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Experimental Hydro meteorological Monitoring and Prediction

(Prepared for Water Management Secretariat, Mahaweli Authority)

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Summary[2]

Weekly Monitoring: During the previous week (07th -13th July 2010) generally low rainfall was experienced over the Island. But 08th-10th July fairly high rainfall was experienced at few places, i.e the maximum value has varied between 80-90mm.

7 Day Prediction: The NCEP Global Forecast System predicts an accumulated rainfall below 65 mm/week all over the island for the next week.

1 Month Prediction: According to Roundy/Zubair forecast, the rainfall for the entire Sri Lanka will increase up to 16th July, but it will decrease dramatically up to 19th July. Thereafter rain shall decrease with a fluctuation up to second week of August. Western slopes will show a similar pattern, but the increase is quite rapid and more intense.

Seasonal Prediction: As per IRI Multi Model Probability Forecast for July to August 2010, issued in June 16th 2010 there is no indications of shifts in rainfall distributions for the remainder of the Yala. However, there is a slightly enhanced probability of lower rainfall for the start of the Maha as there is a prediction for La Nina to develop. Temperature predictions point to above normal during the same period.

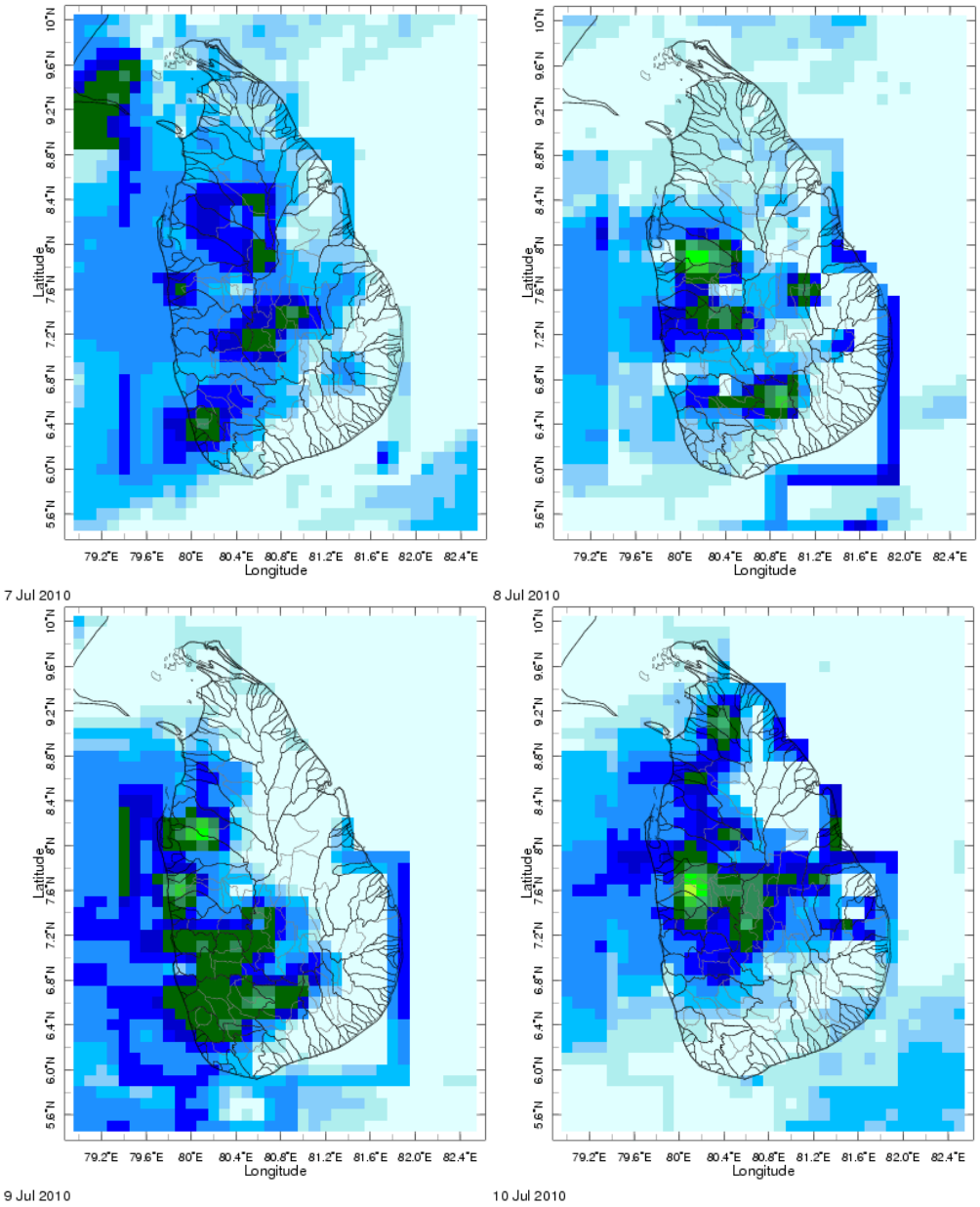
Contents

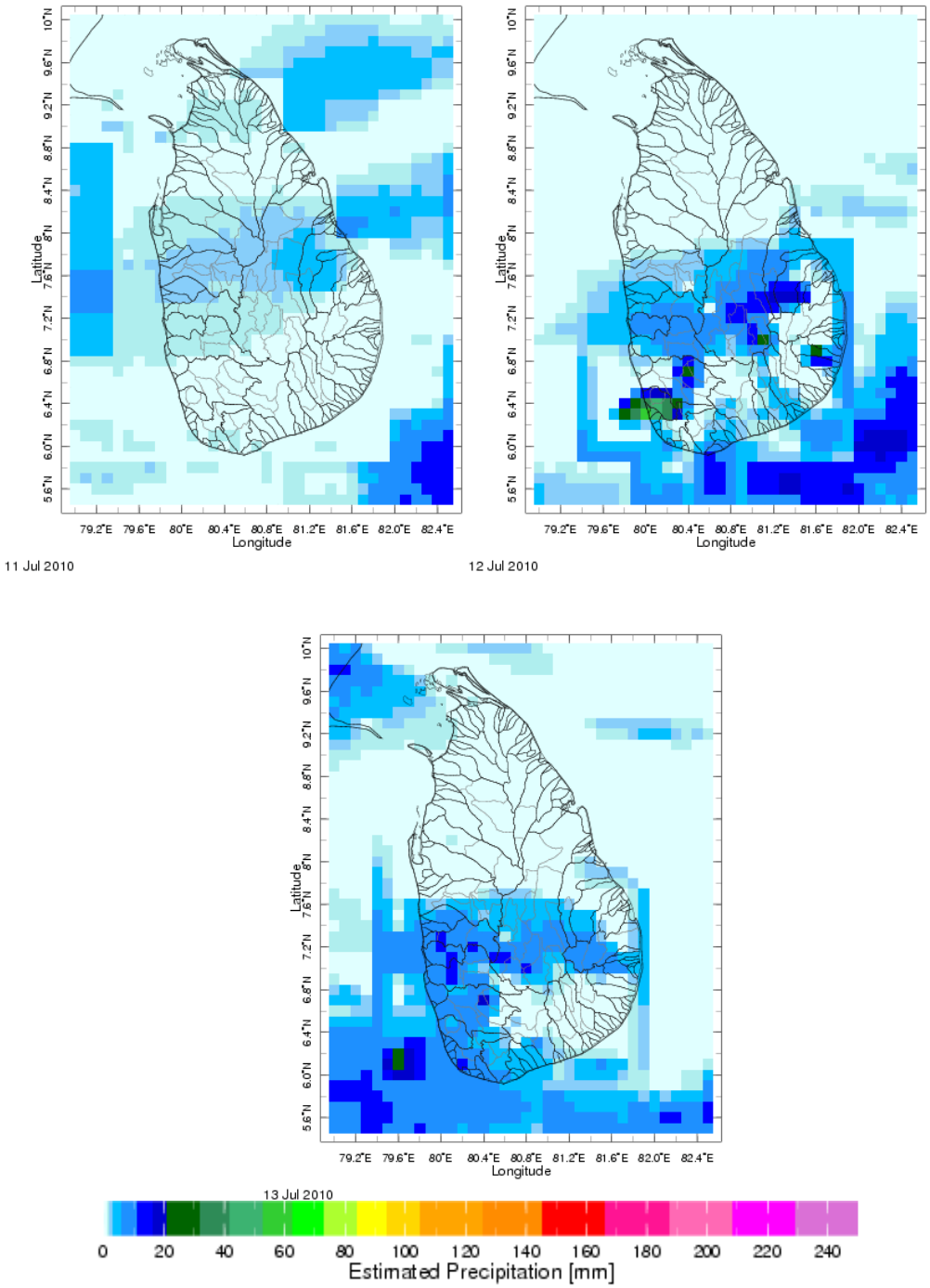
[1] International Research Institute for Climate and Society, Earth Inst. at Columbia Univ., New York.

These interpretations of hydro-meteorological conditions for the Mahaweli basins are provided for the use of the WMS/MASL. Official hydro-meteorological statements are provided by the Sri Lanka Department of Meteorology and Department of Irrigation.

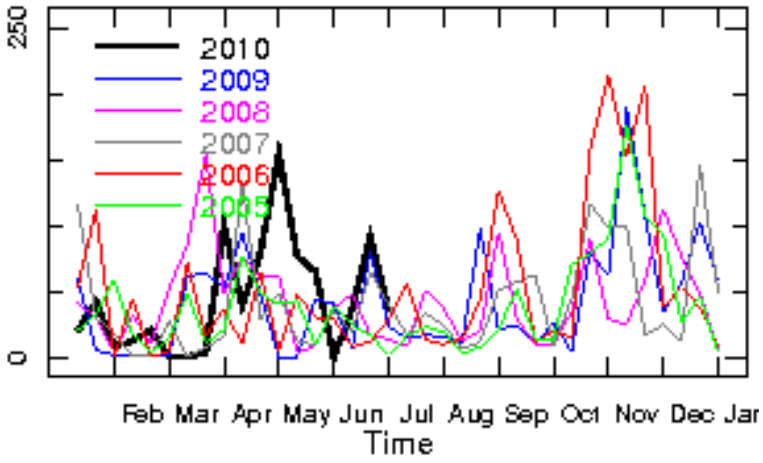
1. Rainfall Monitoring

a) Daily Satellite Derived Rain fall Estimates



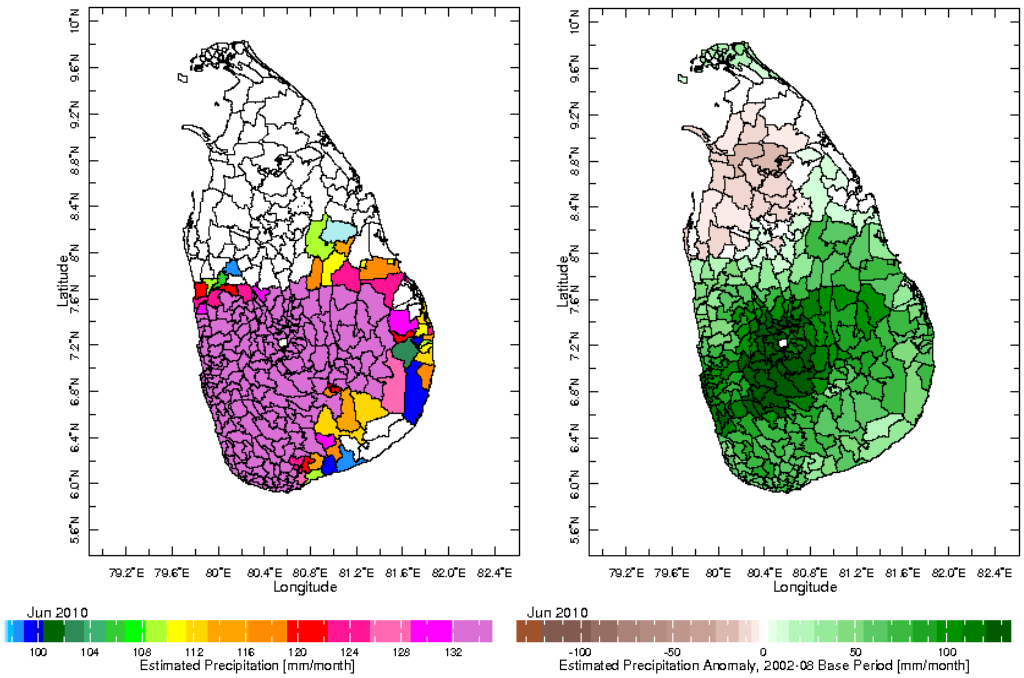


Maps: *Daily Rainfall over Sri Lanka on23-28June 2010.*

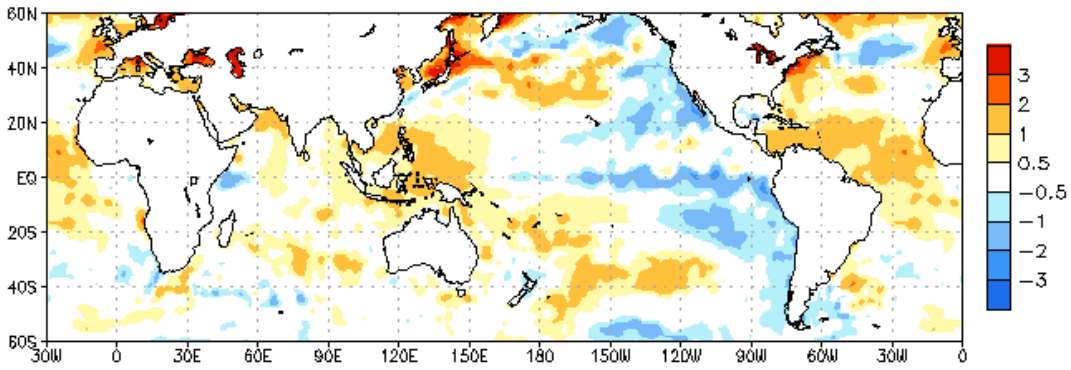


Rainfall for 2010 in comparison with previous years for Mahaweli Basin

b) Monthly Satellite Derived Rain fall Estimates



c) Weekly Average SST Anomalies

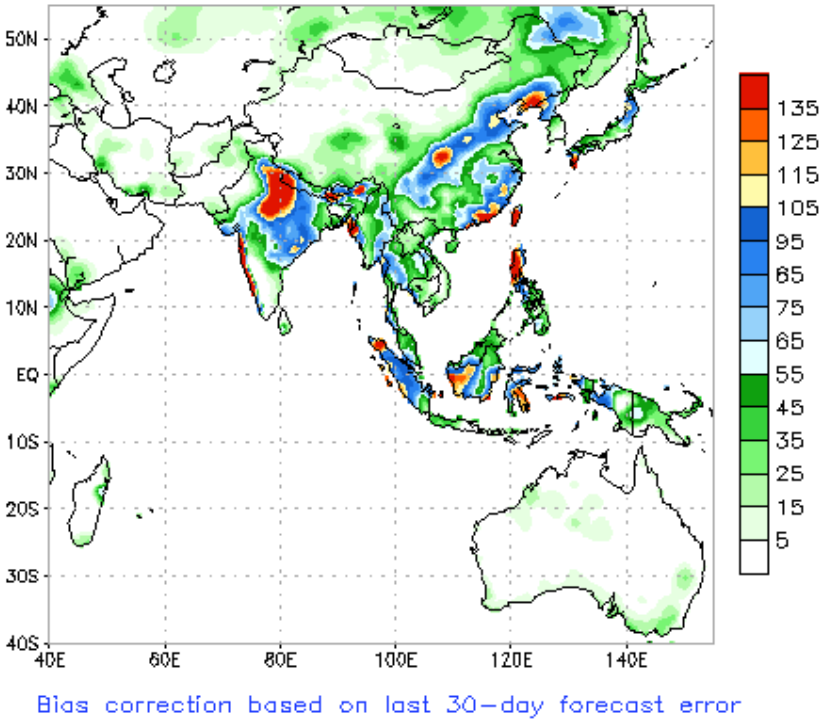


Weekly Average SST Anomalies (^{0}C) 07 Jul 2010

Data Source: NCEP Global Sea Surface Temperature Analysis (Climatology 1979-1995)

2. Predictions

b. ***NCEP GFS Ensemble 1-7 day predictions, NOAA, Climate Prediction Centre, USA.***



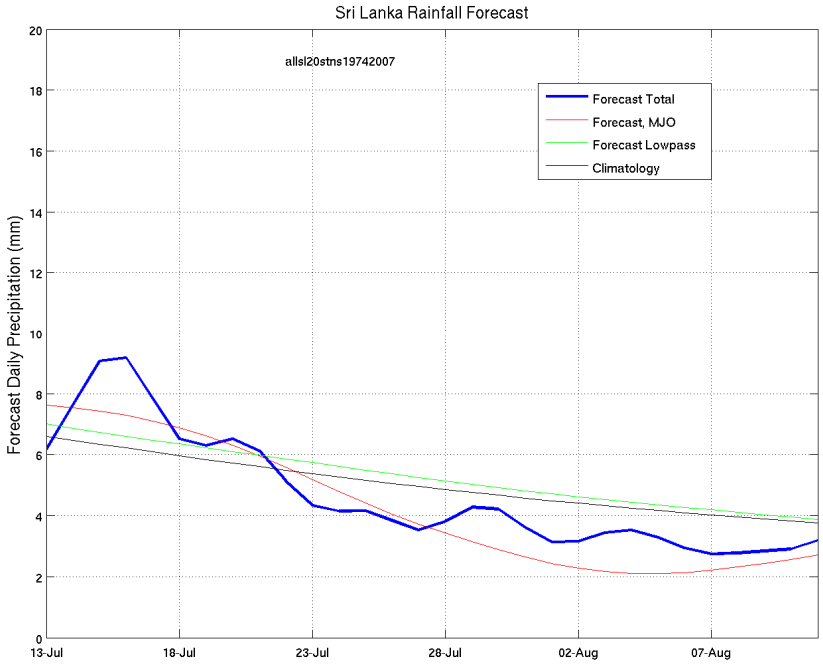
During next week, an accumulated rainfall of below 65 mm is predicted for all over the island.

Source – NOAA Climate Prediction Center

Map: Predicted accumulation of rainfall. (13Jul -19 Jul, 2010 week)

b. ***One month <u>experimental</u> predictions by Paul Roundy (SUNY Albany) and L. Zubair (Columbia U.)***

For the entire Sri Lanka



For Western Slopes

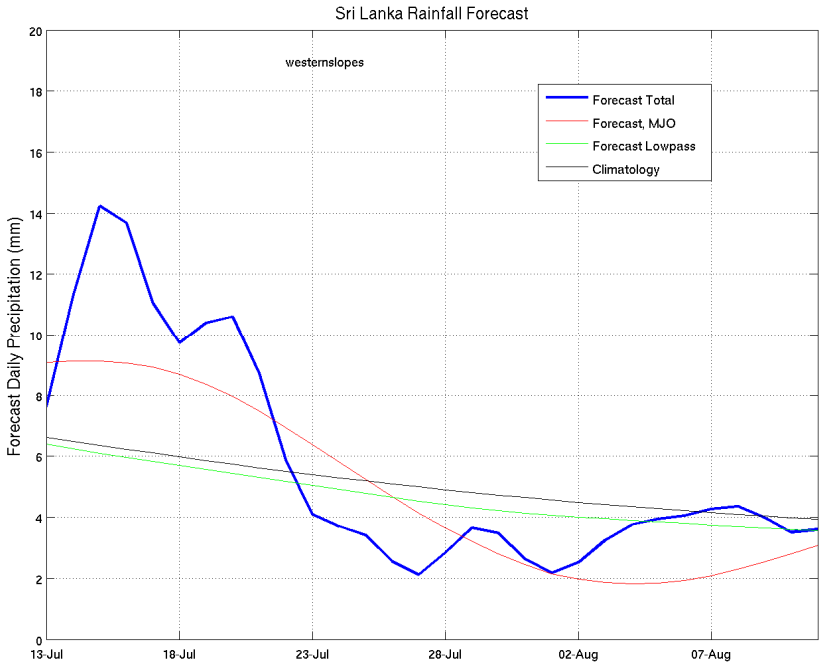
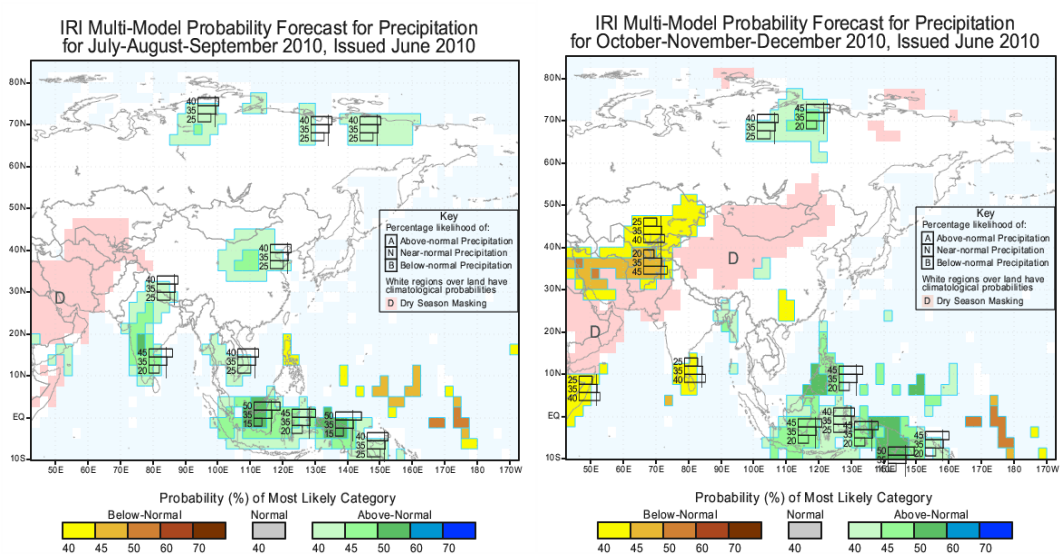
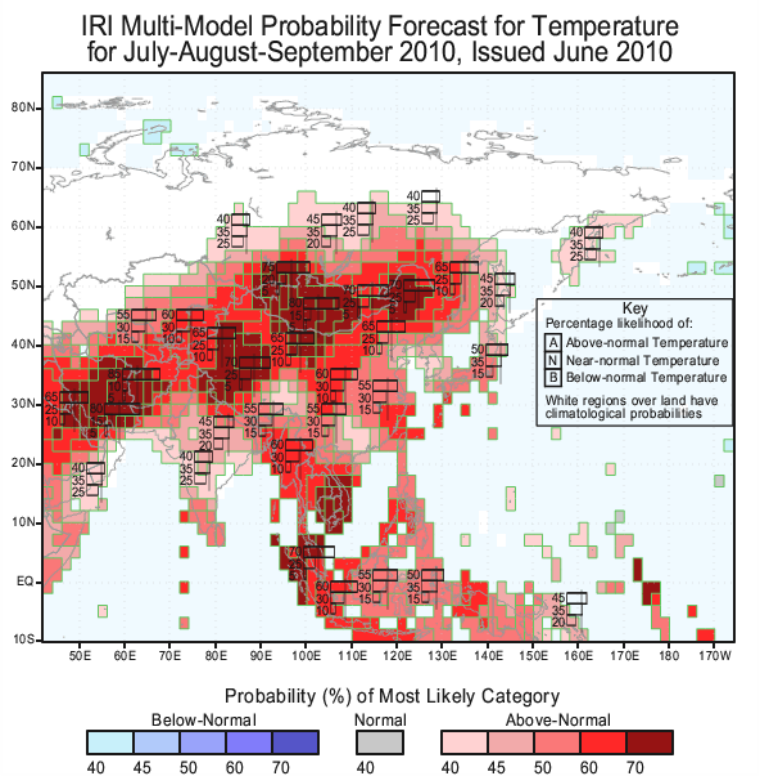


Chart: Rainfall predictions based on observed cloud cover and atmospheric waves over the Indian Ocean. Issued 13th July, 2010

c. Seasonal Rainfall Predictions from IRI





Charts: Seasonal Climate Predictions issued by IRI in June 16th 2010 for Rainfall from July to September and October to December 2010.