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Seasonal, Monthly and weekly Rainfall Forecasts for December 2024-February 2025

Issued on 2nd December 2024 by Seasonal Forecasting Division of the Department of Meteorology, Sri Lanka.

This consensus Climate Outlook for December 2024 to February 2025 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 conditions are present. Equatorial sea surface temperatures (SSTs) are near-to-below-average in the central and eastern Pacific Ocean. La Niña is favored to emerge in October-December (57% chance) and is expected to persist through January-March 2025.The Indian Ocean Dipole (IOD) index for the week ending 24 November was −0.54 °C, having been below the negative IOD threshold (–0.4 °C) since mid-October. 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 December–February 2024/25 (DJF)

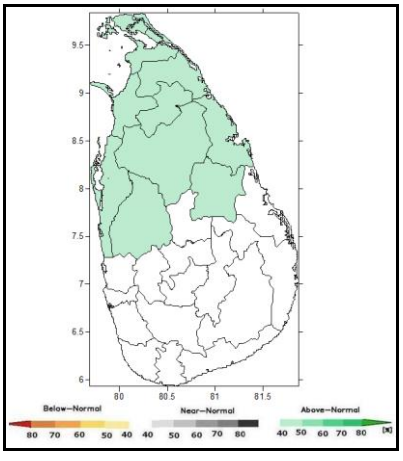


Fig 1: Consensus Probabilistic Monthly rainfall forecast for DJF 2024/25

There is a possibility for having near or slightly above normal rainfall over Northern, North-central and Northwestern provinces and in Trincomalee district and no signal for remaining areas of the country during DJF 2024/25 as a whole. In addition to that development of the

synoptic scale systems such as wavy type disturbances, lows, depressions and cyclones are also possible during the season particularly during December and January. If so rainfall can increase **(Fig.01).**

Monthly Rainfall Forecasts for December 2024, January and February 2025

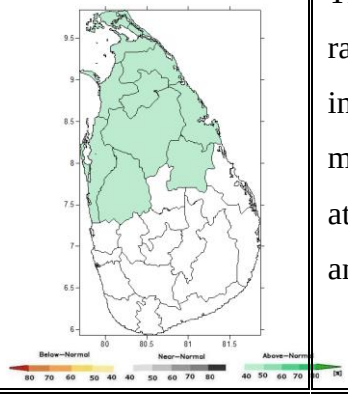
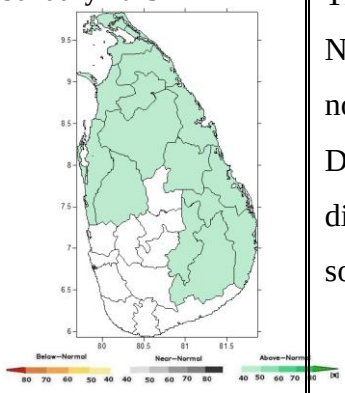
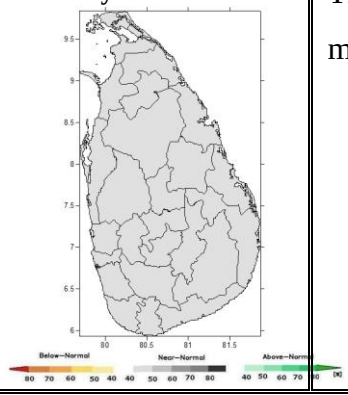
Month	Rainfall forecast
December 2024 	There is a higher chance of having near or slightly above normal rainfalls over Northern, North-central and Northwestern provinces and in Trincomalee district and no signal for remaining areas during the month of December 2024. There is a possibility for developing atmospheric disturbances, such as wavy type disturbances, depressions and cyclones during the month. If so, rainfall will increase.
January 2025 	There is a possibility for near or slightly above normal rainfall over Northern, North-central, Northwestern, Eastern and Uva provinces and no signal for remaining areas during the month of January 2025. Development of the synoptic scale systems such as wavy type disturbances, low and depressions are also possible during the month. If so forecast can be deviated.
February 2025 	There is a possibility for near normal rainfall over most parts during the month of February 2025.

Fig 2. Monthly rainfall forecasts for December, January and February 2024/25

(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. Intraseasonal Oscillations such as Madden Julian Oscillations (MJO) is also another atmospheric phenomena which can't be underestimated.

Weekly Rainfall forecasts for the month of December 2024

Weekly Rainfall anomaly
Source –NCMRWF

Updated on 28th Nov 2024

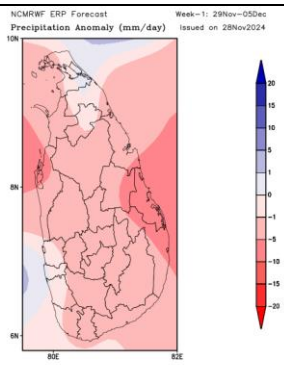
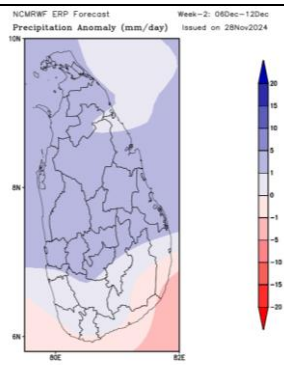
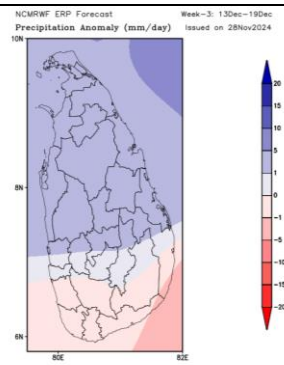
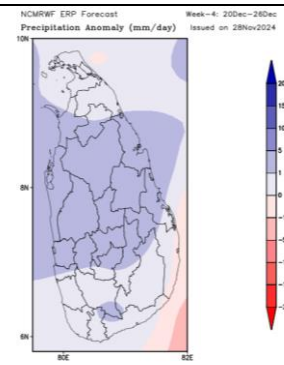
 29 Nov-05 Dec 2024	• Below normal rainfalls are expected over most parts of the country.
 06-12 Dec 2024	• Above normal rainfalls are likely over Northern, Northcentral, Northwestern and Central provinces and Gampaha, Kegalle, Trincomalee, Batticaloa districts and some areas of Ampara and Badulla districts. Near normal rainfalls are expected over remaining areas of the country.
 13-19 Dec 2024	• Above normal rainfalls are likely over Northern, Northcentral, Northwestern provinces and Mathale, Kandy, Trincomalee and Batticaloa districts and some areas of Gampaha, Kegalle, Badulla and Ampara districts. Near normal rainfalls are likely over remaining areas.
 20-26 Dec 2024	• Near or slightly above normal rainfalls are likely over most of the parts of the country.

Fig 3: Weekly rainfall forecast for December 2024

Probabilistic Temperature Forecast for December 2024

The probabilistic Temperature forecasts in Sri Lanka for December 2024 as given below.

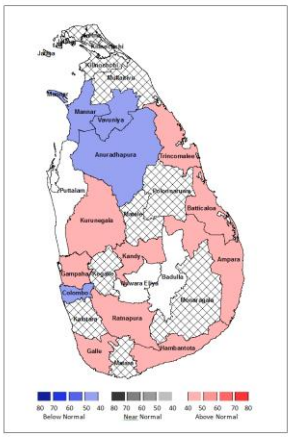


Fig 4:

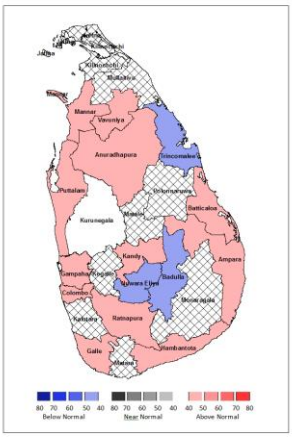


Fig 5:

Figure 4 shows the Probabilistic forecast for Maximum Temperatures in Sri Lanka during December 2024. Accordingly, there is a chance of experience slightly above the normal Maximum(day) temperatures in Galle, Gampaha, Kurunegala, Hambantota, Rathnapura, Kandy, Ampara, Trincomalee and Batticaloa districts and below the normal Maximum temperatures in Mannar, Vavuniya, Anuradhapura and Colombo districts for the month of December 2024.

Figure 5 shows the Probabilistic forecasts for Minimum (night) Temperatures in Sri Lanka during December 2024. Accordingly, there is a chance of experience slightly above the normal Minimum Temperatures in Mannar, Vauniya, Anuradapura, Puttalam, Gampaha, Colombo, Galle, Hambantota, Rathnapura, Kandy, Ampara, and Batticaloa districts and below the normal Minimum temperatures in Trincomalee, Nuwara Eliya and Badulla districts for the month of December 2024.

Note: Temperature forecasts are not available for Kegalle, Matara, Matale, Mulative, Kilinochchi, Polonnaruwa, Monaragala, Jaffna, and Kalutara districts due to unavailability of long-term temperature observation data.

Observed rainfall anomaly during the month of November 2024

Observed rainfall anomaly during the month of November 2024 will be updated in the department web site by 4th December 2024.

http://meteo.gov.lk/index.php?option=com_content&view=article&id=78&Itemid=290&lang=en

Attention is needed for following areas

- More attention for the instructions and advisories issued by authorized agencies particularly related to extreme weather.
- There is a possibility for developing low pressure systems, wavy type disturbances, depressions and Cyclones during the season.

Annex-1

District wise mean (30 years (1981-2010) of average) rainfalls during the months of December, January and February

District	Average rainfall-December(mm)	Average rainfall-January (mm)	Average rainfall-February(mm)
Colombo	171.3	103.7	86.4
Kalutara	232.9	143.5	114.5
Galle	221.6	134.5	109.2
Matara	192.7	114.3	109.4
Hambantota	144.0	81.7	54.8
Ampara	318.7	233.8	113.3
Batticaloa	371.1	209.4	115.0
Trincomalee	310.1	133.7	72.7
Mullaithivu	250.9	92.2	60.8
Jaffna	232.7	73.1	35.7
Killinochchi	240.3	82.5	51.0
Mannar	188.3	62.0	51.1
Puttalam	107.0	52.4	42.0
Gampaha	120.0	68.7	67.7
Kegalle	154.2	96.4	87.0
Ratnapura	218.7	129.4	121.9
Monaragala	221.2	149.9	83.9
Badulla	324.3	242.8	116.4
Pollonnaruwa	328.8	171.7	97.1
Vavuniya	225.2	87.3	54.3
Anuradapura	208.1	94.0	58.0
Kurunegala	122.0	67.2	50.0
Matale	340.3	233.7	115.7
Kandy	258.0	185.9	93.6
Nuwaraeliya	220.9	158.2	87.5

Table 01: 30 year Average (1981-2010) district wise rainfalls during the months of December, January and February

Table 01 shows the mean (30 year Average (1981-2010)) rainfalls during the months of December, January and February in each district.