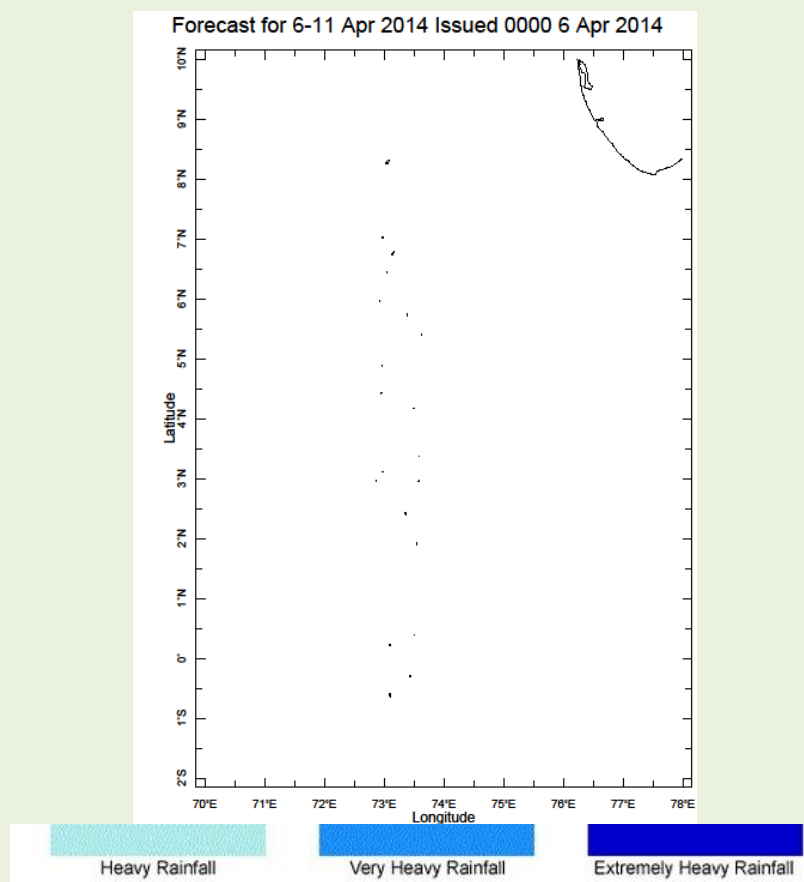
Data Source: NCEP, Environmental Monitoring Center

Base Period of Climatology: 1971- 2000

3). Predictions

a) Weekly Precipitation Forecast for 6th – 11th April, 2014: Issued 6th April, 2014





b) Seasonal Rainfall and Temperature Predictions from IRI

