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Seasonal, Monthly and weekly Rainfall Forecasts for September-November 2024

Issued on 3rd September 2024 by Seasonal Forecasting Division of the Department of Meteorology, Sri Lanka.

This consensus Climate Outlook for September to November 2024 season over Sri Lanka has been developed through an expert assessment of the prevailing global climate conditions influencing the South Asian climate and seasonal forecasts from different climate models around the world. ENSO-neutral is expected to continue for the next several months, with La Niña favoured to develop during September-November (66% chance) and persist into the Northern Hemisphere winter 2024-25 (74% chance during November-January). The Indian Ocean Dipole (IOD) is currently neutral and most global model forecasts is favoured for a neutral IOD for upcoming season (source- BOM, Australia). Careful consideration is also given to other regional and global factors as well as the intraseasonal variability of the region that can affect the rainfall and temperature patterns over the country.

Seasonal Rainfall Forecast for September–November 2024 (SON)

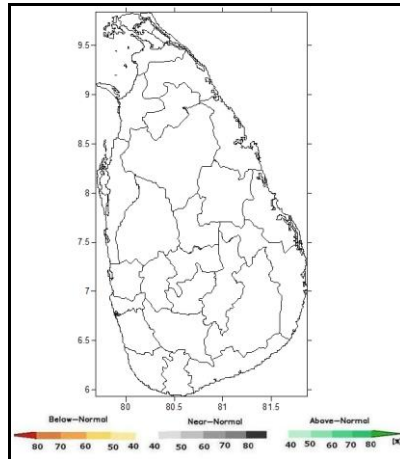


Fig 1.Consensus Probabilistic Monthly rainfall forecast for SON 2024

There is no clear signal indicated for total rainfall of September to November 2024 season as a whole and accordingly there is an equal probability for having below or near or above normal rainfalls over the country during September-October- November 2024 season (Fig. 14). **However, if La Nina onset occurs in October or November 2024 (66% chance of La Nina onset during SON 2024) possibility of below average rainfall over most parts of Sri Lanka during SON 2024 is higher. On the**

other hand, development of the synoptic scale atmospheric systems such as lows and depressions are also possible during the month. If so rainfall may increase (Fig.01).

Monthly Rainfall Forecasts for September, October and November 2024

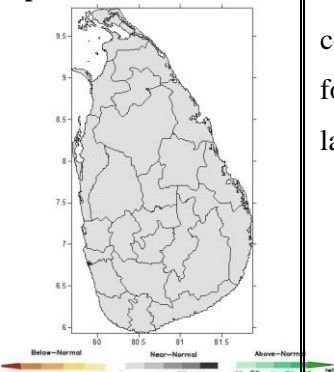
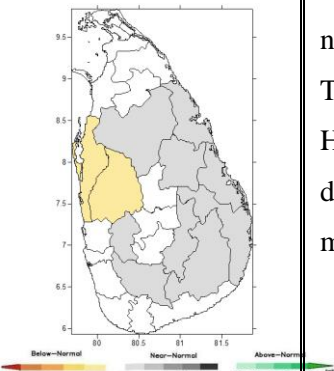
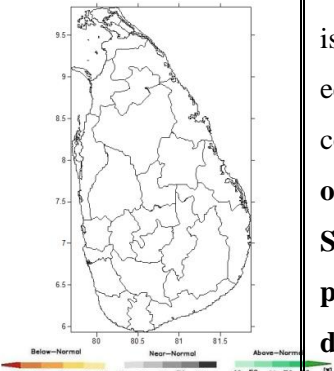
Month	Rainfall forecast
<p>September 2024</p> 	<p>There is a higher chance of having near normal rainfalls over most parts of the country during the month of September 2024. Generally, there is a possibility for developing atmospheric disturbances during the month, particularly during latter part of the month. If so rainfall may increase.</p>
<p>October 2024</p> 	<p>There is a probability of below normal over Northwestern province and near normal rainfalls over Northcentral, Uva, Sabragamuwa and Eastern provinces. There is no clear signal for other areas during the month of October 2024. However, there is a possibility for developing low pressure systems, depressions or cyclones during the month. If so rainfall may increase over most parts.</p>
<p>November 2024</p> 	<p>According to the available global model forecasts, there is no clear signal to issue a rainfall forecast for the month of November 2024. As such there is a equal probability for having below or near or above normal rainfalls over the country during the month of November 2024. However, if LaNina onset occurs in October or November 2024 (66% chance of LaNina onset during SON 2024) there is a higher possibility of below average rainfall over most parts of Sri Lanka during November 2024. On the other hand development of the synoptic scale systems such as lows and depressions are also possible during the month. If so rainfall may increase.</p>

Fig 2.Monthly rainfall forecasts for September, October and November 2024

District wise normal (mean) rainfall values are indicated in annex -1)

The predictability is also limited due to strong day-to-day atmospheric variability caused by the passage of the synoptic scale systems such as lows and depressions as well as intraseasonal Oscillations such as Madden Julian Oscillations (MJO).

Weekly Rainfall forecasts for the month of September 2024

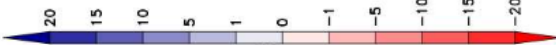
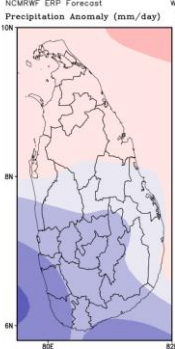
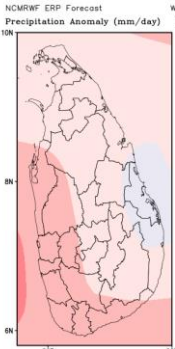
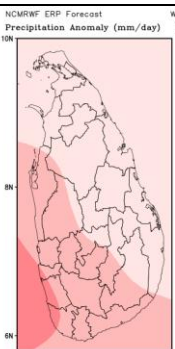
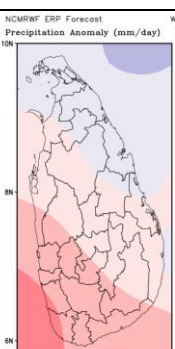
Weekly Rainfall anomaly Source – NCMRWF Updated on 29 th August 2024		
 <p>NCMRWF ERP Forecast Precipitation Anomaly (mm/day)</p>	30Aug-05 Sept 2024	<ul style="list-style-type: none"> • Above normal rainfalls are likely over Western, Southern and Sabaragamuwa provinces, Kandy, Nuwara Eliya and Badulla districts and some areas in Monaragala, Kurunegala and puttalam districts. Near normal rainfalls are expected over remaining parts of the country.
 <p>NCMRWF ERP Forecast Precipitation Anomaly (mm/day)</p>	06-12 Sept 2024	<ul style="list-style-type: none"> • Below normal rainfalls are likely over most parts of the Western, Southern, Sabaragamuwa and Northwestern provinces. Near normal rainfalls are expected over remaining parts of the country.
 <p>NCMRWF ERP Forecast Precipitation Anomaly (mm/day)</p>	13-19 Sept 2024	<ul style="list-style-type: none"> • Below normal rainfalls are likely over most parts of the Western, Southern, Sabaragamuwa, Central, Northwestern and Uva provinces. Near normal rainfalls are expected over remaining parts of the country.
 <p>NCMRWF ERP Forecast Precipitation Anomaly (mm/day)</p>	20-26 Sept 2024	<ul style="list-style-type: none"> • Below normal rainfalls are likely over Western, Southern and Sabaragamuwa provinces and some areas in Central, Northwestern and Uva provinces. Near normal rainfalls are expected over remaining parts of the country.

Fig 3. Weekly rainfall forecast for September 2024

Attention is requested for following areas

- More attention for the instructions and advisories issued by authorized agencies particularly related to extreme weather.
- Floods, Landslides and Strong windy condition are also possible particularly over SW parts of the country particularly during latter part of September.
- Lightning, temporally strong gusty winds accompanied by thundershowers are also possible during the season.

Annex-1

District wise mean (30 years (1981-2010) of average) rainfalls during the months of September, October and November

District	Average rainfall- September(mm)	Average rainfall- October (mm)	Average rainfall- November(mm)
Colombo	279.8	385.3	368.1
Kalutara	363.9	452.9	384.5
Galle	316.5	401.5	341.6
Matara	237.7	310.5	329.5
Hambantota	70.3	157.2	230.8
Ampara	69.9	160.0	289.6
Batticaloa	82.6	172.3	326.8
Trincomalee	109.2	170.2	334.1
Mullaithivu	73.7	170.3	333.9
Jaffna	66.4	194.1	348.4
Killinochchi	55.6	177.5	340.3
Mannar	41.7	161.1	266.5
Puttalam	64.7	212.1	234.6
Gampaha	216.3	362.8	319.3
Kegalle	310.2	451.9	381.2
Ratnapura	256.6	368.4	365.5
Monaragala	79.6	214.0	293.3
Badulla	110.9	248.5	335.4
Pollonnaruwa	89.5	196.6	290.1
Vavuniya	83.6	188.5	273.6
Anuradapura	80.2	200.0	249.2
Kurunegala	100.4	273.4	270.1
Matale	88.5	242.0	336.5
Kandy	159.7	294.3	318.1
Nuwaraeliya	221.0	313.5	303.2

Table 01: 30 year Average (1981-2010) district wise rainfalls during the month of September, October and November

Table 01 shows the mean (30-year Average (1981-2010)) rainfalls during the month of September, October and November in each district.