



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

Dated: 02 February, 2023

Subject: Current Weather Status and Extended range Forecast for next two weeks (02 to 15 February, 2023)

1. Salient Features Observed for week ending on 01 February, 2023

- **Two active Western Disturbances affected northwest India during the week. As a result rainfall over Northwest India was 141% above long period average during the week (26.01.2023 to 01.02.2023).**
- **A Low Pressure Area** formed over east Equatorial Indian Ocean and adjoining Southeast Bay of Bengal on 27th January; concentrated into a **Depression** on 30th January over Southeast & adjoining Southwest Bay of Bengal; reached close to Sri Lanka coast around midnight on 1st February and lay centred at 2330 hours IST of 1st February over Southwest Bay of Bengal off Sri Lanka coast.
- **Dense to very dense fog** was observed over Himachal Pradesh, Uttar Pradesh and Sub Himalayan West Bengal & Sikkim during many days of the week; Rajasthan, Punjab, Haryana, Chandigarh & Delhi, Uttarakhand, Assam & Meghalaya and Tripura on some days of the week; over West Uttar Pradesh, East Rajasthan, East Madhya Pradesh and Chhattisgarh on one day each during the week.
- **Cold wave conditions** observed over Punjab, Haryana, Chandigarh & Delhi and Rajasthan on some days of the week.
- The **lowest minimum temperature of -0.5° C** had been recorded at Churu (West Rajasthan) on 27th January 2023 over the plains of the country during the week.

➤ **Analysis of Weekly overall Rainfall distribution during the current week (26.01.2023 to 01.02.2023) and Winter Season's Rainfall Scenario till 01.02.2023:**

For the country as a whole, the weekly cumulative All India Rainfall till week ending on 01.02.2023 was 60% above from its long period average (LPA) and all India Seasonal cumulative rainfall during this year's **winter Season Rainfall till 01.02.2023** is 16% below LPA.

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 **Annexure I and II** respectively.

Table 1: Rainfall status (Weekly and seasonal)

Region	WEEK			SEASON		
	26.01.2023 to 01.02.2023			01.01.2023 to 01.02.2023		
	Actual	Normal	% Departure	Actual	Normal	% Departure
East & Northeast India	0	4.9	-100	1.9	18.1	-90
Northwest India	22.9	9.5	141	43.4	34.6	25
Central India	1.5	2.2	-30	1.9	7.6	-75
South Peninsula	0.8	1.3	-39	2.8	8	-65
Country as a Whole	7.7	4.8	60	14.8	17.7	-16

2. Large scale features

- The La Niña conditions are prevailing over the equatorial Pacific region. The latest Monsoon Mission Climate Forecasting System (MMCFS) forecast indicates that the current La Niña conditions are likely to weaken till March season and to reach cold ENSO neutral conditions thereafter.
- The neutral Indian Ocean Dipole (IOD) conditions are prevailing over the Indian Ocean. The latest MMCFS forecast indicates that the neutral IOD conditions are likely to continue during the upcoming seasons.
The Madden Julian Oscillation (MJO) Index is currently in Indian Ocean (Phase 3) with amplitude more than 1. It is very likely to be in same phase during next one week with amplitude more than 1.

3. Forecast for next two week

Weather systems & associated Precipitation during Week 1 (02 to 08 February, 2023) and Week 2 (09 to 15 February, 2023)

Forecast for week 1 (02 to 08 February, 2023):

(I) Depression and associated weather:

- A **Depression** lay centered at 0830 hours IST of today, the 2nd February, near latitude 7.2°N and longitude 81.1°E over south Sri Lanka. It is very likely to continue to move southwestwards across south Sri Lanka and emerge into Comorin and adjoining Gulf of Mannar off west coast of Sri Lanka by early morning of tomorrow, the 03rd February 2023. (Forecast Track in attached **Annexure I**). Under its influence, following weather is expected:
 - (i) **Rainfall:** Light/moderate rainfall is very likely at many places over Tamil Nadu & Puducherry and Kerala with isolated **heavy rainfall** over south Tamil Nadu and Kerala on 2nd February.

(ii) Wind warning:

- ✓ **Southwest Bay of Bengal: Squally wind with** speed reaching 40-50 kmph gusting to 60 kmph on 2nd February.
- ✓ **Along & off Sri Lanka coast: Squally wind with** speed reaching 40-50 kmph gusting to 60 kmph on 2nd February.
- ✓ **Gulf of Mannar and Comorin area and along & off south Tamil Nadu & Karaikal coasts: Squally** wind speed reaching 40-50 kmph gusting to 60 kmph on 2nd February becoming squally weather with wind speed reaching 30-40 kmph gusting to 50 kmph on 3rd February.
- ✓ **Along & off north Tamil Nadu & Puducherry coasts: Strong** wind speed reaching 30-40 kmph gusting to 50 kmph on 2nd February.

(iii) Fishermen Warning: Fishermen are advised not to venture into:

- ✓ Gulf of Mannar, Comorin Area and adjoining Southwest Bay of Bengal and along & off Sri Lanka and south Tamil Nadu & Karaikal coasts on 2nd February.
- ✓ Comorin Area and adjoining Southwest Bay of Bengal and along & off Sri Lanka coast upto 3rd February.

(II) Western Disturbance and associated rainfall/snowfall:

- The Western Disturbance as a trough in lower & middle tropospheric westerlies with its axis at 3.1 km above mean sea level now runs roughly along Long. 60°E to the north of Lat. 32°N. Under its influence; light isolated to scattered rainfall/snowfall very likely over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad and Himachal Pradesh on 02nd & 03rd February.
- **Strong Surface Winds (20-30 kmph)** very likely to prevail over plains of northwest India during next 24 hours.
- Light isolated rainfall/snowfall is very likely over Arunachal Pradesh during the week; light/moderate isolated to scattered rainfall over Andaman & Nicobar Islands during the week.

Rainfall for week 2 (09 to 15 February, 2023):

- **Under the influence of Western Disturbance, light/moderate isolated to scattered rainfall/snowfall is likely over Western Himalayan Region during some days of the week.**
- No significant weather likely over rest parts of the country.
- Overall, rainfall activity is likely to be above normal over parts of Western Himalayan Region and no rain or below normal over rest parts of the country (**Annexure IV**).

Minimum Temperatures and its forecast during Week 1 (02 to 08 February, 2023) and Week 2 (09 to 15 February, 2023):

Minimum Temperature Forecast, Cold Wave/Day & Fog Warnings for week 1 (02 to 08 February, 2023):

Minimum Temperature Forecast and Cold Wave/Day & Fog Warning

- Today, the minimum temperatures are in the range of 6-10°C over many parts of plains of Northwest India and Madhya Pradesh. The Lowest Minimum temperature of 3.0°C has been observed over Churu (West Rajasthan).
- Rise in minimum temperatures by 2-3°C very likely over most parts of Northwest India during next 2 days and no significant change thereafter. Fall in minimum temperatures by 2-3°C very likely over East India during next 24 hours and no significant change thereafter. No significant change in minimum temperatures very likely over rest parts of the country during most days of the week.
- **Cold wave conditions very likely in isolated pockets over Madhya Pradesh and Odisha during next 2 days.**
- **Dense fog very likely in isolated pockets over Assam & Meghalaya and Tripura during next 24 hours.**

Minimum Temperatures for week 2 (09 to 15 February, 2023):

- Minimum temperatures likely to be near normal to above normal by 1-2°C over northwest & adjoining central India; near normal to below normal by 1-3°C over east & adjoining central India and over northeast & south Peninsular India during most days of the week (**Annexure V**).
- **No significant Cold wave conditions likely over any part of the country during 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

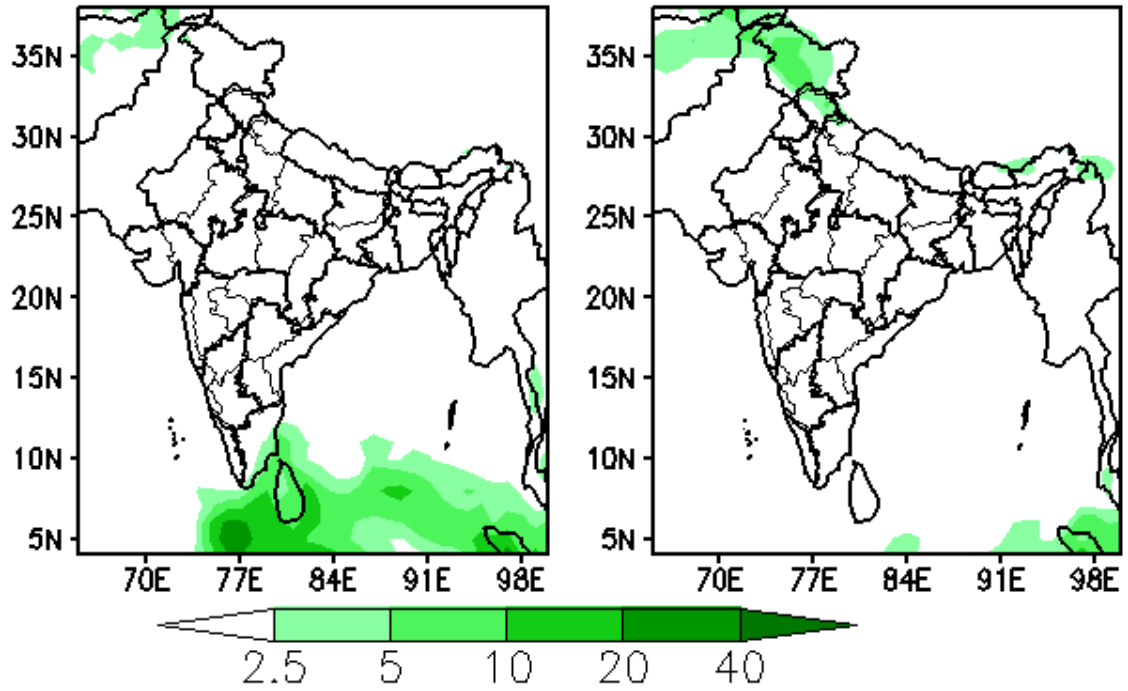
SPATIAL DISTRIBUTION (% of Stations reporting)			
% Stations	Category	% Stations	Category
76-100	Widespread (WS/ Most Places)	26-50	Scattered (SCT/ A Few Places)
51-75	Fairly Widespread (FWS/ Many Places)	1-25	Isolated (ISOL)

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

Forecast Rainfall (mm/day)

(Week1: 03Feb-09Feb)

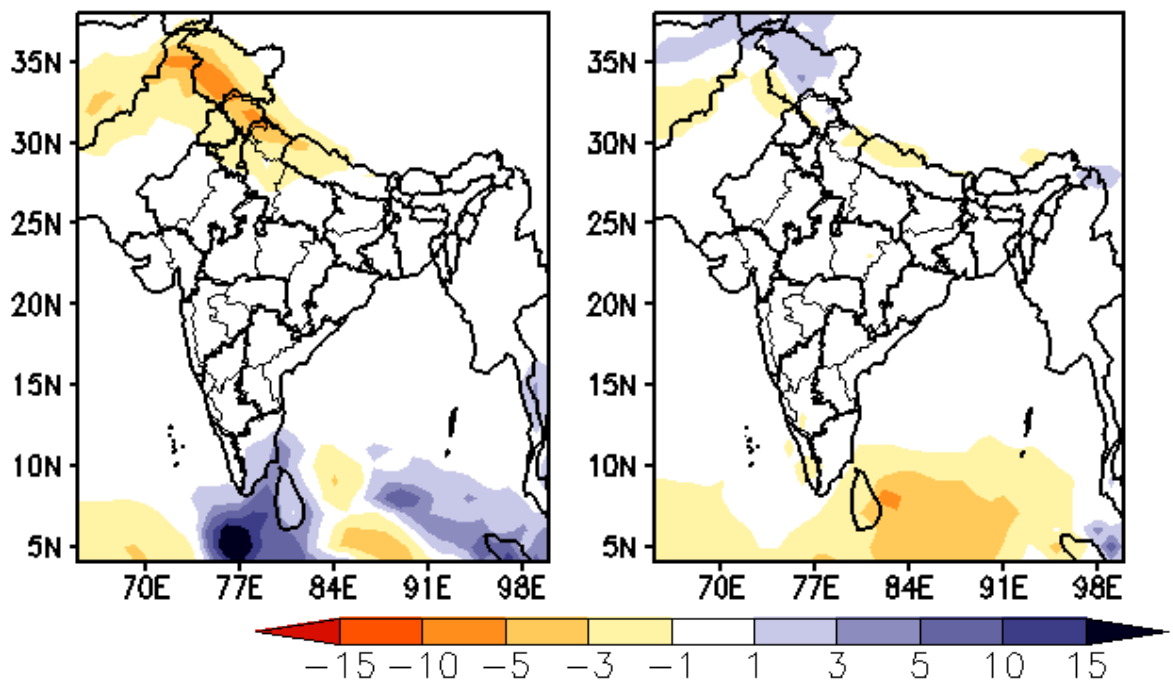
(Week2: 10Feb-16Feb)



Forecast Rainfall Anomaly (mm/day)

(Week1: 03Feb-09Feb)

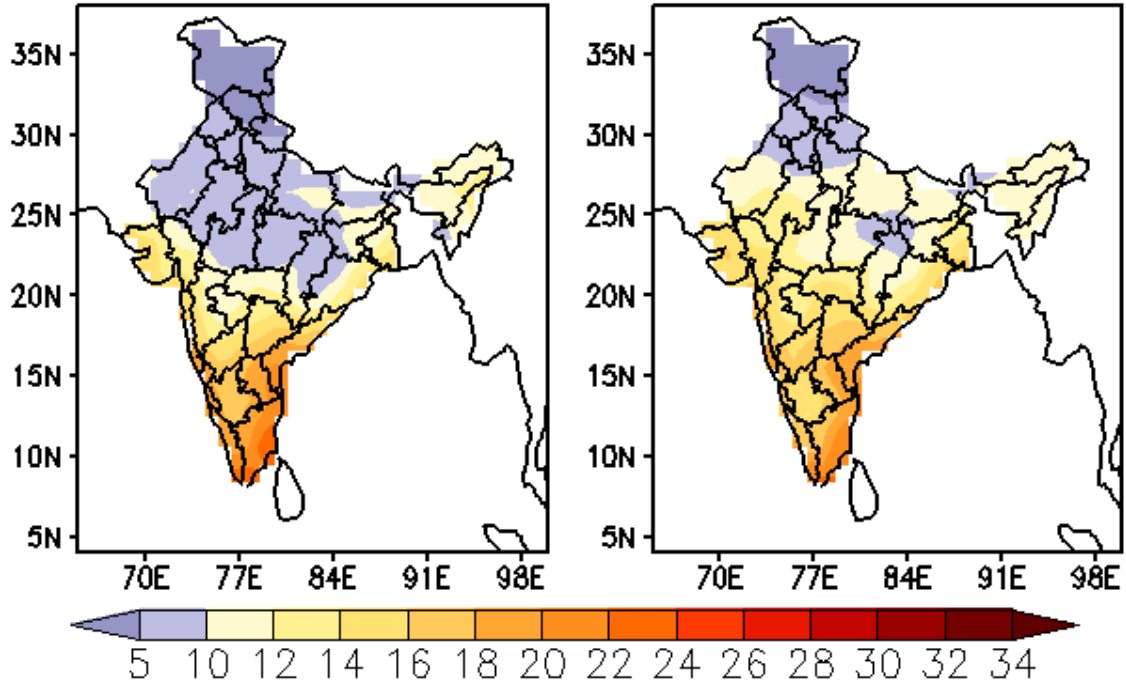
(Week2: 10Feb-16Feb)



MME Bias corrected forecast Tmin (Deg)

(Week1: 03Feb-09Feb)

(Week2: 10Feb-16Feb)



MME forecast Tmin anomaly (Deg C)

(Week1: 03Feb-09Feb)

(Week2: 10Feb-16Feb)

