



**Government of India  
Earth System Science Organization  
Ministry of Earth Sciences  
India Meteorological Department**

**Press: Dated: 05 January, 2023**

**Subject: Current Weather Status and Extended range Forecast for next two weeks  
(05-18 Jan 2023)**

**1. Salient Observed Features during 29 Dec 2022 till 05 Jan 2023**

- **Extensive fog and low cloud coverage observed over Northern and central Parts of India during 30 Dec 2022 to 5 Jan which caused cold day to severe cold days during 1-5 Jan:** Dense to very dense fog was observed over Punjab, Haryana, Chandigarh, Jammu, North Rajasthan, Uttar Pradesh, Bihar and northeastern states during night of 30 Dec 2022 till 5 Jan 2023 and it was extended over to northern parts of Madhya Pradesh, Chhattisgarh and Sub Himalayan West Bengal during 1-5 Jan 2022 with increased intensity and duration. Dense fog was also observed over Uttarakhand and Chhattisgarh during 3-5 Jan and over Delhi 2-3 and 4-5 Jan 2023. **Due to persistence fog and low clouds,** Cold Day to severe cold days conditions was observed at many pockets to most pockets in Punjab, Haryana & Chandigarh and Uttar Pradesh and isolated over Rajasthan and north Madhya Pradesh during 1-5 Jan and in isolated pockets over Uttarakhand and Bihar during 2-4 Jan, over Delhi during 3-5 Jan 2023.
- **Cold Wave:** Cold wave conditions at isolated to few places was observed over Punjab and Rajasthan during 1-3 Jan. It was intensified to severe cold wave over Rajasthan during 3-5 Jan 2023. Cold wave conditions extended spatially further across northern and central plains of India and was prevailed over Haryana, Punjab, Chandigarh Himachal Pradesh, Delhi and West Uttar Pradesh and East Madhya Pradesh during 3-5 Jan 2023.
- **Season's 1<sup>st</sup> WD moved across north India during 29-31 Dec 2022, and caused fairly widespread to widespread light to moderate rainfall/snowfall activity over Jammu Kashmir & Ladakh and Himachal Pradesh and isolated light rainfall activity over Uttarakhand on 30 Dec.** Under the influence of its induced cyclonic circulation in the lower tropospheric levels, isolated to scattered

rainfall/thunderstorm activity had occurred over Punjab and Haryana, Chandigarh & Delhi on 30 Dec 2022

- Analysis of Weekly overall Rainfall distribution during the week ending on 4 Jan 2023 and Post monsoon Season's Rainfall Scenario (1 Oct-31 Dec 2022): It shows for the country as a whole, the weekly cumulative All India Rainfall in % departure from its long period average (LPA) till week ending on 4 Jan 2023, was -78%, with south Peninsula India had -93% while all India Seasonal cumulative rainfall % departure during this year's post monsoon Season Rainfall during 01 Oct-31 Dec 2022 is +19% and over south Peninsula, it is +9%. Details of the rainfall distribution over the four broad geographical regions of India are given in Table 1 and Meteorological sub-division-wise rainfall both for week and season are given in Annex I and II respectively.

**Table 1: Rainfall status (Week and season)**

Region	WEEK			SEASON		
	29.12.2022 TO 04.01.2023			01.10.2022 TO 31.12.2022		
	Actual	Normal	% Dep	Actual	Normal	% Dep
EAST & NORTH-EAST INDIA	0.1	2.7	-95%	176.5	158.9	+11%
NORTH-WEST INDIA	2.2	5.6	-61%	82.8	52.6	+57%
CENTRAL INDIA	0	1.6	-99%	94.8	76.1	+25%
SOUTH PENINSULA	0.2	3.2	-93%	298.1	274.1	+9%
Country as a whole	0.7	3.3	-78%	144.1	121	+19%

## 2. Large scale features

- Currently La Niña conditions are prevailing over Equatorial Pacific Ocean and negative Indian Ocean Dipole (IOD) conditions are prevailing over the Indian Ocean. The latest global model forecasts indicate that the La Niña conditions are likely to continue during the upcoming season and negative IOD conditions are likely to weaken during the upcoming months.

- The Madden Julian Oscillation (MJO) Index is currently in Phase 7 with amplitude close to 1. It will continue in same phase during week 1. Thereafter, it would move to phase 8 and 1 with amplitude more less than 1. Thus, MJO will not support convective activity over the North Indian Ocean (NIO) during the forecast period.

### 3. Forecast for next two week

#### Forecast for next two week

#### Weather systems & associated Precipitation during Week 1 (05 to 11 January, 2023) and Week 2 (12 to 18 January, 2023)

##### **Forecast for week 1 (05 to 11 January, 2023):**

- A fresh Western Disturbance seen as a cyclonic circulation in middle tropospheric levels over east Iran & neighbourhood; under its influence isolated/scattered rainfall/snowfall likely over Western Himalayan Region during 07th-09th January, 2023.
- Due to trough from southeast Madhya Pradesh to north Madhya Maharashtra in lower tropospheric levels; isolated light rainfall likely over southeast Madhya Pradesh, Vidarbha, Madhya Maharashtra and Marathwada on today, the 05<sup>th</sup> January, 2022.
- A fresh Western Disturbance is likely to cause light/moderate scattered to fairly widespread rainfall/snowfall over Western Himalayan Region from 10<sup>th</sup> to 12<sup>th</sup> January 2023.
- No significant weather likely over rest parts of the country during the week.

##### **Rainfall for week 2 (12 to 18 January, 2023):**

- **An active Western Disturbance likely to affect northwest India during send half of the week, it is likely to cause light/moderate scattered to fairly widespread rainfall/snowfall over Western Himalayan Region and light isolated rainfall over adjoining plains of northwest India.**
- Light isolated to scattered rainfall is likely over extreme south Peninsular and Andaman & Nicobar Islands mainly during 1<sup>st</sup> half of the week.
- Light to moderate isolated to scattered rainfall/snowfall is likely over Sikkim and Arunachal Pradesh mainly during 1<sup>st</sup> half of the week.
- Overall, rainfall activity is likely to be near normal over parts of Western Himalayan Region and below normal over remaining parts of the country.

## Minimum Temperatures and its forecast during Week 1 (05 to 11 January, 2023) and Week 2 (12 to 18 January, 2023):

### Minimum Temperature Forecast, Cold Wave/Day & Fog Warnings for week 1 (05 to 11 January, 2023):

#### Fog, Cold Day and Frost Warning

- Due to continue to prevailing of light winds and high moisture near surface over Indo-Gangetic plains, **dense to very dense fog** very likely to continue in some/many pockets during night/morning hours over Punjab, Haryana, Chandigarh and Uttar Pradesh 1<sup>st</sup> half of the week and dense fog thereafter; in isolated pockets over Rajasthan during next 24 hours.
- **Dense fog** in isolated pockets very likely over North Madhya Pradesh, Bihar, Assam & Meghalaya and Nagaland Manipur, Mizoram and Tripura during 1<sup>st</sup> half of the week; over Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Sub Himalayan West Bengal & Sikkim during next 24 hours.
- **Cold Day to severe cold day conditions** very likely in many pockets over Punjab, Haryana and Uttar Pradesh during 1<sup>st</sup> half of the week; in a few places over East Rajasthan and Madhya Pradesh during 48 hours; Cold Day conditions in isolated pockets over Uttarakhand, West Rajasthan and Bihar during next 48 hours.
- Ground frost conditions in many places over Rajasthan during next 48 hours and isolated pockets over Haryana during next 24 hours..

#### Minimum Temperature Forecast & Cold Wave/Day Warning

- **Minimum temperatures** are in the range of 1-5°C in many parts of plains of northwest India and in isolated pockets over adjoining area of north Madhya Pradesh. The Lowest Minimum Temperature of -1.5°C observed Churu and Sikar (Rajasthan).
- **No significant change in minimum temperatures very likely over many parts of Northwest India during next 24 hours, rise by 3-5°C thereafter for subsequent 2-3 days and no significant change thereafter.** As a result;
- **Cold wave to severe cold wave conditions** in many pockets very likely over Rajasthan and Cold wave conditions in isolated pockets over Jammu Division, Punjab, Haryana, Himachal Pradesh and Haryana, Chandigarh & Delhi and west Uttar Pradesh during next 02 days and abate thereafter.
- No significant change in minimum temperatures very likely over East India during next 2 days and fall by 2-4°C thereafter..

#### Minimum Temperatures for week 2 (12 to 18 January, 2023):

- Minimum temperatures are likely to be below normal by 2-3<sup>0</sup> C over most parts of the country outside Western Himalayan Region and Northeastern States, where these likely to be near normal or above normal.
- **Cold wave conditions likely in isolated pockets over northwest & adjoining central India mainly during 1<sup>st</sup> half of the week.**

**Legends: Heavy Rain:** 64.5 to 115.5 mm **Very Heavy Rain:** 115.6 to 204.4 mm, **Extremely Heavy Rain** > 204.4 mm

<b>SPATIAL DISTRIBUTION</b> (% of Stations reporting)			
% Stations	Category	% Stations	Category
76-100	Widespread (WS/ Most Places)	26-50	Scattered (SCT/ A Few Places)
51-75	Fairly Widespread (FWS/ Many Places)	1-25	Isolated (ISOL)

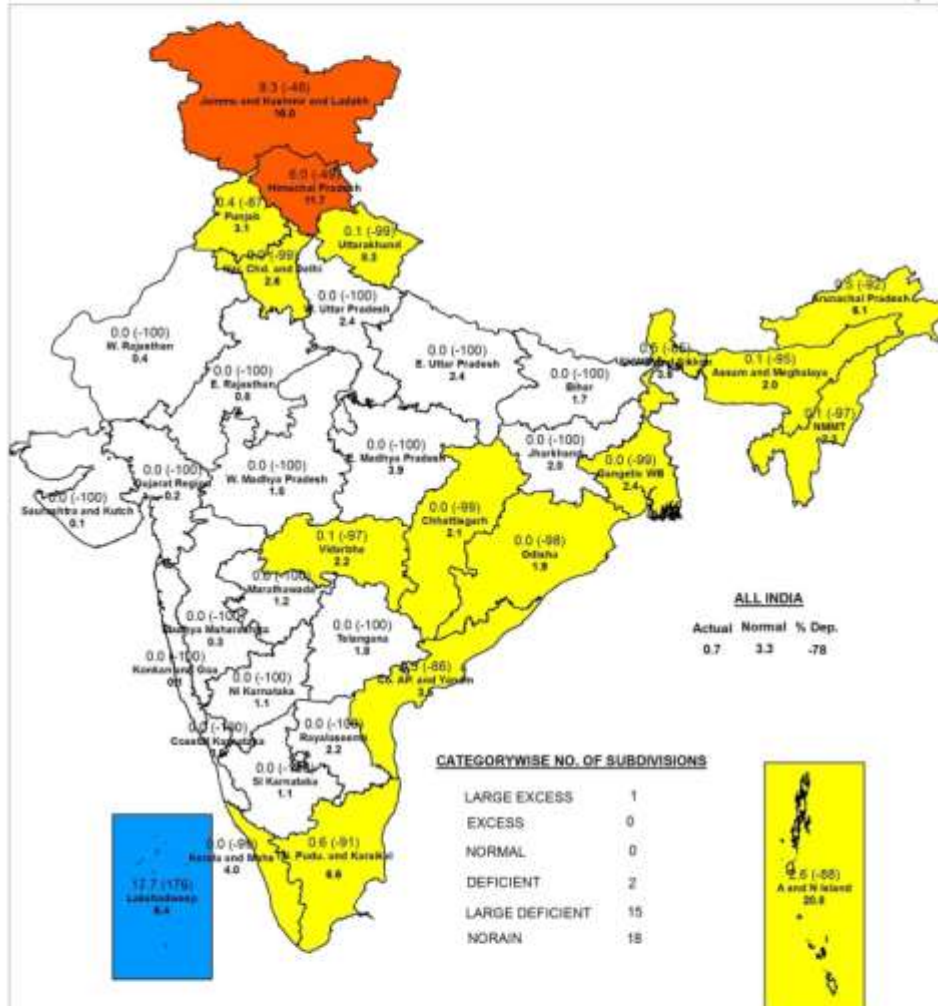
<b>Probabilistic Forecast</b>	
Terms	Probability of Occurrence (%)
Unlikely	< 25
Likely	25 - 50
Very Likely	50 - 75
Most Likely	> 75

**Annexure 1**



**SUBDIVISION RAINFALL MAP**

Week : 29-12-2022 To 04-01-2023



**Legend**

Large Excess [ 60% or more] Excess [ 20% to 59%] Normal [-19% to 19%] Deficient [-59% to -20%] Large Deficient [80% to -40%] No Rain [-100%] No Data

**NOTES :**

- a) Rainfall figures are based on operation data.
- b) Small figures indicate actual rainfall (mm), while bold figures indicate Normal rainfall (mm).
- c) Percentage Departures of rainfall are shown in brackets.

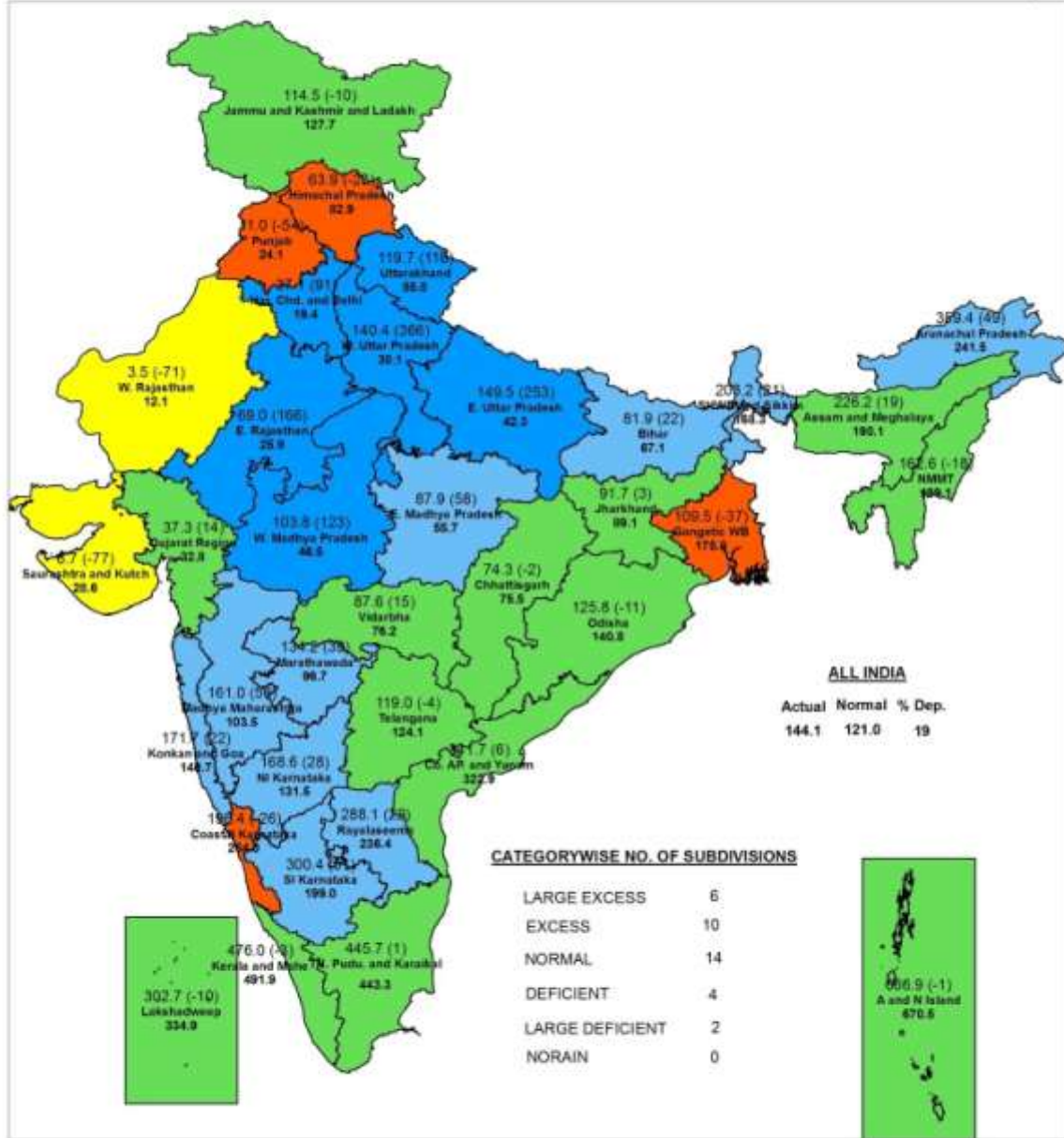
**Annexure: II**





**SUBDIVISION RAINFALL MAP**

Period : 01-10-2022 To 31-12-2022



**Legend**

Large Excess [60% or more] Excess [20% to 59%] Normal [-19% to 19%] Deficient [-20% to -59%] Large Deficient [-40% to -59%] No Rain [-100%] No Data

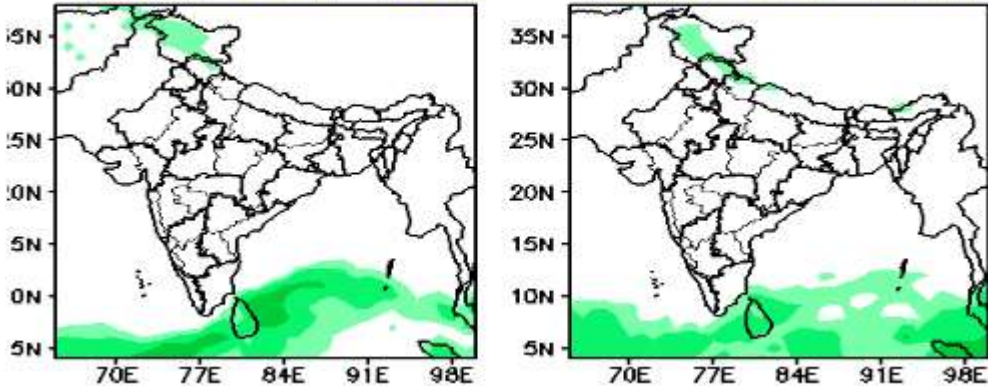
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**Forecast Rainfall (mm/day)**

(Week1: 06Jan-12Jan)

(Week2: 13Jan-19Jan)



**Forecast Rainfall Anomaly (mm/day)**

(Week1: 06Jan-12Jan)

(Week2: 13Jan-19Jan)

