

Experimental Climate Monitoring and Prediction

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FECT BLOG

Past reports available at
<http://fectsl.blogspot.com/> and
<http://fectsl.wordpress.com/>

FECT WEBSITES

<http://www.climate.lk> and
<http://www.tropicalclimate.org/>

18 September, 2014 PACIFIC SEAS STATE

During August through early September the observed ENSO conditions moved to those of a borderline El Niño. Most of the ENSO prediction models indicate weak El Niño conditions during the September-November season in progress, strengthening slightly and peaking at weak strength during winter 2014-15 and lasting into the first few months of 2015.

(Text Courtesy IRI)

INDIAN OCEAN STATE

Around 0.5°C above sea surface temperature in northern sea and 0.5°C below average in south-eastern sea was observed.

MJO STATE

MJO is in Phase 4 in the Maritime continent and therefore shall slightly enhance the rainfall in Sri Lanka.

Highlights

Monitoring and Predictions:

Heavy rainfall was observed throughout the country during the previous week and further heavy rainfall is expected in the entire country during the next week as well. Badulla, Kandy, Kaluthara and Galle districts shall receive heavy rainfall during this period. Up to 200 mm rainfall is expected in Badulla. Unusually heavy rainfall is expected in the region from Monaragala to Polonnaruwa for the 2nd consecutive week. The north-western sea of Sri Lanka shows an above average sea surface temperature while the south eastern sea shows a below average sea surface temperature.

Summary

Monitoring

Weekly Monitoring: On the 23rd and 24th of September only light rainfall was observed throughout Sri Lanka. The average rainfall was in the 40 mm-55 mm range during 25th to 28th, mostly in the western, central and north-central regions. On 29th the south-west regions had the highest rainfall of the week while the rest of the areas had light rainfalls.

Monthly Monitoring: An above average rainfall was observed throughout the country with higher precipitation observed in the south-western regions of Sri Lanka during August. Highest rainfall during this month was observed in Ratnapura district.

Predictions

14 day prediction: The entire country shall receive total rainfall up to 55 mm during 1st of October to 14th October.

IMD WRF & IRI Model Forecast: According to the IMD WRF model the entire country shall receive high rainfall on the 4th of October. Most of the country shall receive up to 8 mm rainfall with exceptions of central, western and south-western regions, which shall receive up to 125 mm rainfall. By 4th of October entire country shall receive an average rainfall around 35 mm.

Seasonal Prediction As per IRI Multi Model Probability Forecast issued in September for the season October to December 2014, Rainfall shall remain climatological while the temperature shall be above normal with a high probability.

Inside this Issue

1. Monitoring

- Daily Satellite Derived Rain fall Estimates
- Monthly Rain fall Estimates
- Decadal (10 Day) Satellite Derived Rainfall Estimates
- Weekly Average SST Anomalies

2. Predictions

- NCEP GFS Ensemble 1-14 day predictions
- WRF model forecast Regional Meteorological Center, Chennai, Indian Meteorological Department)
- Weekly precipitation forecast (IRI)
- Seasonal Predictions from IRI

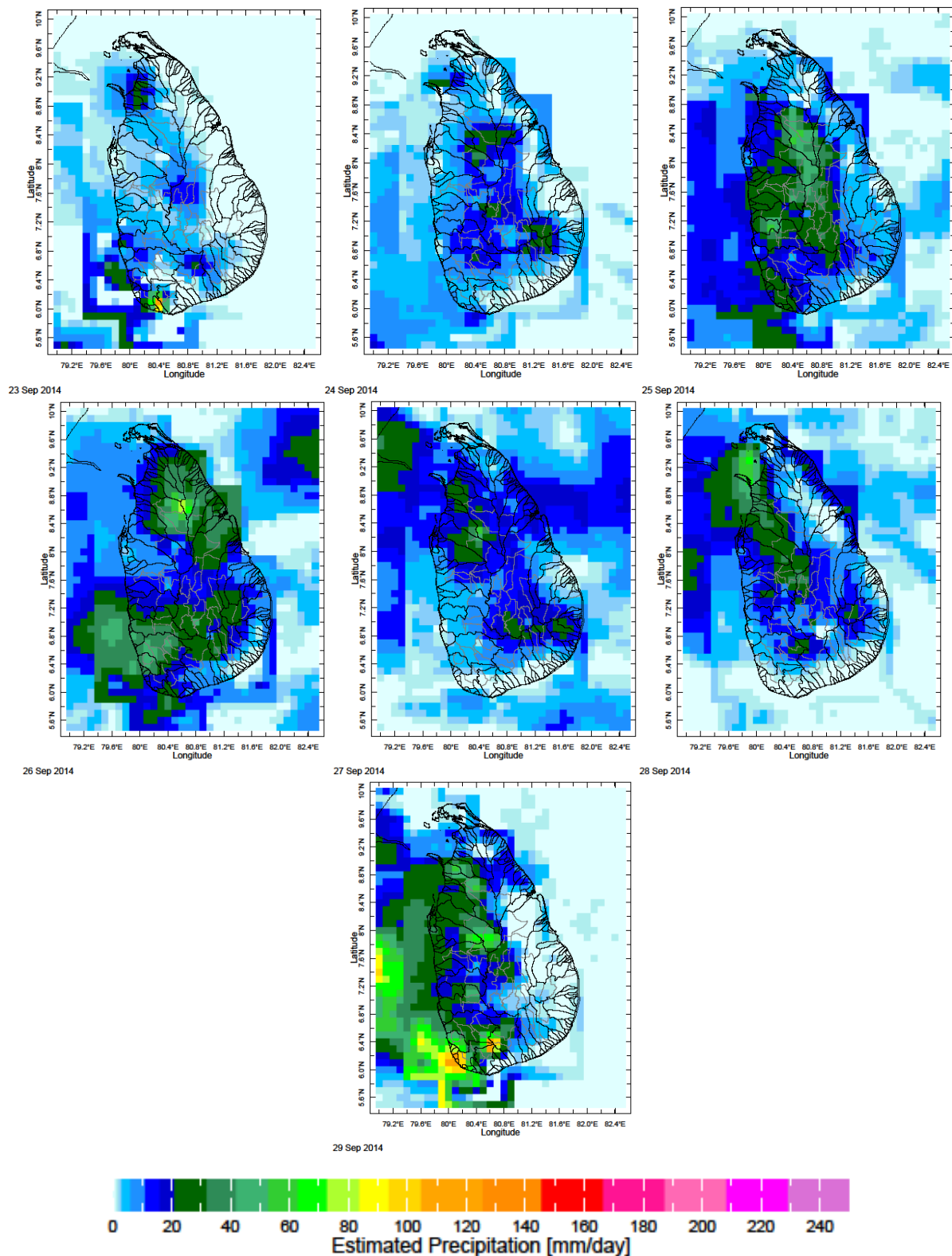
¹ International Research Institute for Climate and Society, Earth Institute at Columbia University, New York.

² These interpretations of hydro-meteorological conditions for the Mahaweli basins are provided for the use of the WMS/MASL.

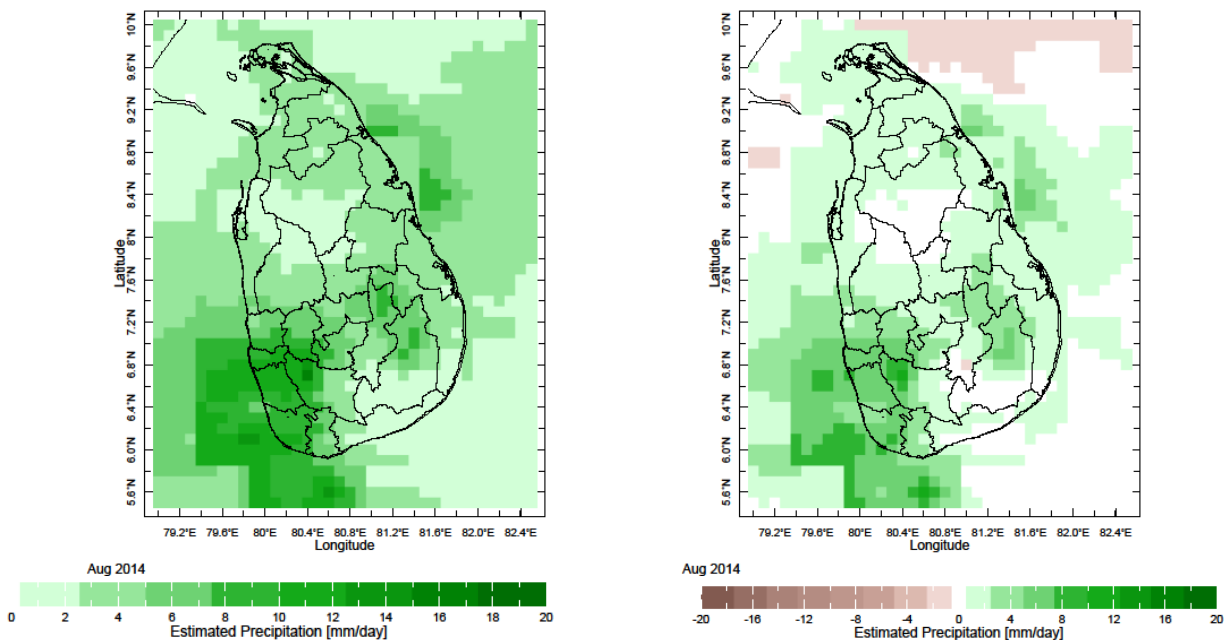
Official hydro-meteorological statements are provided by the Sri Lanka Department of Meteorology and Department of Irrigation.

1. Monitoring

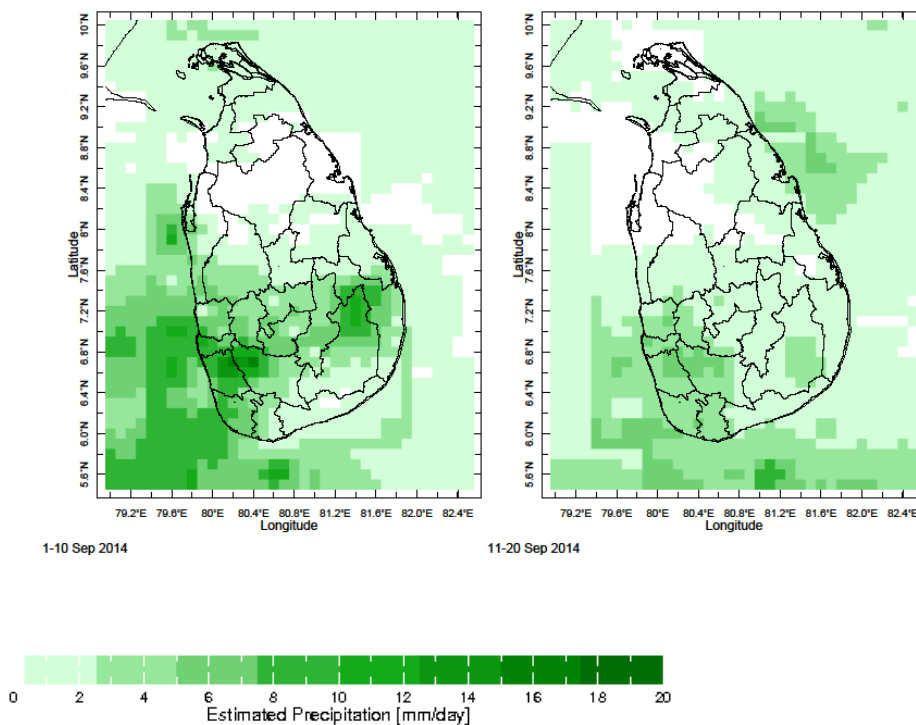
a) Daily Satellite Derived Rainfall Estimate Maps: 23rd – 29th September 2014 (Left-Right, Top-Bottom)



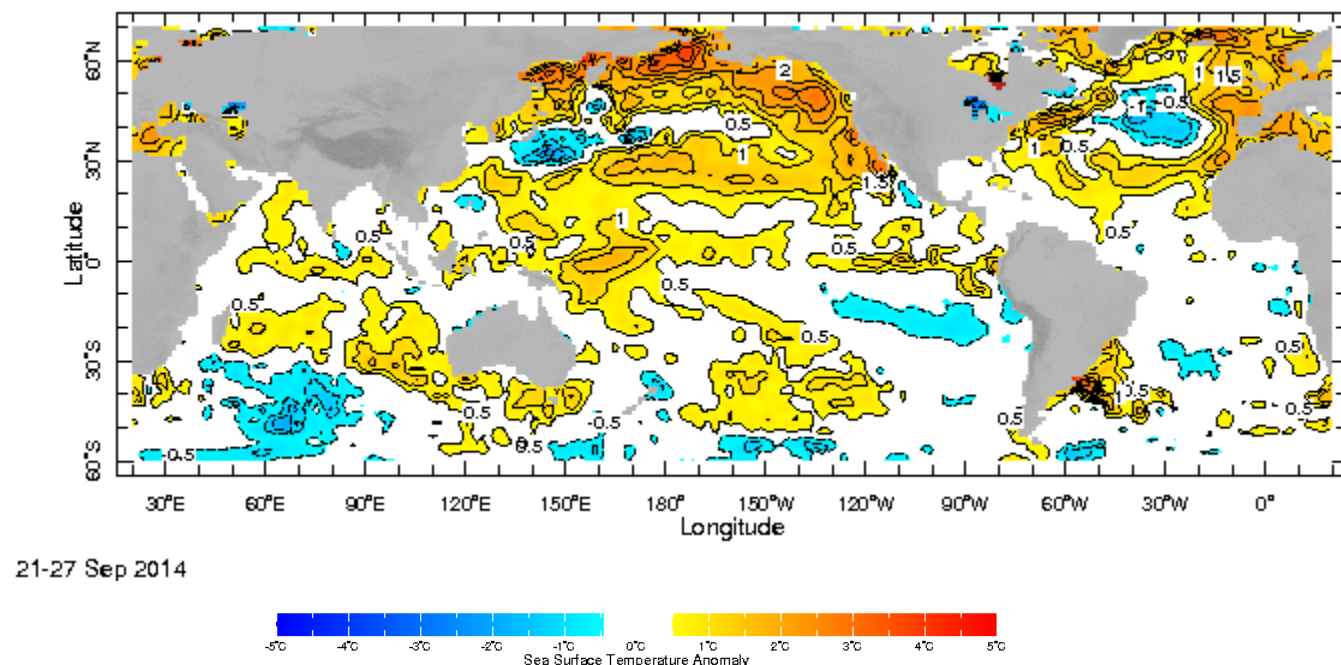
b) Monthly Satellite Derived Rainfall Estimates for August 2014 (Average – Left and Anomaly - Right)



c) Dekadal (10 Day) Satellite Derived Rainfall Estimates (1-10 Sep and 11-20 Sep, 2014)



d) Weekly Average SST Anomalies



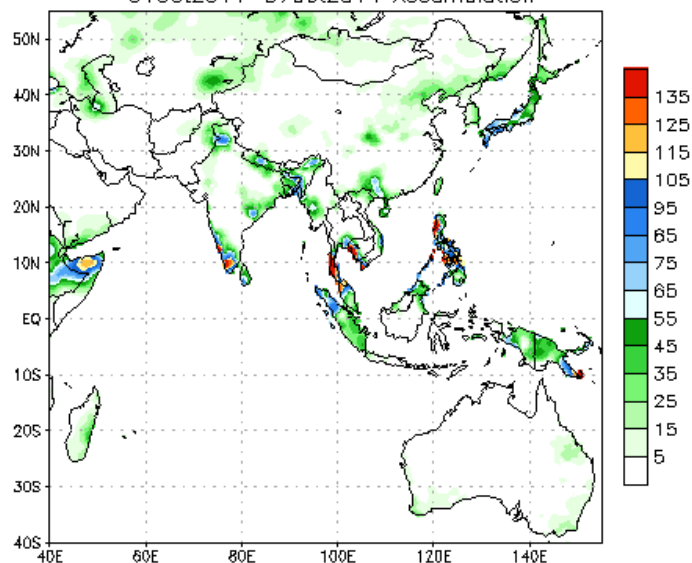
Weekly Average SST Anomalies ($^{\circ}\text{C}$), 21st – 27th September, 2014

Data Source: NCEP Environmental monitoring center (Climatology 1971-2000)

2. Predictions

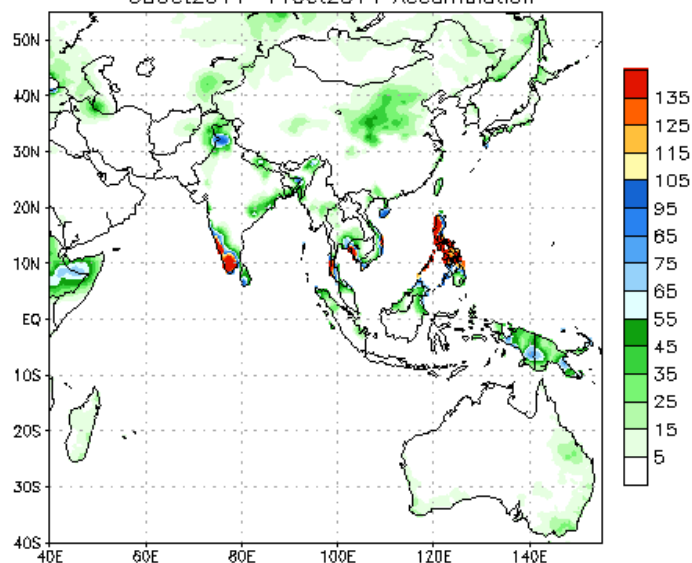
a) NCEP GFS Ensemble 1-14 day predictions, NOAA, Climate Prediction Centre, USA.

NCEP GFS Ensemble Forecast 1-7 Day Precipitation (mm)
from: 01Oct2014
01Oct2014-07Oct2014 Accumulation



Bias correction based on last 30-day forecast error

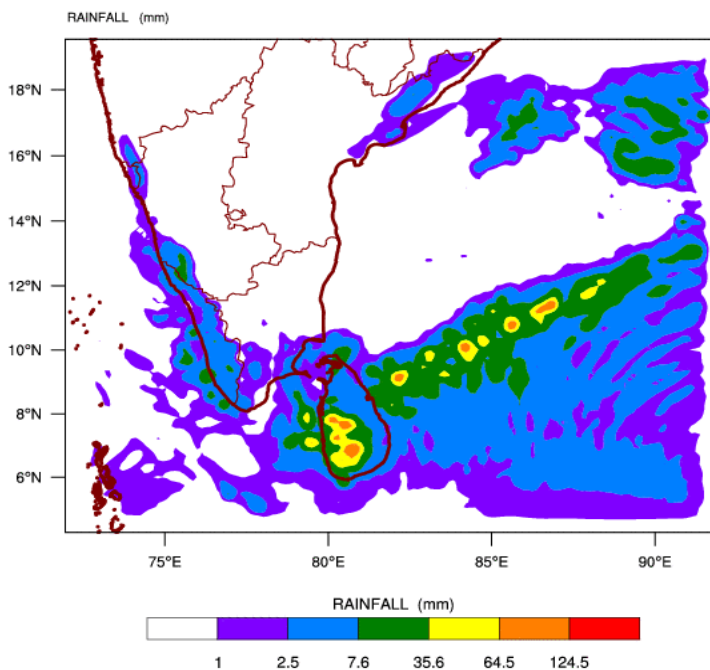
NCEP GFS Ensemble Forecast 8-14 Day Precipitation (mm)
from: 01Oct2014
08Oct2014-14Oct2014 Accumulation



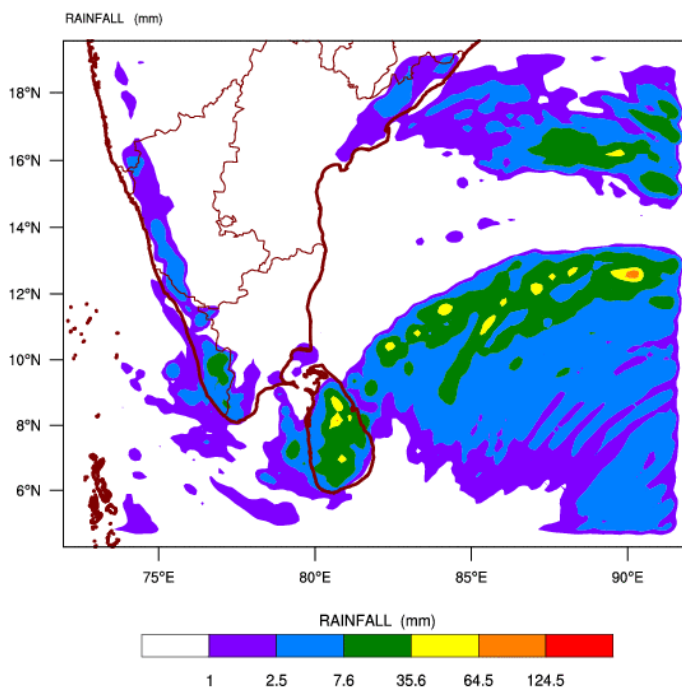
Bias correction based on last 30-day forecast error

b) WRF model forecast from Regional Meteorological Center, Chennai of Indian Meteorological Department

WRF MODEL FORECAST (48 HR.) RAINFALL(mm)\
based on 00 UTC of 01-10-2014 valid for 03 UTC of 03-10-2014

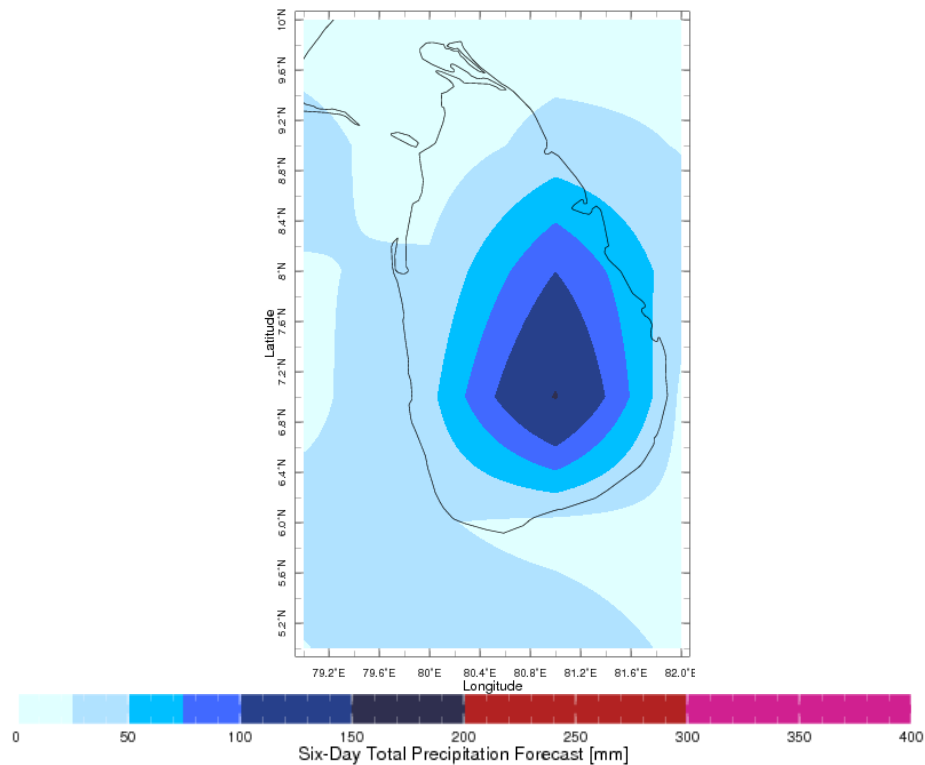


WRF MODEL FORECAST (72 HR.) RAINFALL(mm)\
based on 00 UTC of 01-10-2014 valid for 03 UTC of 04-10-2014

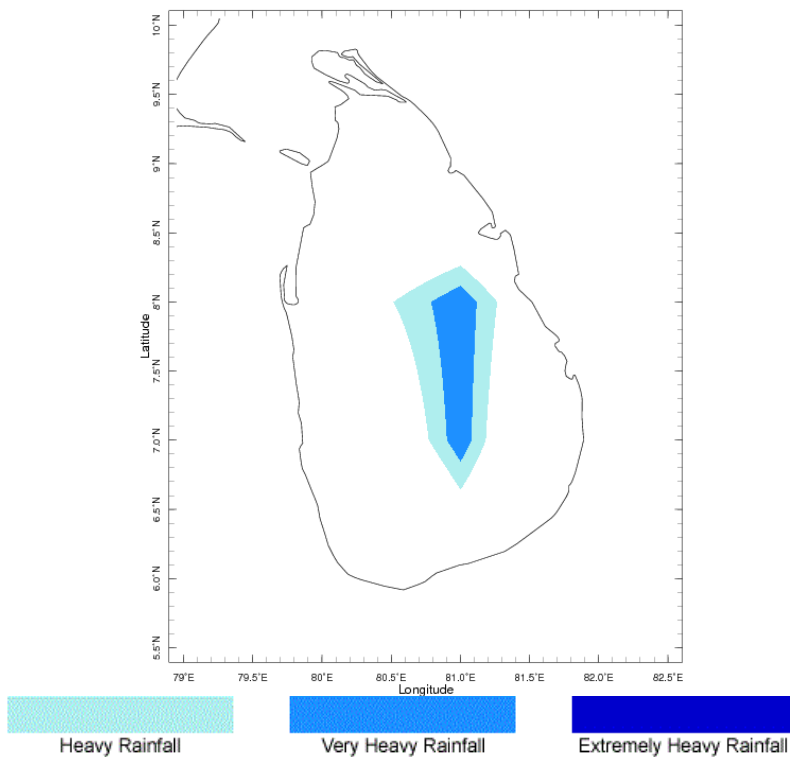


c) Weekly Precipitation Forecast for 1st- 6th October 2014 (Precipitation Forecast in Context Map Tool, IRI)

Forecast for 1-6 Oct 2014 Issued 0000 1 Oct 2014

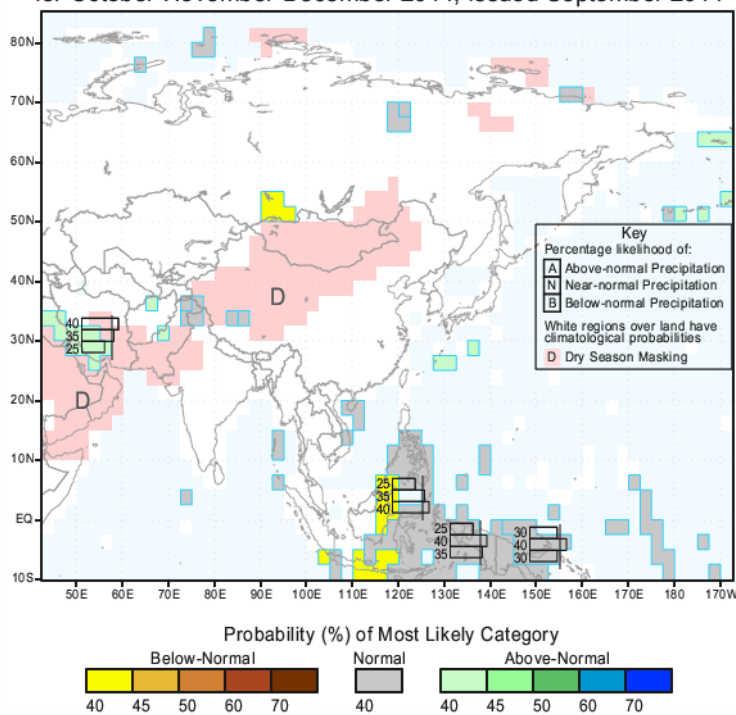


Forecast for 1-6 Oct 2014 Issued 0000 1 Oct 2014



e) Seasonal Rainfall and Temperature Predictions from IRI

IRI Multi-Model Probability Forecast for Precipitation
for October-November-December 2014, Issued September 2014



IRI Multi-Model Probability Forecast for Temperature
for October-November-December 2014, Issued September 2014

