

## **Probabilistic Rainfall Forecast for November 2017**

The probabilistic rainfall forecast for November 2017 for Sri Lanka as given below.

There is a higher chance of receiving slightly below average rainfall in all districts for the month of November 2017.

The district wise average rainfall is given in the column 2 of the table 1. Chance (probability) of receiving below/about/above average is given in the columns 3, 4, and 5 respectively in the table 1 (CPT probabilistic forecast).

Figure 2 represents the weekly rainfall anomaly forecast for November 2017 from Japanese Meteorological Administration (JMA) model. Above normal rainfall can be expected for first, third and fourth week starting from 08 November to 29 November. According to the monthly rainfall anomaly forecast for November 2017 from Japanese Meteorological Administration (JMA) model (Fig 3), above normal rainfall can be expected for November 2017.

Figure 4 represents the multi-model ensemble probabilistic rainfall forecast for November 2017 from Forecast Customization System (FOCUS) for Sri Lanka, developed by Regional Integrated Multi-Hazard Early Warning System (RIMES). According to the FOCUS, there is a higher probability of receiving slightly above normal rainfall in the dry zone, and slightly below normal rainfall in the intermediate zone. There is no signal in wet zone for November 2017.

Figure 5 shows the probabilistic multi model ensemble forecast using dynamical models from 13 global producing centers (GPC) for, November 2017. There is a higher chance of receiving below normal rainfall for month of November 2017.

Out of 13 GPC forecasts 9 GPC forecasts provide below normal rainfall for November (Fig 6). Only GPC model forecasts above normal rainfall for November (Fig 6). There is no signal for November over Sri Lanka from 2 GPC forecast outputs. Accordingly there is a higher chance of receiving below normal rainfall for month of November 2017.

### **Consensus rainfall forecast for November 2017**

Considering the prevailing global climate conditions, forecasts from different global climate models and statistical downscaling of GCM output using CPT, slightly below normal rainfall can be expected November 2017.

However, the predictability is also limited to some extent due to the strong day to day atmospheric variability caused by the passage of the synoptic scale systems such as lows, and depressions etc. The predictability of the November rainfall over Sri Lanka is also influenced by the Madden Julian Oscillation (MJO), which represents the major global scale of intra-seasonal variability pattern.

The probabilistic rainfall forecast for November 2017 for Sri Lanka as given below.

District	Average rainfall (mm) –(November )	Probability %		
		Below	Normal	Above
Colombo	340.8	35	30	35
Kalutara	403.1	35	30	35
Galle	378.9	35	30	35
Matara	352.7	35	30	35
Hambantota	222.5	35	30	35
Ampara	271.9	35	30	35
Batticaloa	303.2	35	30	35
Trincomalee	303.1	35	30	35
Mullaithivu	312.5	35	30	35
Jaffna	324.8	35	30	35
Killinochchi	329.6	35	30	35
Mannar	242.8	35	30	35
Puttalam	233.2	35	30	35
Gampaha	313.1	35	30	35
Kegalle	394.1	35	30	35
Ratnapura	370.2	35	30	35
Monaragala	289.6	35	30	35
Badulla	327.3	35	30	35
Pollonnaruwa	292.9	35	30	35
Vavuniya	272.3	35	30	35
Anuradapura	240.4	35	30	35
Kurunegala	270.1	35	30	35
Matale	309.0	35	30	35
Kandy	342.5	35	30	35
Nuwaraeliya	305.9	35	30	35

Table 1

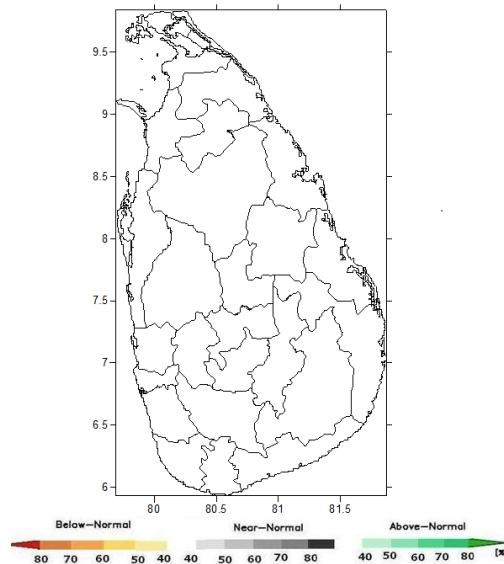


Fig 1. Probabilistic rainfall forecast for November 2017 CPT

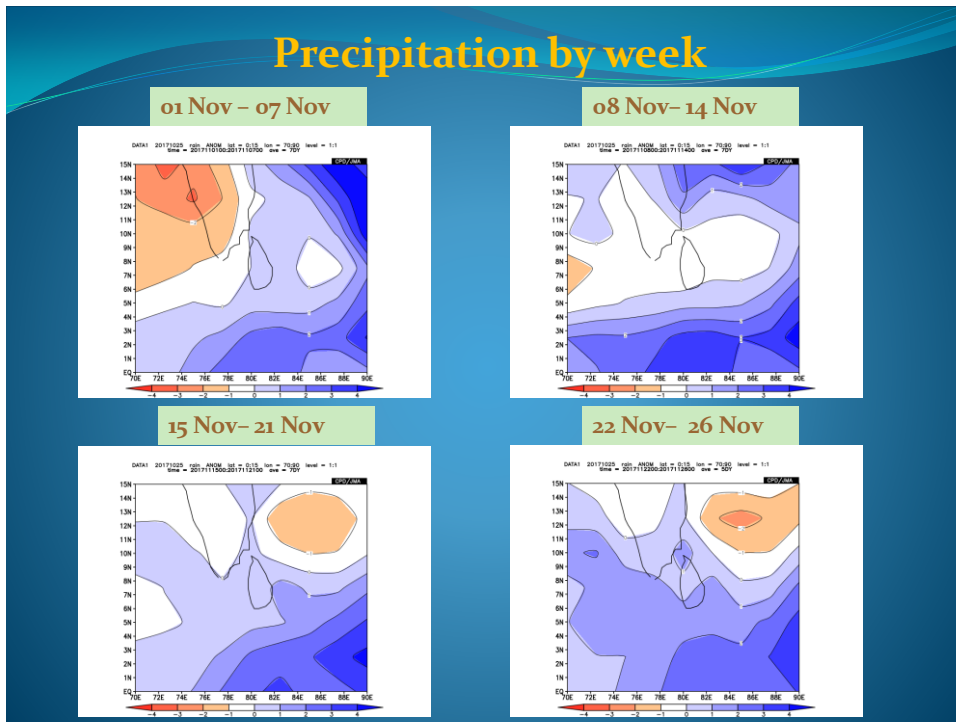


Fig 2. Weekly Rainfall anomaly forecast for November 2017 (01 November – 07 November, Upper left), (08 November – 14 November, Upper right), (15 November – 21 November Lower left) and (22 November – 29 November, Lower right) from JMA model

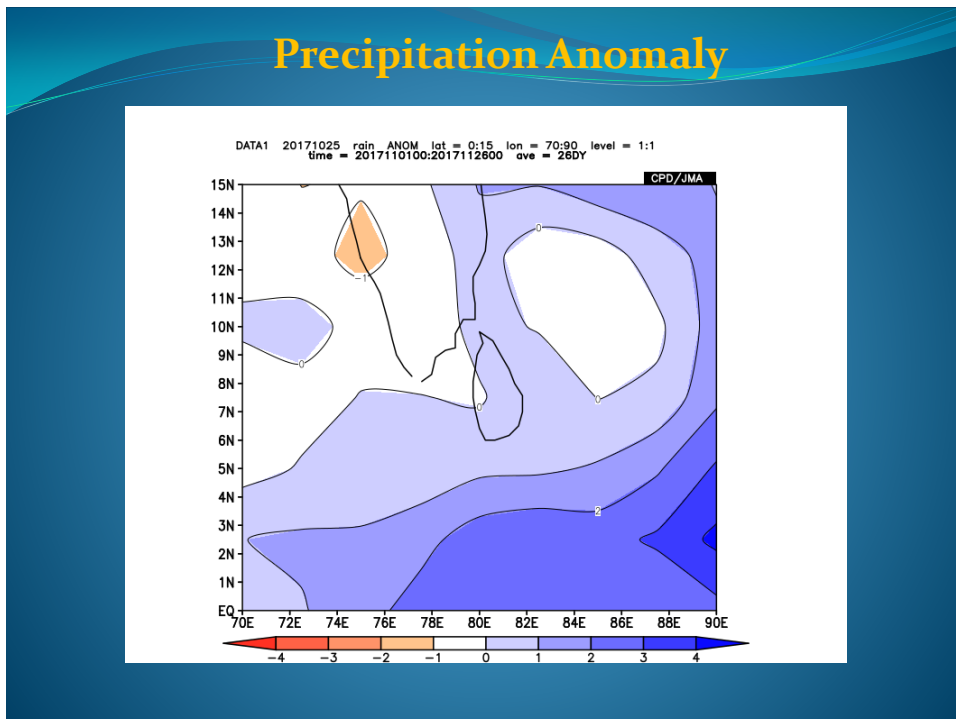


Fig 3. Rainfall anomaly forecast for November 2017 (mm/day) from JMA model

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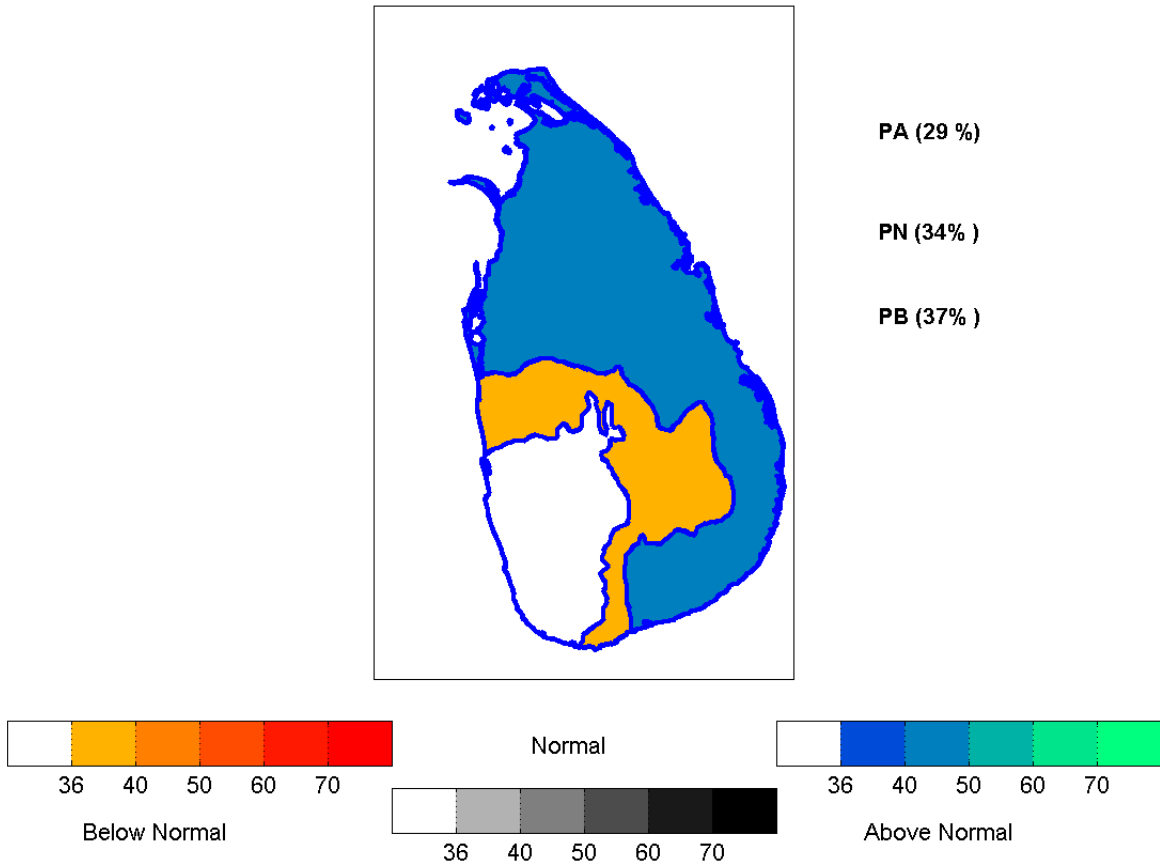


Fig 4. Multi-model ensemble probabilistic forecast for November 2017 from RIMES Forecast Customization System (FOCUS).

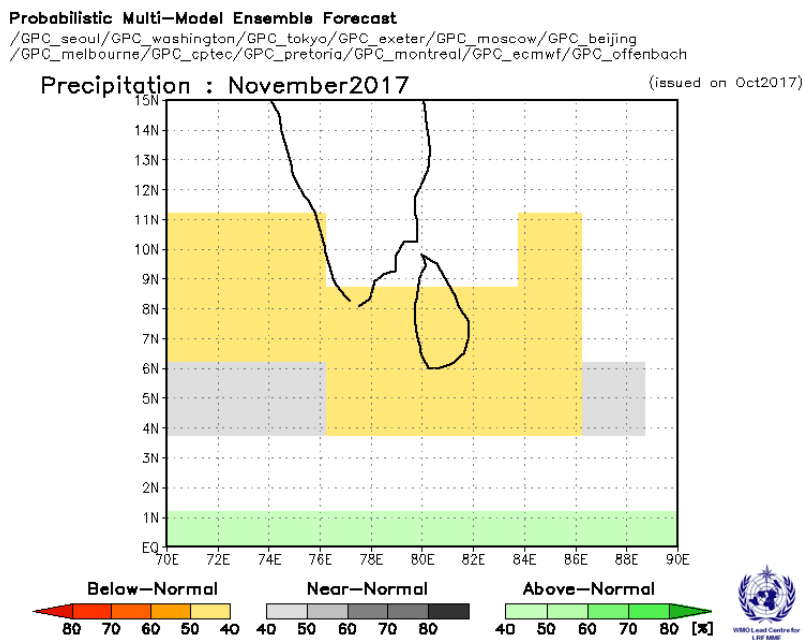


Fig 5: Probabilistic multi model ensemble forecast for November 2017 (right) using dynamical models from 13 WMO global producing centers (GPC).

lat=0 15  
lon=70 90

# Precipitation : November2017

(issued on Oct2017) [Unit: mm/day]

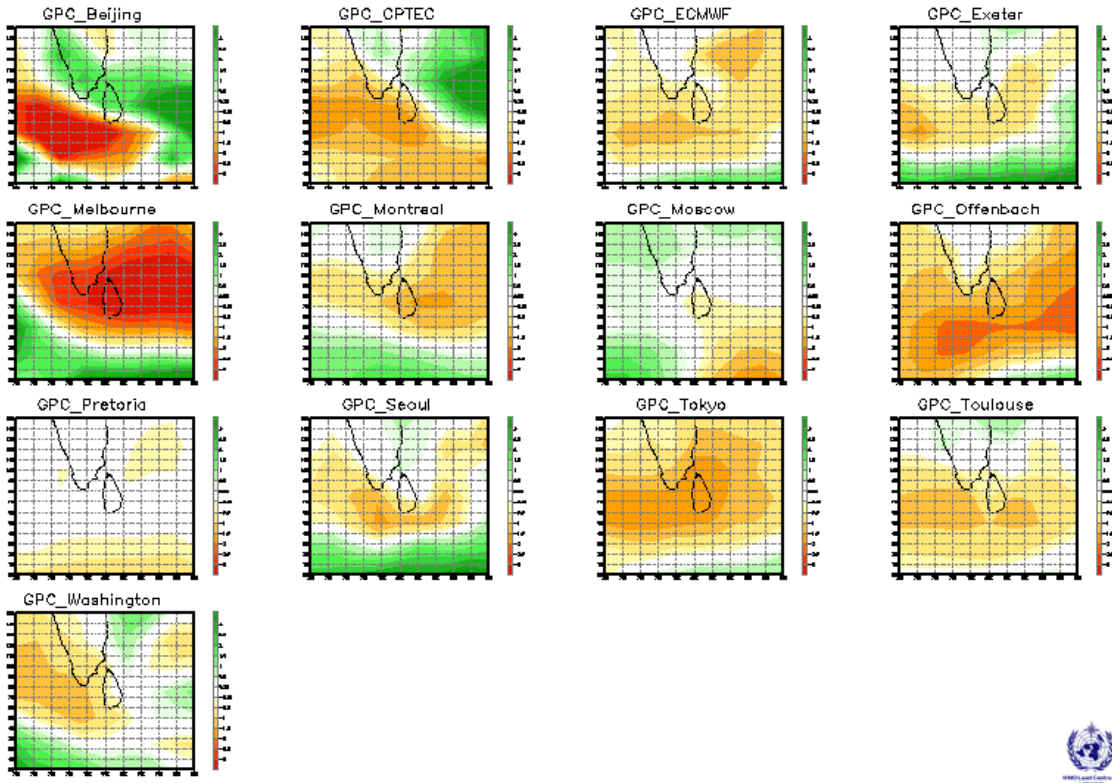


Fig 6 : Individual forecast for November 2017 by dynamical models from 13 WMO global producing centers (GPC).