

Probabilistic Rainfall Forecast for September 2019

The probabilistic rainfall forecast for September 2019 for Sri Lanka as given below.

Figure 1 represents the consensus forecast for month of September 2019. The near normal rainfall is likely over the South Eastern parts as well as Mathale, Kandy and Nuwaraeliya districts during the month of September 2019 while the Jaffna district is likely to receive below normal rainfall. There is no signal for remaining districts indicating that equal chances of receiving above normal, about normal or below normal rainfall for those districts during the month of September 2019.



Fig 1.Consensus Probabilistic rainfall forecast for September 2019

Figure 2 represents the weekly rainfall anomaly forecast for September 2019 from Japanese Meteorological Administration (JMA) model. Below normal rainfall can be expected during the first week and third week of September. During second week it can be expected above normal rainfall in southern parts of the Island and below normal rainfall in northern parts of the Island. Below normal can be expected rainfall in most of the parts of the Island except south eastern parts where slightly above normal rainfall is likely during fourth week (Fig 2). According to the monthly rainfall anomaly forecast for September 2019 from Japanese Meteorological Administration (JMA) model (Fig. 3), slightly below normal rainfall can be expected in all over the country.

Fig.4 represents the weekly precipitation anomaly forecast of ECMWF EPS monthly precipitation forecasting system. According to the figure during the first week of September it is expected below normal rainfall over northern and north eastern coastal regions. During the second week above normal rainfall is likely along the eastern coastal regions. During the third and fourth weeks no signal can be seen over the Island.

Figure 5 represents the multi-model ensemble probabilistic rainfall forecast for September 2019 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 above normal rainfall in wet zone and intermediate zone for the month of September 2019. There is no signal for dry zone, accordingly equal chances of receiving below normal, near normal or above normal rainfall in dry zone for the month of September 2019.

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.

The probabilistic rainfall forecast for September 2019 for Sri Lanka as given below.

Table 1

District	Average rainfall (mm) –(September)	Probability %		
		Below	Normal	Above
Colombo	289.7	35	30	35
Kalutara	388.1	35	30	35
Galle	341.2	35	30	35
Matara	258.6	35	30	35
Hambantota	72.4	25	45	30
Ampara	77.2	35	30	35
Batticaloa	86.6	35	35	30
Trincomalee	109.9	35	30	35
Mullaithivu	83.4	35	30	35
Jaffna	63.0	45	30	25
Killinochchi	60.9	30	35	35
Mannar	46.1	30	35	35
Puttalam	67.5	35	30	35
Gampaha	232.3	35	30	35
Kegalle	360.6	40	27	33
Ratnapura	284.1	30	35	35
Monaragala	83.8	25	45	30
Badulla	118.2	25	45	30
Pollonnaruwa	100.3	35	35	30
Vavuniya	97.5	35	30	35
Anuradapura	83.0	35	30	35
Kurunegala	116.6	35	30	35
Matale	94.3	25	45	30
Kandy	189.6	25	45	30
Nuwaraeliya	250.8	25	45	30

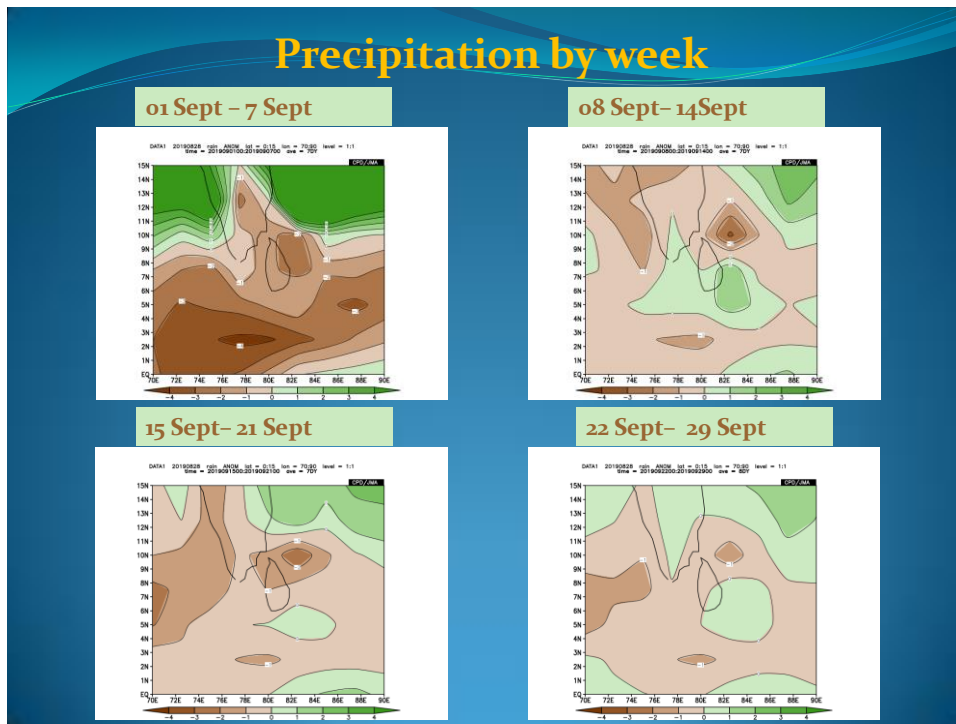


Fig 2. Weekly Rainfall anomaly forecast for September 2019 (01 September –07 September, Upper left), (08September –14September, Upper right), (15September – 21September Lower left) and (22 September–29 September, Lower right) from JMA model.

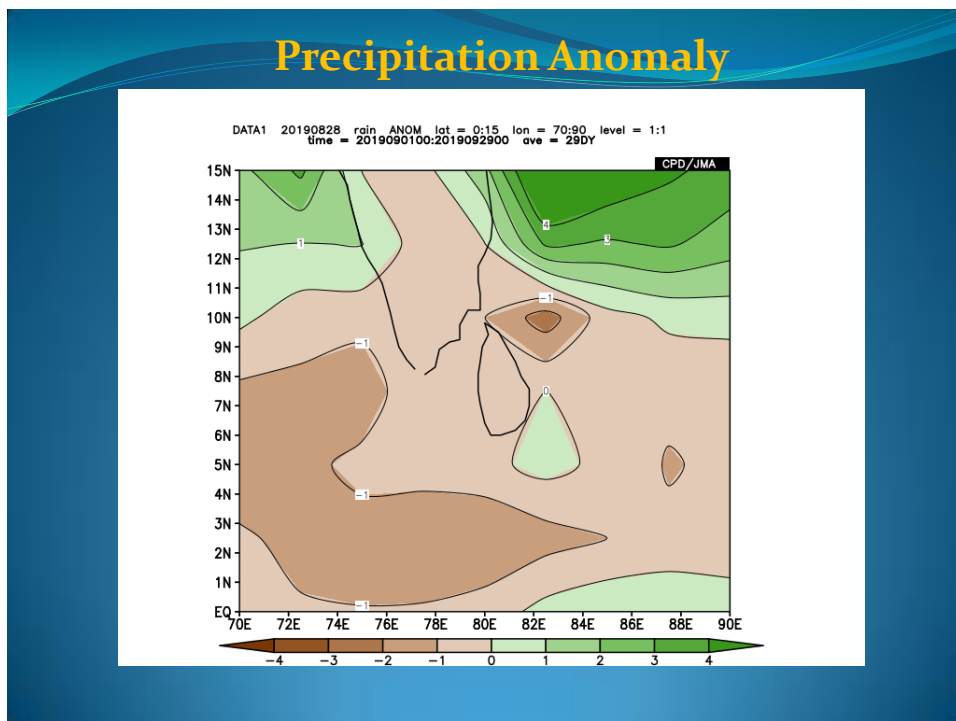


Fig 3. Rainfall anomaly forecast for September 2019 (mm/day) from JMA model

ECMWF EPS Monthly Forecasting System Precipitation Anomaly

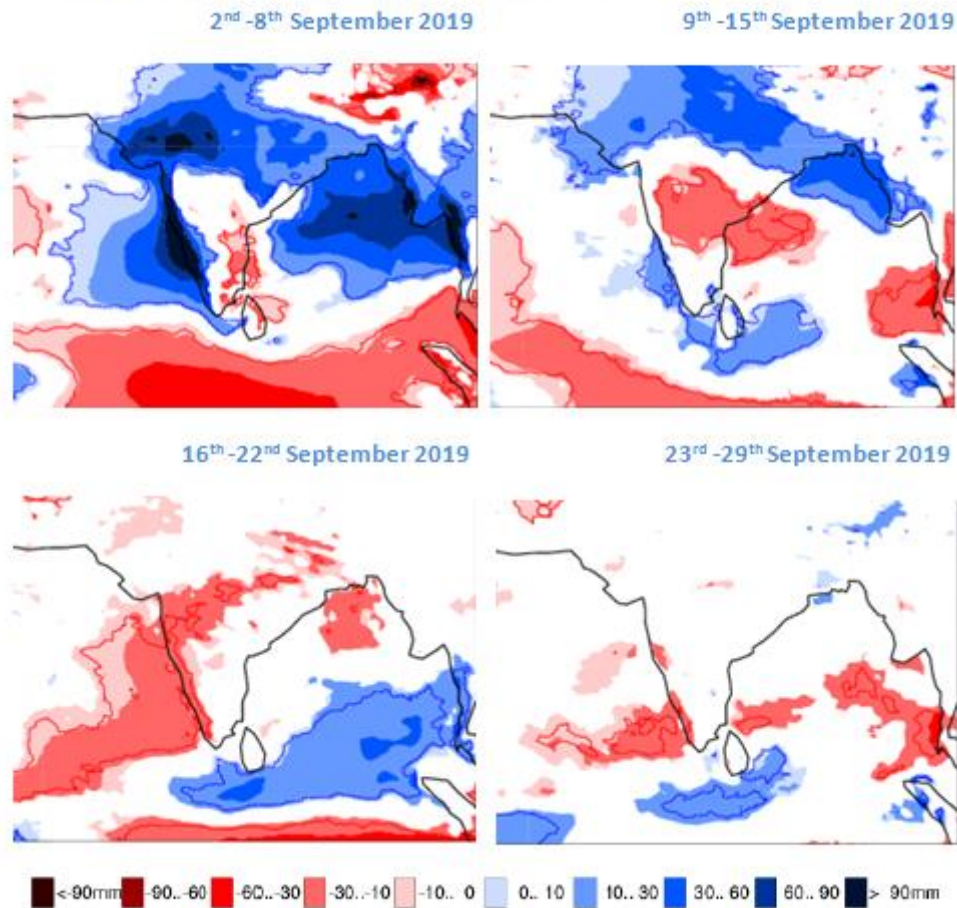


Fig 4. ECMWF EPS monthly precipitation forecast for September 2019

Figure 6 represents the probabilistic rainfall forecast from Climate Predictability tool (CPT) for September 2019. According to the CPT below normal rainfall can be expected in Gampaha, Colombo, Kalutara, Galle and Trincomalee districts. There is a higher probability of receiving above normal rainfall in Mathale, Kandy, Nuwara eliya, Badulla and Hambantota districts. There is no signal for all other districts for the month of September 2019. It indicates that below normal, about normal or above normal rainfall can be expected in those districts during the September 2019.

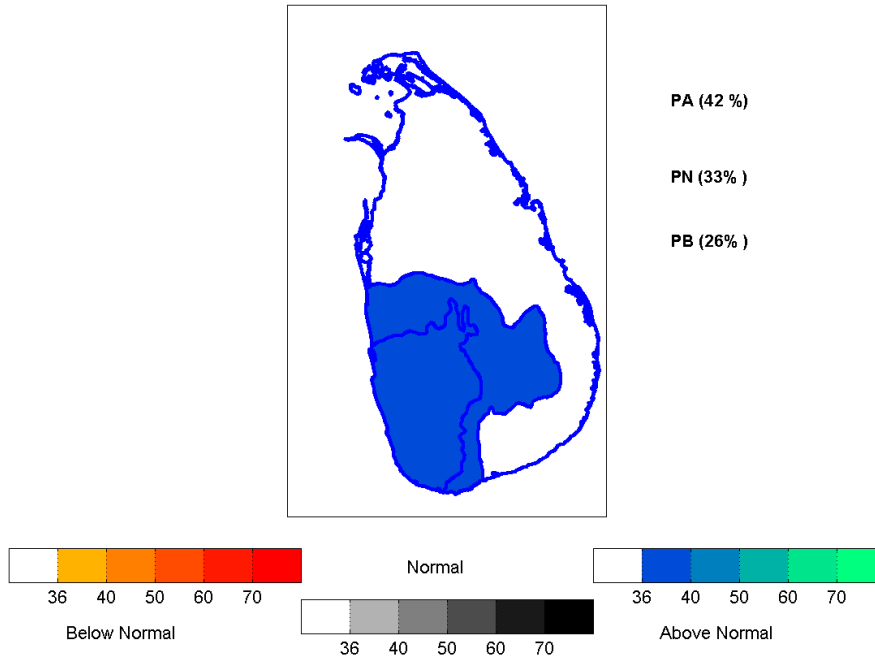


Fig 5. Multi-model ensemble probabilistic forecast for September 2019 from RIMES Forecast Customization System (FOCUS).

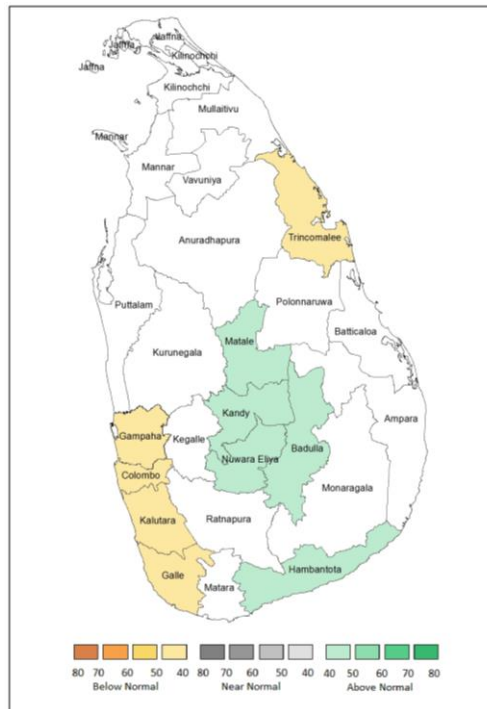


Fig 6. Probabilistic rainfall forecast using Climate predictability tool for September 2019