



Saturday, July 29, 2023  
Time of Issue: 0815 hours IST  
(MORNING)

## ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

### Significant Weather Features

#### Significant Weather features:

- A cyclonic circulation lies over Gangetic West Bengal & adjoining north Odisha upto middle tropospheric levels tilting southwards with height.
- The Monsoon Trough runs near its normal position and at mean sea level it passes through Ganganagar, Hissar, Meerut, Lucknow, Varanasi, Gaya, Balasore and thence east-southeastwards to Northeast Bay of Bengal extending upto 0.9 km above mean sea level.
- A cyclonic circulation lies over Haryana & neighbourhood in lower tropospheric levels.
- A cyclonic circulation lies over north Pakistan in lower tropospheric levels.
- A Western Disturbance is seen as a trough in middle tropospheric westerlies roughly along Long. 68°E to the north of 30°N.

#### Weather Forecast and Warning:

**Northwest India:** Light/Moderate fairly widespread to widespread rainfall with isolated **heavy rainfall** is very likely over Uttarakhand, Himachal Pradesh, Haryana, East Rajasthan on 29<sup>th</sup> July; over East Uttar Pradesh during 29<sup>th</sup> July-02<sup>nd</sup> August, 2023.

**Isolated very heavy rainfall also likely over East Uttar Pradesh on 02<sup>nd</sup> August, 2023.**

**Central India:** Light/moderate fairly widespread to widespread rainfall with isolated **heavy rainfall** is very likely over the region on 29<sup>th</sup> July and reduction thereafter.

**Isolated very heavy rainfall also likely over East Madhya Pradesh and Chhattisgarh on 29<sup>th</sup> July.**

**West India:** Light/moderate fairly widespread to widespread rainfall with **isolated heavy rainfall** very likely to continue over Konkan & Goa and ghat areas of Madhya Maharashtra during next 4-5 days.

**East India:** Light/moderate fairly widespread to widespread rainfall with isolated **heavy rainfall** very likely over Odisha during 29<sup>th</sup>-31<sup>st</sup>; Sub-Himalaya West Bengal & Sikkim on 29<sup>th</sup> July and over Jharkhand during 30<sup>th</sup> July-01<sup>st</sup> August and over Bihar on 30<sup>th</sup> & 31<sup>st</sup> July, 2023.

**Isolated very heavy rainfall also likely over Odisha on 29<sup>th</sup> July.**

**Northeast India:** Light/moderate fairly widespread to widespread rainfall with **isolated heavy rainfall** very likely over the region during next 5 days.

No significant weather over rest parts of the country during next 5 days.

## Main Weather Observations

- ❖ **Rainfall/thundershowers observed** (from 0830 hours IST to 1730 hours IST of yesterday): **at most places** over Arunachal Pradesh, Konkan & Goa and North Interior Karnataka; **at many places** over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Uttarakhand, East Rajasthan, West Madhya Pradesh and South Interior Karnataka; **at a few places** over Gangetic West Bengal, Haryana-Chandigarh-Delhi, Marathwada, Gujarat Region and Coastal Karnataka and **at isolated places** over Sub-Himalaya West Bengal & Sikkim, West Uttar Pradesh, Bihar, Odisha, West Rajasthan, East Madhya Pradesh, Vidarbha, Telangana, Rayalaseema, Saurashtra & Kutch, Coastal Andhra Pradesh & Yanam and Kerala & Mahe.
- ❖ **Significant rainfall recorded ( $\geq 6$  cm)** (from 0830 hours IST to 1730 hours IST of yesterday): Pasighat (Arunachal Pradesh) -14; Ujjain (West Madhya Pradesh) and Mahabaleshwar (Madhya Maharashtra) -7 each.
- ❖ **Heavy Rainfall observed** (from 0830 hours IST to 1730 hours IST of yesterday): **Heavy to very heavy rainfall** at isolated places over Arunachal Pradesh and **Heavy rainfall** at isolated places over West Madhya Pradesh and Madhya Maharashtra.
- ❖ **Thunderstorm observed** (from 0830 hours IST of yesterday to 0530 hours IST of today): at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana-Chandigarh-Delhi, West Rajasthan, Odisha, Assam & Meghalaya, Chhattisgarh, Gangetic West Bengal Madhya Pradesh, Rajasthan, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura and West Bengal & Sikkim.
- ❖ **Minimum Temperature Departures (as on 28-07-2023)**: Minimum temperatures were **appreciably above normal ( $3.1^{\circ}\text{C}$  to  $5.0^{\circ}\text{C}$ )** at isolated places over East Uttar Pradesh, East Madhya Pradesh and Odisha; **above normal ( $1.6^{\circ}\text{C}$  to  $3.0^{\circ}\text{C}$ )** at many places over Gujarat Region, Andaman & Nicobar Islands and Bihar; at a few places over West Madhya Pradesh, Himachal Pradesh and Vidarbha and at isolated places over West Uttar Pradesh. They were **appreciably below normal ( $-3.1^{\circ}\text{C}$  to  $-5.0^{\circ}\text{C}$ )** at isolated places over Telangana; **below normal ( $-1.6^{\circ}\text{C}$  to  $-3.0^{\circ}\text{C}$ )** at a few places over Punjab and at isolated places over East Rajasthan, Haryana-Chandigarh-Delhi and Tamil Nadu, Puducherry & Karaikal and **near normal** over rest parts of the country. Yesterday, **the lowest minimum temperature of  $19.7^{\circ}\text{C}$**  was reported at **Koraput (Odisha)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 28-07-2023)**: Maximum temperatures were **appreciably above normal ( $3.1^{\circ}\text{C}$  to  $5.0^{\circ}\text{C}$ )** at most places over East Madhya Pradesh; at a few places over Chhattisgarh, West Madhya Pradesh, East Uttar Pradesh; at isolated places over Vidarbha and Tamil Nadu, Puducherry & Karaikal; **above normal ( $1.6^{\circ}\text{C}$  to  $3.0^{\circ}\text{C}$ )** at many places over Bihar; at a few places over West Uttar Pradesh and Gujarat Region and at isolated places over West Bengal & Sikkim, Odisha and Kerala & Mahe. They were **markedly below normal ( $-5.1^{\circ}\text{C}$  or less)** at a few places over Telangana and North Interior Karnataka; at isolated places over Madhya Maharashtra and Arunachal Pradesh; **appreciably below normal ( $-3.1^{\circ}\text{C}$  to  $-5.0^{\circ}\text{C}$ )** at many places over West Rajasthan and Marathwada; at a few places over Konkan & Goa and Rayalaseema and at isolated places over Haryana-Chandigarh-Delhi, East Rajasthan and Coastal Andhra Pradesh & Yanam; **below normal ( $-1.6^{\circ}\text{C}$  to  $-3.0^{\circ}\text{C}$ )** at many places over Coastal Karnataka and at a few places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Assam & Meghalaya and **near normal** over rest parts of the country. Yesterday, **the highest maximum temperature of  $39.1^{\circ}\text{C}$**  was reported at **Allahabad (West Uttar Pradesh)**.



## Meteorological Analysis (Based on 0530 hours IST)

- ❖ The cyclonic circulation over north Odisha and adjoining areas of Gangetic West Bengal & Jharkhand now lies over Gangetic West Bengal & adjoining north Odisha and extends upto 4.5 km above mean sea level tilting southwards with height.
- ❖ The Monsoon Trough at mean sea level now passes through Ganganagar, Hissar, Meerut, Lucknow, Varanasi, Gaya, Balasore and thence east-southeastwards to Northeast Bay of Bengal extending upto 0.9 km above mean sea level.
- ❖ The cyclonic circulation over Haryana & neighbourhood between 1.5 km & 3.1 km above mean sea level persists.
- ❖ A cyclonic circulation lies over north Pakistan and extends upto 1.5 km above mean sea level.
- ❖ The Western Disturbance as a trough at 5.8 km above mean sea level now runs roughly along Long. 69°E to the north of 30°N.
- ❖ The north-south trough from cyclonic circulation over north Odisha and adjoining areas of Gangetic West Bengal & Jharkhand to west Assam between 1.5 & 3.1 km above mean sea level has become less marked.
- ❖ The shear zone roughly along Lat. 18° N at 5.8 km above mean sea level has become less marked.

## Weather Forecast for next 5 days (Upto 0830 hours IST of 03<sup>rd</sup> August, 2023)

- ❖ Meteorological sub-division wise detailed 5 days rainfall forecast is given in Table-1.
- ❖ No significant change in maximum temperatures likely over most parts of country during next 5 days.
- ❖ Thunderstorm accompanied with lightning likely over Northwest & Central India during next 5 days and over Northeast India during next 3 days.

## Weather Outlook for subsequent 2 days

- ❖ Fairly widespread to widespread light/moderate rainfall likely over west coast, northwest, east and central India and isolated to scattered rainfall over rest parts of the country.



Table-1

**7 Days Rainfall Forecast**

S. No.	Subdivision	29-Jul	30-Jul	31-Jul	1-Aug	2-Aug	3-Aug	4-Aug
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	FWS	WS	WS	WS	WS	WS	WS
2	ARUNACHAL PRADESH	FWS	FWS	FWS	FWS	FWS	FWS	FWS
3	ASSAM & MEGHALAYA	FWS	FWS	FWS	WS	WS	WS	WS
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	FWS	WS	WS	WS	WS	WS	FWS
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	WS	FWS	FWS	FWS	FWS	FWS	FWS
6	GANGETIC WEST BENGAL	WS	WS	FWS	FWS	SCT	SCT	WS
7	ODISHA	WS	WS	WS	WS	WS	FWS	FWS
8	JHARKHAND	WS	WS	WS	WS	WS	FWS	WS
9	BIHAR	FWS	WS	WS	FWS	FWS	FWS	WS
10	EAST UTTAR PRADESH	FWS	WS	WS	WS	WS	WS	FWS
11	WEST UTTAR PRADESH	FWS	FWS	FWS	WS	WS	WS	FWS
12	UTTARAKHAND	WS	FWS	FWS	WS	WS	WS	WS
13	HARYANA CHANDIGARH & DELHI	FWS	SCT	SCT	SCT	FWS	FWS	FWS
14	PUNJAB	FWS	SCT	SCT	SCT	SCT	FWS	FWS
15	HIMACHAL PRADESH	FWS	SCT	SCT	SCT	WS	WS	WS
16	JAMMU & KASHMIR AND LADAKH	FWS	SCT	ISOL	ISOL	ISOL	ISOL	SCT
17	WEST RAJASTHAN	SCT	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
18	EAST RAJASTHAN	FWS	SCT	SCT	FWS	SCT	SCT	SCT
19	WEST MADHYA PRADESH	SCT	SCT	SCT	SCT	SCT	SCT	FWS
20	EAST MADHYA PRADESH	FWS	FWS	FWS	FWS	FWS	FWS	FWS
21	GUJARAT REGION	FWS	SCT	SCT	SCT	SCT	SCT	FWS
22	SAURASHTRA & KUTCH	SCT	SCT	SCT	ISOL	ISOL	ISOL	FWS
23	KONKAN & GOA	WS	WS	WS	WS	WS	WS	WS
24	MADHYA MAHARASHTRA	FWS	FWS	SCT	SCT	FWS	FWS	FWS
25	MARATHAWADA	FWS	SCT	SCT	FWS	FWS	FWS	SCT
26	VIDARBHA	FWS	FWS	FWS	SCT	SCT	SCT	FWS
27	CHHATTISGARH	FWS	FWS	FWS	FWS	FWS	SCT	FWS
28	COASTAL ANDHRA PRADESH & YANAM	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
29	TELANGANA	SCT	SCT	FWS	FWS	FWS	FWS	ISOL
30	RAYALASEEMA	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
31	TAMILNADU PUDUCHERRY & KARAIKAL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
32	COASTAL KARNATAKA	WS	WS	WS	WS	WS	WS	WS
33	NORTH INTERIOR KARNATAKA	FWS	FWS	FWS	FWS	FWS	SCT	SCT
34	SOUTH INTERIOR KARNATAKA	SCT	SCT	SCT	SCT	SCT	SCT	SCT
35	KERALA & MAHE	FWS	SCT	SCT	FWS	FWS	FWS	FWS
36	LAKSHADWEEP	SCT	SCT	SCT	SCT	SCT	SCT	FWS

Legend	Category	% Stations
WS	Widespread/Most Places	76-100
FWS	Fairly Widespread/Many places	51-75
SCT	Scattered/ A Few Places	26-50
ISOL	Isolated Places	1-25
DRY	No Rain	0

Fig. 1: Maximum Temperatures Dated 27.07.2023

Fig. 2: Departure of Maximum Temp. Dated 27.07.2023

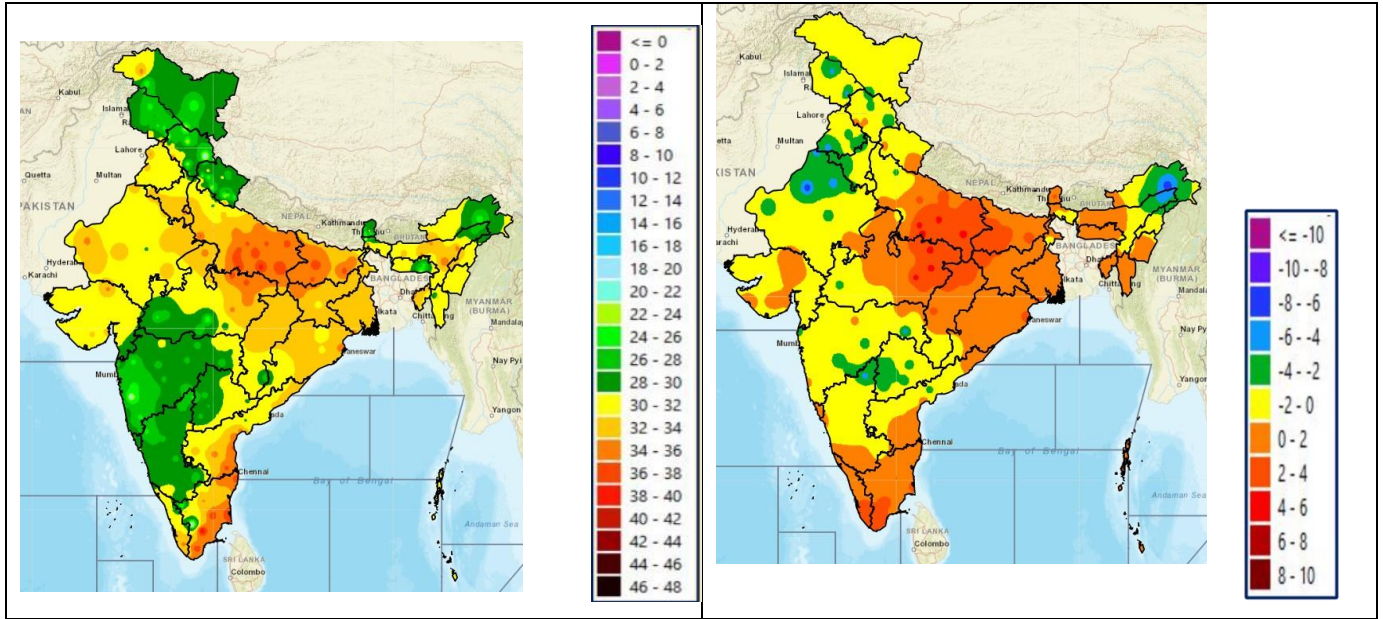
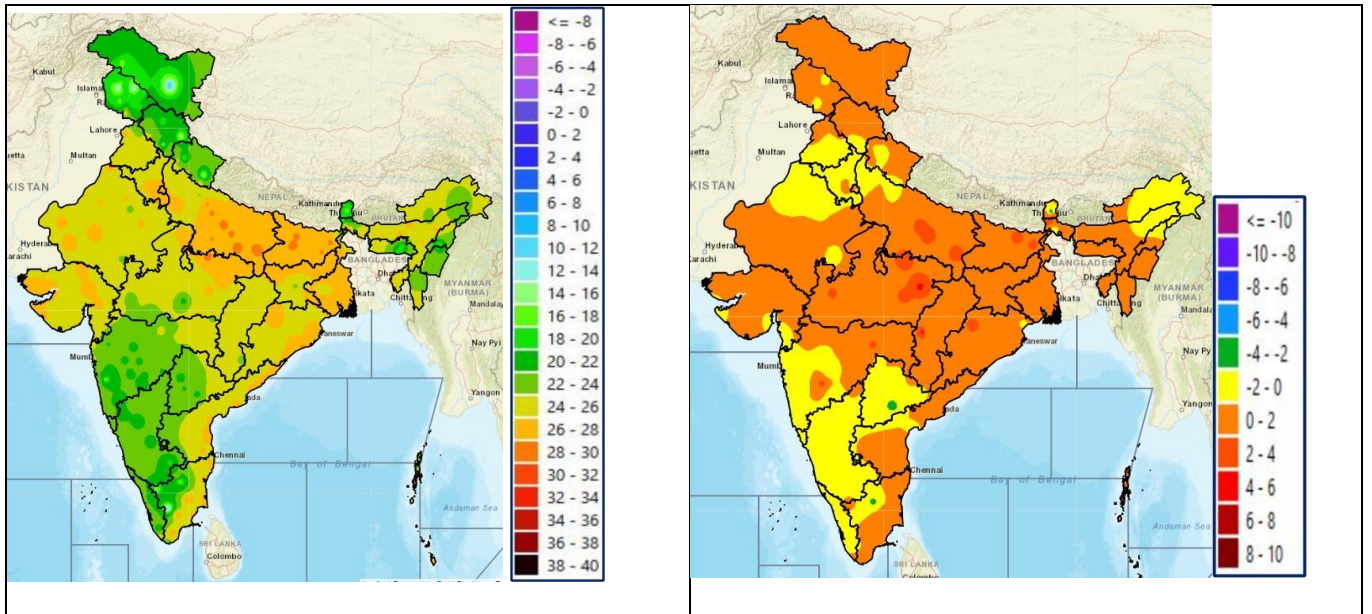


Fig. 3: Minimum Temperatures Dated 28.07.2023

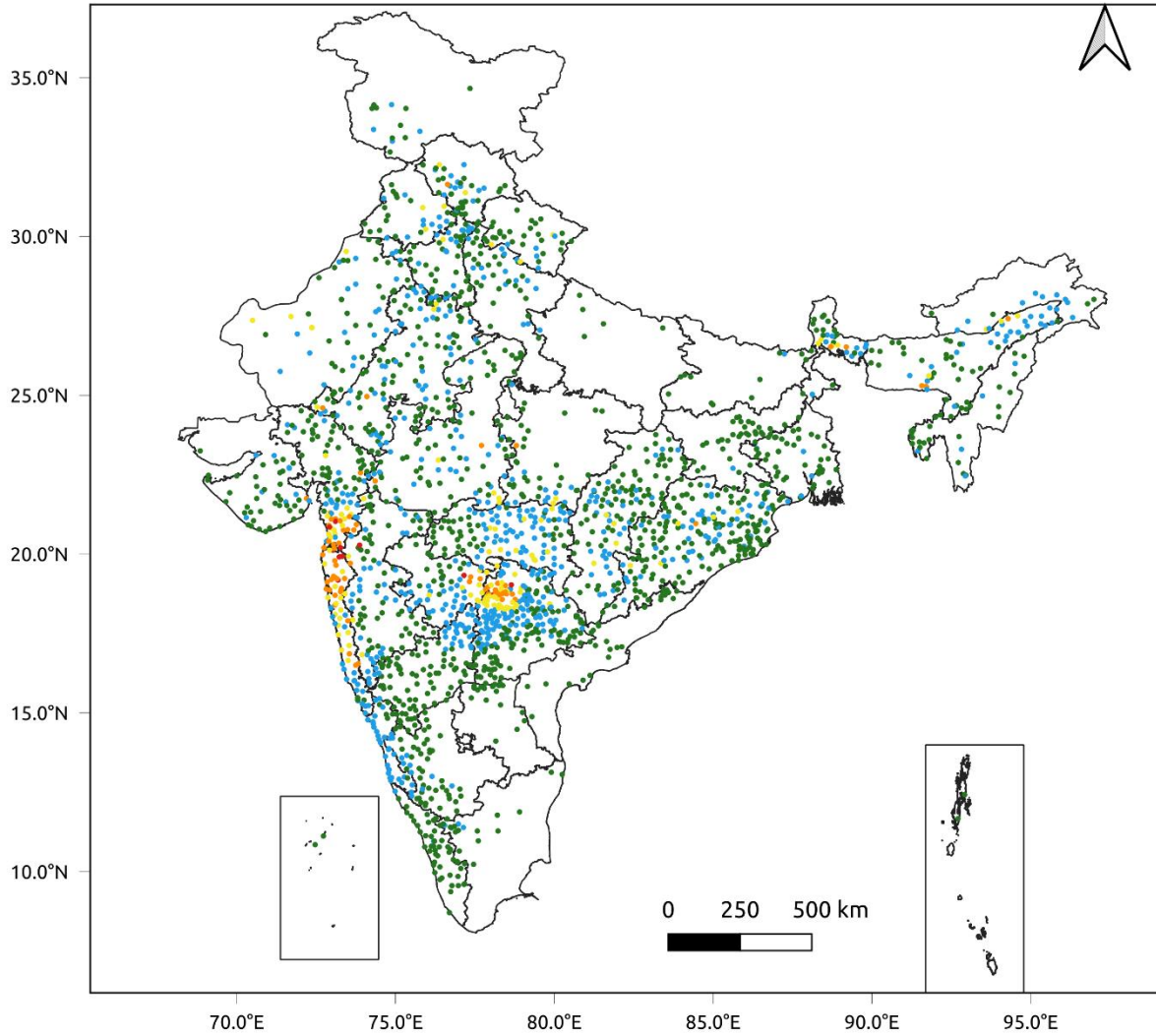
Fig. 4: Departure of Minimum Temp. Dated 28.07.2023



**Fig. 5: Accumulated Rainfall (mm) during past 24 hours**

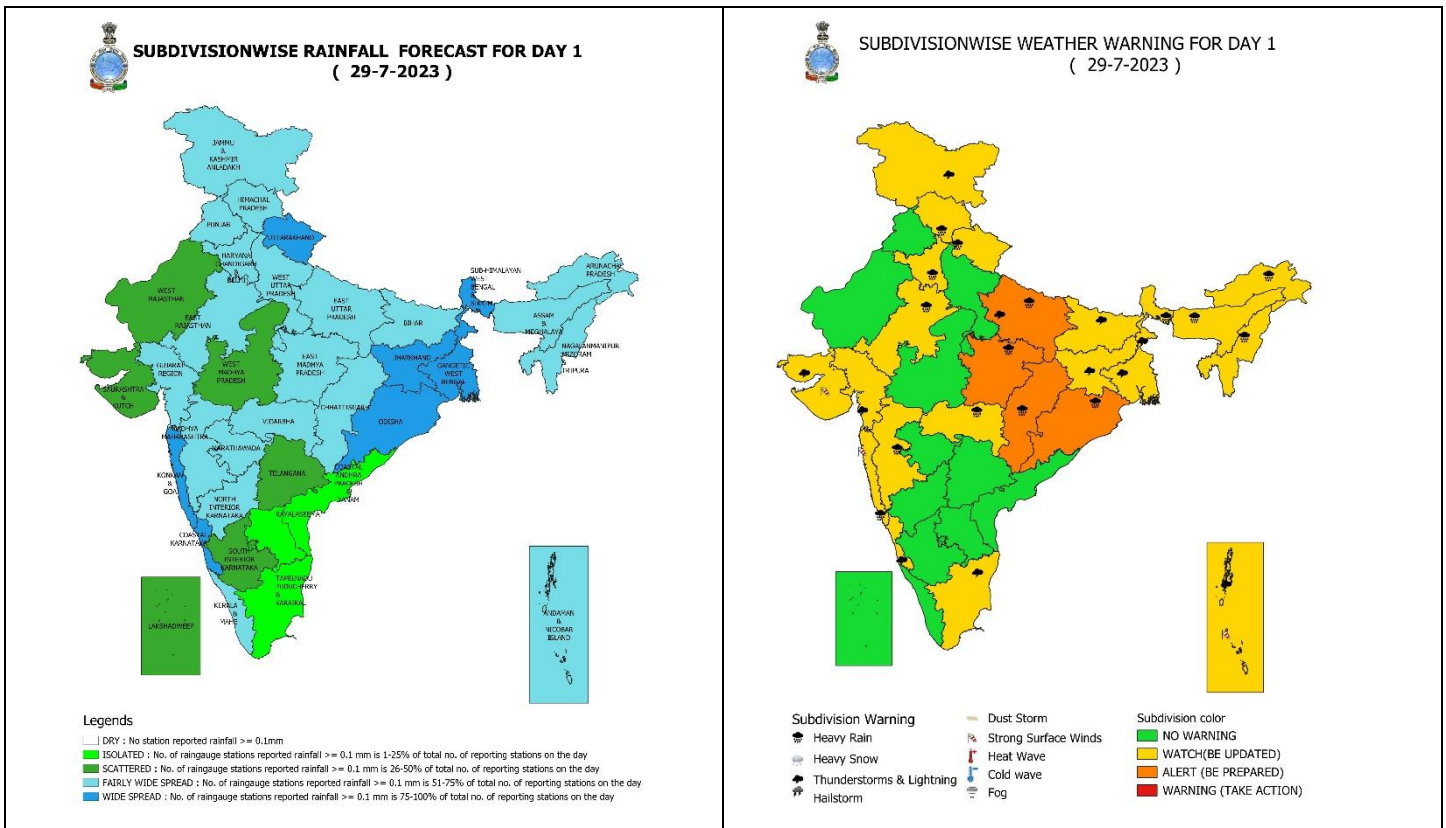


24 Hr cumulative rainfall recorded over different stations during 0830 IST of 27-7-2023 to 0830 IST of 28-7-2023



## Legends

- Very Light to Light Rainfall (0.1 - 15.5 mm)
- Moderate Rainfall (15.6 - 64.4 mm)
- Heavy Rainfall (64.5 - 115.5 mm)
- Very Heavy Rainfall (115.6 - 204.4 mm)
- Extremely Heavy Rainfall ( $\geq 204.5$  mm)

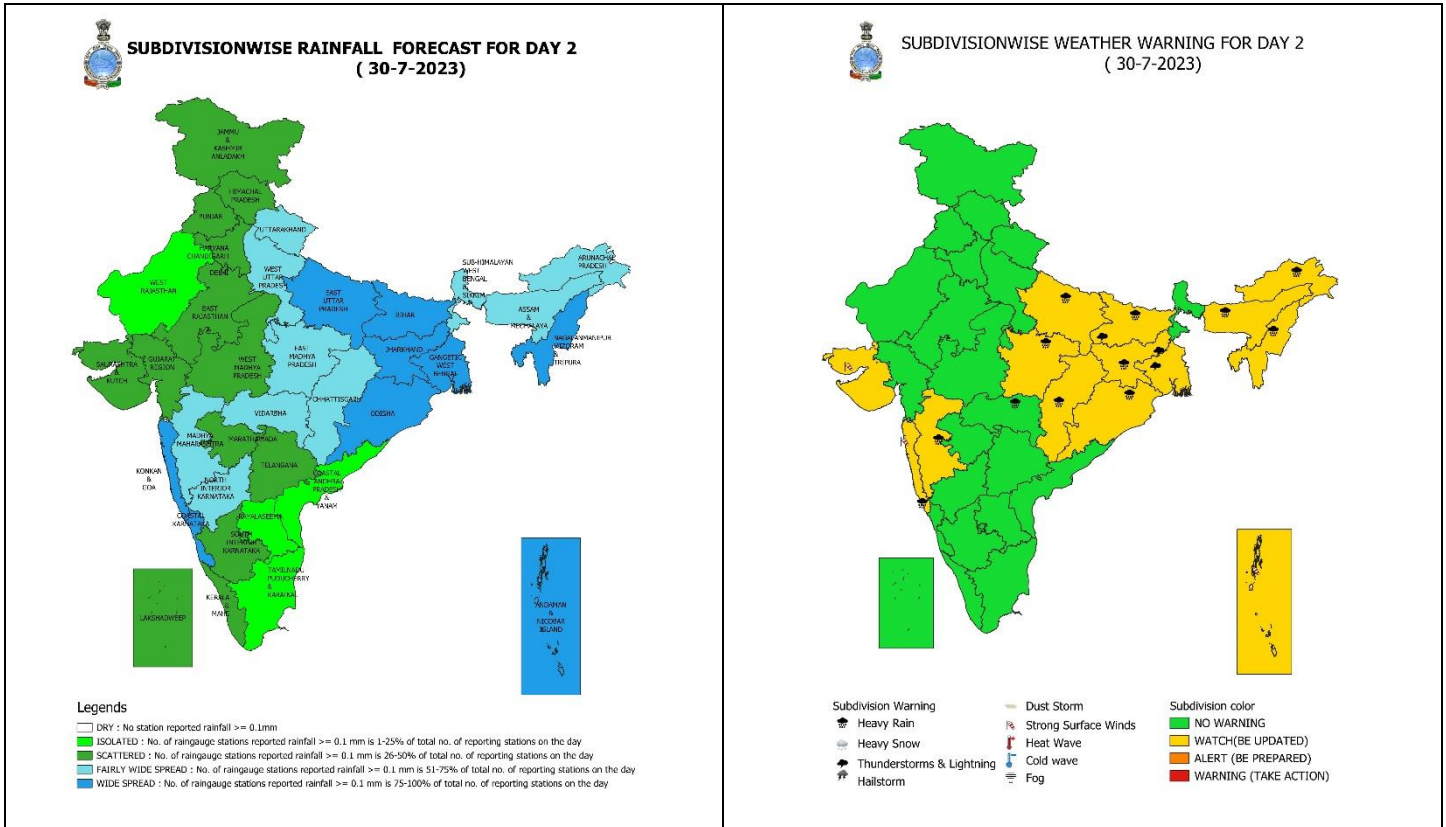


**29 July (Day 1):**

- ❖ **Heavy to very heavy rainfall** likely at isolated places over Odisha, East Uttar Pradesh, East Madhya Pradesh and Chhattisgarh; **Heavy rainfall** very likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Sub-Himalayan West Bengal & Sikkim, Uttarakhand, Haryana, Himachal Pradesh, East Rajasthan, East Madhya Pradesh, Konkan & Goa, Madhya Maharashtra and Vidarbha.
- ❖ **Thunderstorm with lightning gusty (wind speed 30-40 kmph)** very likely at isolated places over Andaman & Nicobar Islands; **with lightning** likely at isolated places over Jammu division, East Uttar Pradesh, West Bengal & Sikkim, Jharkhand, Bihar, Gujarat state, Tamil Nadu, Puducherry & Karaikal and Coastal Karnataka.
- ❖ **Squally wind speed of 45-55 kmph gusting to 65 kmph** over Central & adjoining Southwest Arabian Sea and wind speed reaching 55-65 kmph gusting to 75 kmph over Westcentral & adjoining Southwest Arabian Sea. **Squally weather with wind speed reaching 40-45 kmph gusting to 55 kmph** along & off Gujarat, Maharashtra, Karnataka coasts and Gulf of Mannar. **Squally weather with wind speed reaching 45-55 kmph gusting to 65 kmph** over Westcentral Bay of Bengal, along & off north Andhra Pradesh coast and wind speed reaching 40-45 kmph gusting to 55 kmph over South & Eastcentral Bay of Bengal and Andaman Sea. Fishermen are advised not to venture into these areas.

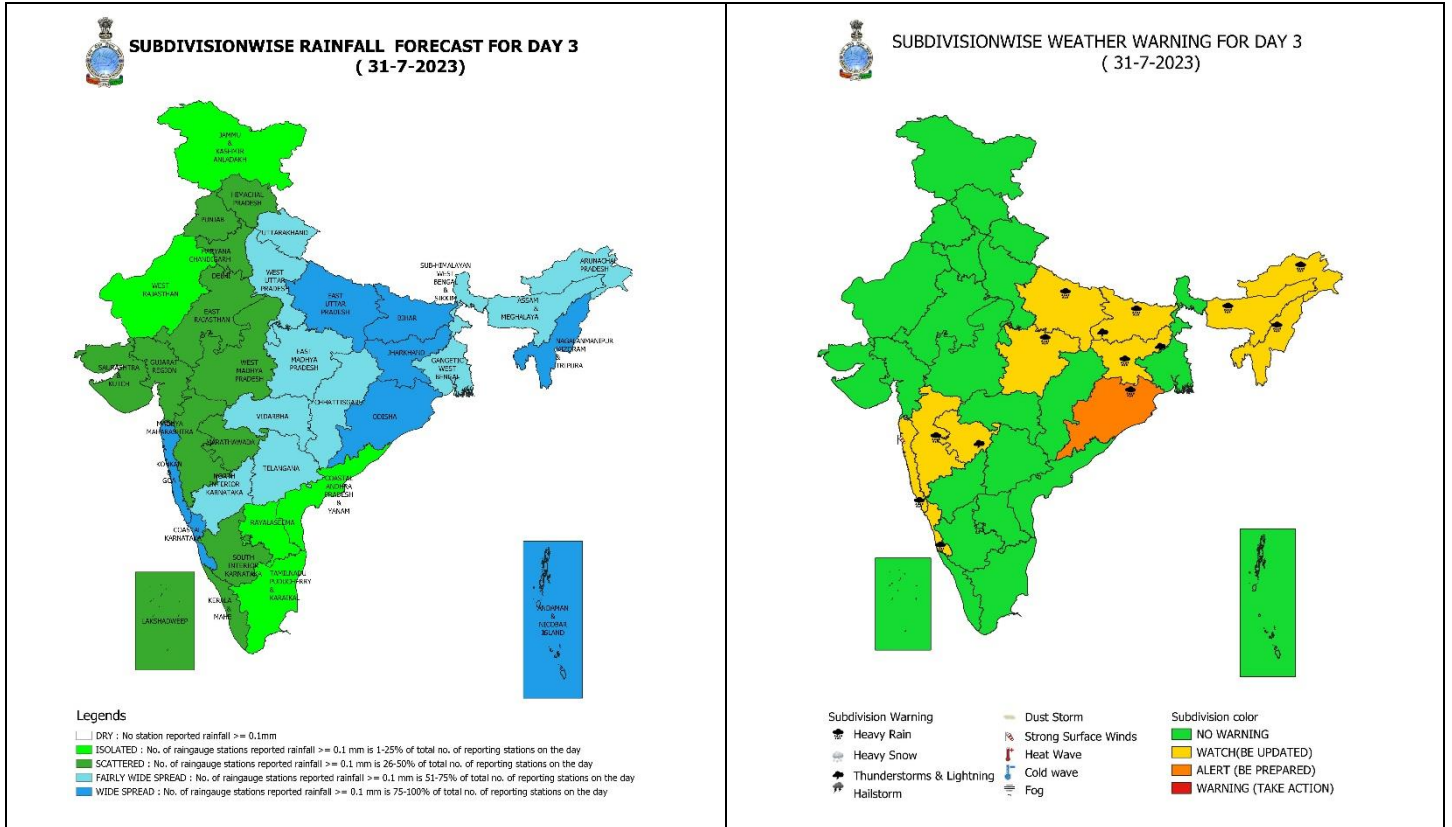
\* Red color warning does not mean "Red Alert" Red color warning means "Take Action".

Forecast and Warning for any day is valid from 0830 hours IST of day till 0830 hours IST of next day For more details kindly visit <https://mausam.imd.gov.in> or contact : 011-2434-4599 (Service to the Nation since 1875)



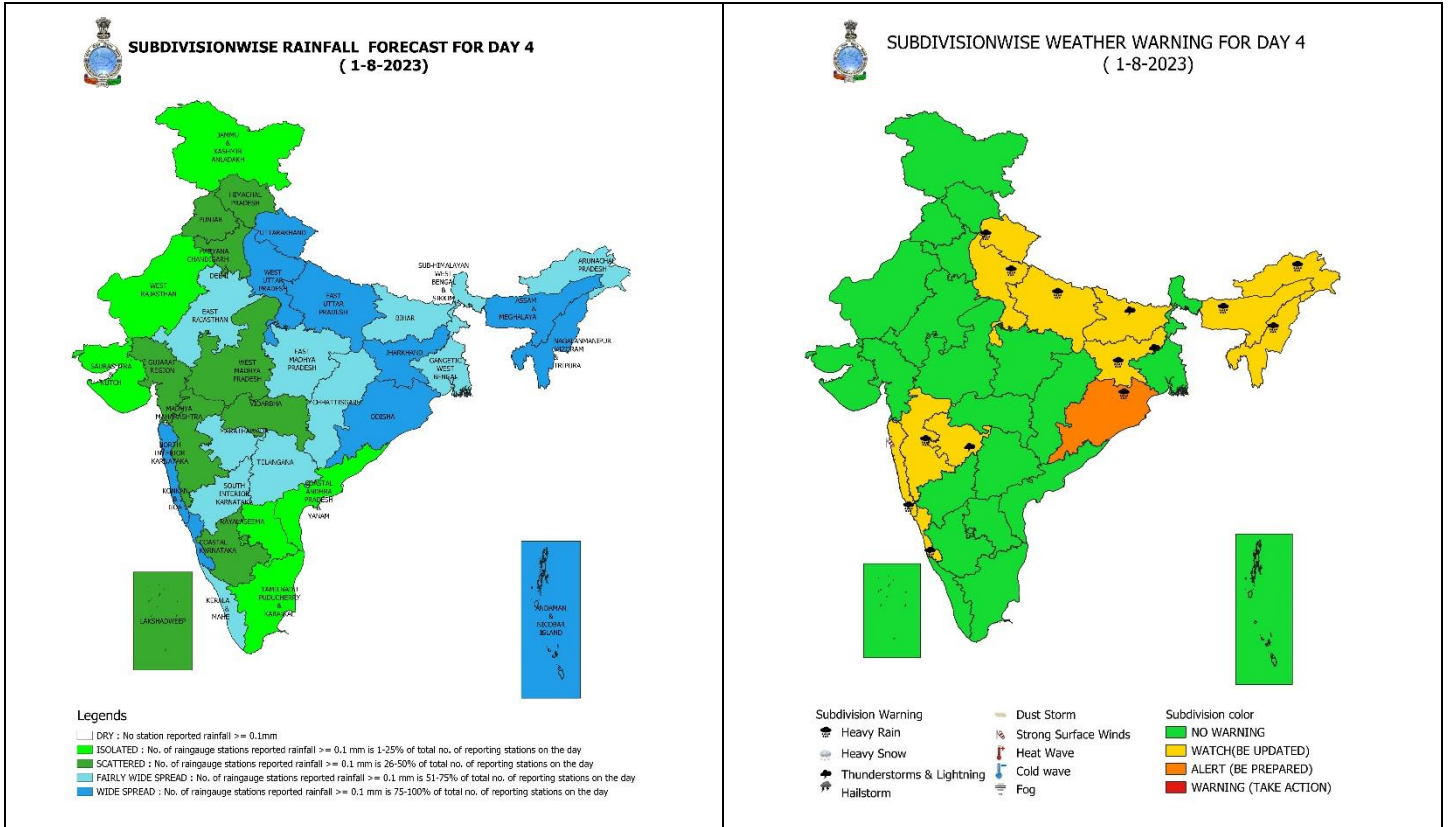
### 30 July (Day 2):

- ❖ **Heavy rainfall** likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Odisha, Jharkhand, Bihar, East Uttar Pradesh, East Madhya Pradesh, Konkan & Goa, Madhya Maharashtra and Chhattisgarh.
- ❖ **Thunderstorm with lightning very likely** at isolated places over Gangetic West Bengal, Bihar and Jharkhand.
- ❖ **Squally wind speed of 45-55 kmph gusting to 65 kmph** over Central & adjoining Southwest Arabian Sea and wind speed reaching 55-65 kmph gusting to 75 kmph over Westcentral & adjoining Southwest Arabian Sea. **Squally weather with wind speed reaching 40-45 kmph gusting to 55 kmph** along & off Gujarat, Maharashtra coasts and Gulf of Mannar. **Squally weather with wind speed reaching 45-55 kmph gusting to 65 kmph** over Westcentral Bay of Bengal and wind speed reaching 40-45 kmph gusting to 55 kmph over Southwest & adjoining Southeast & Eastcentral Bay of Bengal and north Andaman Sea. Fishermen are advised not to venture into these areas.



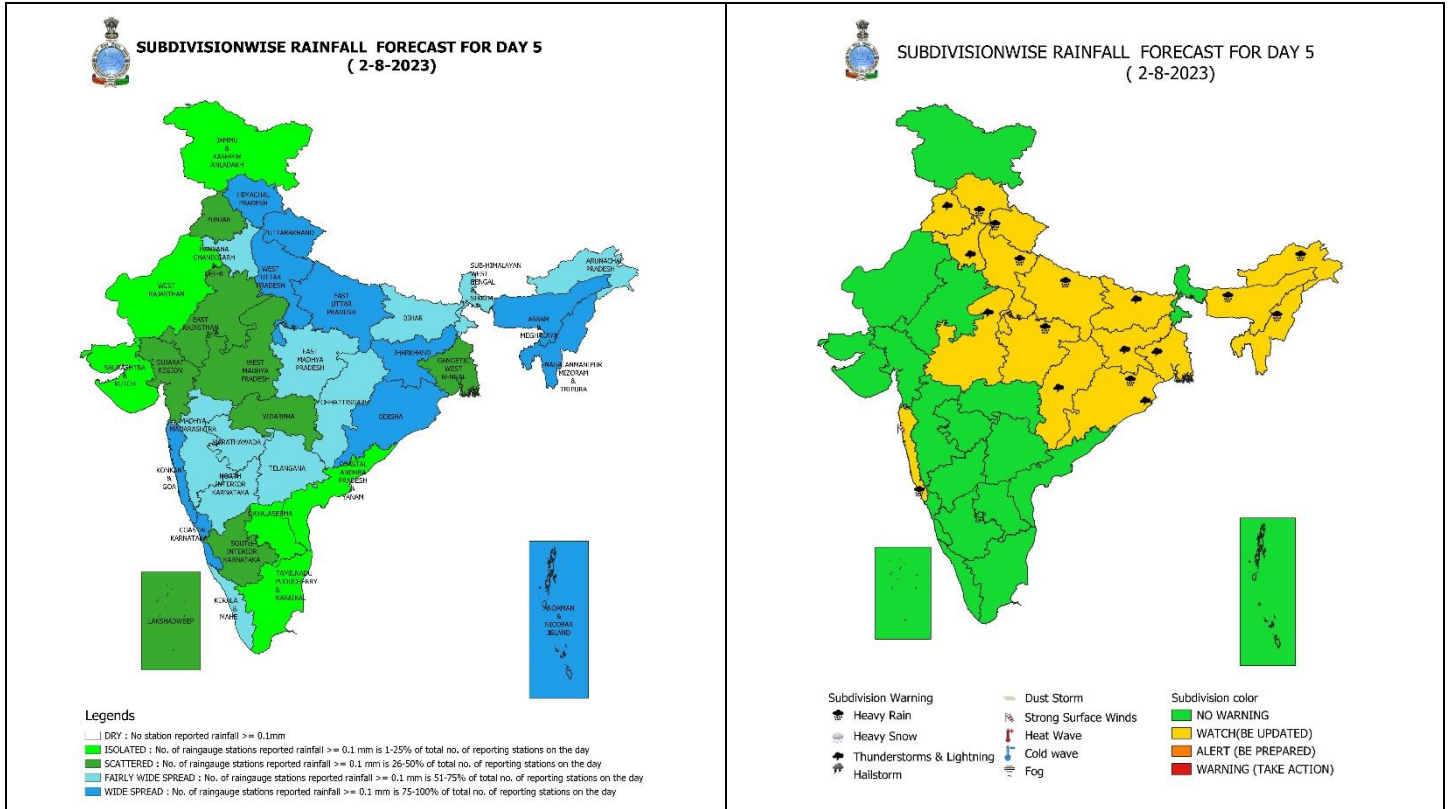
### 31 July (Day 3):

- ❖ **Heavy to very heavy rainfall** likely at isolated places over Odisha and **heavy rainfall** at isolated places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Jharkhand, Bihar, East Uttar Pradesh, East Madhya Pradesh, Konkan & Goa, Madhya Maharashtra and Coastal Karnataka.
- ❖ **Thunderstorm with lightning** likely at isolated places over Bihar, Jharkhand and Marathwada.
- ❖ **Squally wind speed of 45-55 kmph gusting to 65 kmph** over Central & adjoining Southwest Arabian Sea and wind speed reaching 55-65 kmph gusting to 75 kmph over Westcentral & adjoining Southwest Arabian Sea. **Squally weather with wind speed reaching 40-45 kmph gusting to 55 kmph** along & off Gujarat, Maharashtra coasts and Gulf of Mannar. **Squally weather with wind speed reaching 45-55 kmph gusting to 65 kmph** over Westcentral, adjoining Northwest & Eastcentral Bay of Bengal and wind speed reaching 40-45 kmph gusting to 55 kmph over Southwest & adjoining Southeast Bay of Bengal. Fishermen are advised not to venture into these areas.



### 01 August (Day 4):

- ❖ **Heavy to very heavy rainfall** likely at isolated places over Odisha and **heavy rainfall** at isolated places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Jharkhand, Uttarakhand, Uttar Pradesh, Konkan & Goa, Madhya Maharashtra and Coastal Karnataka.
- ❖ **Thunderstorm with lightning** likely at isolated places over Bihar, Jharkhand and Marathwada.
- ❖ **Squally wind speed of 45-55 kmph gusting to 65 kmph** over Central & adjoining Southwest Arabian Sea and wind speed reaching 55-65 kmph gusting to 75 kmph over Westcentral & adjoining Southwest Arabian Sea. **Squally weather with wind speed reaching 40-45 kmph gusting to 55 kmph** along & off Gujarat, Maharashtra coasts and Gulf of Mannar. **Squally weather with wind speed reaching 45-55 kmph gusting to 65 kmph** over Westcentral, adjoining Northwest & Eastcentral Bay of Bengal and wind speed reaching 40-45 kmph gusting to 55 kmph over Southwest & adjoining Southeast Bay of Bengal. Fishermen are advised not to venture into these areas.



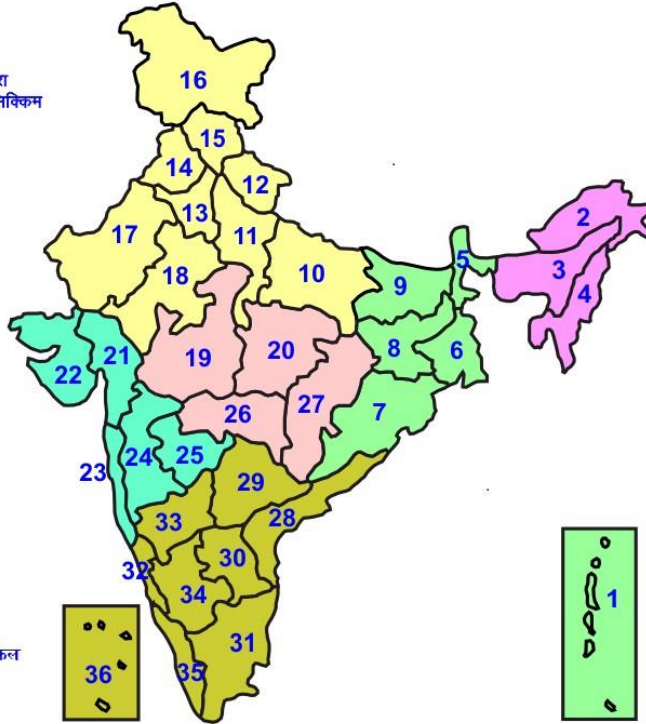
## 02 August (Day 5):

- ❖ **Heavy to very heavy rainfall** likely at isolated places over Uttar Pradesh, East Madhya Pradesh, Uttarakhand and **heavy rainfall** at isolated places over Himachal Pradesh, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Konkan & Goa.
- ❖ **Thunderstorm with lightning** likely at isolated places over Punjab, Haryana-Chandigarh-Delhi, West Madhya Pradesh, Gangetic West Bengal, Chhattisgarh, Odisha Bihar and Jharkhand, .
- ❖ **Squally wind speed of 45-55 kmph gusting to 65 kmph** over Central & adjoining Southwest Arabian Sea and wind speed reaching 55-65 kmph gusting to 75 kmph over Westcentral & adjoining Southwest Arabian Sea. **Squally weather with wind speed reaching 40-45 kmph gusting to 55 kmph** along & off Gujarat, Maharashtra coasts and Gulf of Mannar. **Squally weather with wind speed reaching 45-55 kmph gusting to 65 kmph** over Westcentral, adjoining Northwest & Eastcentral Bay of Bengal and wind speed reaching 40-45 kmph gusting to 55 kmph over Southwest & adjoining Southeast Bay of Bengal. Fishermen are advised not to venture into these areas.



## LEGENDS

- 1 अंडमान और निकोबार द्वीप समुह
- 2 अरुणाचल प्रदेश
- 3 असम और मेघालय
- 4 नागालैंड मनीपुर मीजोरम और त्रिपुरा
- 5 उप हिमालय पश्चिम बंगाल एवं सिक्किम
- 6 पश्चिम गंगेय बंगाल
- 7 ओडिसा
- 8 झारखंड
- 9 बिहार
- 10 पूर्वी उत्तर प्रदेश
- 11 पश्चिम उत्तर प्रदेश
- 12 उत्तराखंड
- 13 हरियाणा चंडिगढ़ एवं दिल्ली
- 14 पंजाब
- 15 हिमाचल प्रदेश
- 16 जम्मू एवं कश्मीर एवं लद्दाख
- 17 पश्चिम राजस्थान
- 18 पूर्वी राजस्थान
- 19 पश्चिम मध्य प्रदेश
- 20 पूर्वी मध्य प्रदेश
- 21 गुजरात क्षेत्र
- 22 सौराष्ट्र एवं कच्छ
- 23 कोंकण एवं गोवा
- 24 मध्य महाराष्ट्र
- 25 मराठावाड़ा
- 26 विदर्भ
- 27 छत्तीसगढ़
- 28 तटीय आंध्र प्रदेश एवं यनम
- 29 तेलंगाना
- 30 रायलसीमा
- 31 तमिलनाडु, पुदुचेरी एवं कराईकल
- 32 तटिय कर्नाटक
- 33 आंतरिक उत्तरी कर्नाटक
- 34 आंतरिक दक्षिणी कर्नाटक
- 35 केरल एवं माहे
- 36 लक्षद्वीप



1. Andaman & Nicobar Islands
2. Arunachal Pradesh
3. Assam & Meghalaya
4. Nagaland, Manipur, Mizoram & Tripura
5. Sub-Himalayan West Bengal & Sikkim
6. Gangetic West Bengal
7. Orissa
8. Jharkhand
9. Bihar
10. East Uttar Pradesh
11. West Uttar Pradesh
12. Uttarakhand
13. Haryana, Chd & Delhi
14. Punjab
15. Himachal Pradesh
16. Jammu & Kashmir and Ladakh
17. West Rajasthan
18. East Rajasthan
19. West Madhya Pradesh
20. East Madhya Pradesh
21. Gujarat
22. Saurashtra
23. Konkan & Goa
24. Madhya Maharashtra
25. Marathwada
26. Vidharbha
27. Chhattisgarh
28. Coastal Andhra Pradesh & Yanam
29. Telangana
30. Rayalaseema
31. Tamilnadu, Puducherry & Karaikal
32. Coastal Karnataka
33. North Interior Karnataka
34. South Interior Karnataka
35. Kerala & Mahe
36. Lakshadweep

## 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)

## WARNING

<b>WARNING (TAKE ACTION)</b>
<b>ALERT ( BE PREPARED)</b>
<b>WATCH (BE UPDATED)</b>
<b>NO WARNING ( NO ACTION)</b>

## Probabilistic Forecast

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



Heavy Rain



Heavy Snow



Thunderstorm



Dust Storm



Strong Winds



Visibility



Cyclone



Squall/ Hail



Frost



Cold Wave



Heat Wave



Sea State

\* Red color warning does not mean "Red Alert" Red color warning means "Take Action".

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## LEGENDS

### WARNING

<b>WARNING (TAKE ACTION)</b>
<b>ALERT ( BE PREPARED)</b>
<b>WATCH (BE UPDATED)</b>
<b>NO WARNING ( NO ACTION)</b>

### Probabilistic Forecast

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



Rain/ Snow \*

Heavy: 64.5 to 115.5 mm/cm \*  
Very Heavy: 115.6 to 204.4 mm/cm\*  
Extremely Heavy: > 204.4 mm/cm \*



Heat Wave

When maximum temperature of a station reaches  $\geq 40^{\circ}\text{C}$  for plains and  $\geq 30^{\circ}\text{C}$  for hilly regions  
(a) Based on Departure from normal

Heat Wave: Maximum Temperature Departure from normal  $4.5^{\circ}\text{C}$  to  $6.4^{\circ}\text{C}$ .  
Severe Heat Wave: Maximum Temperature Departure from normal  $\geq 6.5^{\circ}\text{C}$

(b). Based on Actual maximum temperature

Heat Wave: When actual maximum temperature  $\geq 45^{\circ}\text{C}$ .  
Severe Heat Wave: When actual maximum temperature  $\geq 47^{\circ}\text{C}$

(c). Criteria for heat wave for coastal stations

When maximum temperature departure is  $> 4.5^{\circ}\text{C}$  from normal. Heat Wave may be described provided maximum temperature  $\geq 37^{\circ}\text{C}$



Warm Night

When maximum temperature remains  $40^{\circ}\text{C}$

Warm Night: When minimum temperature departure  $4.5^{\circ}\text{C}$  to  $6.4^{\circ}\text{C}$ .  
Severe Warm Night: When minimum temperature departure  $> 6.4^{\circ}\text{C}$ .



Cold Wave

When minimum temperature of a station  $\leq 10^{\circ}\text{C}$  for plains and  $\leq 0^{\circ}\text{C}$  for hilly regions.

(a). Based on departure

Cold Wave: Minimum Temperature Departure from normal  $-4.5^{\circ}\text{C}$  to  $-6.4^{\circ}\text{C}$ .  
Severe Cold Wave: Minimum Temperature Departure from normal  $\leq -6.5^{\circ}\text{C}$

(b) Based on actual Minimum Temperature (for Plains only)

Cold Wave : When Minimum Temperature is  $\leq 4.0^{\circ}\text{C}$   
Severe Cold Wave: When Minimum Temperature is  $\leq 2.0^{\circ}\text{C}$

(c) For Coastal Stations

When Minimum Temperature departure is  $\leq -4.5^{\circ}\text{C}$  & actual Minimum Temperature is  $\leq 15^{\circ}\text{C}$



Cold Day

When minimum temperature of a station  $\leq 10^{\circ}\text{C}$  for plains and  $\leq 0^{\circ}\text{C}$  for hilly regions  
Based on departure

Cold Day: Maximum Temperature Departure from normal  $-4.5^{\circ}\text{C}$  to  $-6.4^{\circ}\text{C}$ .  
Severe Cold Day: Maximum Temperature Departure from normal  $\leq -6.5^{\circ}\text{C}$



Fog

Phenomenon of small droplets suspended in air and the horizontal visibility  $< 1\text{km}$

Moderate Fog: When the visibility between 500-200 metres  
Dense Fog: when the visibility between 50- 200 metres  
Very Dense Fog: when the visibility  $< 50$  metres



Thunderstorm

Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)



Dust/Sand Storm

An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.



Frost

Ice deposits on ground

Air temperature  $\leq 4^{\circ}\text{C}$  ( over Plains)



Squall

A strong wind that rises suddenly, lasts for atleast 1 minute.

Moderate: Wind speed 52-61 kmph  
Severe: Wind speed 62-87 kmph  
Very Severe: Wind speed  $> 87$  kmph



Sea State

Effect of various waves in the sea over specific area

Rough to very rough: Wind speed 41-62 kmph (22-33 knots) & Wave height 2.5-6 metre  
High to very high: Wind speed 63-117 kmph ( 34-63 knots) & Wave height 6-14 metre  
Phenomenal: Wind speed  $> 117$  kmph ( $> 63$  knots) & Wave height  $> 14$  metre



Cyclone

Cyclonic Storm: Wind speed 62-87 kmph (34-47 knots)  
Severe Cyclonic Storm: Wind speed 88-117 kmph (48-63 knots)  
Very Severe Cyclonic Storm: Wind speed 118-165 kmph (64 - 89 knots)  
Extremely Severe Cyclonic Storm: Wind speed 166-220 kmph (90 -119 knots)  
Super Cyclone Strom: Wind speed  $> 220$  kmph ( $> 119$  knots)

\* Red color warning does not mean "Red Alert" Red color warning means "Take Action".

Forecast and Warning for any day is valid from 0830 hours IST of day till 0830 hours IST of next day For more details kindly visit <https://mausam.imd.gov.in> or contact : 011-2434-4599

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