

Experimental Climate Monitoring and Prediction for the Maldives

–February 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

17 February 2014

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PACIFIC SEAS STATE

February 17, 2013

Although the NINO indices have not indicated it so far, Pacific Ocean has been showing a La Nina sea surface temperature pattern with major cold anomalies to the Eastern Pacific sea surfaces south of the equator only but strong warm anomalies in the Western Pacific tropical sea surfaces.

(Text Courtesy IRI)

INDIAN OCEAN STATE

Feb 17, 2013

Although there is modest departures of sea surfaces adjacent to Maldives, there are very strong warm anomalies to the South-East around Madagascar, cold anomalies in the Northern Bay of Bengal and warm anomalies towards the Chagos Islands.

Highlights²

Dry conditions were observed in Maldives in January. Northern islands did not receive any rainfall during this month while some rainfall was observed in central and Southern islands.

Summary²

CLIMATOLOGY

Monthly Climatology: The average rainfall for the Southern islands is high in November and December and the average declines as one travels 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 are expected in September and October.

MONITORING

Weekly Monitoring: No rainfall was observed in any part of Maldives during 11th – 16th February 2014.

Monthly and Seasonal Monitoring: During the month of January an average of 0- 10 mm of rainfall was observed in Southern islands and seas surrounding this region. No rainfall was observed in Northern islands of Maldives throughout January. Up to 20 mm of cumulative rainfall was observed in Central islands as well as Southern islands. Higher than average cumulative precipitation was observed in Southern islands where there still is a rainfall deficit in other parts of Maldives.

PREDICTIONS

Weekly Rainfall Forecast: Heavy rainfall events are not expected during 18th – 23rd of February 2014.

Seasonal Rainfall and Temperature Prediction: As per IRI Multi Model Probability Forecast for January to March 2014, rainfall shall have a 40-45% chance of being in the above-normal tercile for the Central Islands and near climatological conditions in Southern and Northern Islands while temperature this season shall have a 40- 50% probability of being in the above normal tercile in the Southern Islands and climatological in the Central Islands.

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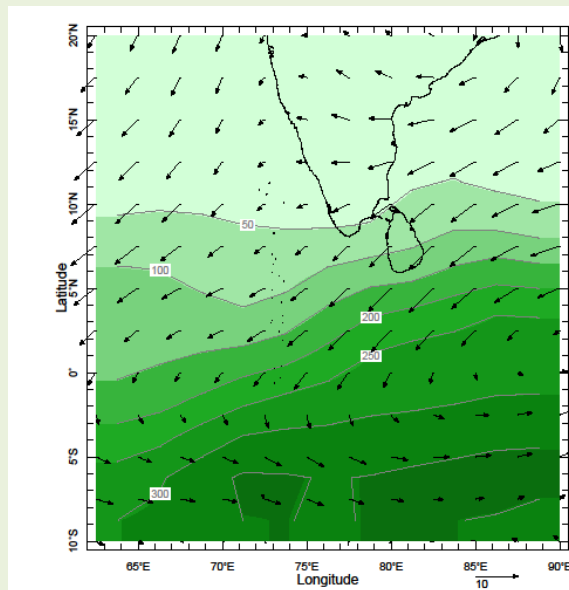
1. Monthly Climatology
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3. Rainfall Predictions
 - a. Weekly Predictions from NOAA/NCEP
 - b. Seasonal Predictions from IRI¹

¹ International Research Institute for Climate and Society.

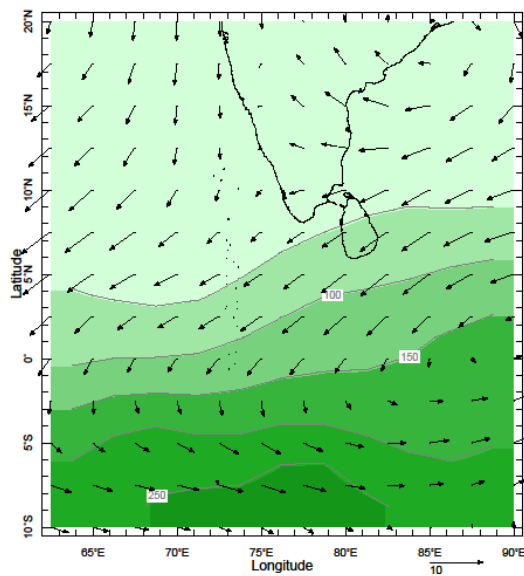
²These interpretations of climatic conditions are an experimental product.

1). Monthly Climatology (CAM5-OPI):

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



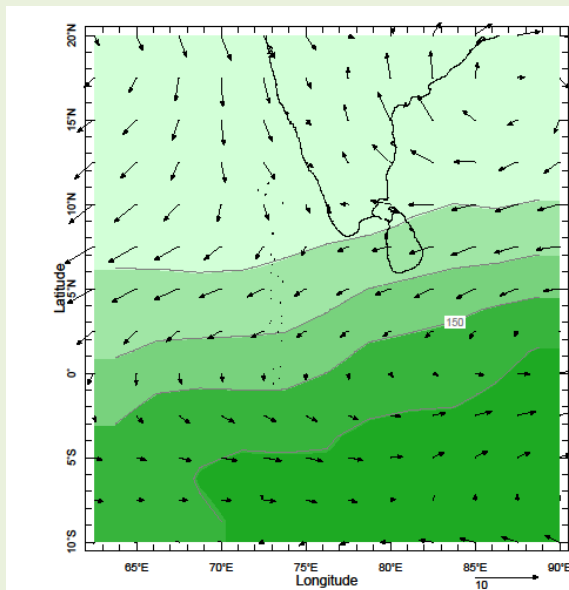
Time Jan Pressure 925.0 mb



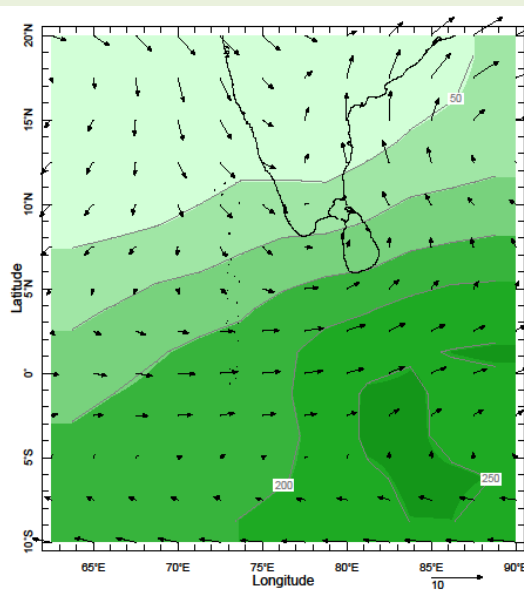
Time Feb Pressure 925.0 mb

January

February



Time Mar Pressure 925.0 mb



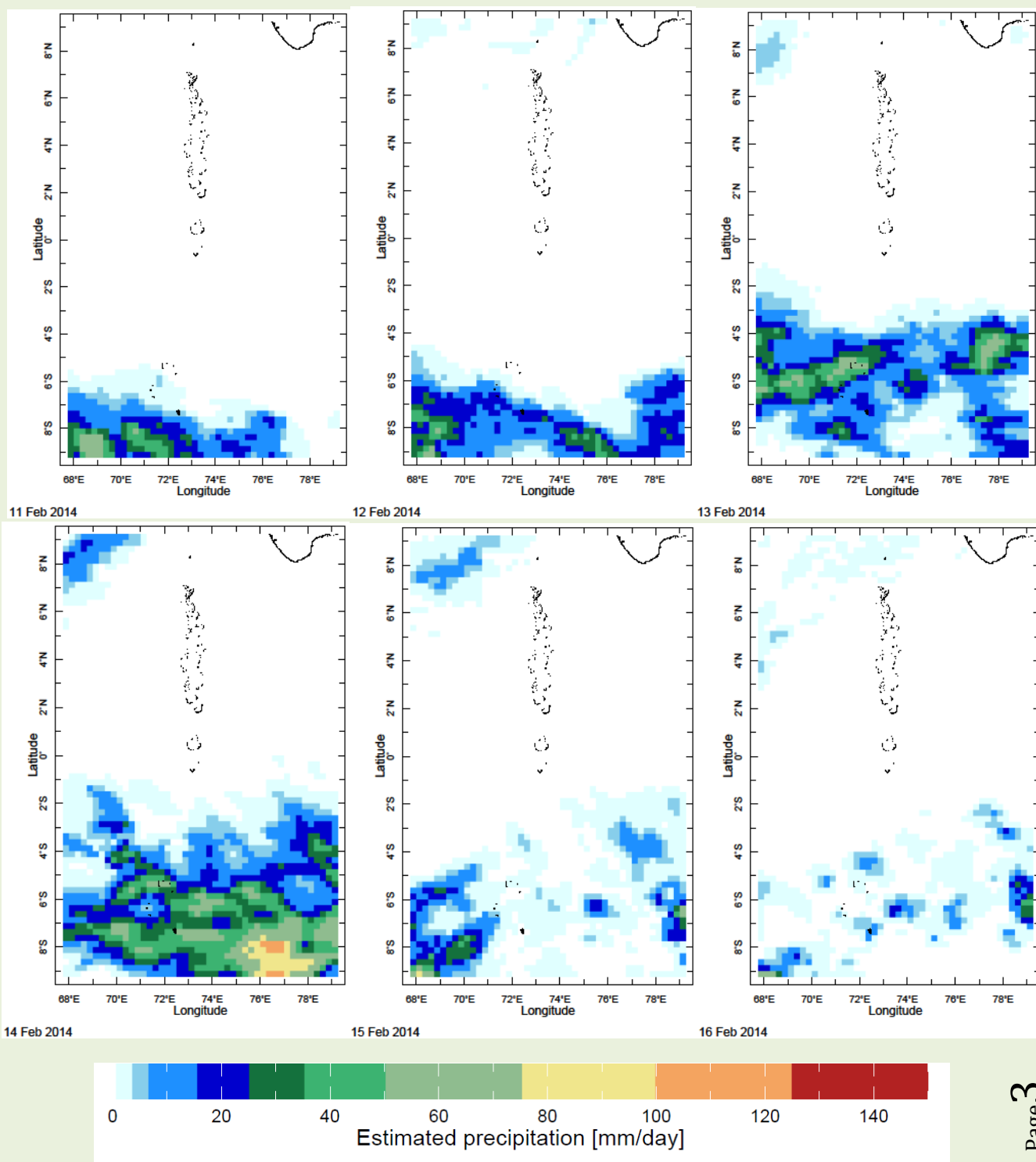
Time Apr Pressure 925.0 mb

March

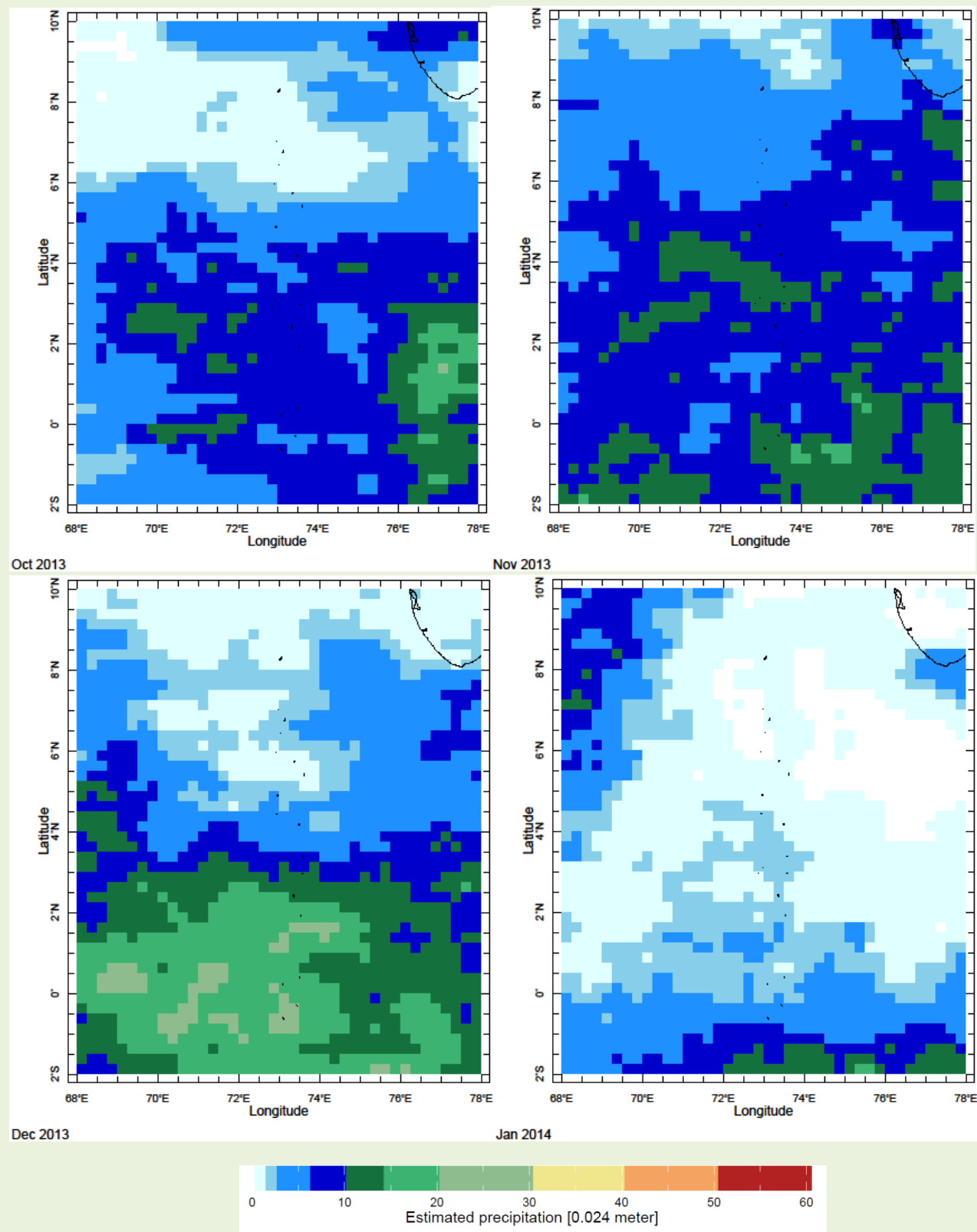
April

2) Rainfall Monitoring

a) Daily Satellite Derived Rainfall Estimate Maps: 11th February 2014– 16th of February, 2014 (Left-Right, Top-Bottom)



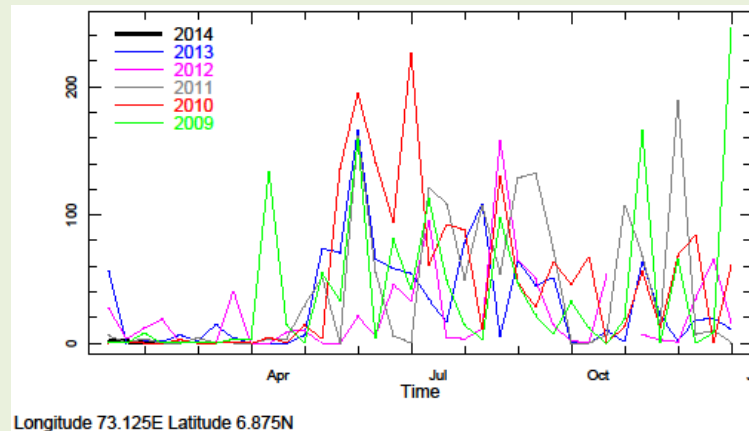
b) Monthly Rainfall (October 2013- January 2014), Derived from Satellite Rainfall Estimates



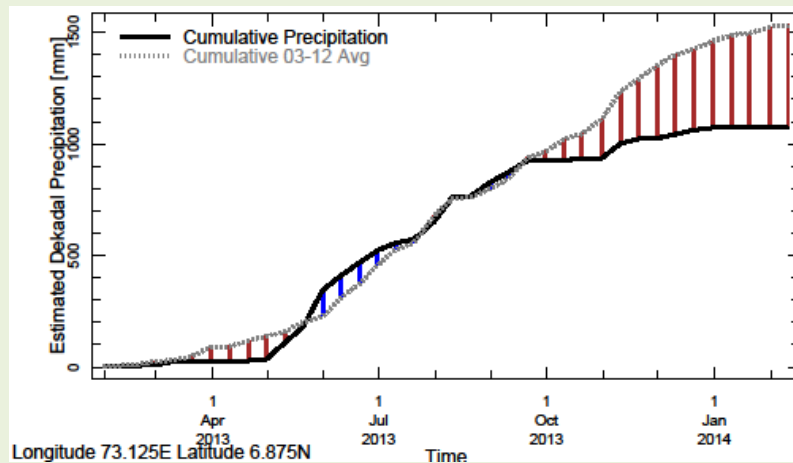
c) Seasonal to Annual Rainfall Monitoring

i) For Northern Maldives

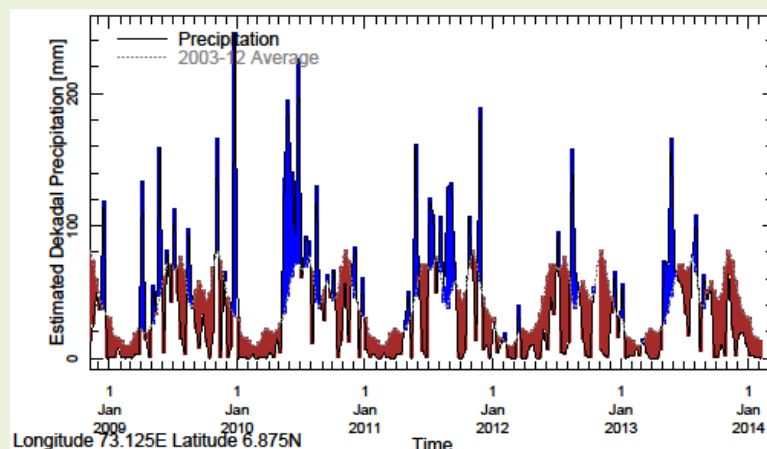
1) Rainfall in 2014 (black) compared to rainfall in previous 5 years



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

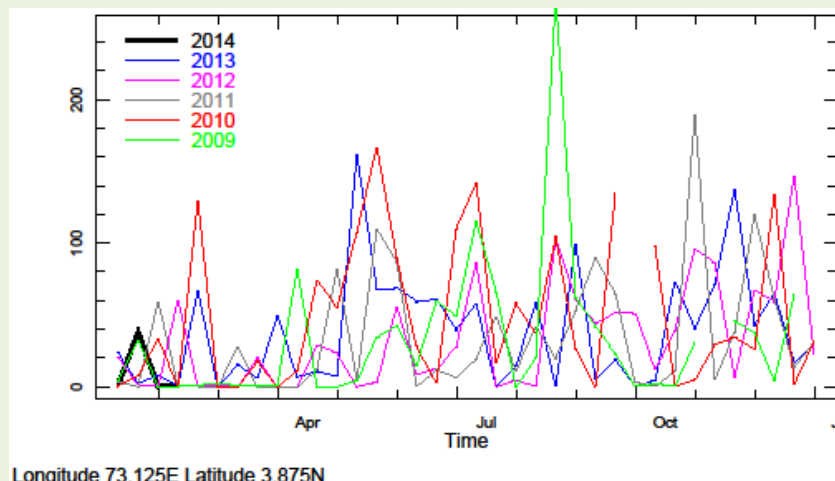


3) Rainfall for the past 5 years with above-average (compared to the last 8 years) hatched in blue and below normal in brown.

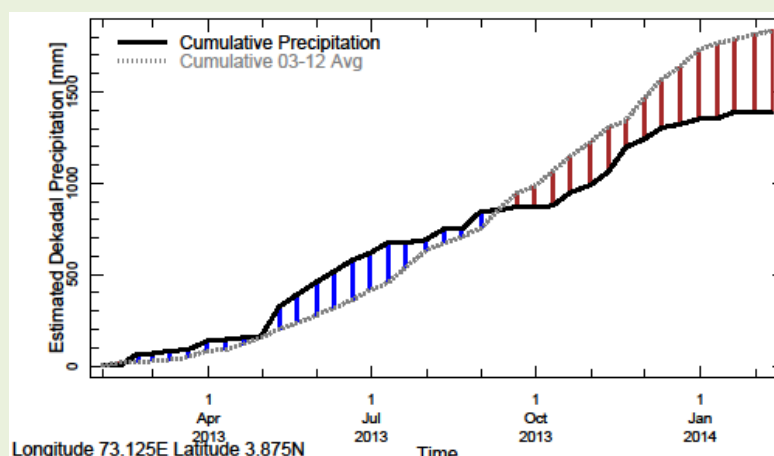


ii) For Central Maldives

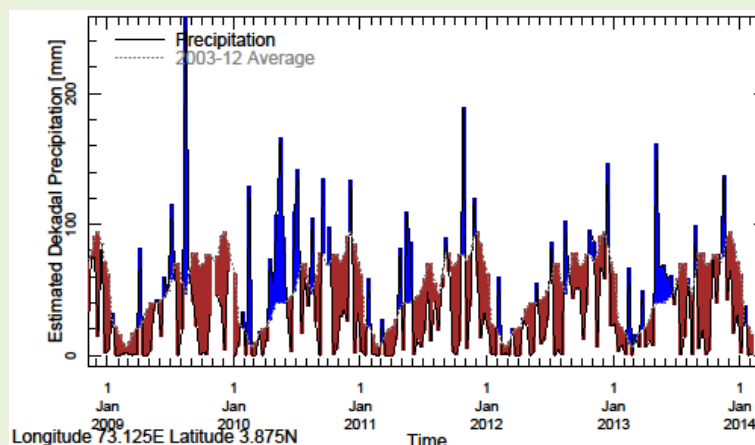
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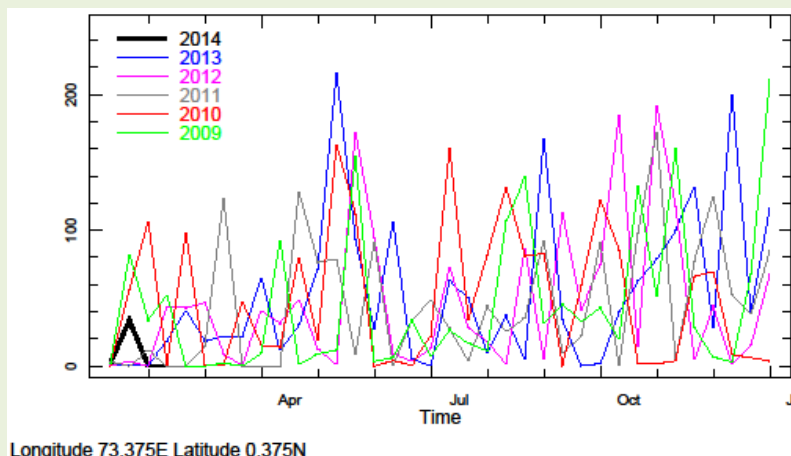


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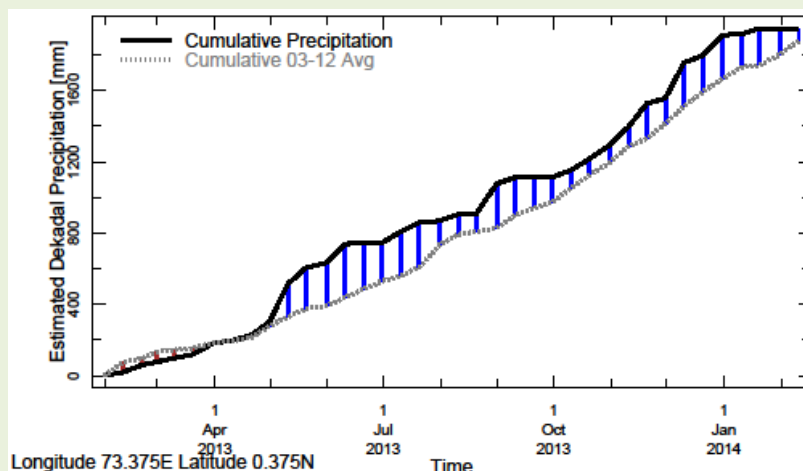


iii) For Southern Maldives

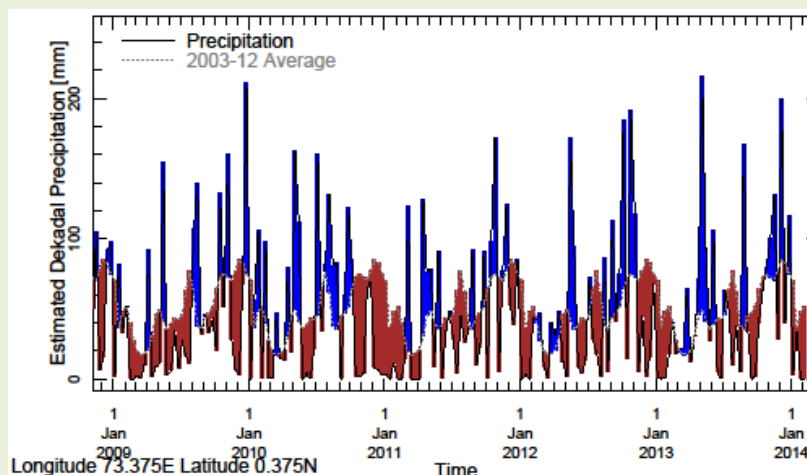
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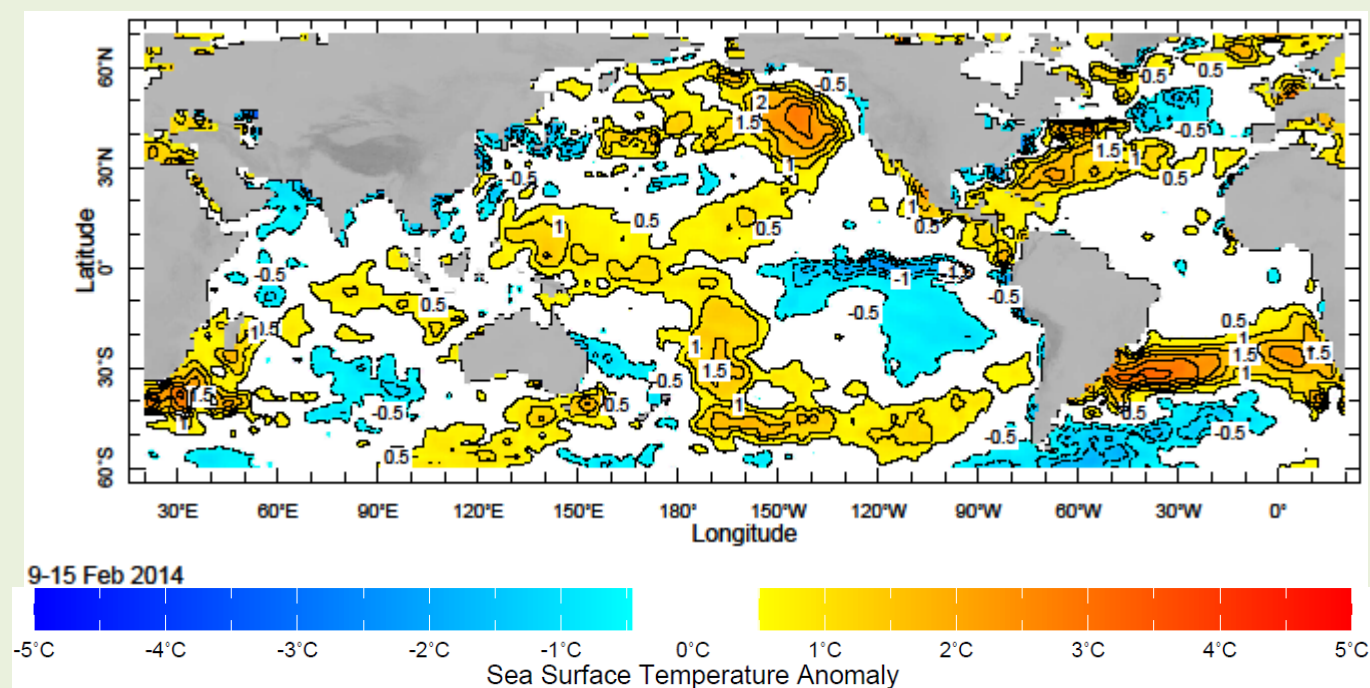
2) Rainfall of past 365 days (black) compared to average rainfall in previous 8 years.



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 ($^{\circ}\text{C}$), 9th February, 2014– 15th February, 2014



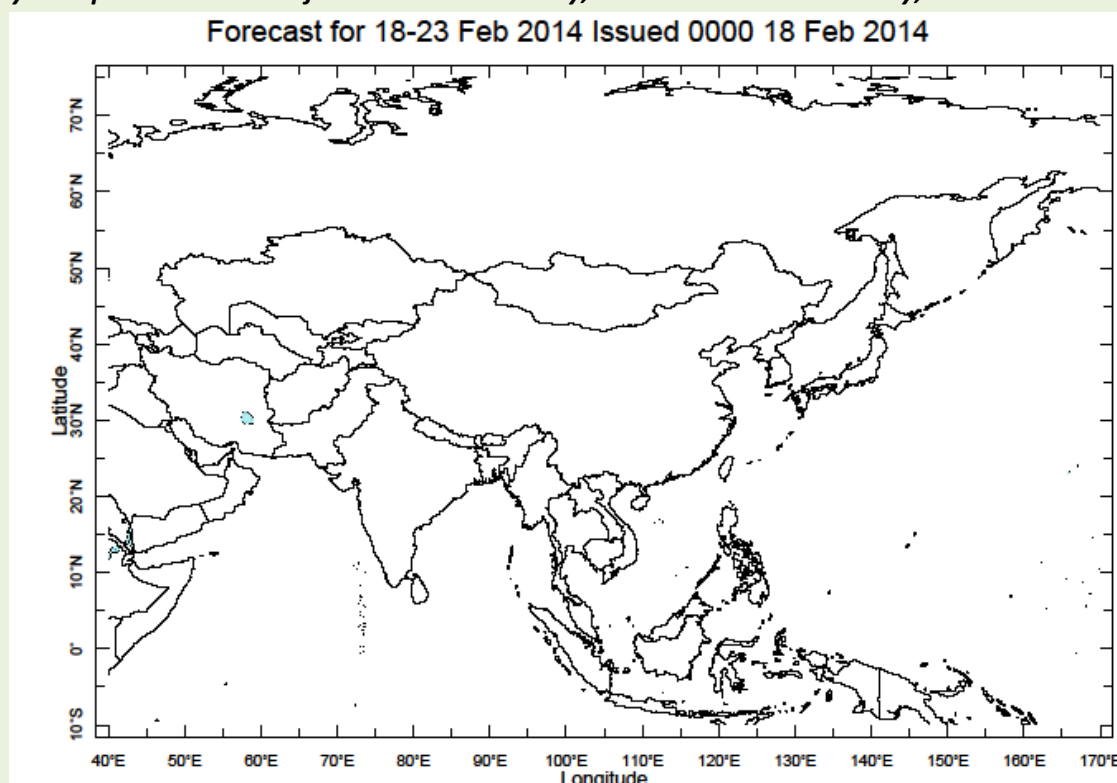
Data Source: NCEP, Environmental Monitoring Center

Base Period of Climatology: 1971- 2000

3). Predictions

a) Weekly Precipitation Forecast for 18th – 23rd February, 2014: Issued 18th February, 2014

Forecast for 18-23 Feb 2014 Issued 0000 18 Feb 2014



b) Seasonal Rainfall and Temperature Predictions from IRI

