

Experimental Climate Monitoring and Prediction

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FECT BLOG

Past reports available at
<http://fects.blogspot.com/> and
<http://fects.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 average sea surface temperature in northern sea was observed.

MJO STATE

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

Highlights

Monitoring and Predictions:

Slightly heavy rainfall was observed throughout the coastal areas of the country and mostly around the south-west region during the previous week and despite the tropical cyclone Hudhud only mild rainfall is expected in the entire country during next week except in south- western regions where up to 150- 200 mm rainfall is expected in coming six days. The north-western sea of Sri Lanka shows an above average sea surface temperature.

Summary

Monitoring

Weekly Monitoring: On 1st and 2nd of October high rainfall was observed throughout the country averaging around 15 mm and from 3rd to 6th an average of 10 mm- 15 mm rainfall was observed around the coastal areas in general. On 7th October a very heavy rainfall around 50 mm was observed around the south-west region. Rainfall up to 100 mm was observed in Ratnapura and Kalmunai areas on the same day.

Monthly Monitoring: An average rainfall of 6 mm-10 mm was observed throughout the country with higher precipitation observed in the south-western regions of Sri Lanka during September. Highest rainfall during this month was observed in Ratnapura district. Also the decadal rainfall average was increased from 4 mm to 18 mm within a week.

Predictions

14 day prediction: The entire country shall receive total rainfall up to 65 mm during 8th of October to 14th October. Rainfall is expected to increase in the next week (15th- 21st) resulting in heavier rainfall in south- western regions of Sri Lanka.

IMD WRF & IRI Model Forecast: According to the IMD WRF model the entire country shall receive high rainfall on the 10th of October. By 11th of October the south-west region shall receive average rainfall around 7.6 mm- 35.6 mm whereas the rest of the country shall not receive significant rainfall. Heavy rainfall continues in the Bay of Bengal due to the tropical cyclone Hudhud.

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

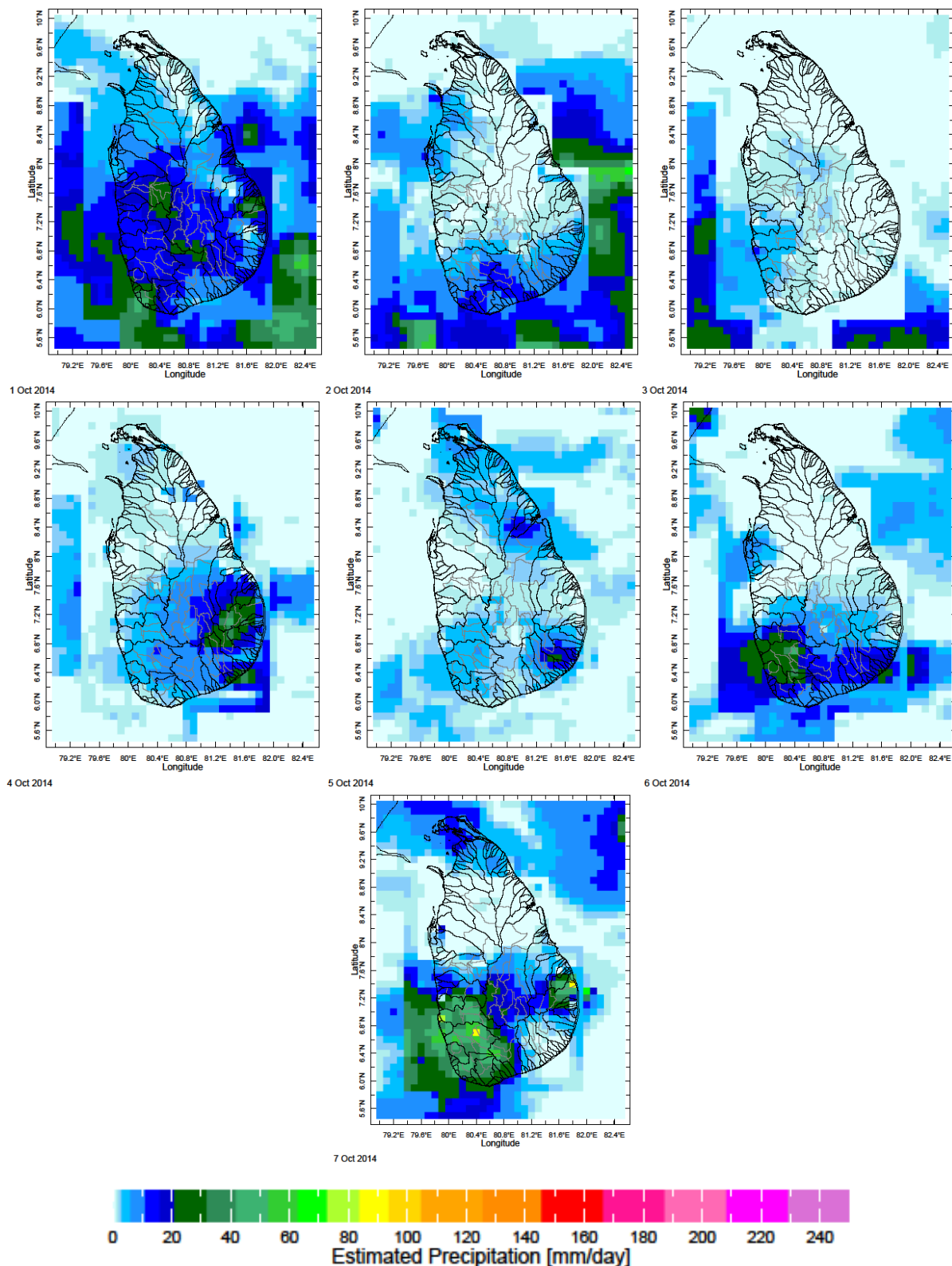
¹ International Research Institute for Climate and Society, Earth Institute at Columbia University, New York.

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

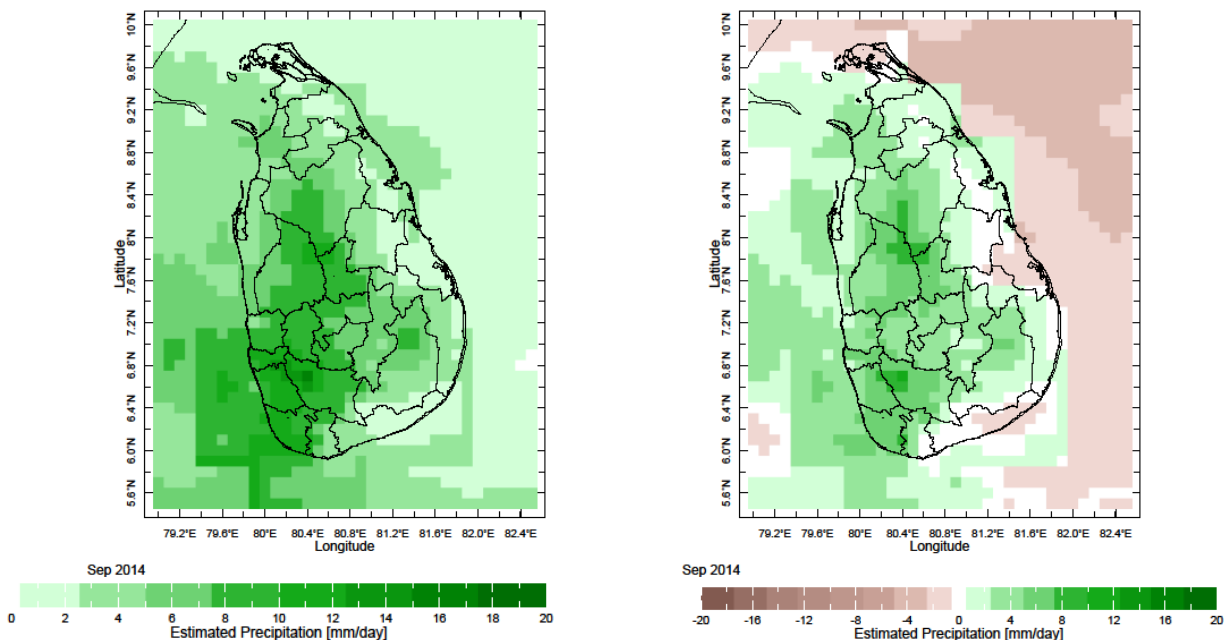
Official hydro-meteorological statements are provided by the Sri Lanka Department of Meteorology and Department of Irrigation.

1. Monitoring

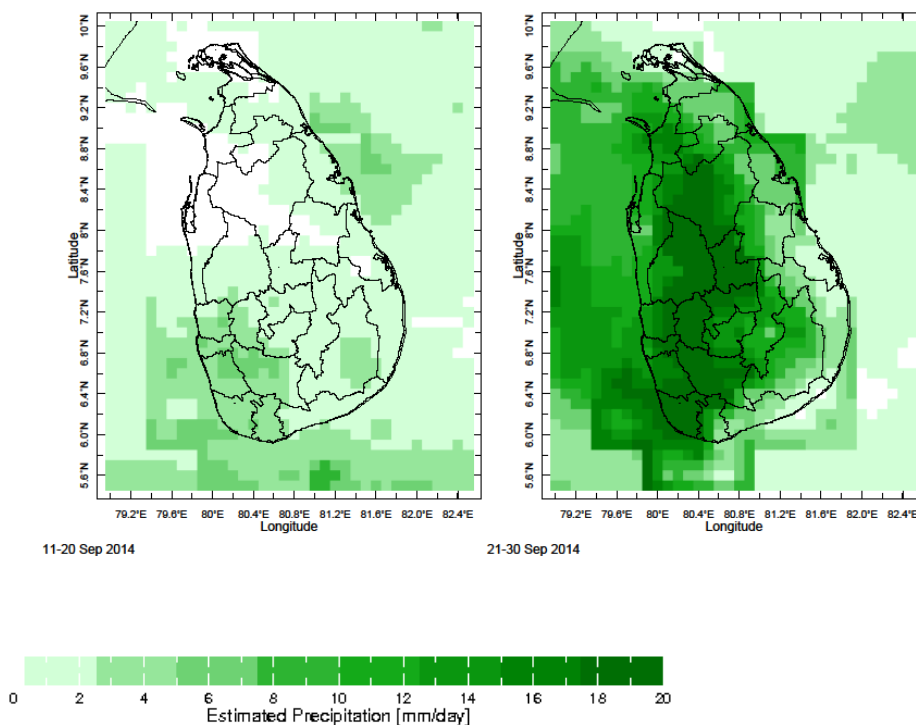
a) Daily Satellite Derived Rainfall Estimate Maps: 01st – 07th October 2014 (Left-Right, Top-Bottom)



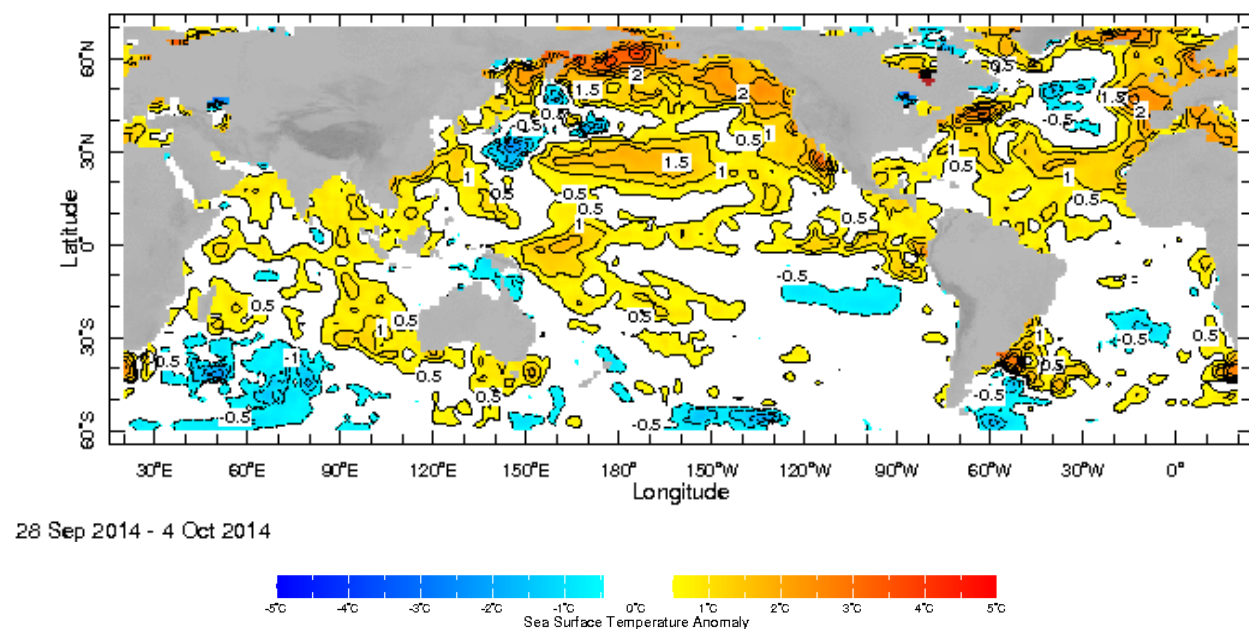
b) Monthly Satellite Derived Rainfall Estimates for September 2014 (Average – Left and Anomaly - Right)



c) Dekadal (10 Day) Satellite Derived Rainfall Estimates (11-20 Sep and 21-30 Sep, 2014)



d) Weekly Average SST Anomalies



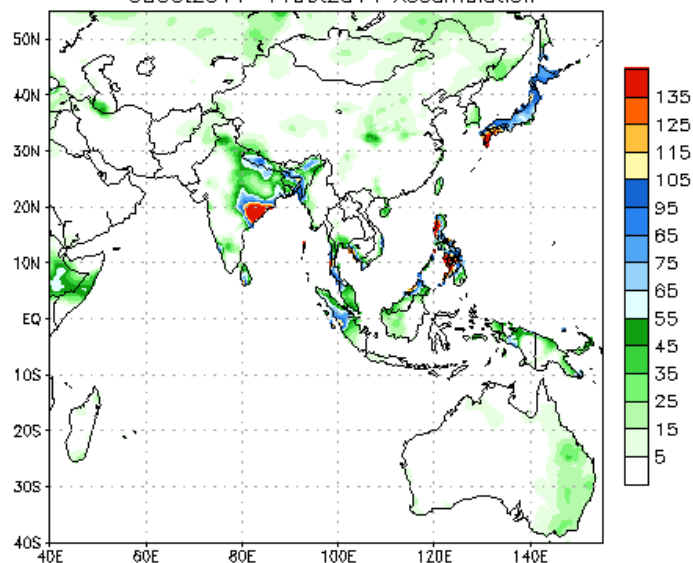
Weekly Average SST Anomalies ($^{\circ}\text{C}$), 28th September – 04th October, 2014

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

2. Predictions

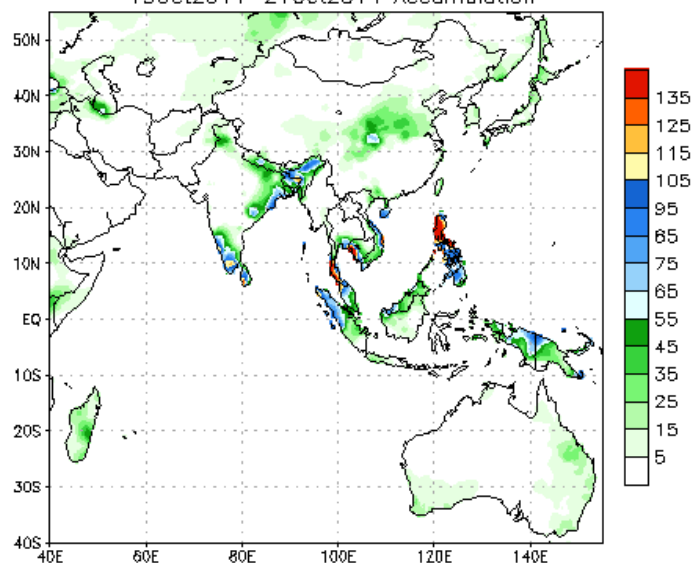
a) NCEP GFS Ensemble 1-14 day predictions, NOAA, Climate Prediction Centre, USA.

NCEP GFS Ensemble Forecast 1-7 Day Precipitation (mm)
from: 08Oct2014
08Oct2014-14Oct2014 Accumulation



Bias correction based on last 30-day forecast error

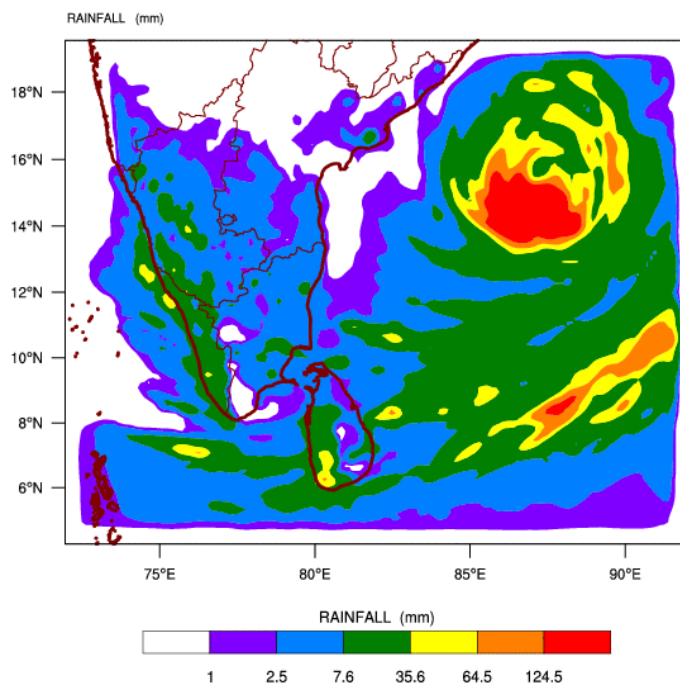
NCEP GFS Ensemble Forecast 8-14 Day Precipitation (mm)
from: 08Oct2014
15Oct2014-21Oct2014 Accumulation



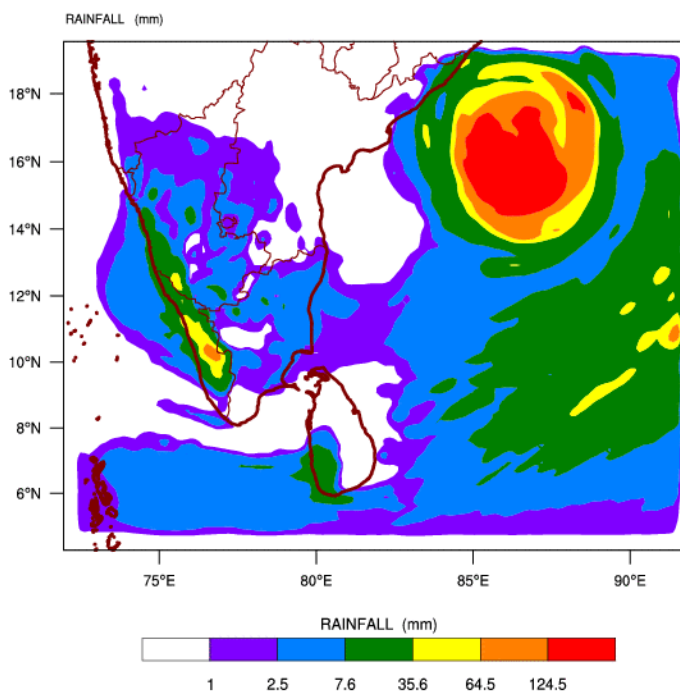
Bias correction based on last 30-day forecast error

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

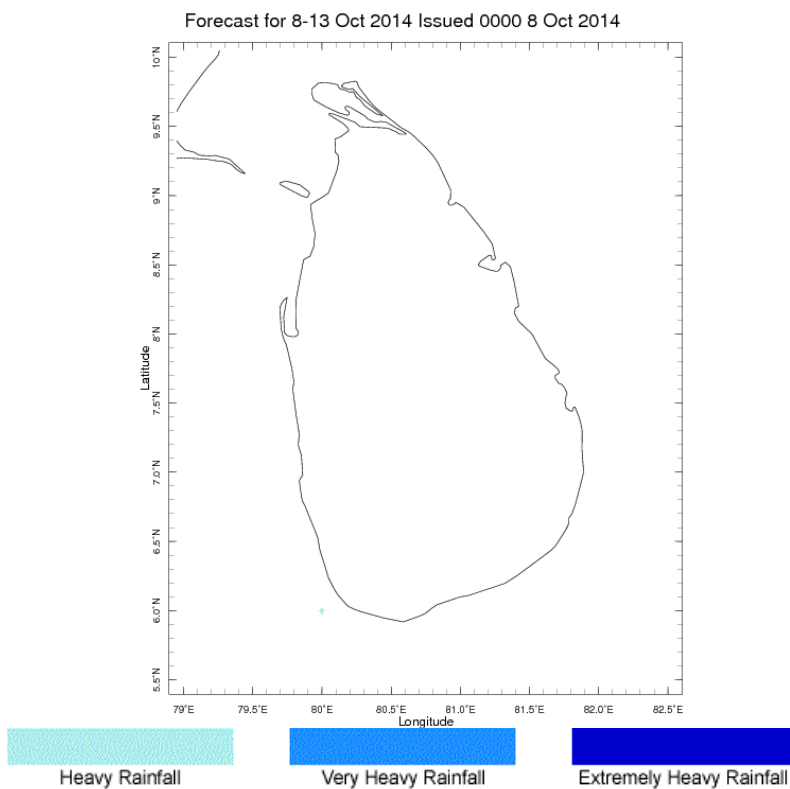
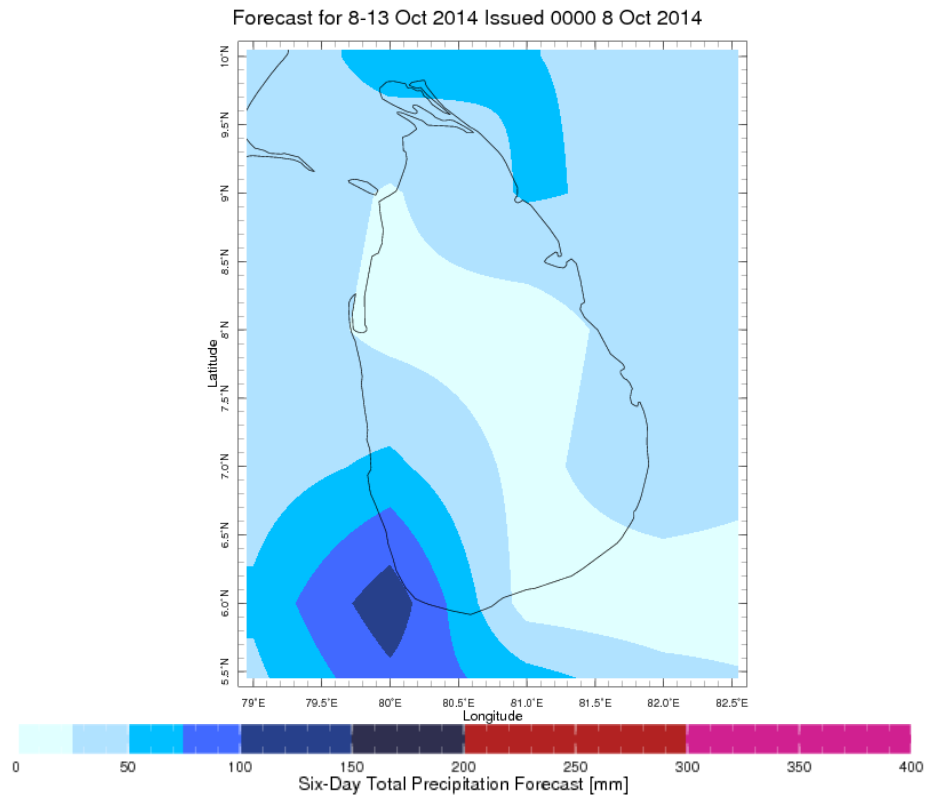
WRF MODEL FORECAST (48 HR.) RAINFALL(mm)\
based on 12 UTC of 08-10-2014 valid for 12 UTC of 10-10-2014



WRF MODEL FORECAST (72 HR.) RAINFALL(mm)\
based on 12 UTC of 08-10-2014 valid for 12 UTC of 11-10-2014

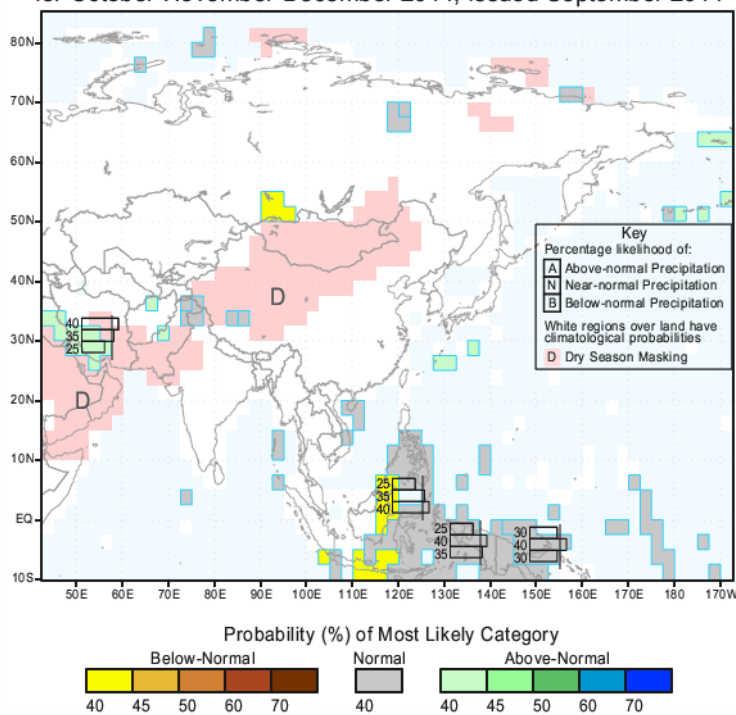


c) Weekly Precipitation Forecast for 8th - 13th October 2014 (Precipitation Forecast in Context Map Tool, IRI)



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

