

Experimental Climate Monitoring and Prediction

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19 March 2015

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/>

March 5, 2015 PACIFIC SEAS STATE

During January through February 2015 the SST just met the thresholds for weak Niño conditions. Lately some of the atmospheric variables began indicating an El Niño pattern a little more than they had been before January. The consensus of ENSO prediction models indicate warm neutral to borderline El Niño conditions during the February-April season in progress, continuing into northern spring 2015, with some suggestion of strengthening El Niño toward mid-2015.

(Text Courtesy IRI)

INDIAN OCEAN STATE

Average sea surface temperature was observed in the sea around Sri Lanka.

MJO STATE

MJO is in phase 7 with a very high amplitude. Therefore this shall suppress rainfall in Sri Lanka

Highlights

Once again rainfall was observed during the previous week following a dry week. The entire country received rainfall during the week. NOAA NCEP and IRI models predict dry conditions in the next week.

Summary

Monitoring

Weekly Monitoring: Light rainfall in south western region of the country was observed on 10th and 11th of March. During 12th -15th up to 40 mm rainfall was observed throughout the country. Once again light rainfall was observed on the 16th.

Monthly Monitoring: After a dry January, almost the entirety of the country received above average rainfall during February. Only places where less than average rainfall was observed are Puttalam, Kurunegala and Polonnaruwa districts. Batticaloa and Ratnapura areas received highest rainfall during this month. Decreased rainfall was observed during the first 10 days of March compared to the last 8 days of February. In March until the 10th, rainfall was mostly observed in the western and south-western parts of the country.

Predictions

14 day prediction: NOAA NCEP models does not predict rainfall during 18th- 24th March but during 25th- 31st March the whole country is expected to receive rainfall up to 55 mm.

IMD WRF & IRI Model Forecast: According to the IMD WRF model, no rainfall is expected on 20th and 21st of March. IRI models also predict low rainfall during 17th- 22nd March with no chance of unusually high rainfall.

Seasonal Prediction: As per IRI Multi Model Probability Forecast for March to May, the total 3 month precipitation shall be climatological. The 3 month average temperature has more than 60- 70% likelihood of being in the above-normal tercile during this period.

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

2. Predictions

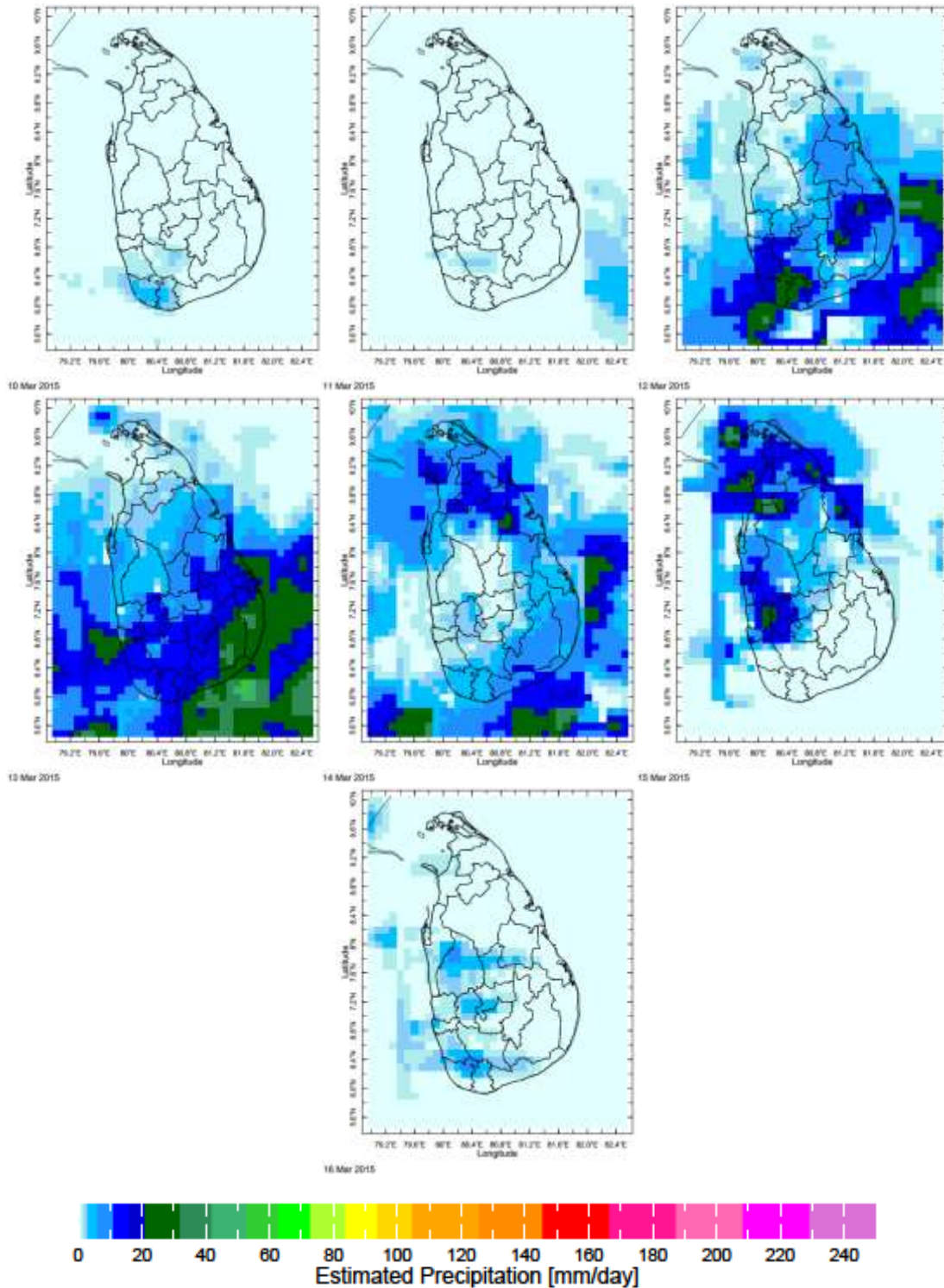
- NCEP GFS Ensemble 1-14 day predictions
- WRF model forecast Regional Meteorological Center, Chennai, Indian Meteorological Department)
- Weekly precipitation forecast (IRI)
- Seasonal Predictions from IRI

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

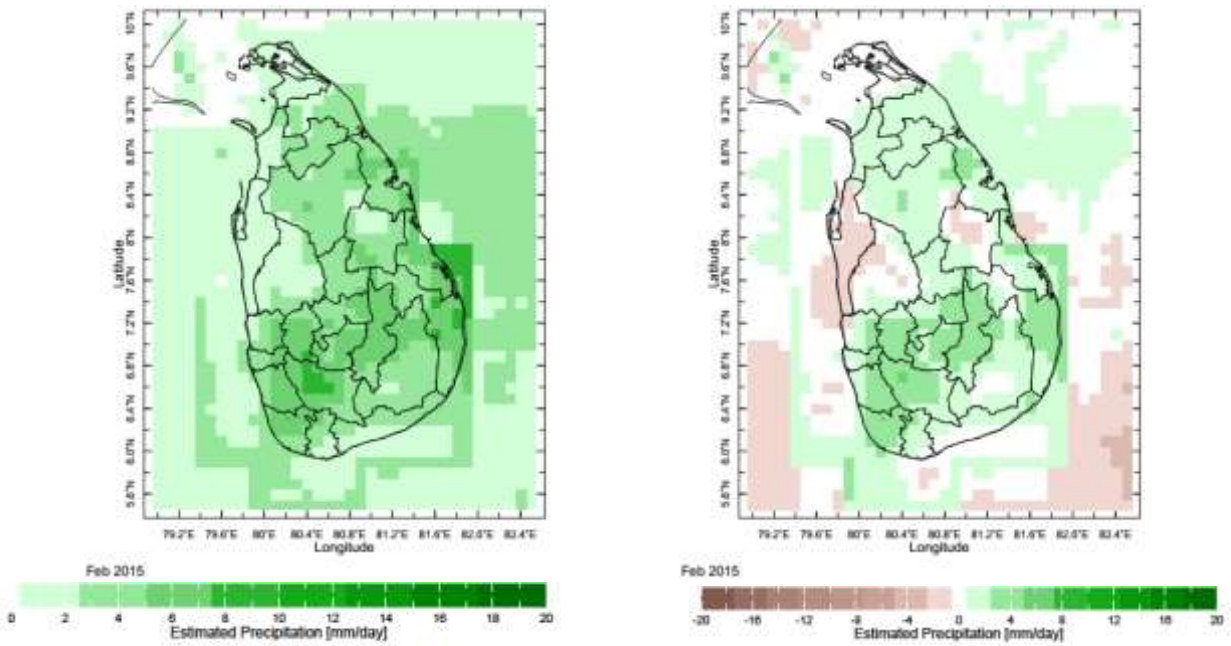
² These interpretations of hydro-meteorological conditions for the Mahaweli basins are provided for the use of the WMS/MASL.

1. Monitoring

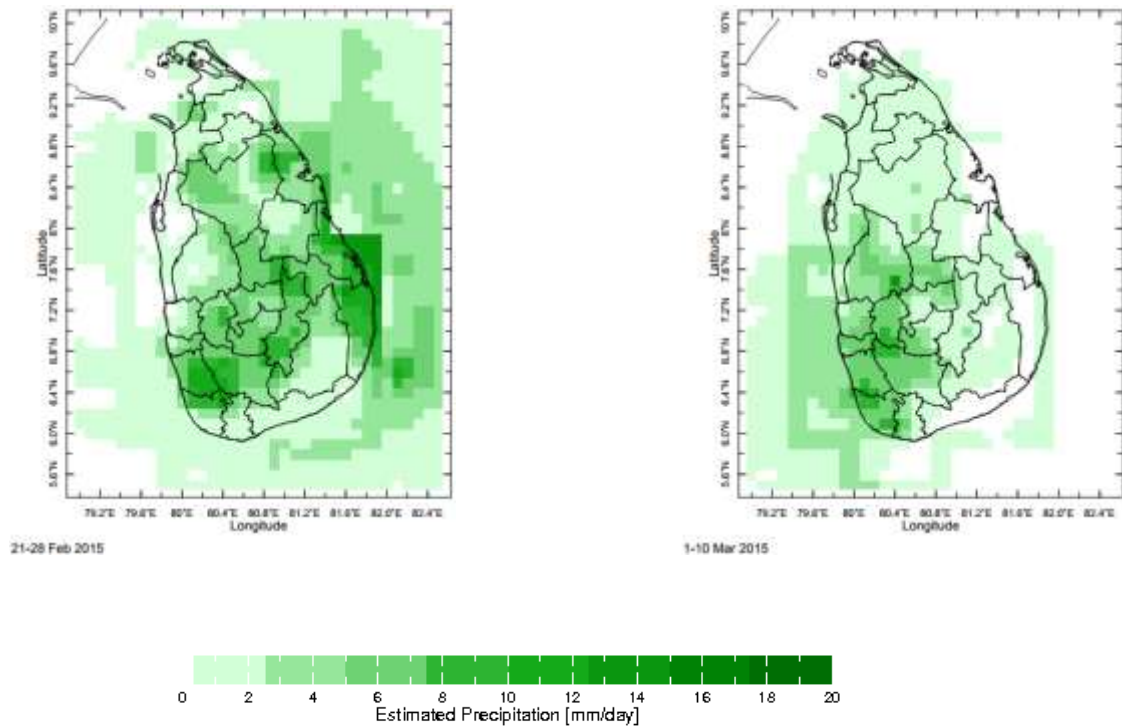
a) Daily Satellite Derived Rainfall Estimate Maps: 10th – 16th March 2015 (Left-Right, Top-Bottom)



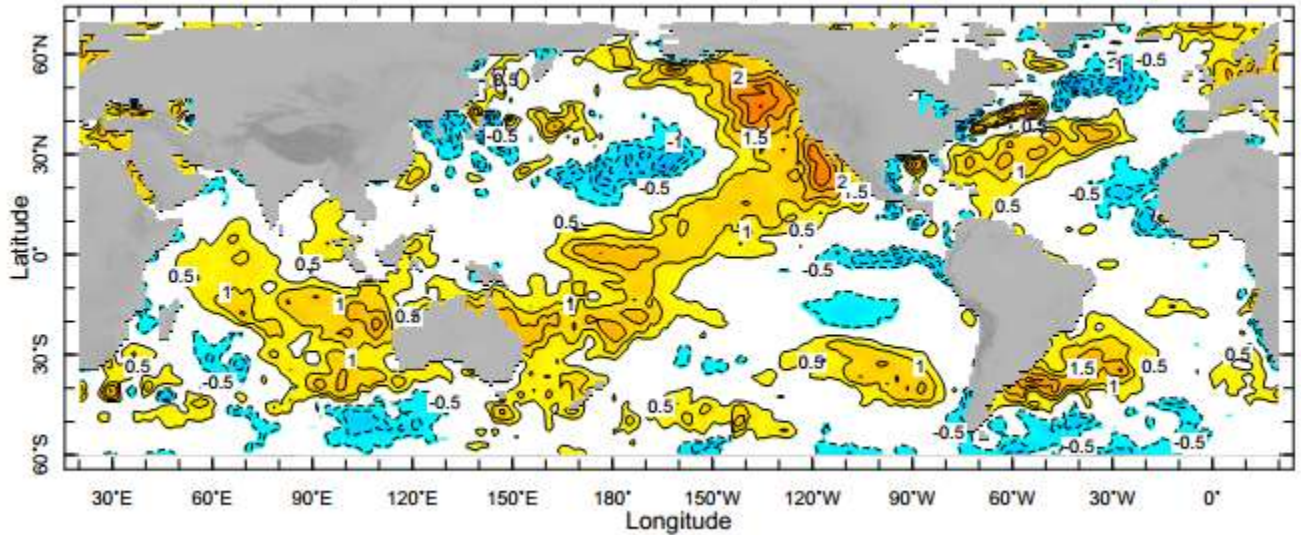
b) Monthly Satellite Derived Rainfall Estimates for February 2015 (Average – Left and Anomaly - Right)



c) Dekadal (10 Day) Satellite Derived Rainfall Estimates 21-28 February & 1- 10 March 2015)



d) Weekly Average SST Anomalies



8-14 Mar 2015



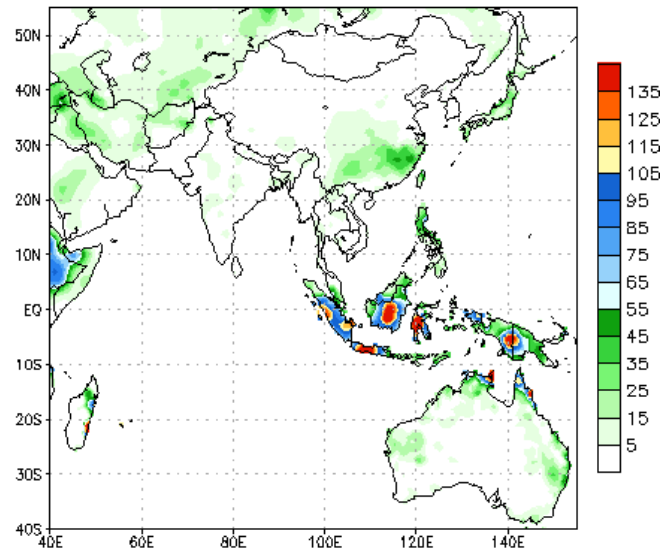
Weekly Average SST Anomalies ($^{\circ}\text{C}$), 8th-14th March, 2015

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

2. Predictions

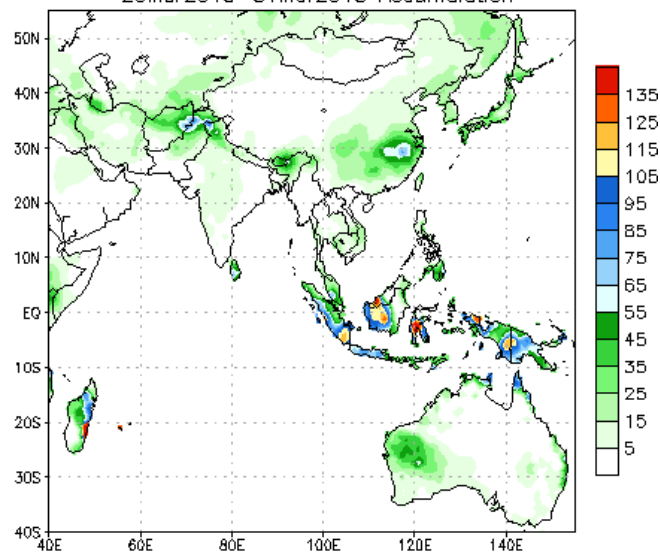
a) NCEP GFS Ensemble 1-14 day predictions, NOAA, Climate Prediction Centre, USA.

NCEP GFS Ensemble Forecast 1-7 Day Precipitation (mm)
from: 18Mar2015
18Mar2015-24Mar2015 Accumulation



Bias correction based on last 30-day forecast error

NCEP GFS Ensemble Forecast 8-14 Day Precipitation (mm)
from: 18Mar2015
25Mar2015-31Mar2015 Accumulation

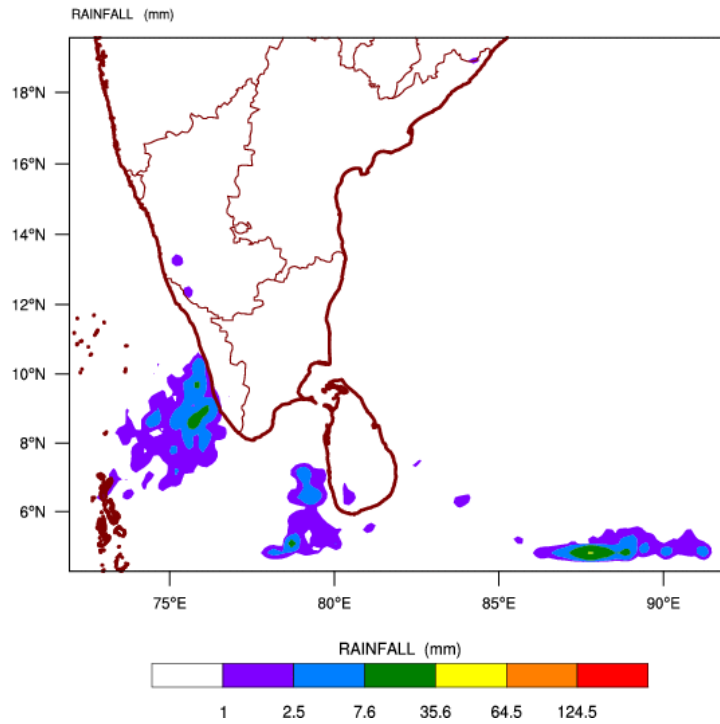


Bias correction based on last 30-day forecast error

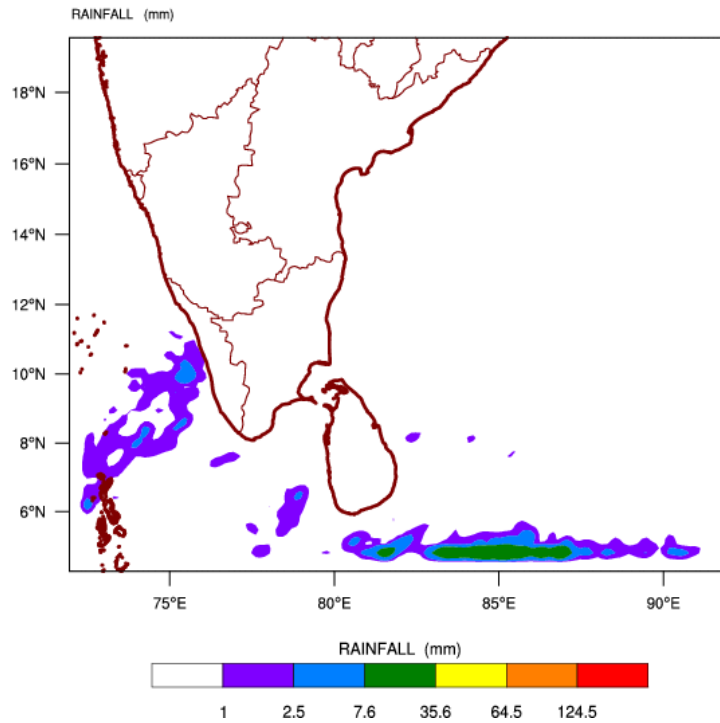
Source – NOAA Climate Prediction Center

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

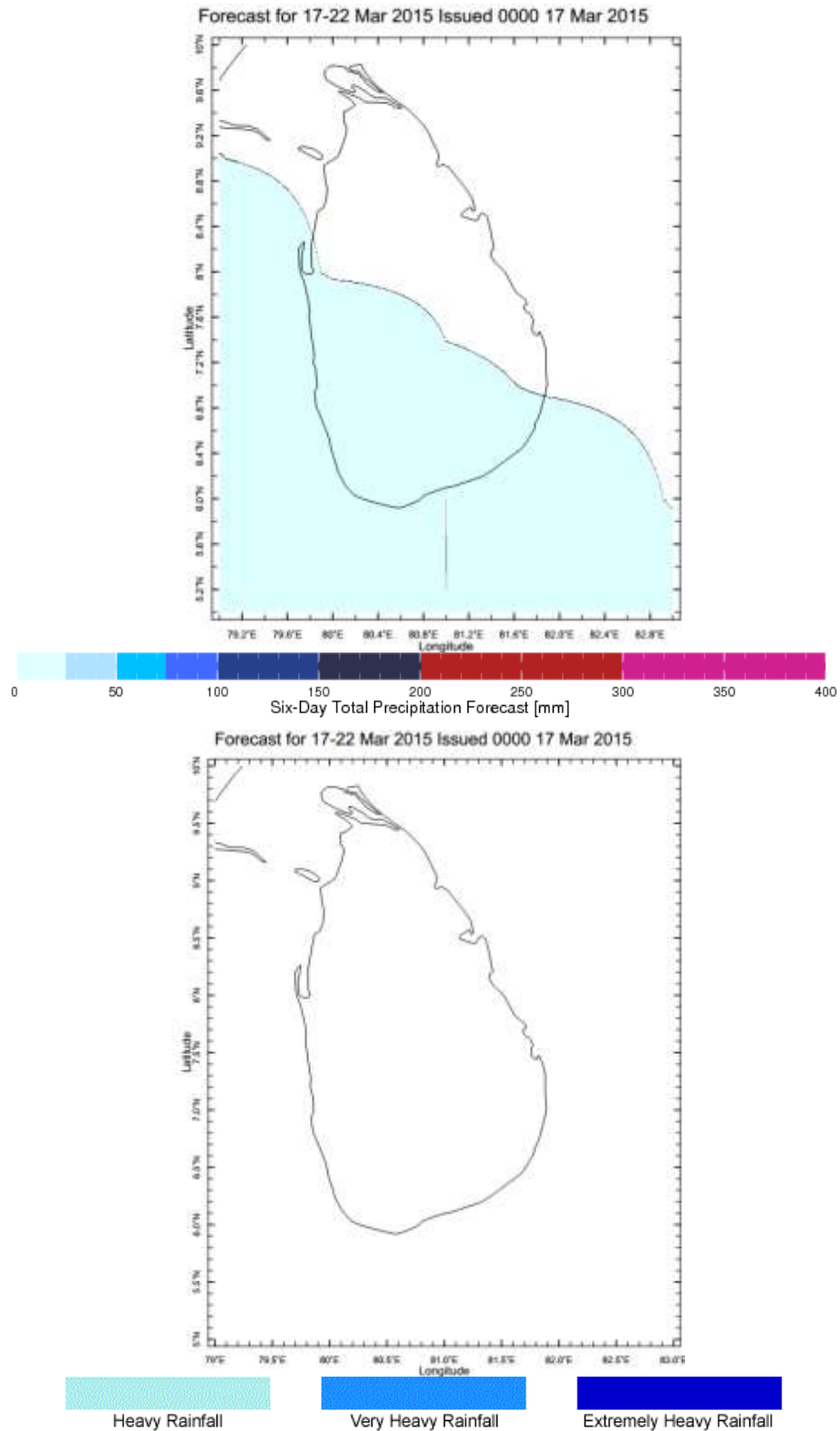
WRF MODEL FORECAST (48 HR.) RAINFALL(mm)\
based on 00 UTC of 18-03-2015 valid for 03 UTC of 20-03-2015



WRF MODEL FORECAST (72 HR.) RAINFALL(mm)\
based on 00 UTC of 18-03-2015 valid for 03 UTC of 21-03-2015

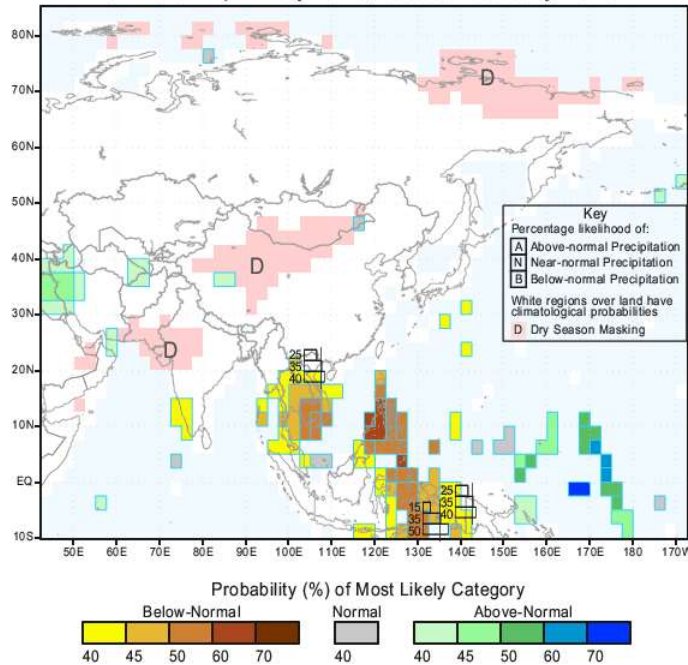


c) Weekly Precipitation Forecast for 17th-22nd March 2015 (Precipitation Forecast in Context Map Tool, IRI)



e) Seasonal Rainfall and Temperature Predictions from IRI

IRI Multi-Model Probability Forecast for Precipitation
for March-April-May 2015, Issued February 2015



IRI Multi-Model Probability Forecast for Temperature
for March-April-May 2015, Issued February 2015

