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Seasonal, Monthly and weekly Rainfall Forecasts for November-January 2023/24

Issued on 6<sup>th</sup> November 2023 by Seasonal forecasting Division of the Department of Meteorology, Sri Lanka.

This consensus Climate Outlook for November 2023 to January 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 tropical Pacific atmospheric anomalies are consistent with El Niño. El Niño is anticipated to continue through the Northern Hemisphere spring (March-May 2024) with an 75-80% chance of as strong event. A positive Indian Ocean Dipole (IOD) is underway. All models indicate that this positive IOD will likely be sustained to at least December 2023. 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 November 2023–January 2024(NDJ)

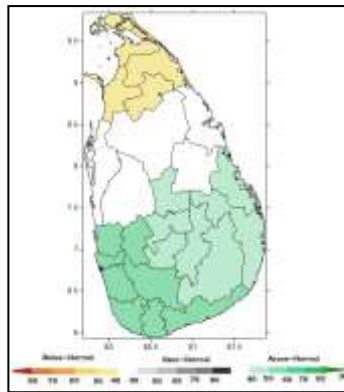


Fig 1.Consensus Probabilistic Monthly rainfall forecast for NDJ 2023/24

There is a possibility of having below normal rainfall over Northern Province and above normal over Western, Southern, Sabaragamuwa, Uva and Central provinces and in Ampara and Batticaloa districts. There is no signal for remaining areas, where there is an equal probability for having below or near or above normal rainfalls during NDJ 2023/24 season as a whole. (Fig. 01).

## Monthly Rainfall Forecasts for November, December 2023 and January 2024

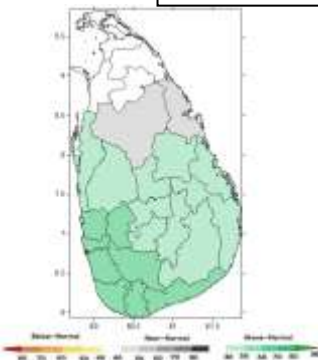

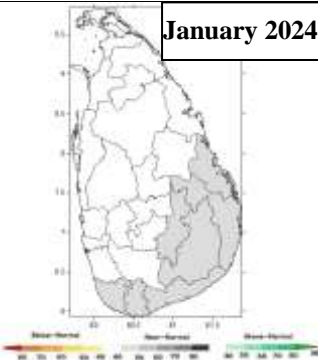
Month	Rainfall forecast
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="border: 1px solid black; padding: 2px; font-weight: bold;">November</div>  </div>	<p>There is a higher chance of having above normal rainfall over Western, Southern, Sabaragamuwa, Central, Uva and Northwestern provinces and Batticaloa, Polonnaruwa and Ampara districts. Near normal rainfall are likely over Anuradhapura and Trincomalee districts. There is no clear signal indicated for Northern province, where there is an equal probability for having below or near or above normal rainfalls during the month of November 2023.</p> <p>However, there is a possibility for developing low level atmospheric disturbances and depressions during the month, if so rainfalls can be enhanced over most parts of the country.</p>
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="border: 1px solid black; padding: 2px; font-weight: bold;">December 2023</div>  </div>	<p>There is a chance of having below normal rainfall over Northern province and above normal rainfall over Southern and Uva provinces and in Batticaloa and Ampara districts with a possibility for near or slightly above normal rainfall over Western, Central, Sabaragamuwa and Northwestern provinces. There is no clear signal indicated for North central province, where there is an equal probability for having below or near or above normal rainfalls, during the month of December 2023.</p> <p>However, there is a possibility for developing synoptic scale systems like low level atmospheric disturbances, depressions and cyclones in the vicinity of Sri Lanka and in Bay of Bengal during the month of December, if so rainfalls forecast can be deviate with a chance of enhancing rainfall over the country.</p>
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="border: 1px solid black; padding: 2px; font-weight: bold;">January 2024</div>  </div>	<p>There is a possibility of having near normal rainfall over Uva and Southern provinces and in Batticaloa and Ampara districts. There is no clear signal indicate for remaining areas, where there is an equal probability for having below or near or above normal rainfalls, during the month of January 2024. In general wavy type disturbances which could enhance rainfall over the country is possible during the month</p>

Fig 2.Monthly rainfall forecasts for November, December 2023 and January 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 November 2023

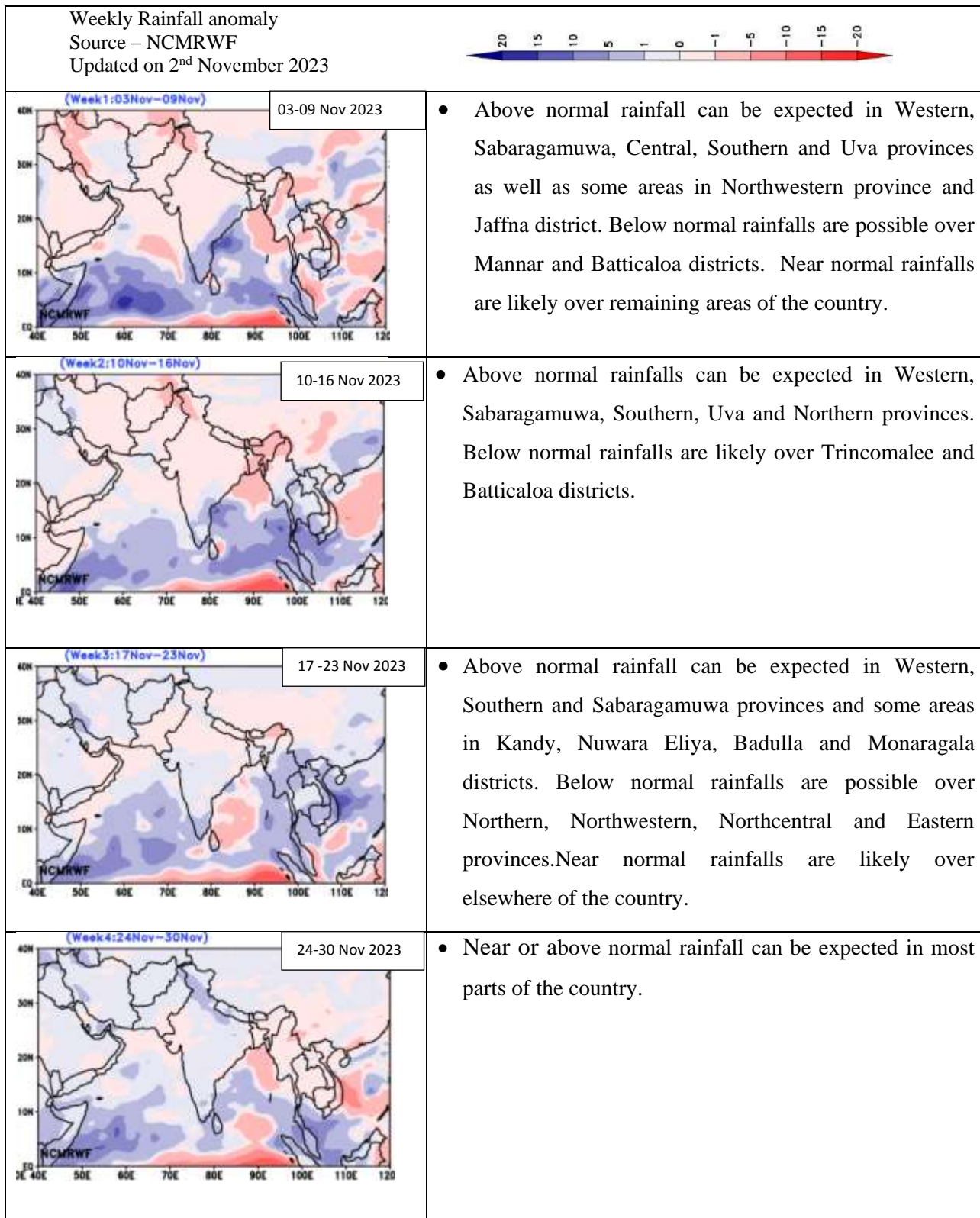


Fig 3. Weekly rainfall forecast for November 2023

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

- More attention for the instructions and advisories issued by authorized agencies particularly related to extreme weather and water management.
- There is a possibility for lightning, temporally strong gusty winds and heavy rainfall during particularly November.
- Generally, low level atmospheric disturbances, depressions and cyclones are possible over vicinity of Sri Lanka during the season.
- Floods and Landslides are also possible.

## Annex-1

### District wise mean (30 years (1961-1990) of average) rainfalls during the months of

#### November, December and January

<b>District</b>	<b>Average rainfall- November (mm)</b>	<b>Average rainfall- December (mm)</b>	<b>Average rainfall- January(mm)</b>
Colombo	340.8	191.7	77.2
Kalutara	403.1	258.0	122.7
Galle	378.9	239.6	127.0
Matara	352.7	219.9	125.2
Hambantota	222.5	159.2	70.9
Ampara	271.9	350.5	210.1
Batticaloa	303.2	388.0	194.3
Trincomalee	303.1	335.6	127.4
Mullaithivu	312.5	291.0	77.2
Jaffna	324.8	257.4	70.7
Killinochchi	329.6	274.0	76.7
Mannar	242.8	206.4	53.8
Puttalam	233.2	126.2	46.9
Gampaha	313.1	141.1	53.7
Kegalle	394.1	188.5	77.4
Ratnapura	370.2	231.5	117.0
Monaragala	289.6	253.5	129.7
Badulla	327.3	356.1	232.3
Pollonnaruwa	292.9	369.5	164.1
Vavuniya	272.3	256.7	74.2
Anuradapura	240.4	232.8	84.6
Kurunegala	270.1	150.2	63.5
Matale	309.0	357.7	202.0
Kandy	342.5	308.8	159.8
Nuwaraeliya	305.9	250.1	138.3

Table 01: 30 year Average (1961-1990) district wise rainfalls during the month of November, December and January

Table 01 shows the mean (30 year Average (1961-1990)) rainfalls during the month of November, December and January in each district.