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Seasonal, Monthly and weekly Rainfall Forecasts for October-December 2024

Issued on 2<sup>nd</sup> October 2024 by Seasonal Forecasting Division of the Department of Meteorology, Sri Lanka.

This consensus Climate Outlook for October to December 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. The Bureau of Meteorology's model suggests SSTs are likely to remain within the ENSO-neutral range ( $-0.8\text{ }^{\circ}\text{C}$  to  $+0.8\text{ }^{\circ}\text{C}$ ) throughout the forecast period. It is possible a La Niña may develop in coming months but if so, it is forecast to be relatively weak and short-lived. 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 October–December 2024 (OND)

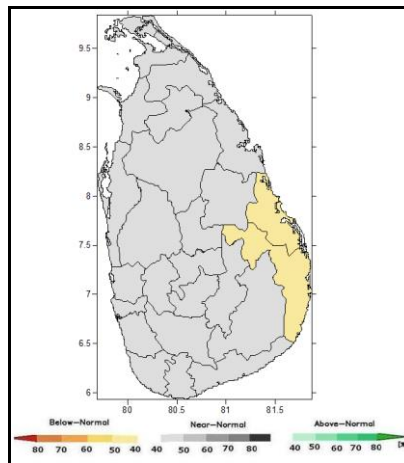


Fig 1.Consensus Probabilistic Monthly rainfall forecast for OND 2024

**There is a possibility for near normal rainfall over Sri Lanka except Ampara and Batticalo districts where there is a possibility for below normal rainfall, during OND 2024 as a whole.**

Remarks\*\* - However if La Nina onset occurs in October 2024 there is some possibility of below average rainfall over some parts of Mullative, Trincomalee, Vavuniya, Killinochchi and Jaffna districts as well. On the other hand, development of the synoptic scale systems such as lows and depressions are also possible during the month of October and November. If so rainfall can increase (Fig.01).

### Monthly Rainfall Forecasts for October, November and December 2024

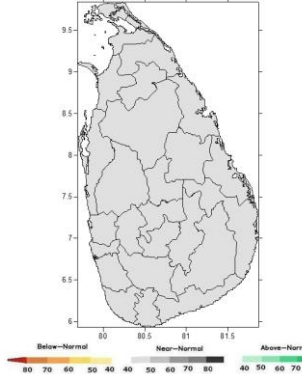
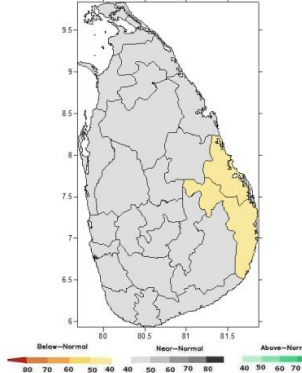
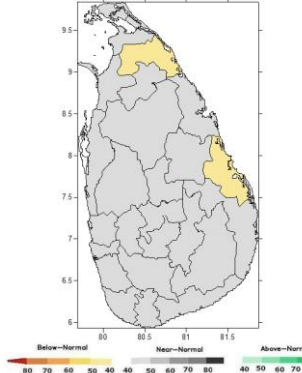
| Month   | Rainfall forecast  |
|---|--|
| <p><b>October 2024</b></p>     | <p>There is a higher chance of having near normal rainfalls over most parts of the country during the month of October 2024.</p> <p>There is a possibility for developing atmospheric disturbances, such as low pressure areas and depressions during the month, particularly during latter part of the month. If so rainfall will increase.</p>   |
| <p><b>November 2024</b></p>   | <p>There is a possibility for near normal rainfall over Sri Lanka except Ampara and Batticalo districts where there is a possibility for below normal rainfall, during the month of November 2024.</p> <p>However, if LaNina onset occurs in October 2024, some parts of Mullative, Trincomalee, Vavuniya, Killinochchi, Jaffna, Polonnaruwa and Matale districts are also may receive below normal rainfalls during the month. On the other hand, development of the synoptic scale systems such as lows and depressions are also possible during the month. If so rainfall can increase.</p> |
| <p><b>December 2024</b></p>  | <p>According to the available global model forecasts, there is a possibility for near normal rainfall over Sri Lanka except Batticalo and Mullative districts where there is a possibility for below normal rainfall, during the month of December 2024.</p> <p><b>In addition to that development of the cyclones and wave type disturbances are also possible during the month. If so the forecast may change.</b></p>   |

Fig 2: Monthly rainfall forecasts for October, November and December 2024

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).

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

## Weekly Rainfall forecasts for the month of October 2024

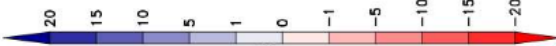
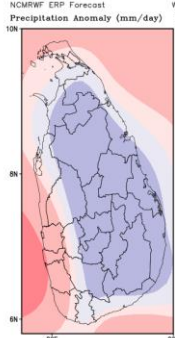
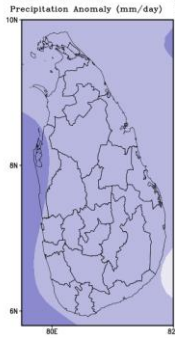
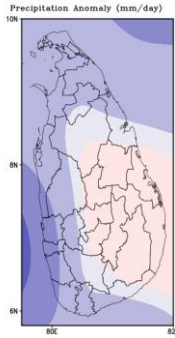
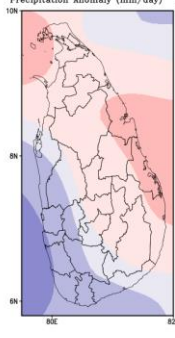
| Weekly Rainfall anomaly<br>Source – NCMRWF<br>Updated on 26 <sup>th</sup> September 2024   |  |   |
|--|--|---|
|  <p style="font-size: small; margin-top: 5px;">NCMRWF ERP Forecast<br/>Precipitation Anomaly (mm/day)</p>   | <p style="text-align: center;">Week<br/>Issued</p> <p style="text-align: center; font-weight: bold;">27 Sept-03 Oct 2024</p> | <ul style="list-style-type: none"> <li>Near or slightly below normal rainfalls are likely over Western province and some areas in Galle, Puttalam and Kurunegala districts. Above normal rainfalls are likely over remaining parts of the country.</li> </ul>   |
|  <p style="font-size: small; margin-top: 5px;">NCMRWF ERP Forecast<br/>Precipitation Anomaly (mm/day)</p>  | <p style="text-align: center;">Week<br/>Issued</p> <p style="text-align: center; font-weight: bold;">04-10 Oct 2024</p>      | <ul style="list-style-type: none"> <li>Above normal rainfalls are expected over most parts of the country.</li> </ul>   |
|  <p style="font-size: small; margin-top: 5px;">NCMRWF ERP Forecast<br/>Precipitation Anomaly (mm/day)</p> | <p style="text-align: center;">Week<br/>Issued</p> <p style="text-align: center; font-weight: bold;">11-17 Oct 2024</p>      | <ul style="list-style-type: none"> <li>Above normal rainfalls are expected over most parts of the Western, Southern, Sabaragamuwa, North western and Northern provinces. Near normal rainfalls are expected remaining parts of the country.</li> </ul>  |
|  <p style="font-size: small; margin-top: 5px;">NCMRWF ERP Forecast<br/>Precipitation Anomaly (mm/day)</p> | <p style="text-align: center;">Week<br/>Issued</p> <p style="text-align: center; font-weight: bold;">18-24 Oct 2024</p>      | <ul style="list-style-type: none"> <li>Above normal rainfalls are expected over most parts of the Western, Southern, Sabaragamuwa and North western provinces. Below normal rainfalls are possible over some areas in Eastern province and near normal rainfalls are likely over remaining parts of the country.</li> </ul> |

Fig 3. Weekly rainfall forecast for October 2024

## **Attention is requested for following areas**

- More attention for the instructions and advisories issued by authorized agencies particularly related to extreme weather.
- Lightning and temporally strong gusty winds accompanied by thundershowers are also possible during the season, particularly October and November.
- There is a possibility for developing low pressure systems, depressions and Cyclones during the season.

## Annex-1

### District wise mean (30 years (1981-2010) of average) rainfalls during the months of

#### October, November and December

| <b>District</b> | <b>Average rainfall-<br/>October(mm)</b> | <b>Average rainfall-<br/>November (mm)</b> | <b>Average rainfall-<br/>December(mm)</b> |
|-----------------|--|--|---|
| Colombo         | 385.3                                    | 368.1                                      | 171.3                                     |
| Kalutara        | 452.9                                    | 384.5                                      | 232.9                                     |
| Galle           | 401.5                                    | 341.6                                      | 221.6                                     |
| Matara          | 310.5                                    | 329.5                                      | 192.7                                     |
| Hambantota      | 157.2                                    | 230.8                                      | 144.0                                     |
| Ampara          | 160.0                                    | 289.6                                      | 318.7                                     |
| Batticaloa      | 172.3                                    | 326.8                                      | 371.1                                     |
| Trincomalee     | 170.2                                    | 334.1                                      | 310.1                                     |
| Mullaithivu     | 170.3                                    | 333.9                                      | 250.9                                     |
| Jaffna          | 194.1                                    | 348.4                                      | 232.7                                     |
| Killinochchi    | 177.5                                    | 340.3                                      | 240.3                                     |
| Mannar          | 161.1                                    | 266.5                                      | 188.3                                     |
| Puttalam        | 212.1                                    | 234.6                                      | 107.0                                     |
| Gampaha         | 362.8                                    | 319.3                                      | 120.0                                     |
| Kegalle         | 451.9                                    | 381.2                                      | 154.2                                     |
| Ratnapura       | 368.4                                    | 365.5                                      | 218.7                                     |
| Monaragala      | 214.0                                    | 293.3                                      | 221.2                                     |
| Badulla         | 248.5                                    | 335.4                                      | 324.3                                     |
| Pollonnaruwa    | 196.6                                    | 290.1                                      | 328.8                                     |
| Vavuniya        | 188.5                                    | 273.6                                      | 225.2                                     |
| Anuradapura     | 200.0                                    | 249.2                                      | 208.1                                     |
| Kurunegala      | 273.4                                    | 270.1                                      | 122.0                                     |
| Matale          | 242.0                                    | 336.5                                      | 340.3                                     |
| Kandy           | 294.3                                    | 318.1                                      | 258.0                                     |
| Nuwaraeliya     | 313.5                                    | 303.2                                      | 220.9                                     |

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

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