

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^o C above average sea surface temperature was observed around Sri Lanka.

MJO STATE

MJO is weak and therefore shall not influence the rainfall in Sri Lanka.

Highlights

Monitoring and Predictions:

Heavy rainfall is expected in the entire country during the next week. Badulla, Moneragala and Polonnaruwa districts shall receive heaviest rainfall during this period.

Summary

Monitoring

Weekly Monitoring: On the 17th and 18th of September only light rainfall was observed in south western parts of Sri Lanka. No rainfall was observed anywhere in the country on the 19th and the 20th. Up to 10 mm rainfall was observed in the north central region on the 21st and in the central region on the 22nd. The entire western half of the country received much higher rainfall compared to previous days on the 23rd with Galle and Matara areas receiving rainfall up to 120 mm.

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 24th September to 7th October.

IMD WRF & IRI Model Forecast: According to the IMD WRF model the entire country shall receive high rainfall on the 26th of September. Most of the country shall receive up to 35 mm rainfall with exceptions of north eastern region, which shall receive up to 125 mm rainfall, and south eastern region, which shall receive up to 7.5 m rainfall. On the 27th a decrease in rainfall is expected in most places. North eastern region shall receive rainfall up to 65 mm and Anuradhapura and surrounding region shall receive rainfall up to 125 mm. South western and western regions shall receive light rainfall and the rest of the country except south eastern region shall receive rainfall up to 7.5 mm. NOAA models also predict very high rainfall in Polonnaruwa during 24th- 29th September. During this period the Uva Province shall receive total rainfall up to 200 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

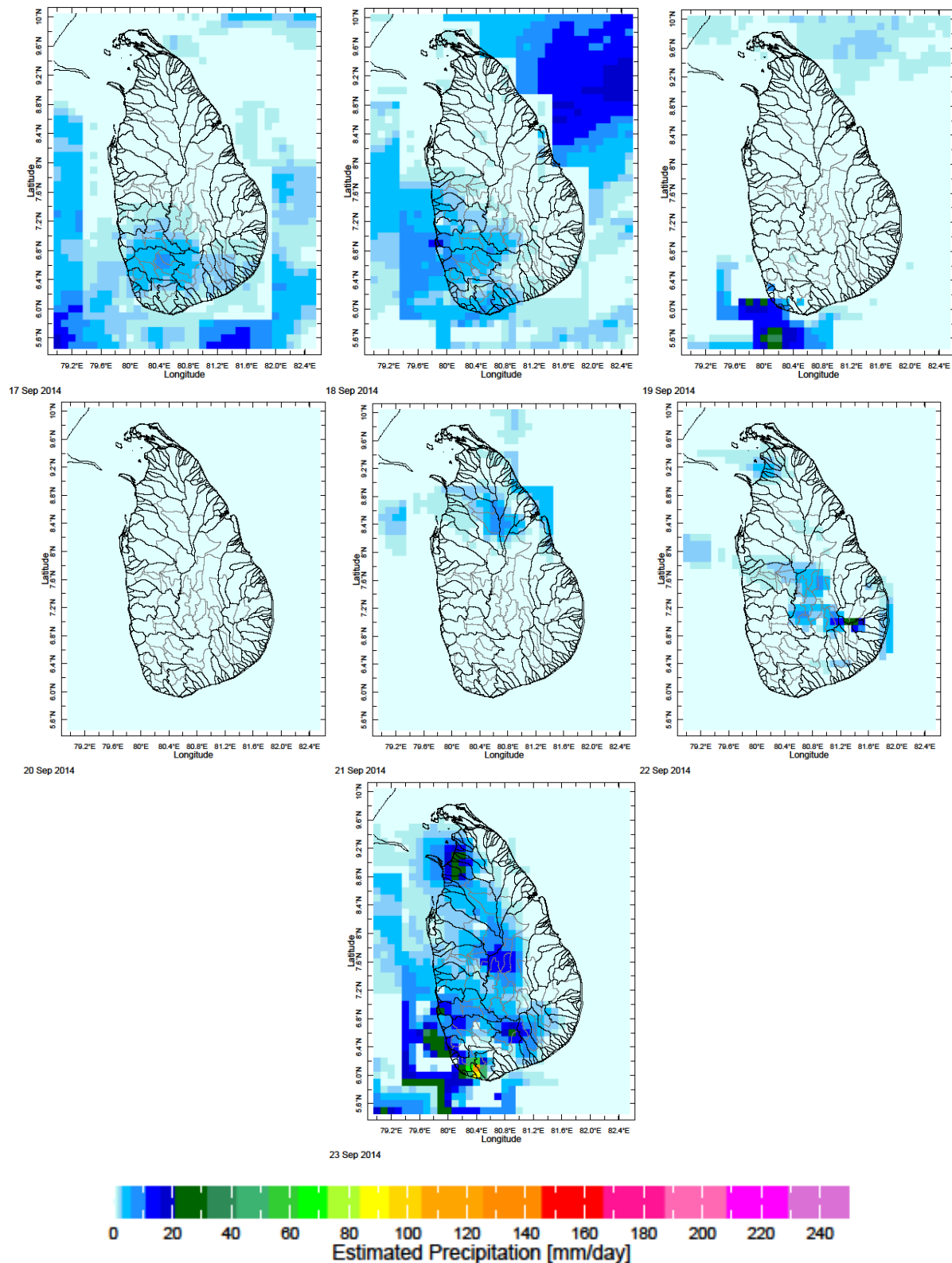
¹ International Research Institute for Climate and Society, Earth Institute at Columbia University, New York.

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

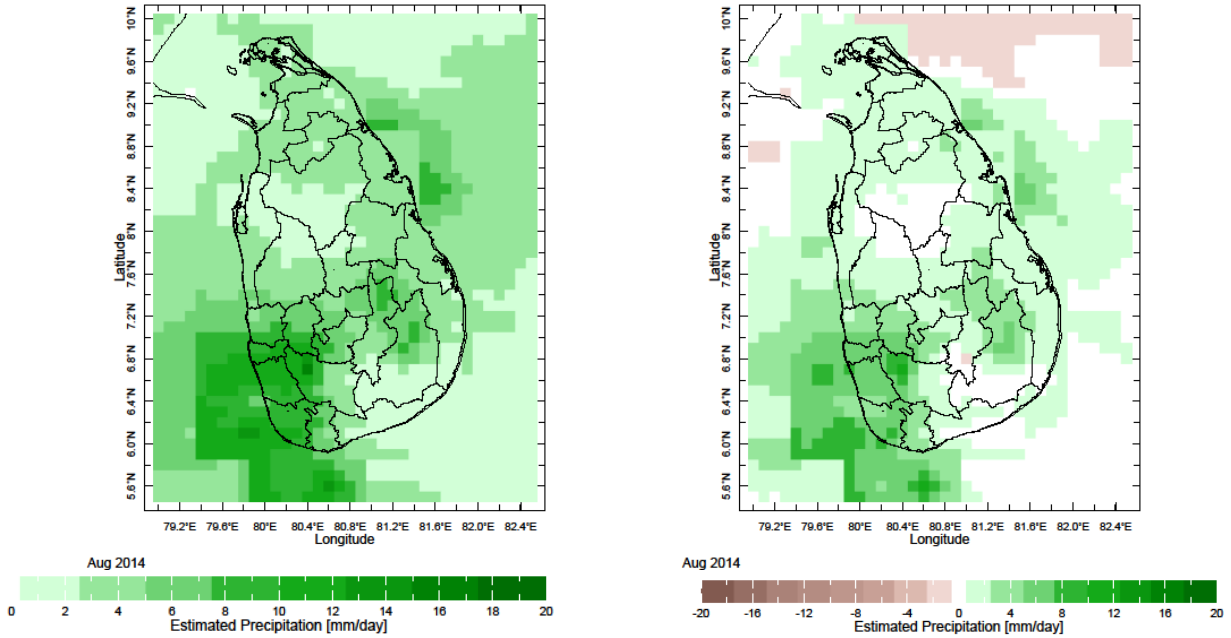
Official hydro-meteorological statements are provided by the Sri Lanka Department of Meteorology and Department of Irrigation.

1. Monitoring

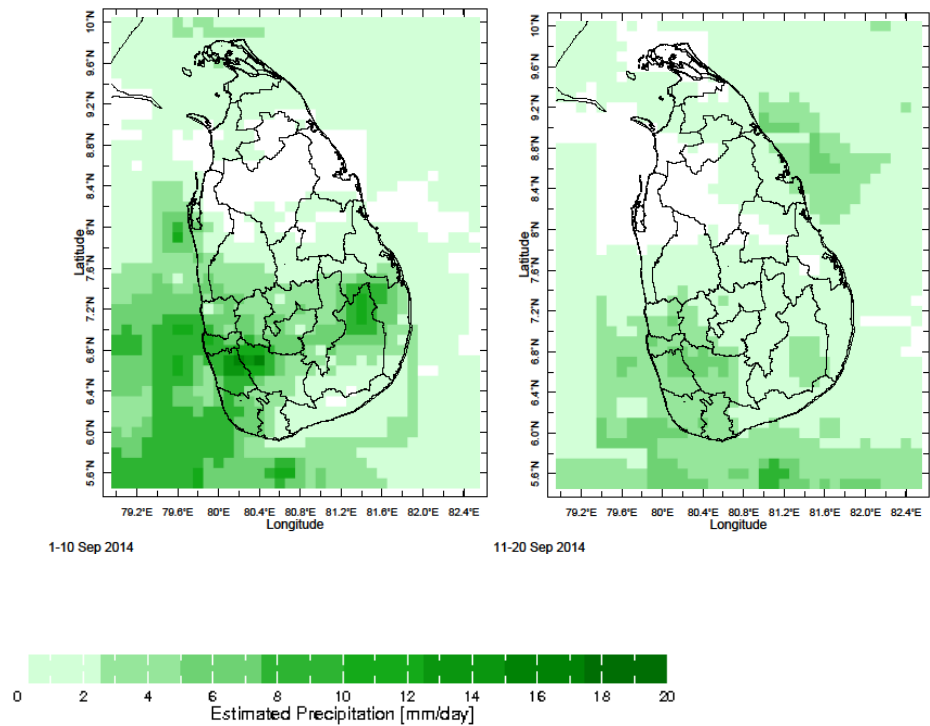
a) Daily Satellite Derived Rainfall Estimate Maps: 9th – 15th September 2014 (Left-Right, Top-Bottom)



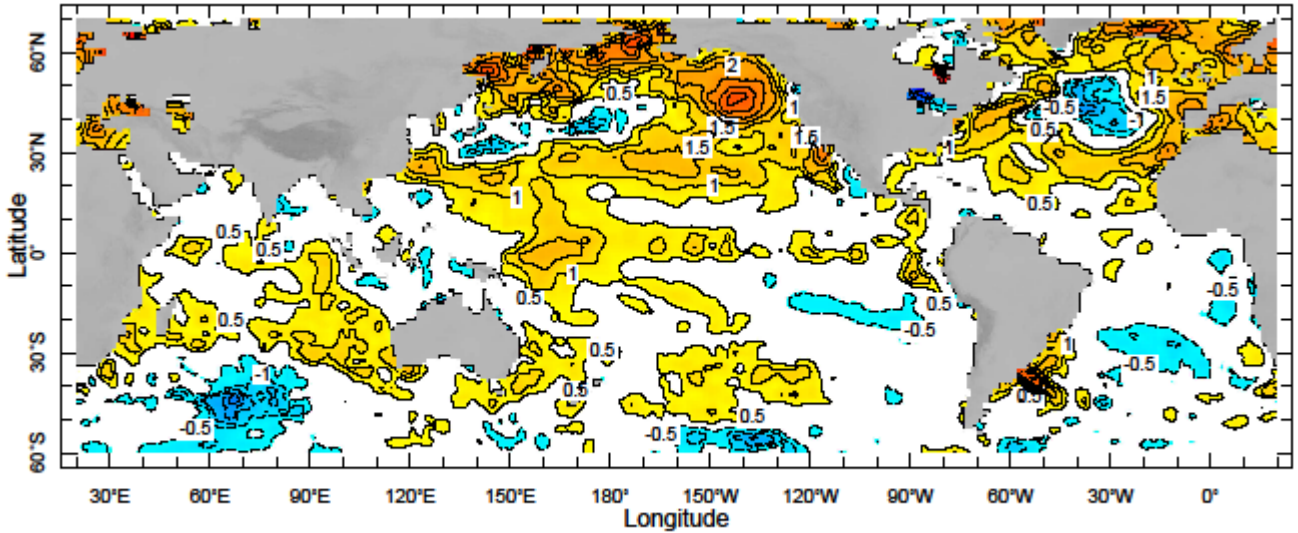
b) Monthly Satellite Derived Rainfall Estimates for August 2014 (Average – Left and Anomaly - Right)



c) Dekadal (10 Day) Satellite Derived Rainfall Estimates (21-31 Aug and 1- 10 Sep, 2014)



d) Weekly Average SST Anomalies



14-20 Sep 2014



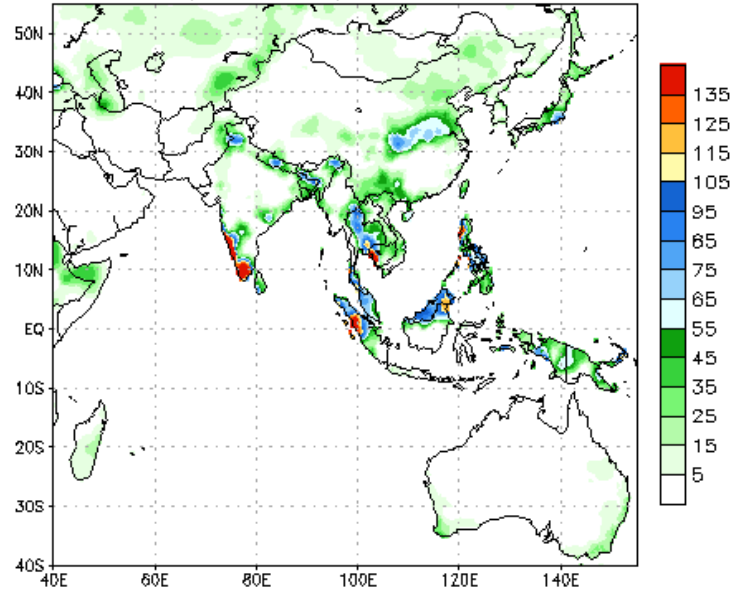
Weekly Average SST Anomalies (°C), 7th – 13th September, 2014

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

2. Predictions

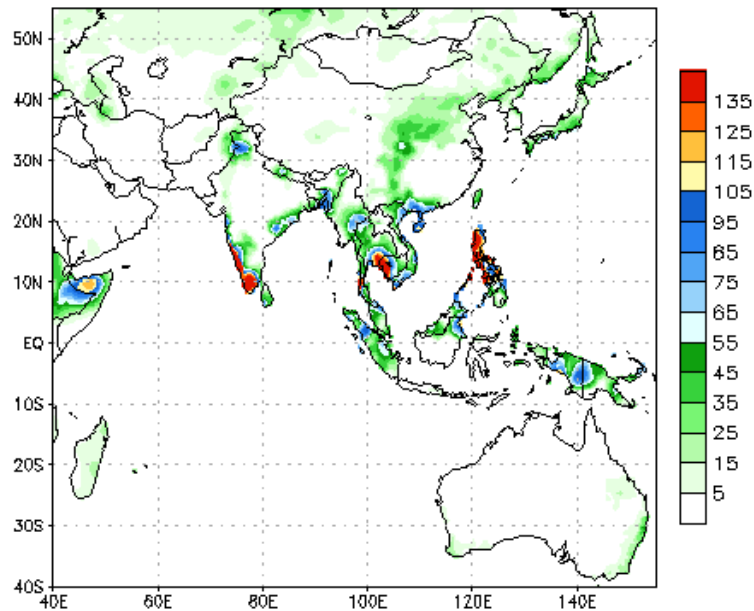
a) NCEP GFS Ensemble 1-14 day predictions, NOAA, Climate Prediction Centre, USA.

NCEP GFS Ensemble Forecast 1-7 Day Precipitation (mm)
from: 24Sep2014
24Sep2014-30Sep2014 Accumulation



Bias correction based on last 30-day forecast error

NCEP GFS Ensemble Forecast 8-14 Day Precipitation (mm)
from: 24Sep2014
01Oct2014-07Oct2014 Accumulation

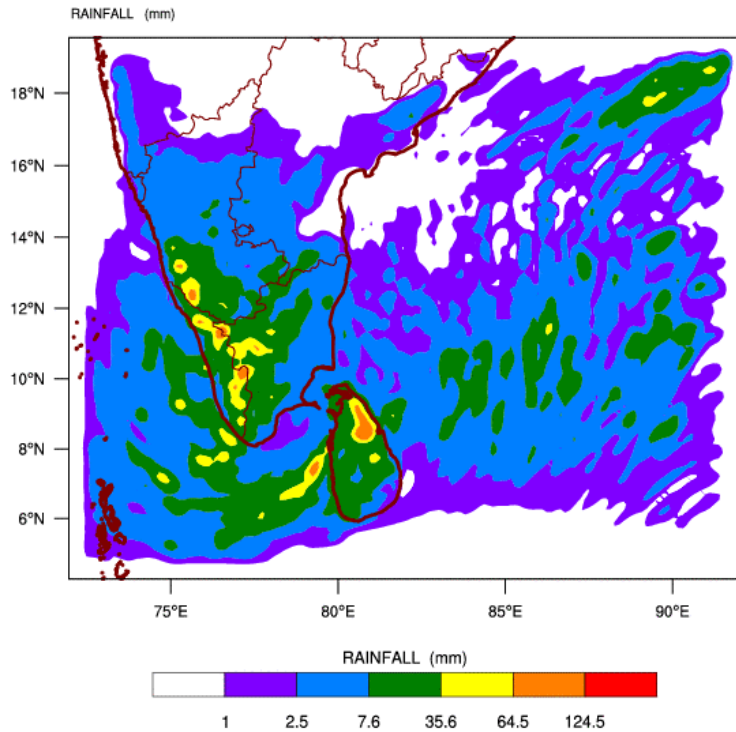


Bias correction based on last 30-day forecast error

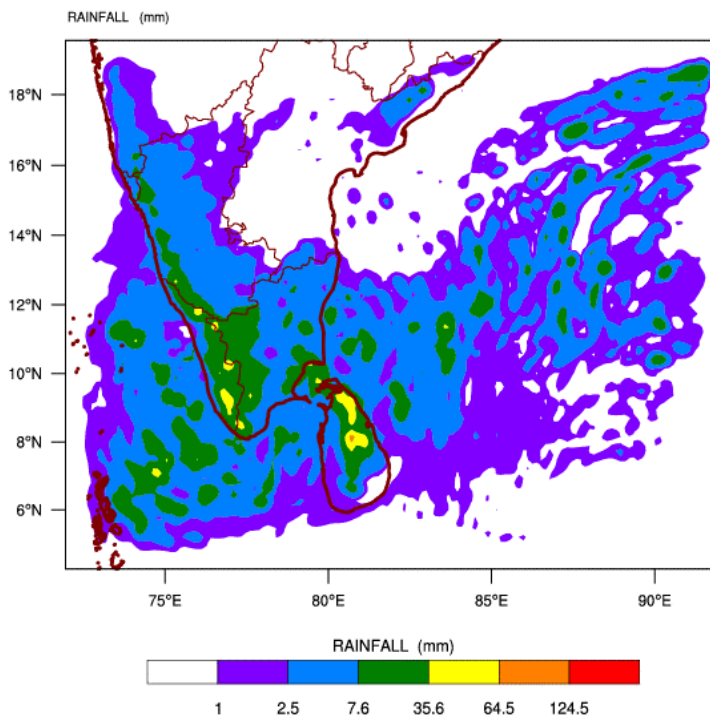
Source – NOAA Climate Prediction Center

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 24-09-2014 valid for 03 UTC of 26-09-2014

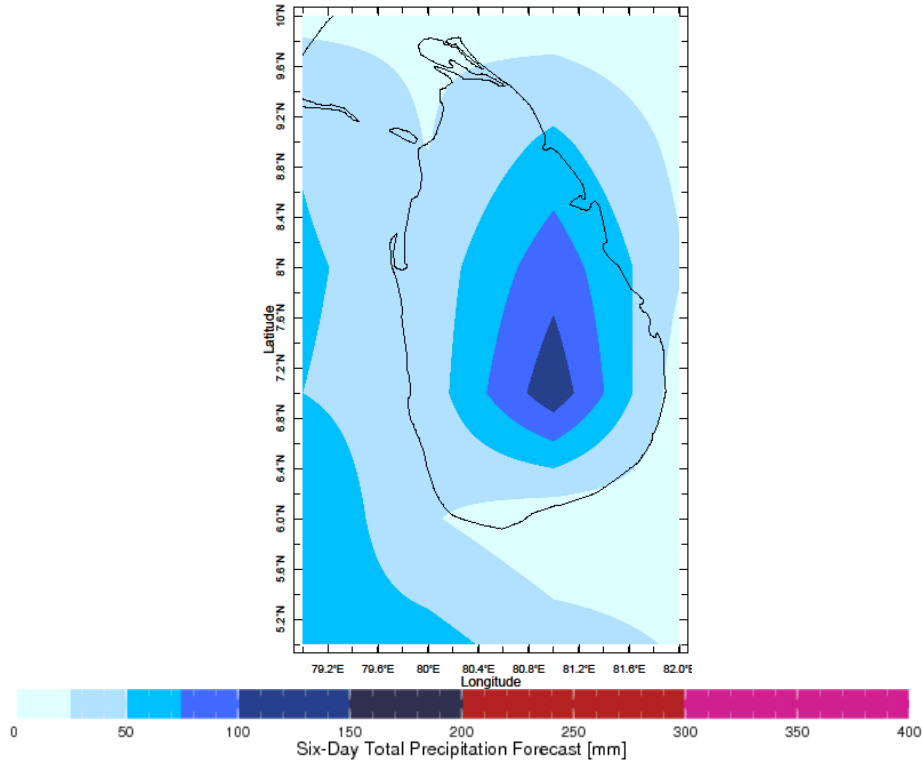


WRF MODEL FORECAST (72 HR.) RAINFALL(mm)\
based on 00 UTC of 24-09-2014 valid for 03 UTC of 27-09-2014

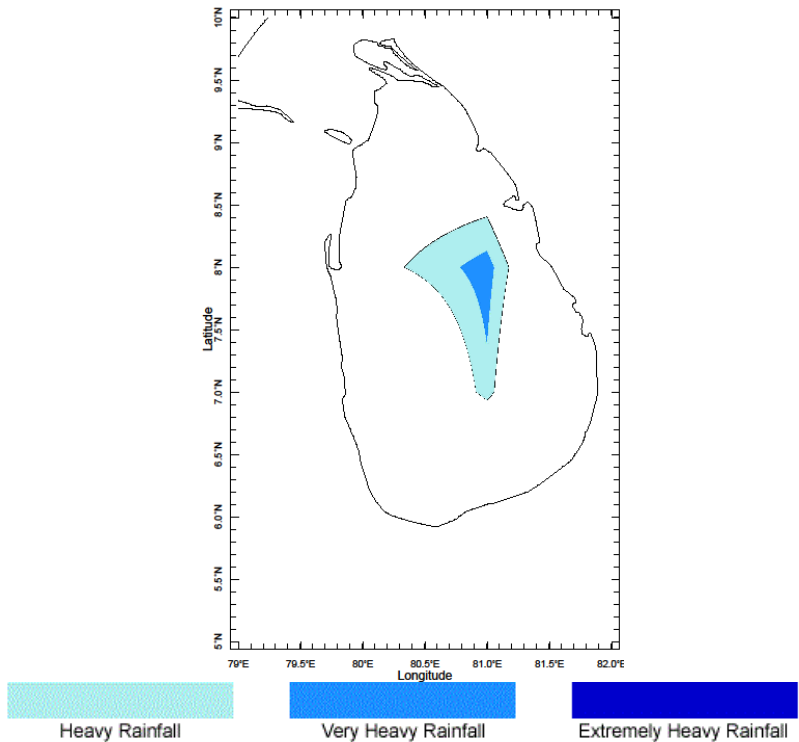


c) Weekly Precipitation Forecast for 17th- 22nd September 2014 (Precipitation Forecast in Context Map Tool, IRI)

Forecast for 24-29 Sep 2014 Issued 0000 24 Sep 20

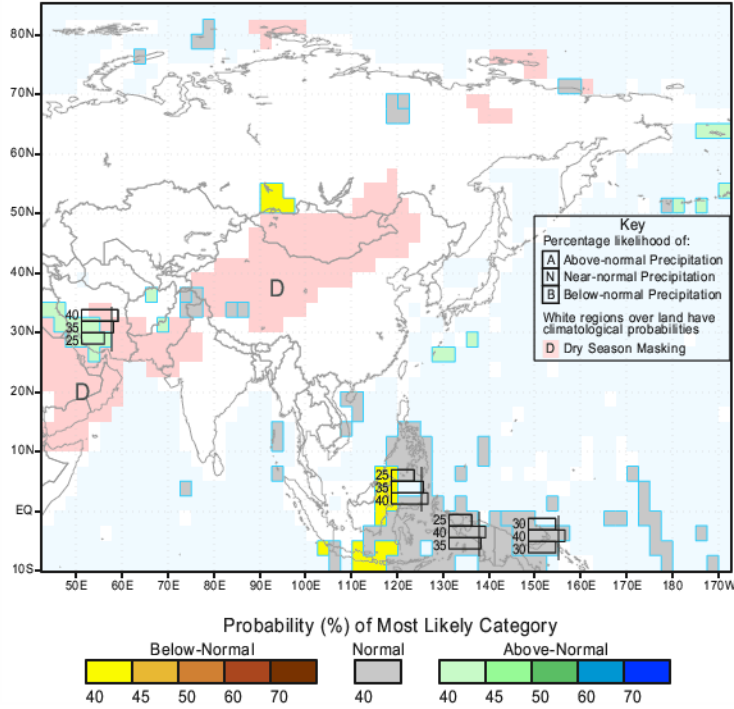


Forecast for 24-29 Sep 2014 Issued 0000 24 Sep 2014



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

