

Experimental Climate Monitoring and Prediction

(Prepared for the Water Management Secretariat of the Mahaweli Authority)

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(FECT and IRI)

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FECT BLOG

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ENSO Update

12 September
2011

For the September - November season, there is approximately 52% of probability of continuing La-Nina conditions, a 48% of probability for returning to neutral conditions, and virtually no chance to development of El-Nino conditions. Although weak La-Nina conditions are the most likely scenario for the remainder of 2011, a return to neutral conditions is also possible.

(Text Courtesy IRI)

Summary²

Weekly Monitoring: During the previous week (11th to 17th October, 2011) rainfall ranged between 0-70 mm. The entire Island received considerable rainfall, except for the Southern regions, where there was no rainfall from 15th-17th. Heavy rainfall was scattered mostly for the Northern & North-eastern regions.

Monthly Monitoring: During September, below-average rainfall experienced high regional variation with deficits up to 100 mm in the Northern, North-central and Southern provinces while there was above average rainfall more than 100 mm for some parts of Kegalle and Ratnapura district.

7 Day Prediction: For the coming week the NCEP Global Forecast System predicts accumulated rainfall between 75-85 mm for the entire Sri Lanka, except particularly for the coastal regions of Northern, North-eastern, Eastern, South-eastern and South provinces.

1 Month Prediction: During 17th-21st October rainfall shall increase rapidly & shall decrease during 21st-23rd. Again same pattern shall exist during 23rd-28th & 28th October - 3rd November, respectively. Thereon rainfall shall increase gradually till the 13th November. For the western slopes rainfall shall increase during 17th-28th, with a drop on 23rd. Rainfall shall decrease during 28th October - 4th November with different decreasing rates. Thereon rainfall shall slowly increase. For the eastern slopes rainfall shall increase during 17th-21st October & thereon shall decrease gradually till 5th November. Thereafter rainfall shall increase. For the eastern coasts, on the 17th there shall observe no rainfall. Rainfall shall increase drastically during 18th-21st & shall reach maximum of 7 mm daily rainfall. During 21st-24th rainfall shall decrease drastically & again shall increase during 23rd-28th. Thereon rainfall shall show same pattern as eastern slopes.

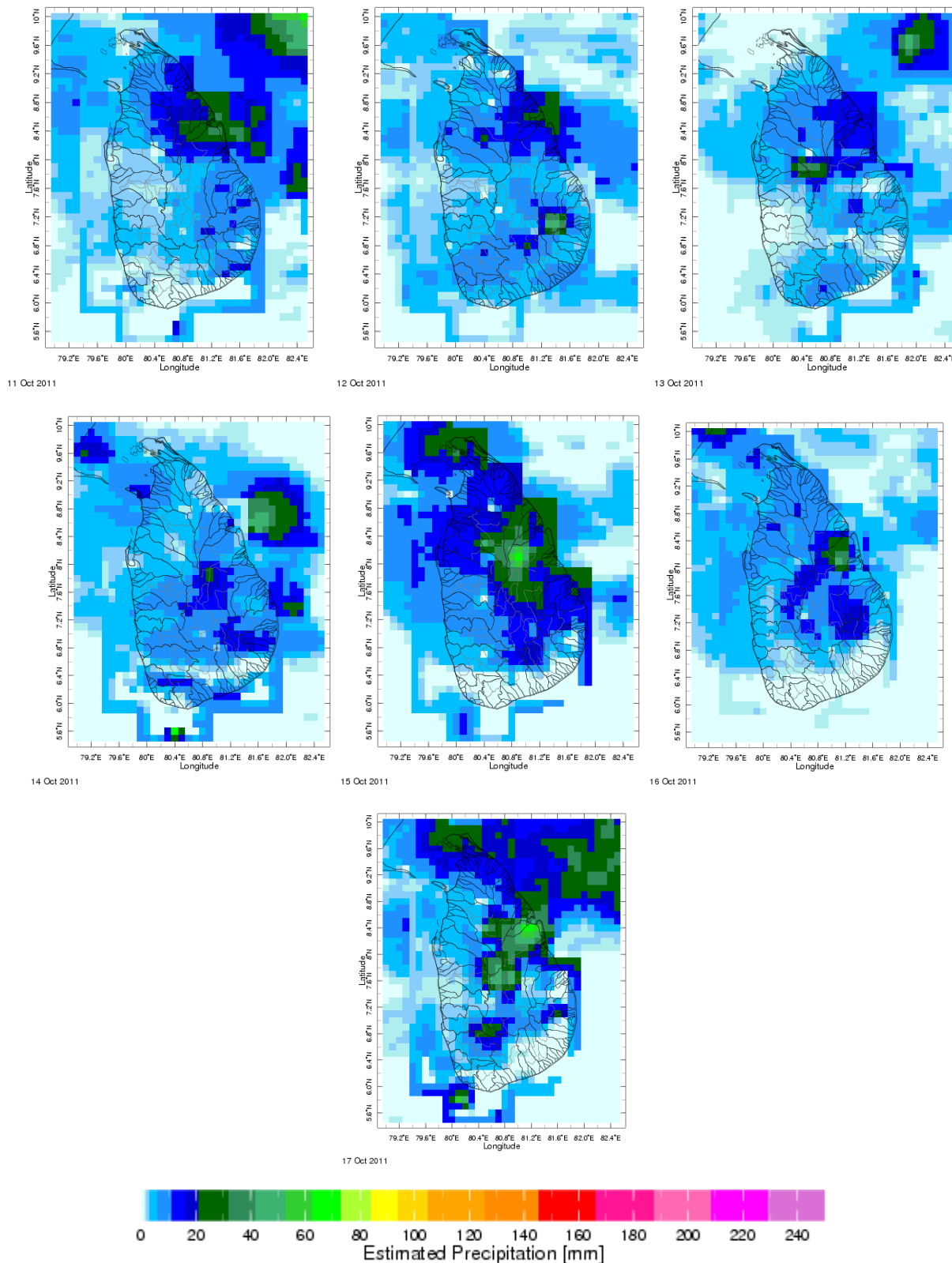
Seasonal Prediction: As per IRI Multi Model Probability Forecast for October 2011 to December 2011, issued in September 2011, there is 40%-45% probability for temperature to be below normal for entire Sri Lanka, while the precipitation is likely to be climatological.

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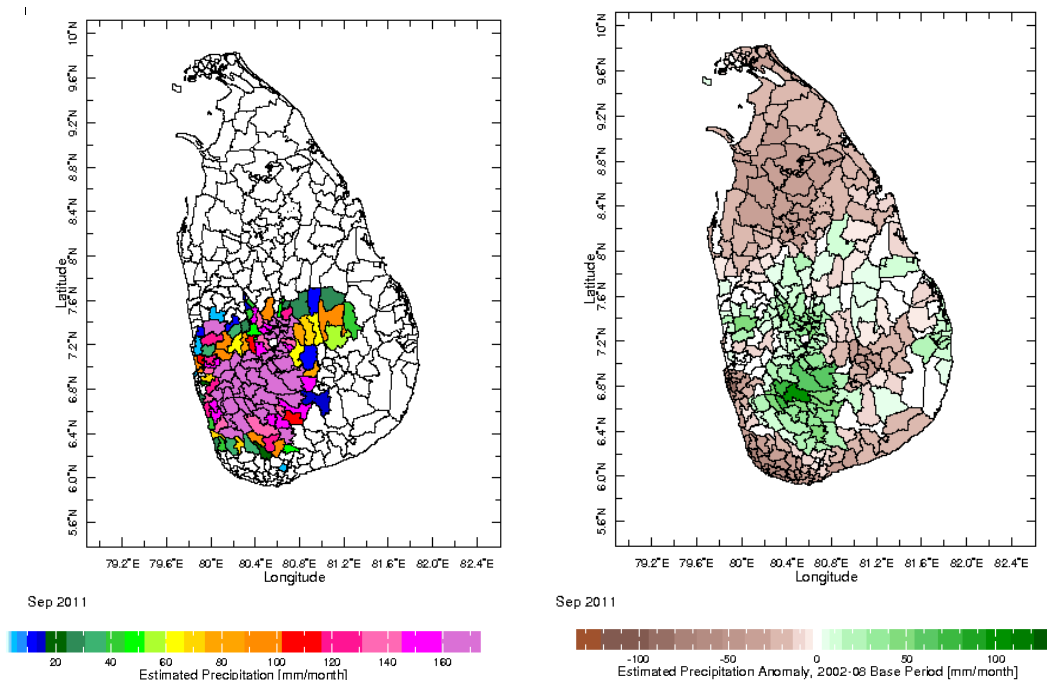
1. Rainfall Monitoring
 - a. Daily Satellite Derived Rain fall Estimates
 - b. Monthly Rain fall Estimates
 - c. Decadal (10 Day) Satellite Derived Rainfall Estimates
 - d. Weekly Average SST Anomalies
2. Rainfall Predictions
 - a. NCEP GFS Ensemble 1-7 day predictions, NOAA, CPC, USA
 - b. 1 month experimental predictions by Paul Roundy and L. Zubair
 - c. Seasonal Predictions from IRI

1. Rainfall Monitoring

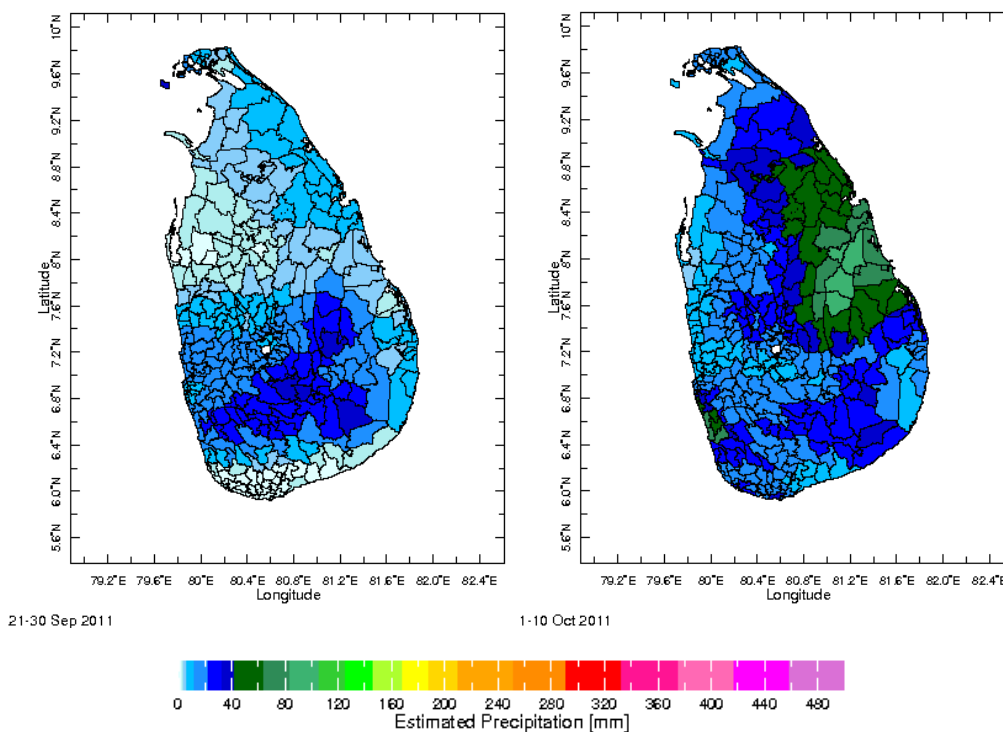
a) Daily Satellite Derived Rainfall Estimate Maps: 11th – 17th October, 2011 (Left-Right, Top-Bottom)



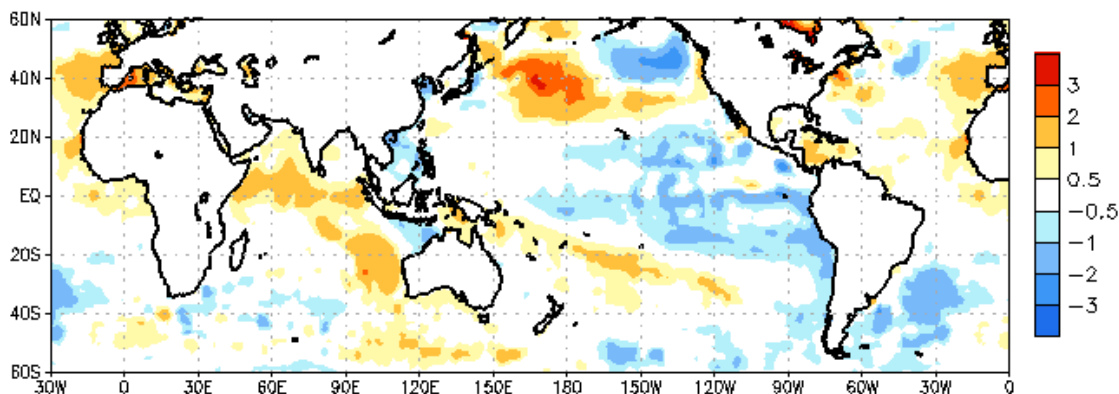
b) Monthly Satellite Derived Rain fall Estimates for September 2011 (Total – Left and Anomaly -Right)



c) Dekadal (10 Day) Satellite Derived Rainfall Estimates (September 21-30, 2011 and October 1-10, 2011)



d) Weekly Average SST Anomalies

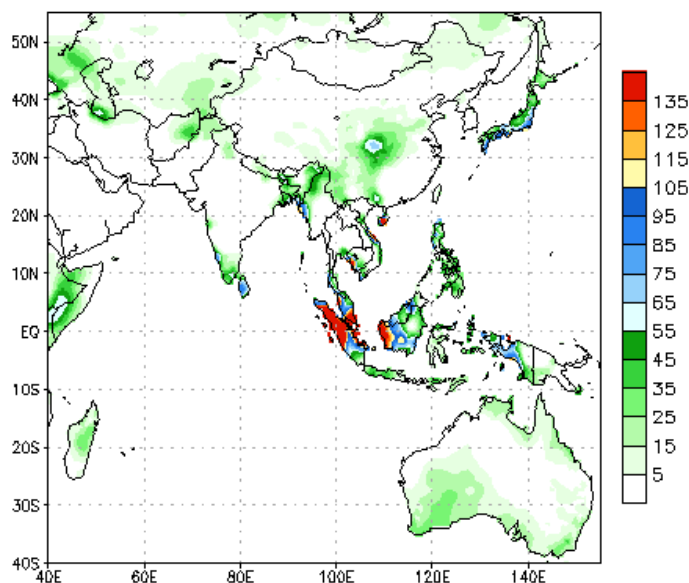


Weekly Average SST Anomalies ($^{\circ}$ C), 12th September, 2011

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

2. Predictions

a) NCEP GFS Ensemble 1-7 day predictions, NOAA, Climate Prediction Centre, USA.



During next week, an accumulated rainfall between 75-85 mm is predicted for the entire Sri Lanka except particularly for coastal regions of North, North-eastern, Eastern, South-eastern and Southern provinces.

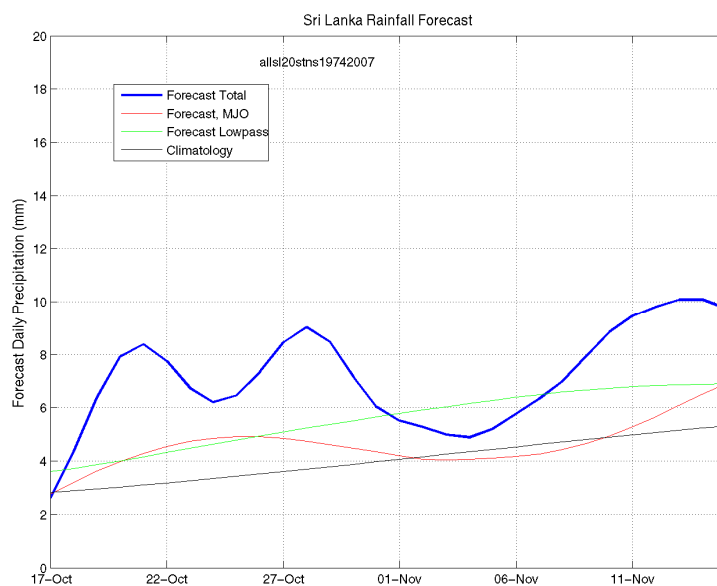
Source – NOAA Climate Prediction Center

Map: Predicted accumulation of rainfall. (17th – 23rd October, 2011 week)

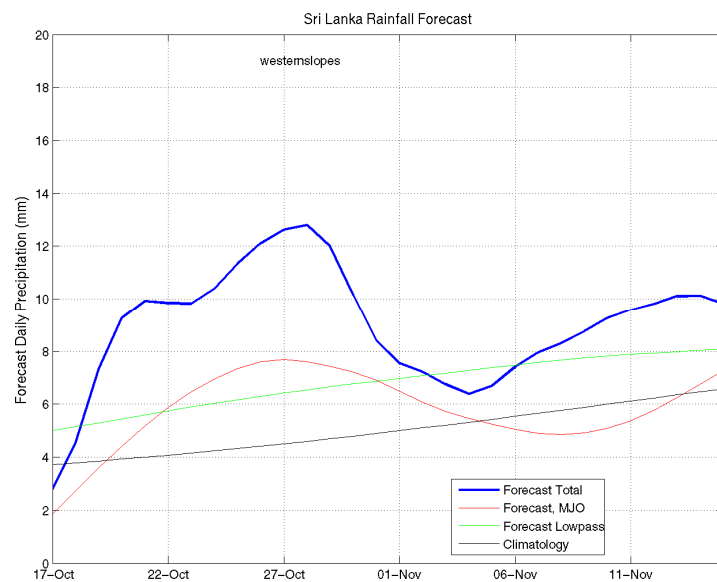
c) 1 month experimental predictions by Paul Roundy and L. Zubair

Predictions based on observed cloud cover and atmospheric waves. Issued 19th October, 2011

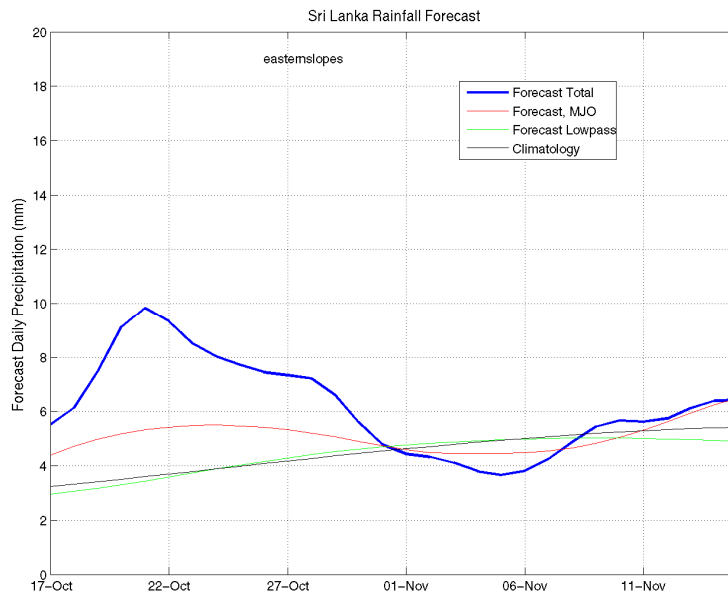
All Sri Lanka (Rainfall Scale from 0-20 mm/day)



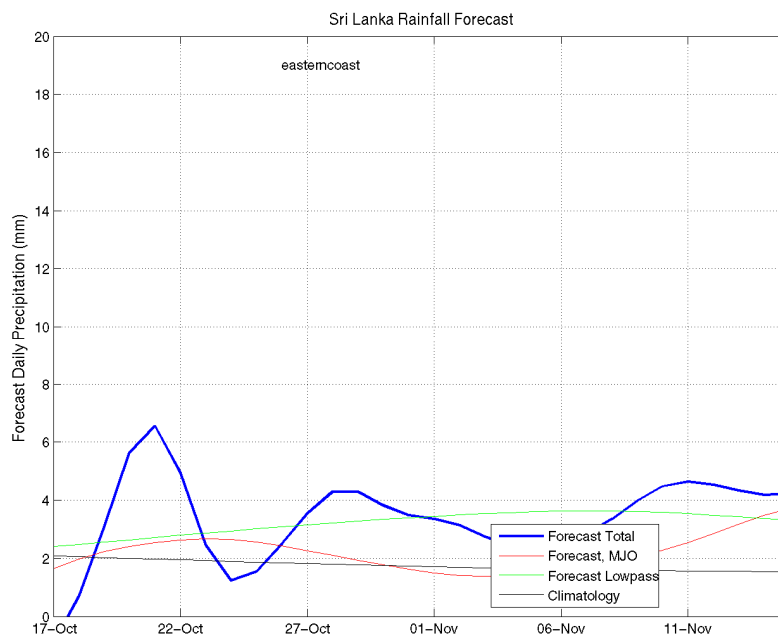
Western Slopes (Rainfall Scale from 0-20 mm/day)



Eastern Slopes (Rainfall Scale- from 0-20 mm/day)

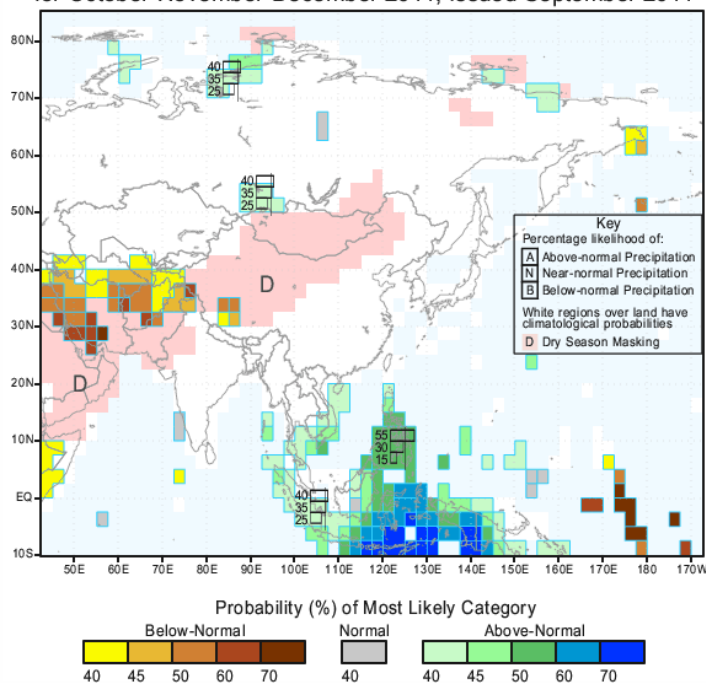


Eastern Coasts (Rainfall Scale- from 0-20 mm/day)



d) Seasonal Rainfall and Temperature Predictions from IRI

IRI Multi-Model Probability Forecast for Precipitation
for October-November-December 2011, Issued September 2011



IRI Multi-Model Probability Forecast for Temperature
for October-November-December 2011, Issued September 2011

