

# NE Monsoon – 2022/23

November



# Forecast for next NDJ 2022

Nandalal Peiris  
Department Of Meteorology

## Seasonal Prediction Team

**A.R.Warnasuriya (Director)**

Nandalal Peiris

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# Rainfall Distribution

Resource: CCCS Division - DoM

## Average Monthly Rainfall distribution

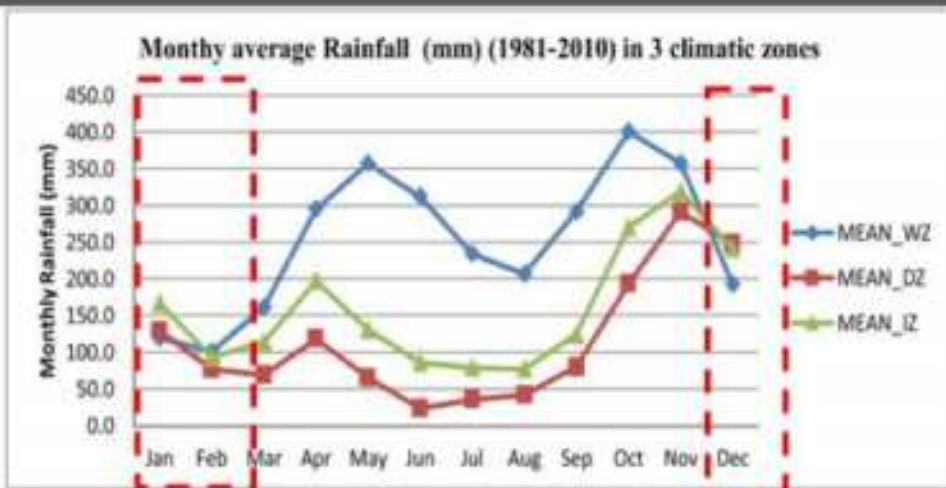
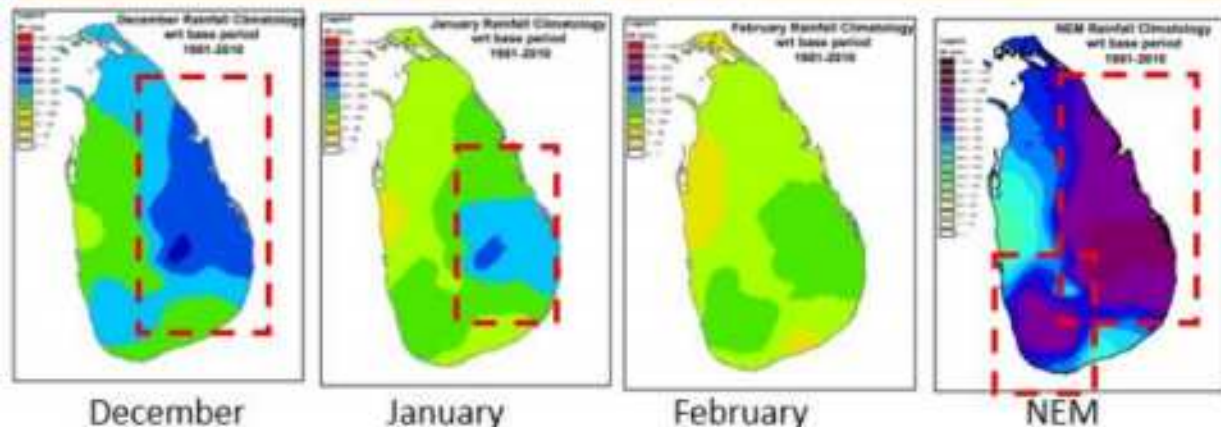


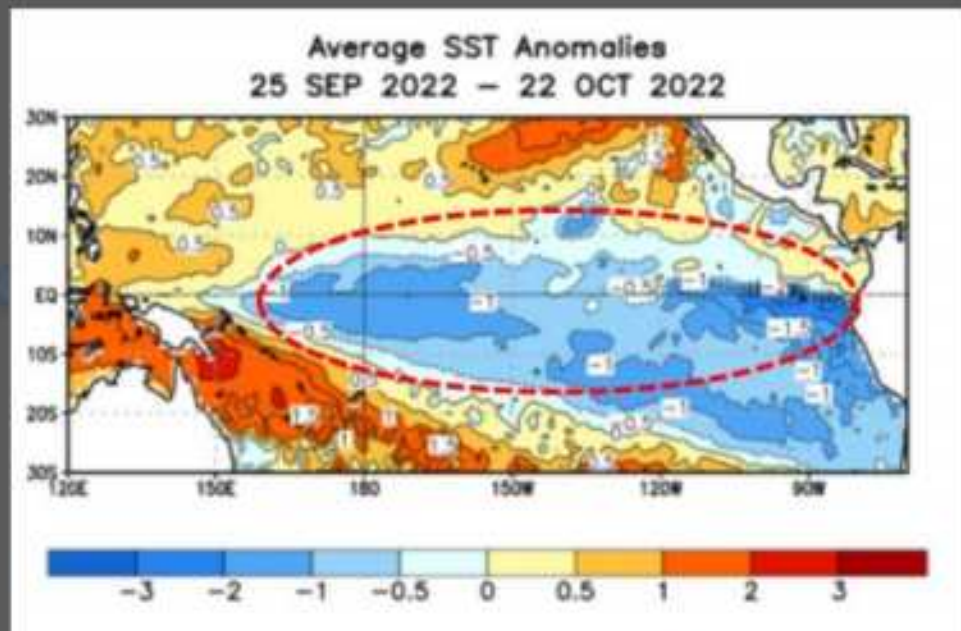
Fig. 1. The annual cycle of area-averaged monthly rainfall (mm) over three climatic zones (wet zone (WZ), Intermediate Zone (IZ) and Dry Zone (DZ)). Rainfall climatology is based on station rainfall from 1981 to 2010.

Resource : I. M. S. P. Jayawardena Department of Meteorology

## District wise average monthly rainfall (mm)

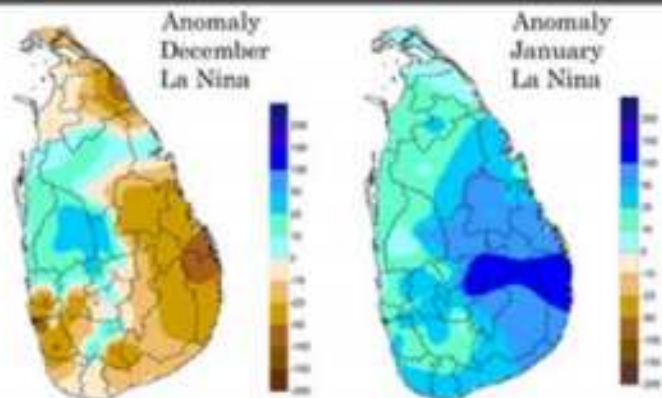
District	Average rainfall- December (mm)	Average rainfall- January (mm)	Average rainfall- February(mm)	Average rainfall (mm) –DJF
Colombo	191.7	77.2	89.7	358.6
Kalutara	258.0	122.7	119.3	499.9
Galle	239.6	127.0	118.2	484.7
Matara	219.9	125.2	99.7	444.8
Hambantota	159.2	70.9	63.7	293.8
Ampara	350.5	210.1	144.9	705.5
Batticaloa	388.0	194.3	121.9	704.2
Trincomalee	335.6	127.4	82.4	545.4
Mullaithivu	291.0	77.2	59.9	428.1
Jaffna	257.4	70.7	32.5	360.5
Killinochchi	274.0	76.7	50.3	400.9
Mannar	206.4	53.8	48.4	308.6
Puttalam	126.2	46.9	38.5	211.6
Gampaha	141.1	53.7	76.8	271.6
Kegalle	188.5	77.4	98.3	364.2
Ratnapura	231.5	117.0	117.9	466.4
Monaragala	253.5	129.7	110.4	493.6
Badulla	356.1	232.3	160.6	749.0
Pollonnaruwa	369.5	164.1	106.2	639.8
Vavuniya	256.7	74.2	53.7	384.6
Anuradapura	232.8	84.6	55.7	373.2
Kurunegala	150.2	63.5	62.5	276.2
Matale	357.7	202.0	121.5	681.2
Kandy	308.8	159.8	118.3	586.9
Nuwaraeliya	250.1	138.3	104.8	493.2

# Latest Global SST Departure (C<sup>0</sup>) and ENSO Condition over Pacific



Equatorial SSTs were below average over most parts of the Pacific Ocean and were above average around Indonesia.

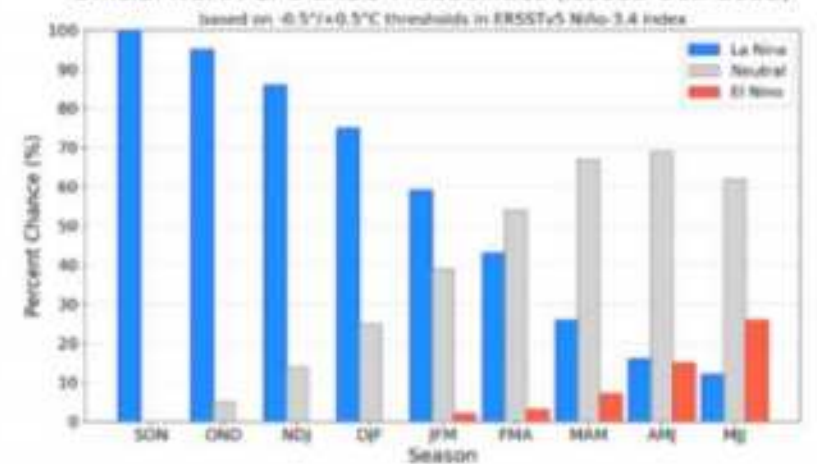
Source: CPC - NOAA



During the La-nina years it is evident that the below normal rainfall over most parts of the country during the month of December above normal rainfalls over Northwestern and Northcentral parts of the country. However above normal RF over most parts of the country during the months of January.

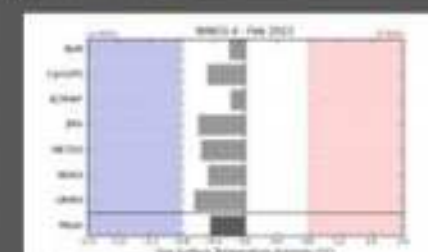
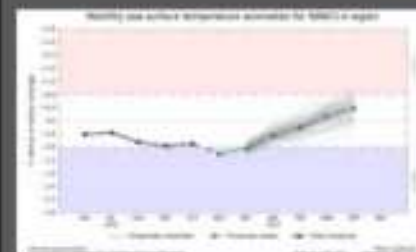
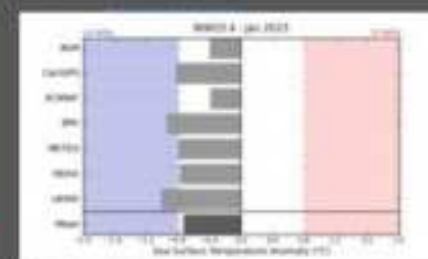
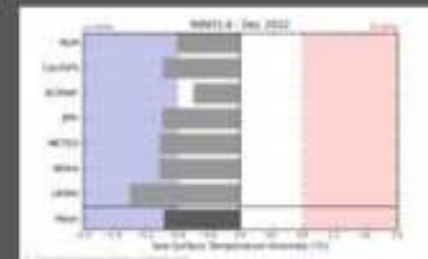
Hapuarachchi et al

## Official NOAA CPC ENSO Probabilities (issued Oct. 2022)



La Niña gradually decrease through the Northern Hemisphere fall and winter, with ENSO-neutral favored beginning in February-April 2023.

Source: BoM



## NDJ Consensus FC

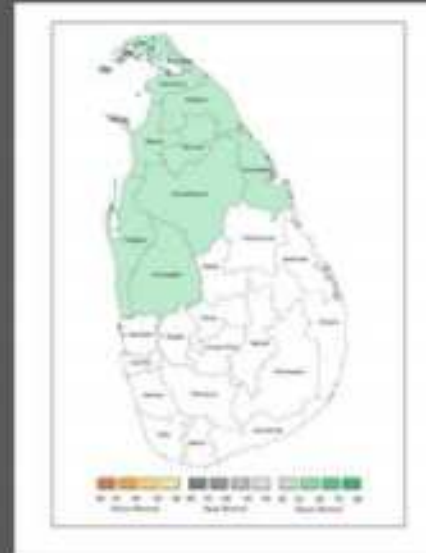
# Forecasts of Different Months



Near or slightly above normal rainfalls are likely over Northern province and in Trincomalee district and near or slightly below normal rainfalls over remaining areas during NDJ 2022/23



**November**



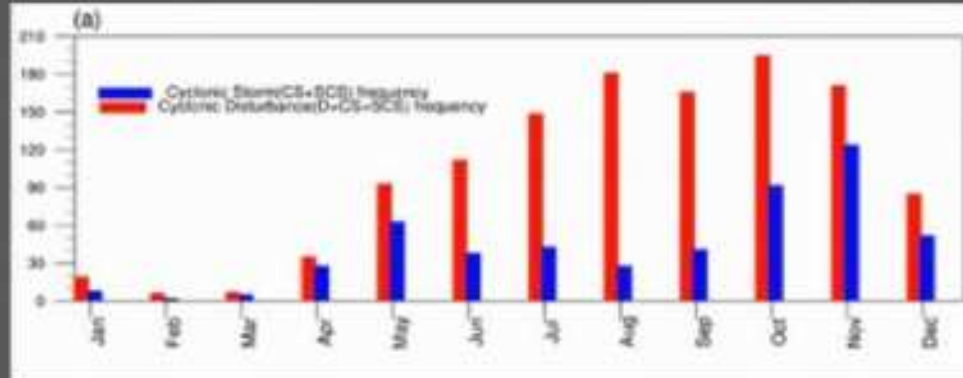
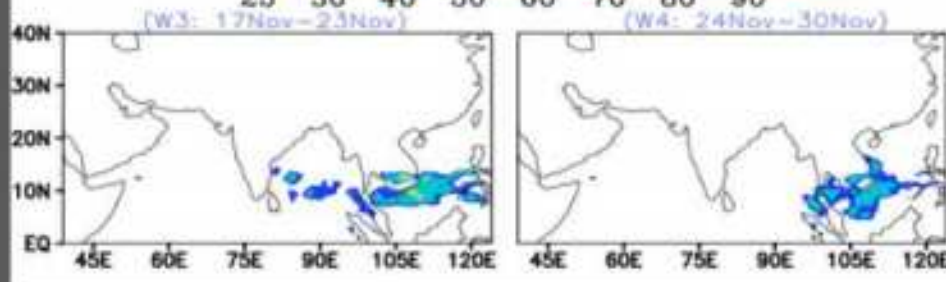
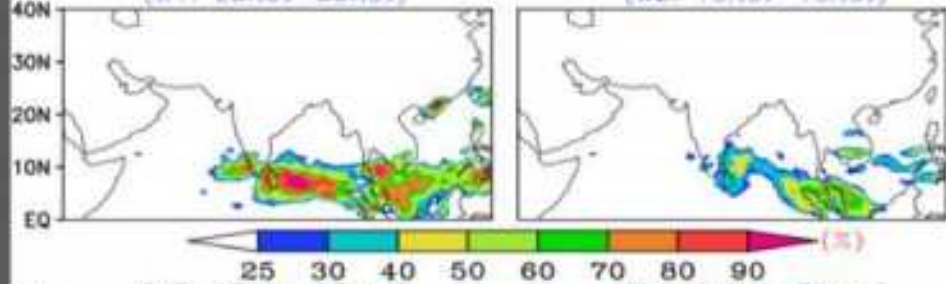
**December**



**January**

# Cyclogenesis over Bay of Bengal

Cyclogenesis & Evolution Probability (%) from MPME-IGPP  
(W1: 03Nov-09Nov) (W2: 10Nov-16Nov)



Experimental Cyclone Forecast over Bay of Bengal: 2022 post-monsoon season

Deterministic Forecast: Cyclonic storm frequency over Bay of Bengal

Year	Forecast	Observed
2022	2.0	??
2021	1.0	1.0
2020	2.0	2.0
2019	1.0	1.0
2018	1.0	3.0
2017	2.0	1.0

Experimental Cyclone Forecast over Bay of Bengal: 2022 post-monsoon season

Deterministic Forecast: Cyclonic Disturbance frequency over Bay of Bengal

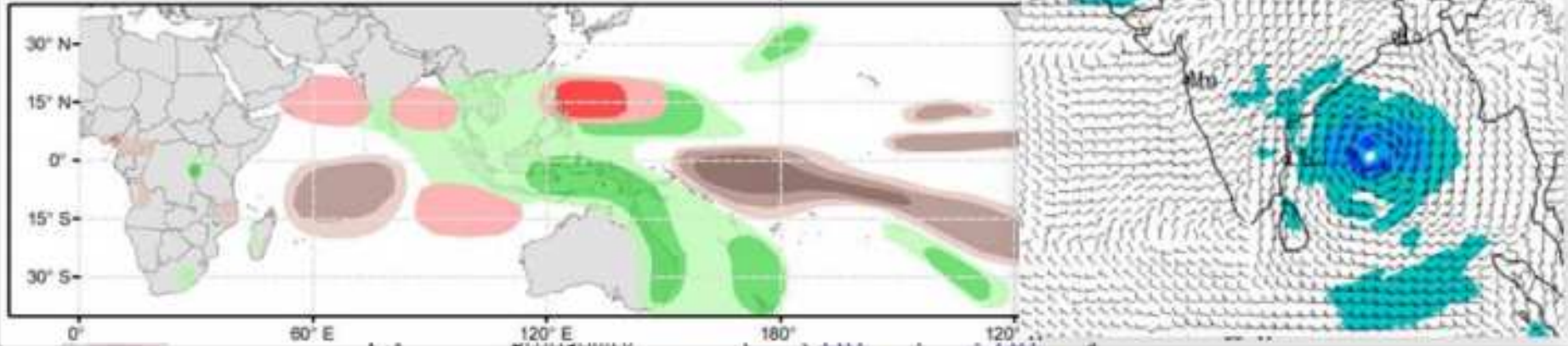
Year	Forecast	Observed
2022	4.0	??
2021	3.0	3.0
2020	5.0	4.0
2019	3.0	1.0
2018	3.0	3.0
2017	4.0	5.0

Synoptic scale systems such as lows and depressions developed in the Bay of Bengal enhance the RF over SL.

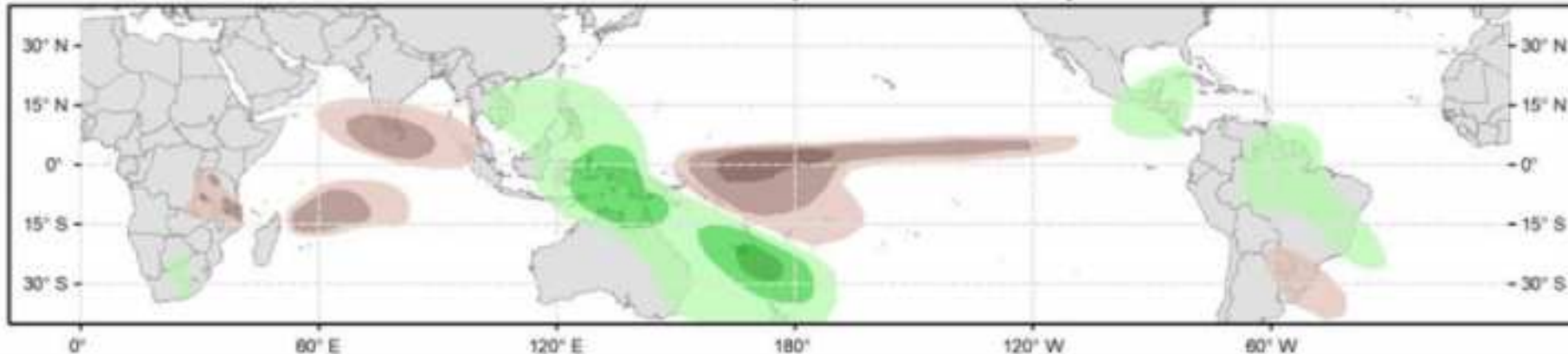
Possibility of Low pressure, depression and cyclones in Bay of Bengal in December is high according to the climatology.

# Cyclogenesis over Bay of Bengal

Week 2 - Valid: Nov 16, 2022 - Nov 22, 2022



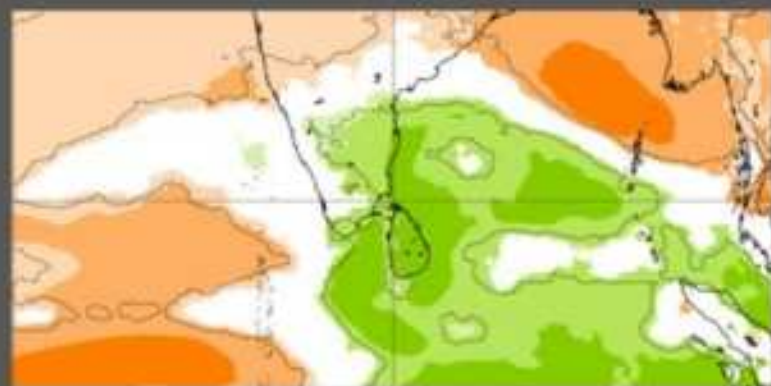
Week 3 - Valid: Nov 23, 2022 - Nov 29, 2022



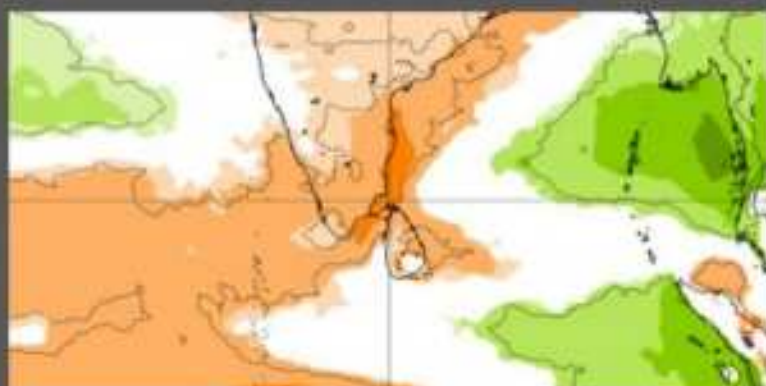
# Weather Forecasts for Next Four Weeks

ECMWF EPS-Monthly Forecasting System  
Precipitation anomaly

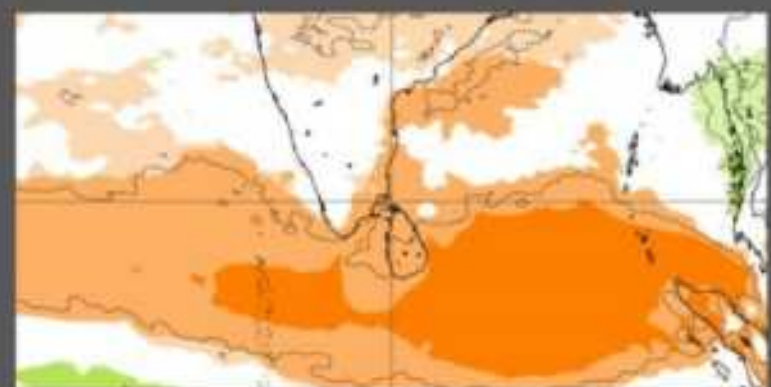
Forecast start reference is 30-09-2021  
ensemble size = 51 , climate size = 650



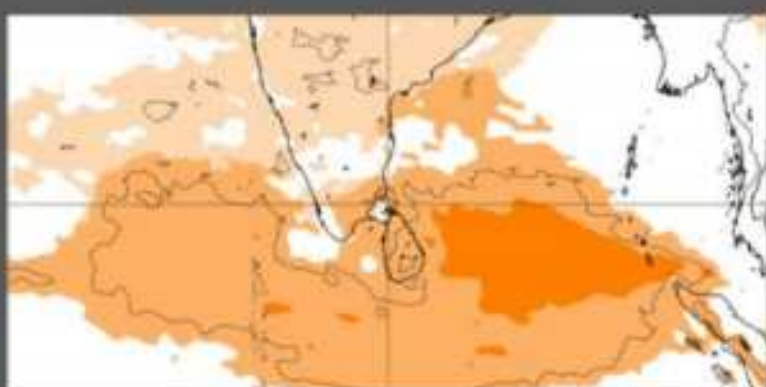
7-14 November



15 - 21 November



22 - 27 November



28 November 05 December

## Weekly Anomaly Forecast

### 1<sup>st</sup> Week

Above normal over most parts

### 2<sup>nd</sup> Week

Below normal over most parts

### 3<sup>rd</sup> Week

Below normal over most parts

### 4<sup>th</sup> Week

Below normal over most parts



# Summary



Attention is required for following areas

- Flood /landslides in NE parts of the country
- Wavy type disturbances/low pressure systems in the vicinity of Sri Lanka.
- Strong gusty winds over the country and the surrounding sea areas
- General public are kindly requested to pay more attention for the instructions and advisories issued by authorized agencies particularly on agriculture, water sectors and weather related activities.



## Seasonal Forecasts

### 1. Seasonal Forecast

- It consists with rainfall and temperature forecasts for next 3 months along with individual monthly forecasts.

### 2. Monthly Forecast

### 3. Weekly forecast

- Weekly briefing for the requested parties( agriculture/water sectors) on each Monday

### 4. National Agromet Advisory

### 5. Drought Bulletin

**Thank You**

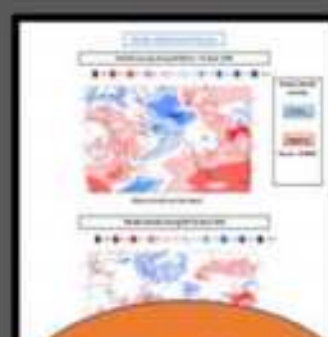
# Updates of National Forecasts



seasonal  
forecast



Monthly  
forecast



Weekly  
forecasts

[www.meteo.gov.lk](http://www.meteo.gov.lk)



National Agromet Advisory



Weekly Agromet Bulletin



Drought Bulletin