

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/>

February 5, 2015 PACIFIC SEAS STATE

During December 2014 through early January 2015 the SST exceeded thresholds for weak Niño conditions, although only some of the atmospheric variables indicate an El Niño pattern. Most of the ENSO prediction models indicate weak El Niño conditions during the December-February season in progress, continuing through most or all of northern spring 2015.

(Text Courtesy IRI)

INDIAN OCEAN STATE

Neutral SST was observed in the sea around Sri Lanka.

MJO STATE

MJO is weak therefore it shall not affect the rainfall in Sri Lanka

Highlights:

During past week significant rainfall was only observed between 11th to 13th in western, southern, eastern and central areas averaging up to 10 mm. Highest rainfall for the week was observed on 12th February in Ratnapura around 60 mm. During 18th to 23th rainfall can be observed in northern and western areas.

Summary:

Monitoring

Weekly Monitoring: On 11th rainfall was observed in western, southern, eastern and central regions of the country averaging up to 20 mm with high rainfall in Avissawella and Kataragama areas averaging up to 40 mm. On 12th areas around Avissawella and Ratnapura received rainfall averaging up to 50 mm. Rainfall decreased on 13th but still significant rainfall was observed in Sabaragamuwa, western and eastern regions of the island averaging up to 20 mm. Some rainfall was observed in Galle and Matara areas on 14th. Thereafter rainfall was completely ceased during 15th to 17th February.

Monthly Monitoring: During January an average rainfall of 2 mm to 5 mm was observed in western, southern, sabaragamuwa and uva regions. Highest rainfall in January was observed in the areas of Kalutara and Ratnapura. Decadal rainfall average was significantly increased during 1st-10th February compared with 21st - 31st January.

Predictions

14 day prediction: NOAA NCEP models predict that northern region shall receive rainfall during 8th to 24th February exceeding 35 mm. According to the model rainfall is expected to cease during 25th February - 3rd March.

IMD WRF & IRI Model Forecast: According to the IMD WRF model, no significant rainfall is expected on the 20th and 21st of February. According to IRI model, during 18th -23th February Colombo area shall receive 6 day total rainfall around 50 mm.

Seasonal Prediction: As per IRI Multi Model Probability Forecast for February to April, the total 3 month precipitation shall be climatological. The 3 month average temperature has more than 60% 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

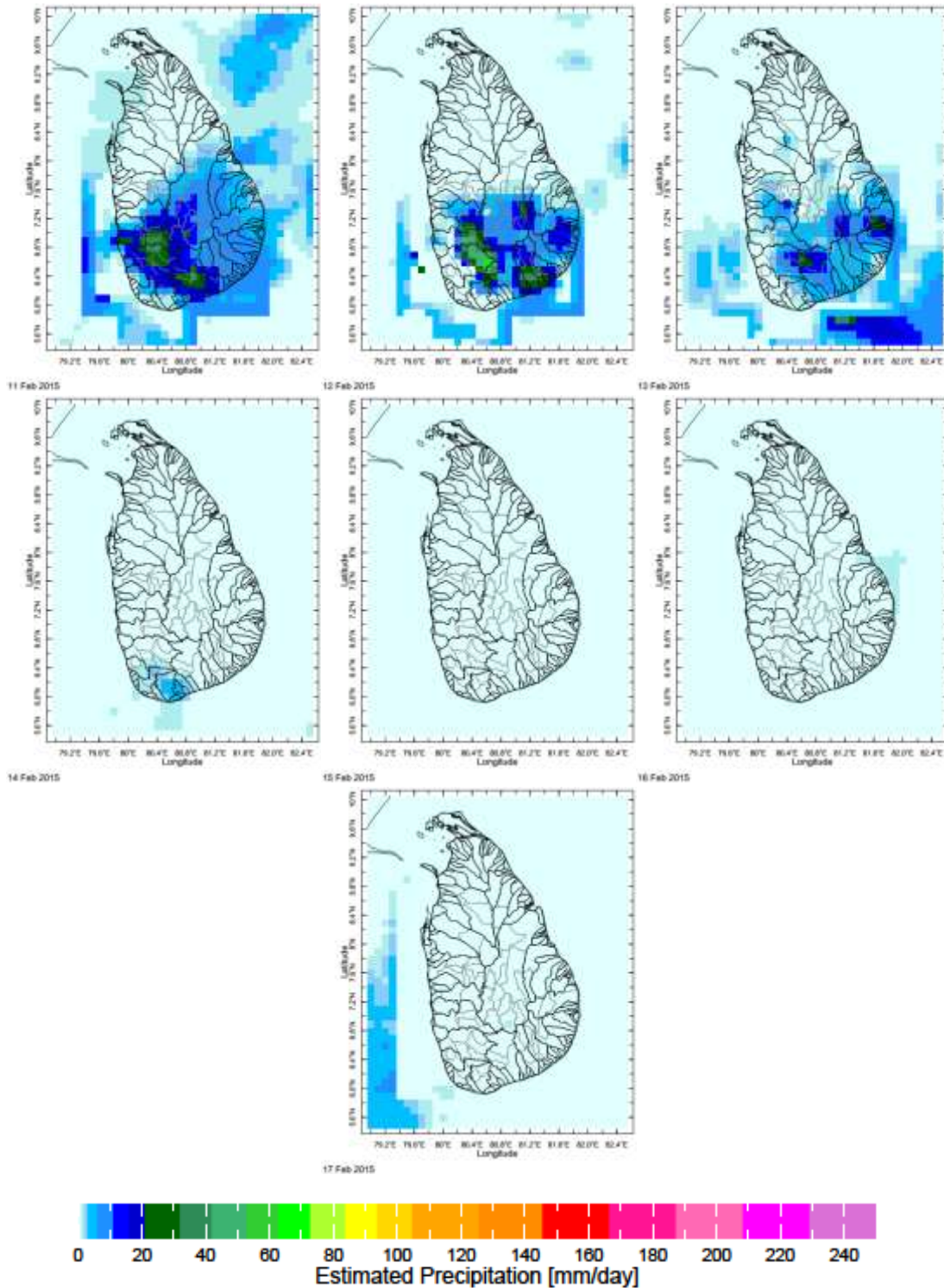
- NCEP GFS Ensemble 1-14 day predictions
- WRF model forecast Regional Meteorological Center, Chennai, Indian Meteorological Department)
- Weekly precipitation forecast (IRI)
- Seasonal Predictions from IRI

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

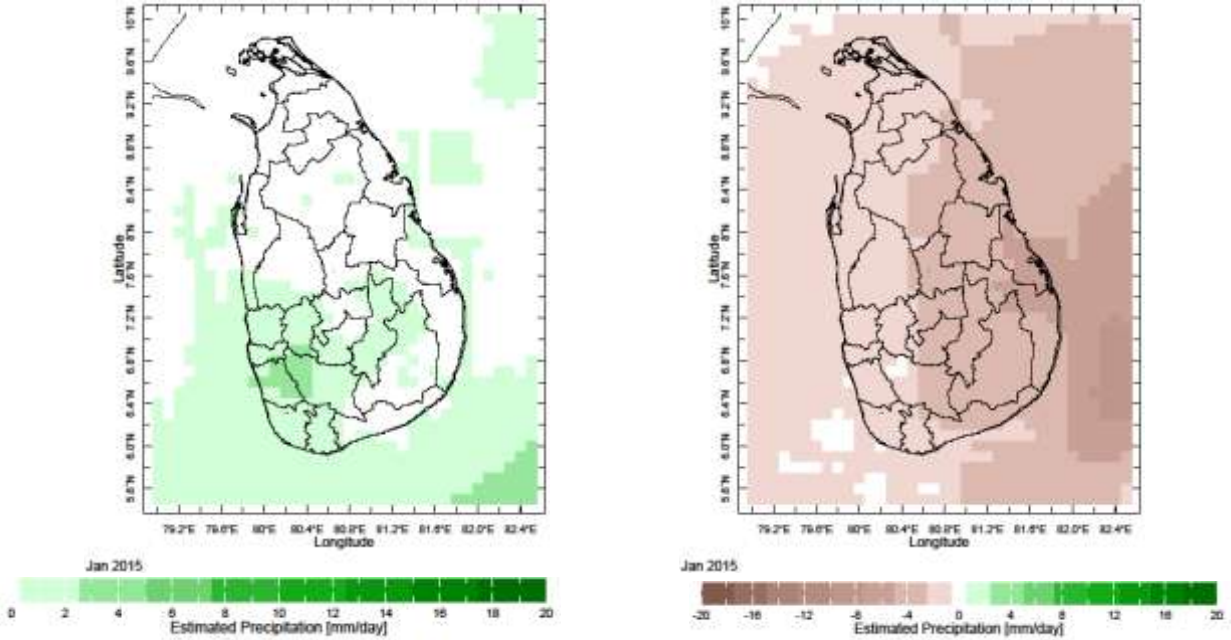
² These interpretations of hydro-meteorological conditions for the Mahaweli basins are provided for the use of the WMS/MASL.

1. Monitoring

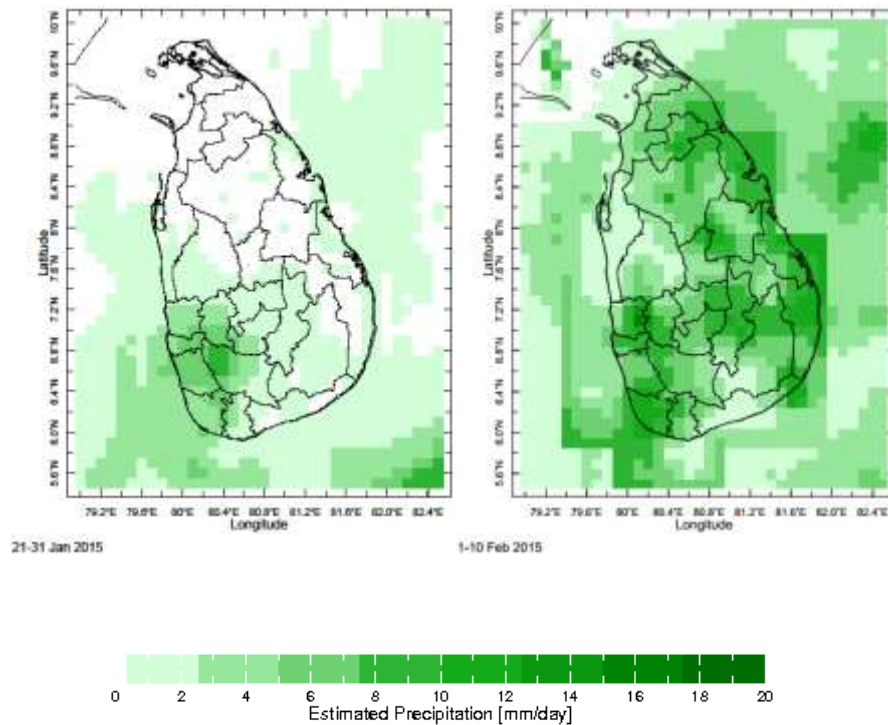
a) *Daily Satellite Derived Rainfall Estimate Maps: 11th – 17th February 2015 (Left-Right, Top-Bottom)*



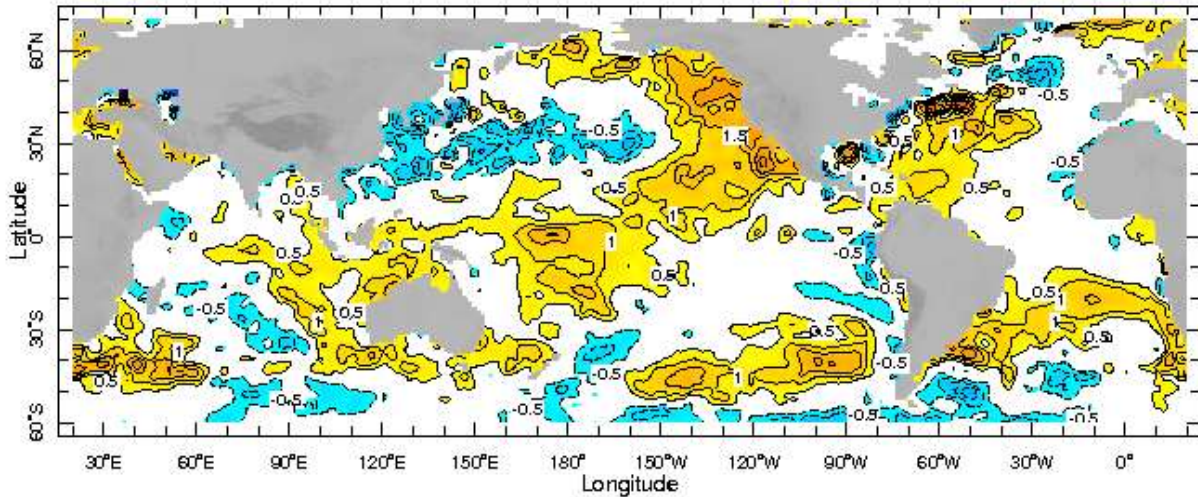
b) Monthly Satellite Derived Rainfall Estimates for January 2014 (Average – Left and Anomaly - Right)



c) Dekadal (10 Day) Satellite Derived Rainfall Estimates 21-31 Jan, 1-10 Feb 2015



d) Weekly Average SST Anomalies



8-14 Feb 2015



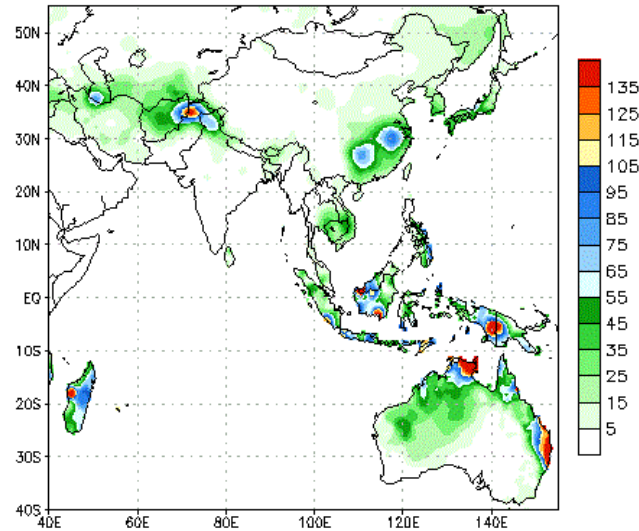
Weekly Average SST Anomalies (°C), 8th – 14th February, 2015

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

2. Predictions

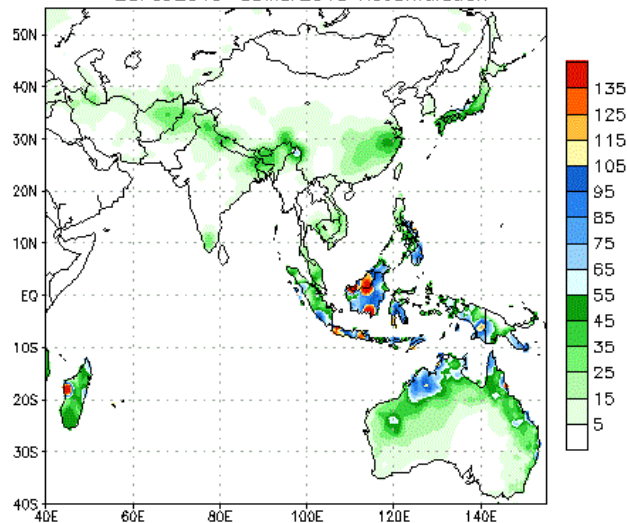
a) NCEP GFS Ensemble 1-14 day predictions, NOAA, Climate Prediction Centre, USA.

NCEP GFS Ensemble Forecast 1-7 Day Precipitation (mm)
from: 18Feb2015
18Feb2015-24Feb2015 Accumulation



Bias correction based on last 30-day forecast error

NCEP GFS Ensemble Forecast 8-14 Day Precipitation (mm)
from: 18Feb2015
25Feb2015-03Mar2015 Accumulation

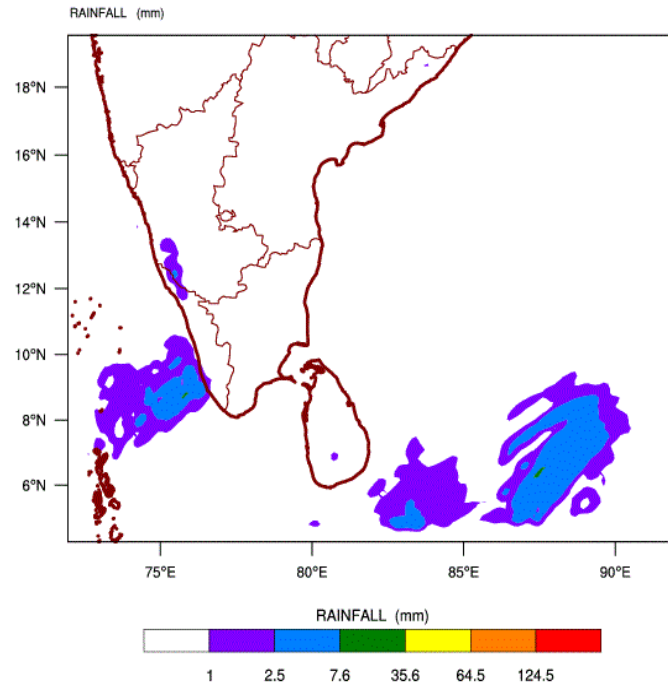


Bias correction based on last 30-day forecast error

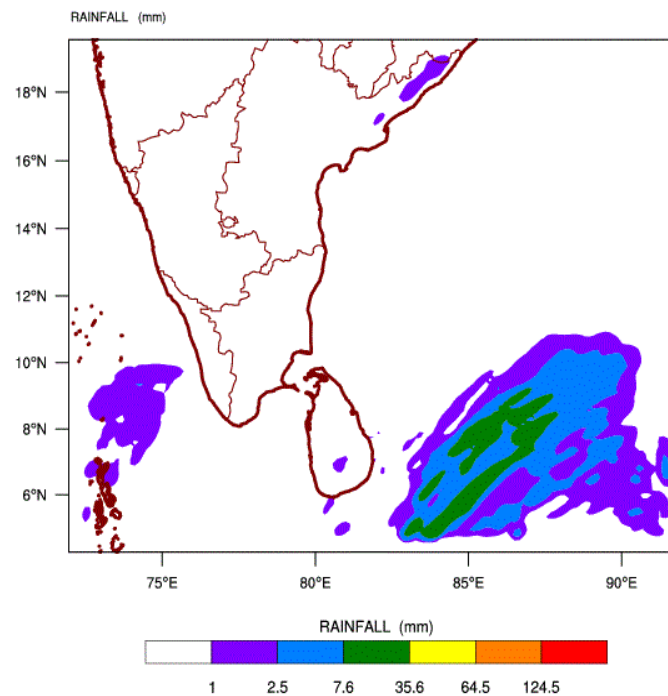
Source – NOAA Climate Prediction Center

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

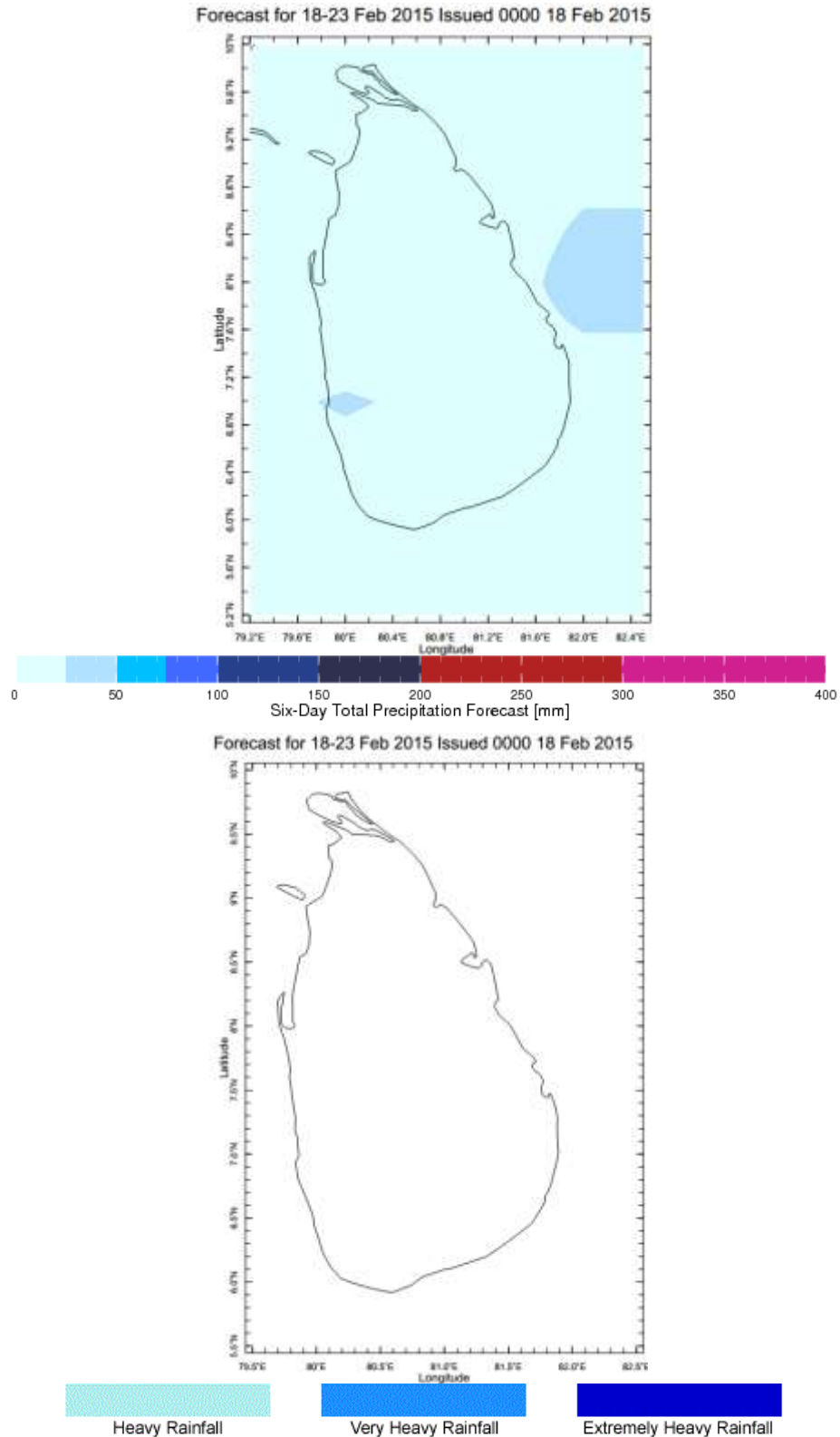
WRF MODEL FORECAST (48 HR.) RAINFALL(mm)
based on 00 UTC of 18-02-2015 valid for 03 UTC of 20-02-2015



WRF MODEL FORECAST (72 HR.) RAINFALL(mm)
based on 00 UTC of 18-02-2015 valid for 03 UTC of 21-02-2015

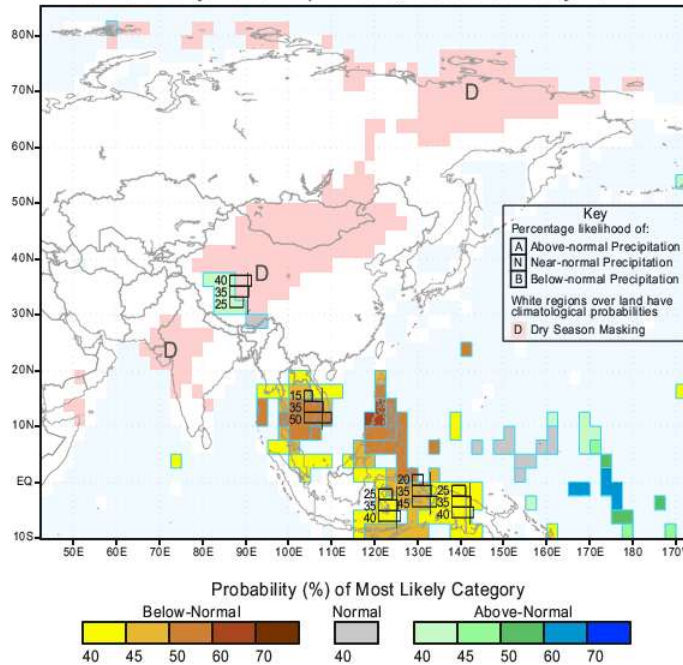


c) Weekly Precipitation Forecast for 18th – 23th February 2015 (Precipitation Forecast in Context Map Tool, IRI)



e) Seasonal Rainfall and Temperature Predictions from IRI

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



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

