

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/>

January 15, 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

Monitoring and Predictions:

During the past week there was limited rainfall. Rainfall is forecasted upto totals of 50 mm for the week between 28th January to 3rd February – but the predictions are at a lower value than provided with two weeks lead in the last issue. Some rainfall can be further expected during 4th to 10th February. The February to April season has a high chances of being warmer than usual.

Summary

Monitoring

Weekly Monitoring: More or less no rainfall was observed during 21st to 22nd January. Rainfall was observed in western and south-west regions on 23rd and 24th January with highest rainfall in Kalutara, Panadura and Galle areas averaging upto 30 mm. On 25th Mahiyangana, Budulla and Moneragala areas received rainfall averaging upto 10 mm. Thereafter rainfall gradually decreased and completely ceased by 27th January.

Monthly Monitoring: During December an average rainfall of 8 mm to 20 mm was observed throughout the country with high precipitation in the central, north-eastern and eastern regions. Highest rainfall in December was observed in Batticaloa district. Decadal rainfall average was significantly decreased during 1st to 10th January compared with last week of December. It further decreased during 11th to 20th January 2015.

Predictions

14 day prediction: NOAA NCEP models predict that heavy showers can be expected in eastern coast of the island exceeding 125 mm while rest of the country shall receive rainfall exceeding 85 mm during 28th January to 3rd February. Rainfall can be further expected in northern and eastern regions during 4th February to 10th February.

IMD WRF & IRI Model Forecast: According to the IMD WRF model, rainfall can be observed throughout the country on 30th January with high precipitation around 35 mm in northern, eastern, western regions and around 65 mm in Ratnapura. Rainfall is expected to decrease on 31st January with highest rainfall around 35 mm in Galle and Ratnapura only. IRI model predicts that rainfall can be expected in southern, western, eastern and central regions of the island during 28th January to 2nd February.

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

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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

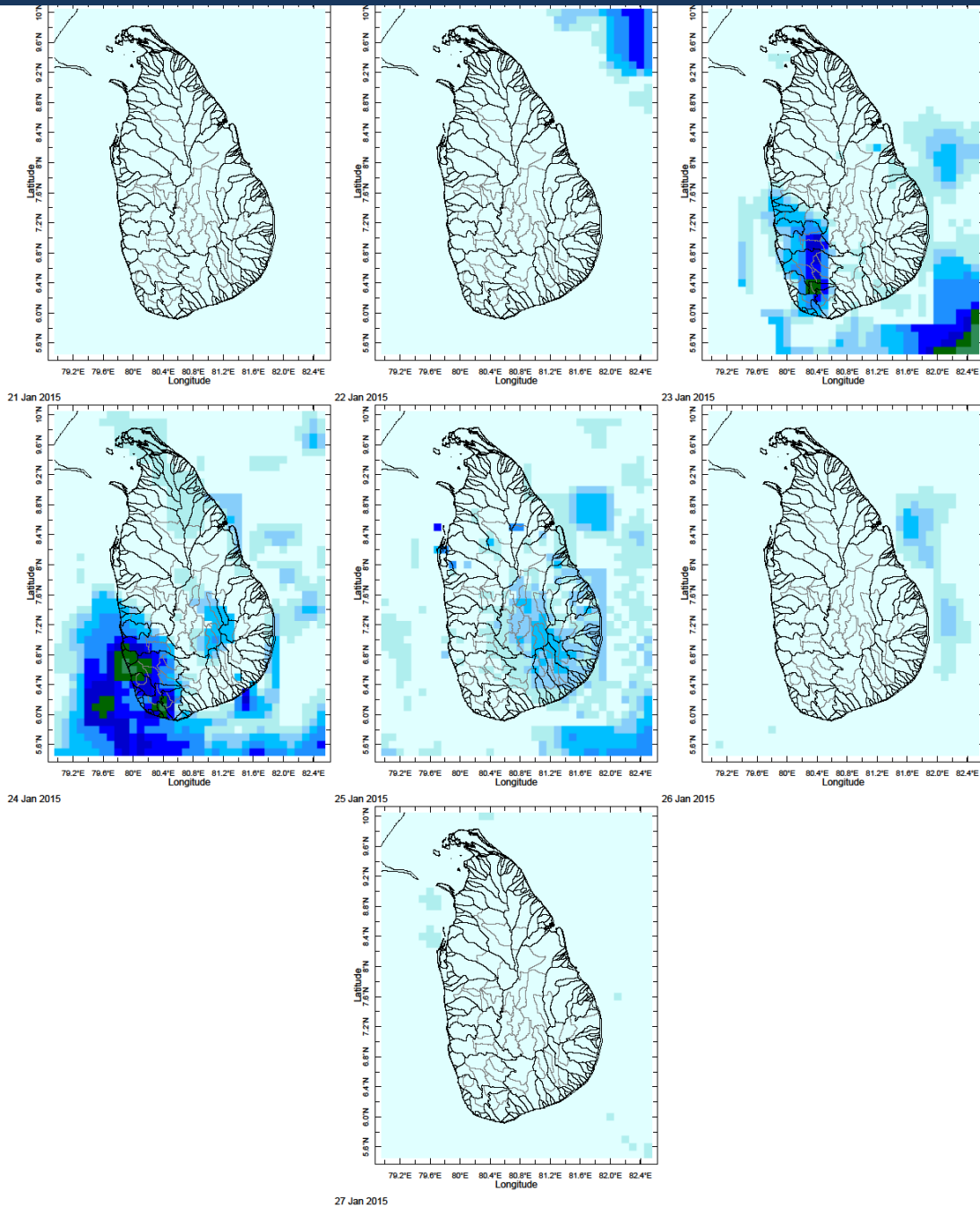
- NCEP GFS Ensemble 1-14 day predictions
- WRF model forecast Regional Meteorological Center, Chennai, Indian Meteorological Department)
- Weekly precipitation forecast (IRI)
- Seasonal Predictions from IRI

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

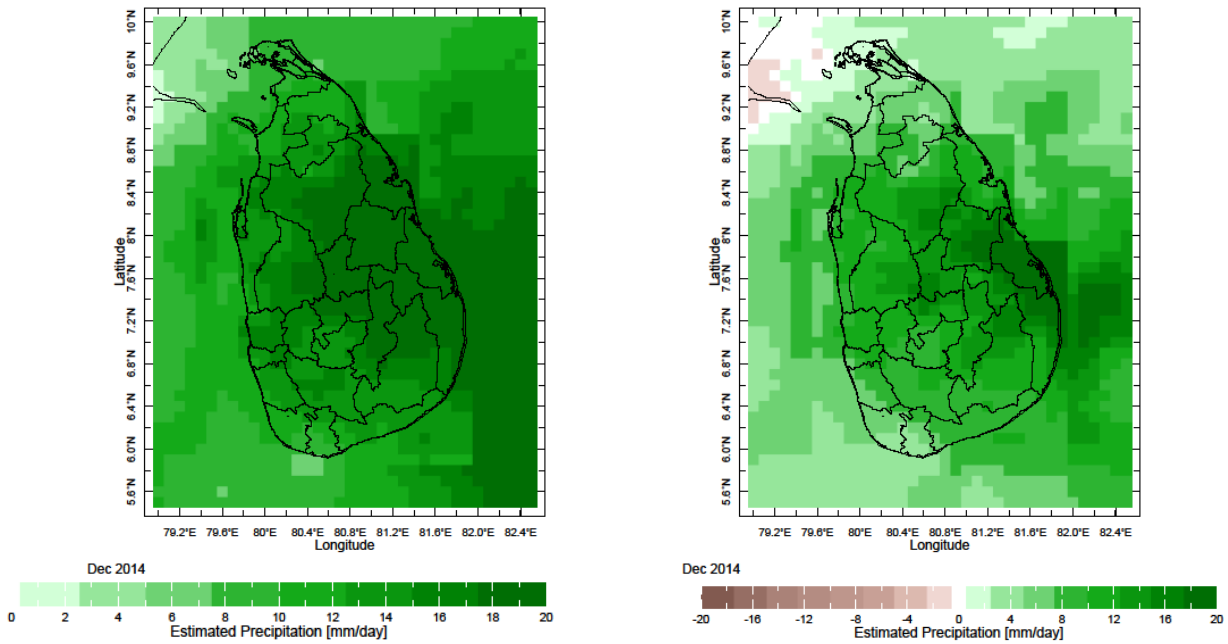
² These interpretations of hydro-meteorological conditions for the Mahaweli basins are provided for the use of the WMS/MASL.

a) Daily Satellite Derived Rainfall Estimate Maps: 21st January 2015 – 27th January 2015 (Left-Right,

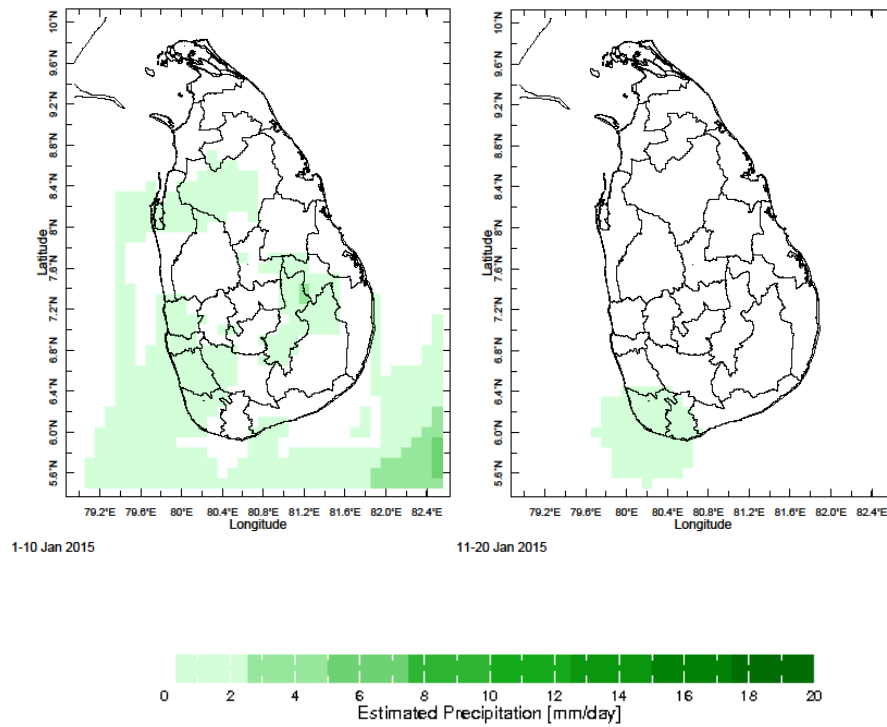
1. Monitoring



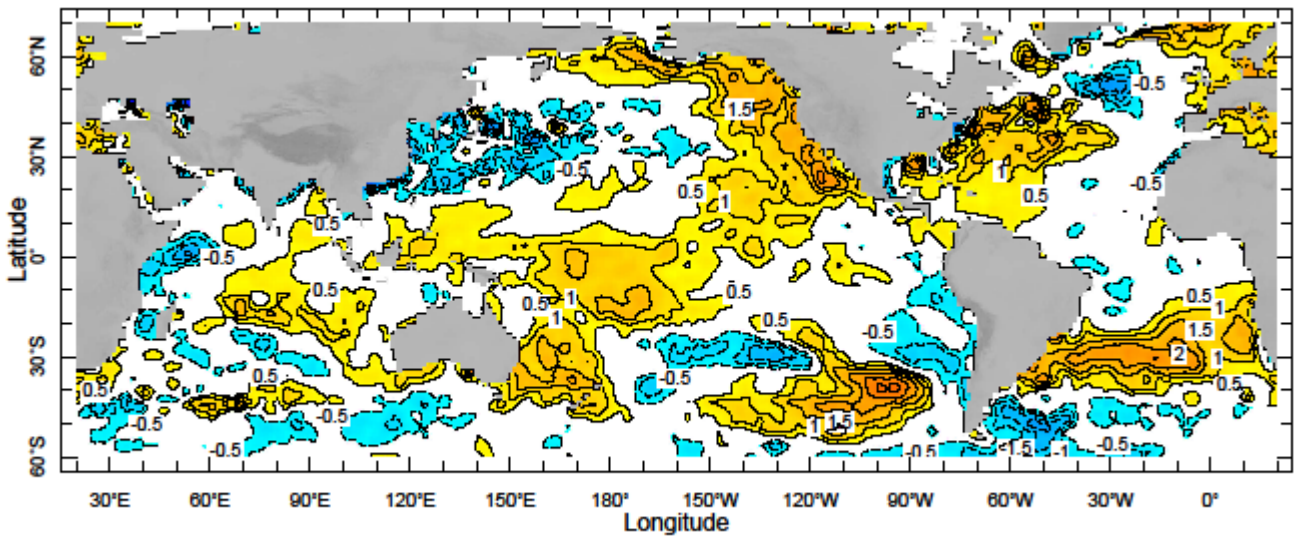
b) Monthly Satellite Derived Rainfall Estimates for December 2014 (Average – Left and Anomaly - Right)



c) Dekadal (10 Day) Satellite Derived Rainfall Estimates (1-10 , 11-20 Jan 2015)



d) Weekly Average SST Anomalies



18-24 Jan 2015



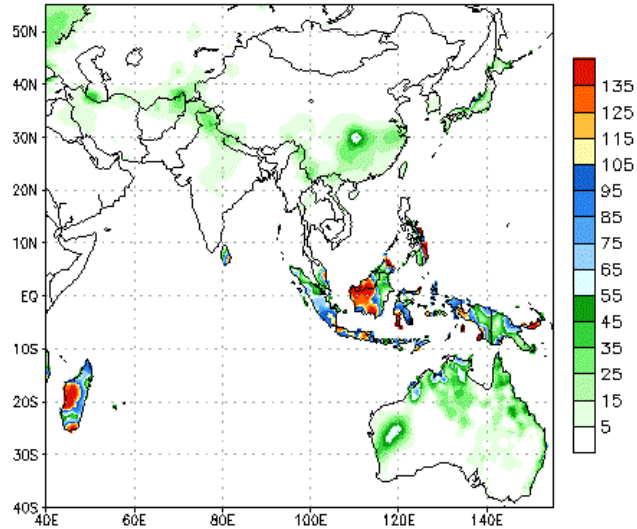
Weekly Average SST Anomalies (°C), 18th – 24th January, 2015

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

2. Predictions

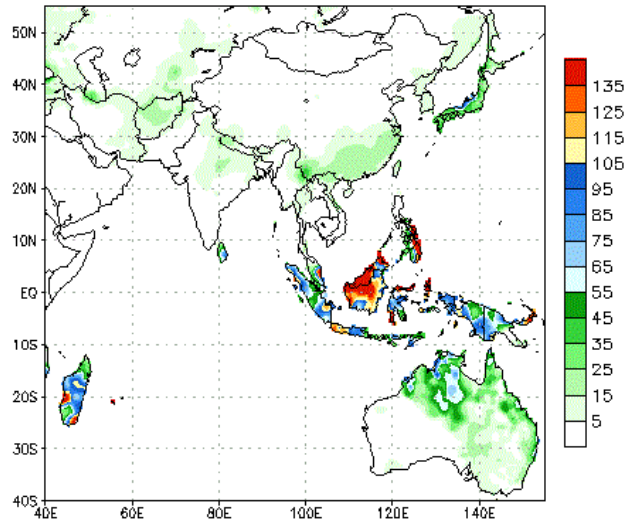
a) NCEP GFS Ensemble 1-14 day predictions, NOAA, Climate Prediction Centre, USA.

NCEP GFS Ensemble Forecast 1-7 Day Precipitation (mm)
from: 28Jan2015
28Jan2015-03Feb2015 Accumulation



Bias correction based on last 30-day forecast error

NCEP GFS Ensemble Forecast 8-14 Day Precipitation (mm)
from: 28Jan2015
04Feb2015-10Feb2015 Accumulation

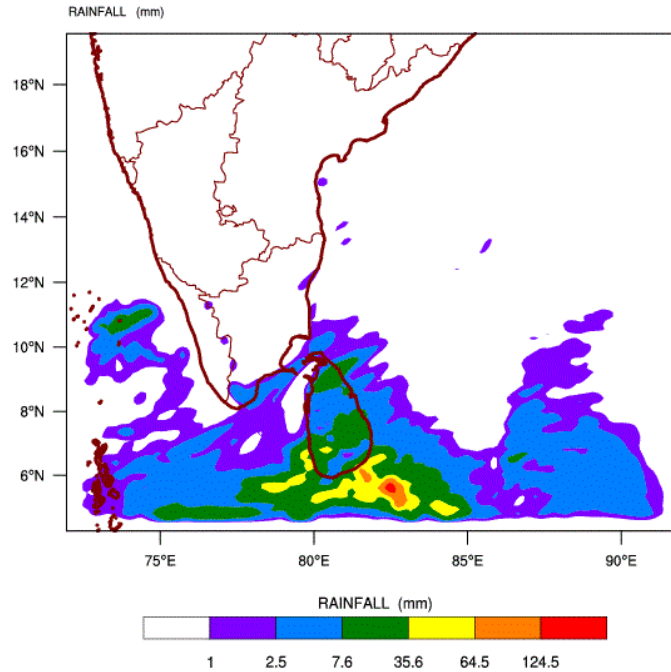


Bias correction based on last 30-day forecast error

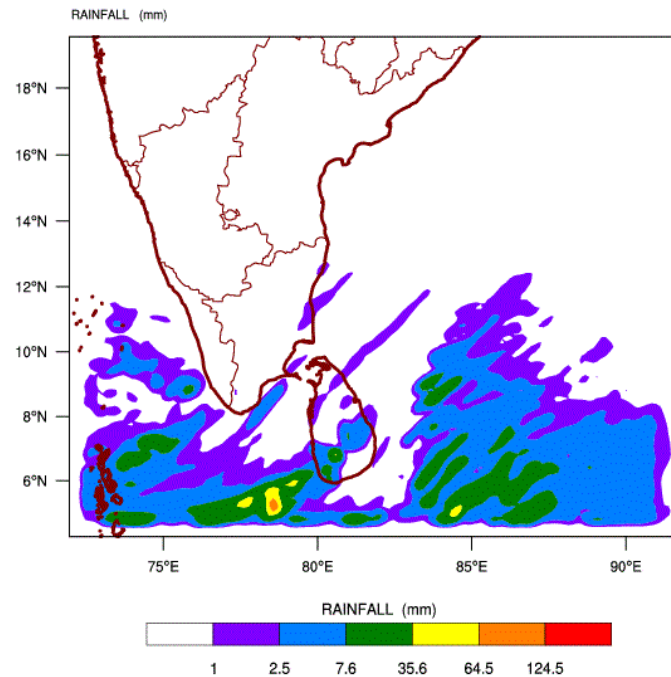
Source – NOAA Climate Prediction Center

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 28-01-2015 valid for 03 UTC of 30-01-2015

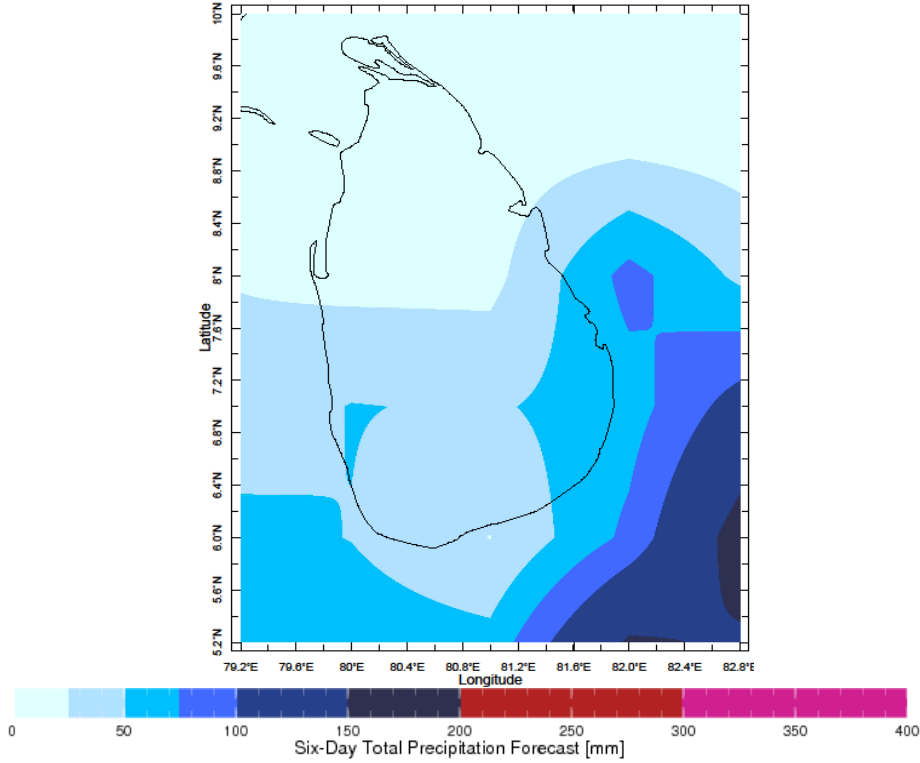


WRF MODEL FORECAST (72 HR.) RAINFALL(mm)
based on 00 UTC of 28-01-2015 valid for 03 UTC of 31-01-2015

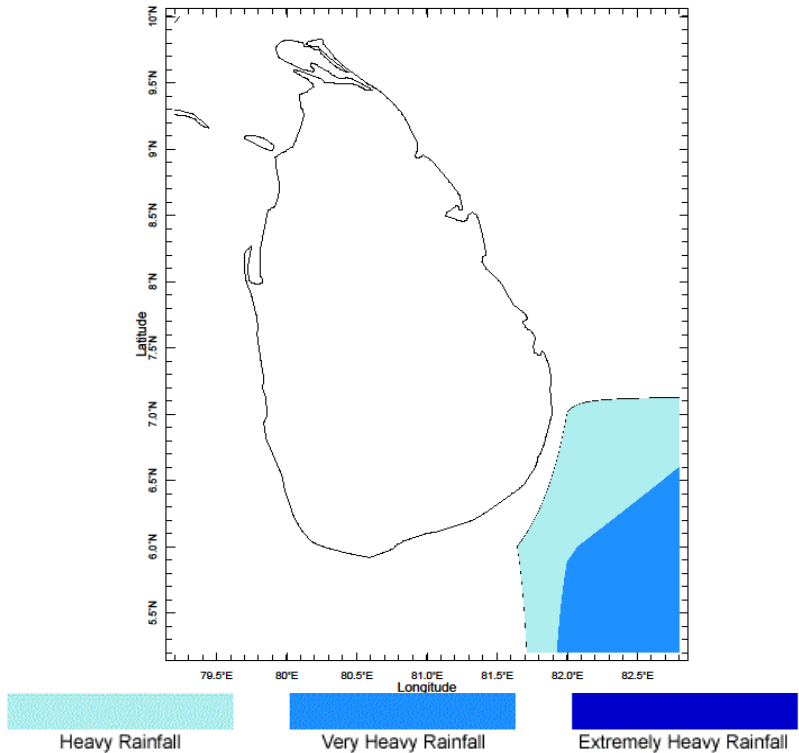


c) Weekly Precipitation Forecast for 28th January – 2nd February 2015 (Precipitation Forecast in Context Map Tool, IRI)

orecast for 28 Jan 2015 - 2 Feb 2015 Issued 0000 28 Jan 20

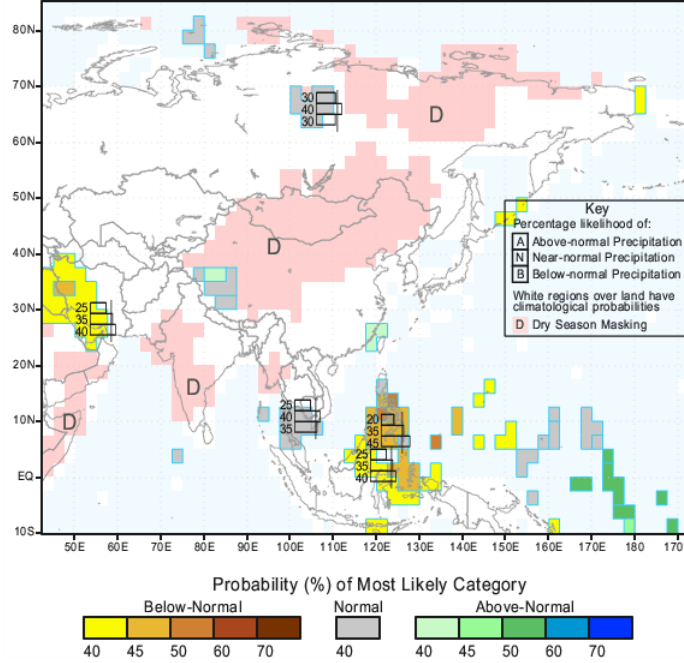


Forecast for 28 Jan 2015 - 2 Feb 2015 Issued 0000 28 Jan 2015



e) Seasonal Rainfall and Temperature Predictions from IRI

IRI Multi-Model Probability Forecast for Precipitation
for January-February-March 2015, Issued December 2014



IRI Multi-Model Probability Forecast for Temperature
for January-February-March 2015, Issued December 2014

