



Monday, July 31, 2023  
Time of Issue: 0800 hours IST  
(MORNING)

## ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

### Significant Weather Features

#### Significant Weather features:

- ❖ The Low Pressure Area over Northwest Bay of Bengal & neighbourhood now lies as a Well Marked Low Pressure Area over central parts of North Bay of Bengal with the associated cyclonic circulation extending upto 9.5 km above mean sea level. It is likely to move northwestwards and concentrate into a Depression during next 12 hours.
- ❖ The Monsoon Trough at mean sea level now passes through Amritsar, Patiala, Bareilly, Gorakhpur, Gaya, Bankura, Digha, center of Well Marked Low Pressure Area and thence southeastwards to north Andaman Sea.
- ❖ The north-south trough from northwest Bihar now runs to the cyclonic circulation associated with the Well Marked Low Pressure Area over central parts of North Bay of Bengal between 0.9 & 3.1 km above mean sea level.
- ❖ The western end of the monsoon trough lies north of its normal position and it is likely to shift towards foothills of Himalayas during next 2 days. However, the eastern end lies south of its normal position.

#### Weather Forecast and Warning:

**Northwest India:** Light/Moderate scattered to fairly widespread rainfall with isolated **heavy rainfall** is very likely over East Uttar Pradesh during 31<sup>th</sup> July to 04<sup>th</sup> August; over East Rajasthan on 31<sup>st</sup> July & 02<sup>nd</sup> August; over Uttarakhand during 01<sup>st</sup> to 04<sup>th</sup> August; over West Uttar Pradesh 01<sup>st</sup> & 02<sup>nd</sup> August; over Himachal Pradesh, Punjab, Haryana-Chandigarh-Delhi on 02<sup>nd</sup> & 03<sup>rd</sup> August. Isolated thunderstorm & lightning activity likely over the region during next 5 days.

**Central India:** Light/moderate scattered to fairly widespread rainfall/thunderstorm & lightning with isolated **heavy rainfall** is very likely over East Madhya Pradesh and North Chhattisgarh during next 5 days. **Isolated very heavy rainfall also likely over East Madhya Pradesh on 02<sup>nd</sup> August.**

**East India:** Light/moderate fairly widespread to widespread rainfall/thunderstorm & lightning with **heavy rainfall** at isolated places very likely over Bihar, Jharkhand, Odisha during 31<sup>th</sup> July to 04<sup>th</sup> August; over Gangetic West Bengal during 31<sup>th</sup> July to 02<sup>nd</sup> August; over Sub-Himalaya West Bengal & Sikkim on 03<sup>rd</sup> August.

**Isolated very heavy rainfall also very likely over Odisha during 31<sup>th</sup> July to 02<sup>nd</sup> August; over Jharkhand on 31<sup>st</sup> July, 2023.**

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

**Isolated very heavy rainfall also likely over Arunachal Pradesh on 02<sup>nd</sup> & 03<sup>rd</sup> August; Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during 01<sup>st</sup> to 3<sup>rd</sup> August 2023.**

**West India:** Light/moderate scattered to fairly widespread rainfall with **isolated heavy rainfall** very likely to continue over Konkan & Goa and Madhya Maharashtra during next 5 days;

**South India:** Light/moderate Isolated to scattered rainfall with **isolated heavy rainfall** very likely over Telangana on 01<sup>st</sup> August and over Coastal Karnataka on 02<sup>nd</sup> & 03<sup>rd</sup> August.

**Hot and Humid weather also very likely over Tamil Nadu on 31<sup>st</sup> July, 2023.**

## Main Weather Observations

- ❖ **Rainfall/thundershowers observed** (from 0830 hours IST to 1730 hours IST of yesterday): **at most places** over Gujarat Region, Madhya Maharashtra and Konkan & Goa; **at many places** over Saurashtra & Kutch; **at a few places** over Haryana-Chandigarh-Delhi, Uttarakhand, Madhya Pradesh Marathwada, North Interior Karnataka, Coastal Karnataka, Bihar, Gangetic West Bengal and Nagaland, Manipur, Mizoram & Tripura and at isolated places over Punjab, Rajasthan, Uttar Pradesh, Vidarbha, Telangana, Sub-Himalaya West Bengal & Sikkim, Odisha, Assam & Meghalaya and Andaman & Nicobar Islands.
- ❖ **Significant rainfall recorded** (from 0830 hours IST to 1730 hours IST of yesterday) **(in cm)** : Mahabaleshwar and Long Island-5; Shahjahanpur-4; Dehradun, Hissar-3; Patiala, Guna, Muzaffarpur-2 each.
- ❖ **Thunderstorm observed** (from 0830 hours IST of yesterday to 0530 hours IST of today): at isolated places over Gangetic West Bengal, Himachal Pradesh, Punjab, West Madhya Pradesh, Bihar, Telangana, Tripura and Odisha.
- ❖ **Minimum Temperature Departures (as on 30-07-2023)**: Minimum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Coastal Andhra Pradesh & Yanam; **above normal (1.6°C to 3.0°C)** at many places over Punjab; at a few places over Gangetic West Bengal, Andaman & Nicobar Islands and at isolated places over East Uttar Pradesh, Odisha, Tamil Nadu, Puducherry & Karaikal. They were **below normal (-1.6°C to -3.0°C)** at many places over Haryana-Chandigarh-Delhi; at a few places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; at isolated places over West Rajasthan, Telangana and **near normal** over rest parts of the country. Yesterday, **the lowest minimum temperature of 19.4°C** was reported at **Narsinghpur (East Madhya Pradesh)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 30-07-2023)**: Maximum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal and Nagaland, Manipur, Mizoram & Tripura and at isolated places over Odisha, Gangetic West Bengal and Assam & Meghalaya; **above normal (1.6°C to 3.0°C)** at a few places over East Uttar Pradesh and Coastal Andhra Pradesh & Yanam and at isolated places over East Madhya Pradesh, Vidarbha and Sub-Himalaya West Bengal & Sikkim. They were **below normal (-1.6°C to -3.0°C)** at many places over West Rajasthan; at a few places over Himachal Pradesh, Punjab and at isolated places over Telangana and **near normal** over rest parts of the country. Yesterday, **the highest maximum temperature of 41.7°C** was reported at **Madurai (Tamil Nadu, Puducherry & Karaikal)**.



## Meteorological Analysis (Based on 0530 hours IST)

- ❖ **The Low Pressure Area** over Northwest Bay of Bengal & neighbourhood now lies as a Well Marked Low Pressure Area over central parts of North Bay of Bengal with the associated cyclonic circulation extending upto 9.5 km above mean sea level. It is likely to move northwestwards and concentrate into a Depression during next 12 hours.
- ❖ The Monsoon Trough at mean sea level now passes through Amritsar, Patiala, Bareilly, Gorakhpur, Gaya, Bankura, Digha, center of **Well Marked Low Pressure Area** and thence southeastwards to north Andaman Sea.
- ❖ The north-south trough from northwest Bihar now runs to the cyclonic circulation associated with the Well Marked Low Pressure Area over central parts of North Bay of Bengal between 0.9 & 3.1 km above mean sea level.
- ❖ The Western Disturbance as a trough in mid-tropospheric westerlies with its axis at 5.8 km above mean sea level roughly along Long. 73°E to the north of 30°N persists.

## Weather Forecast for next 5 days (Upto 0830 hours IST of 05<sup>th</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 4-5 days and over Northeast India during next 2 days.

## Weather Outlook for subsequent 2 days

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



Table-1

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

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

\* 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)

Fig. 1: Maximum Temperatures Dated 30.07.2023

Fig. 2: Departure of Maximum Temp. Dated 30.07.2023

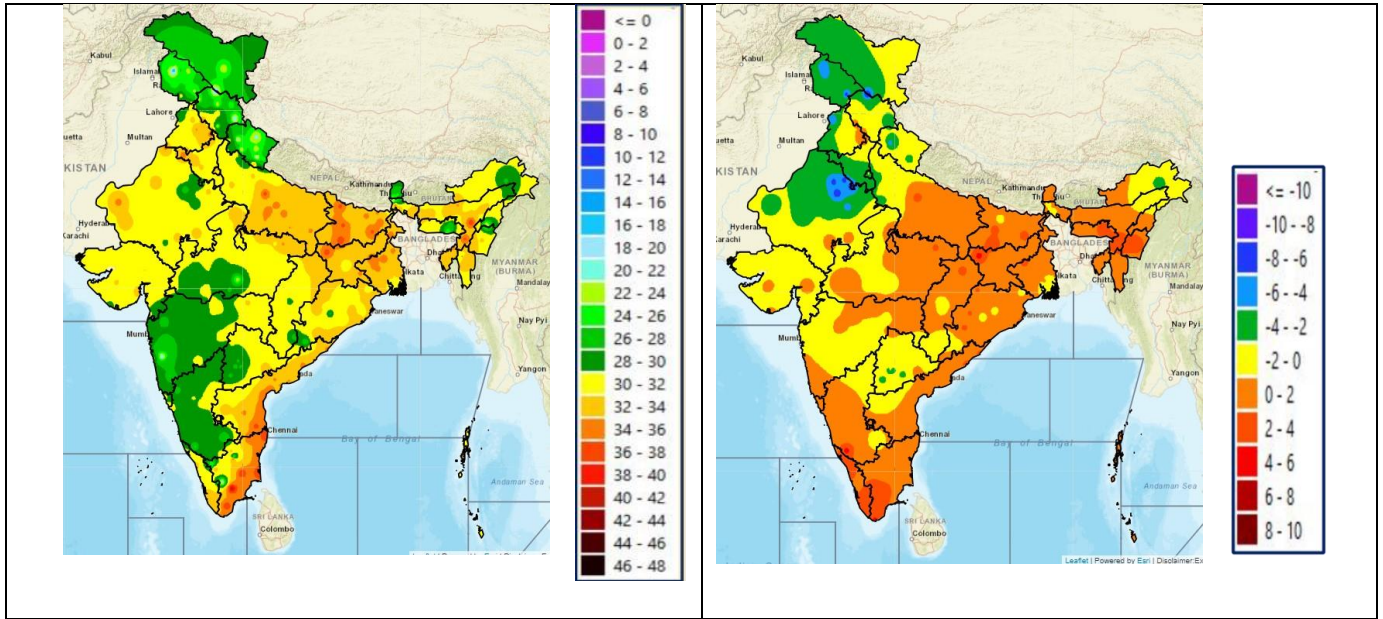
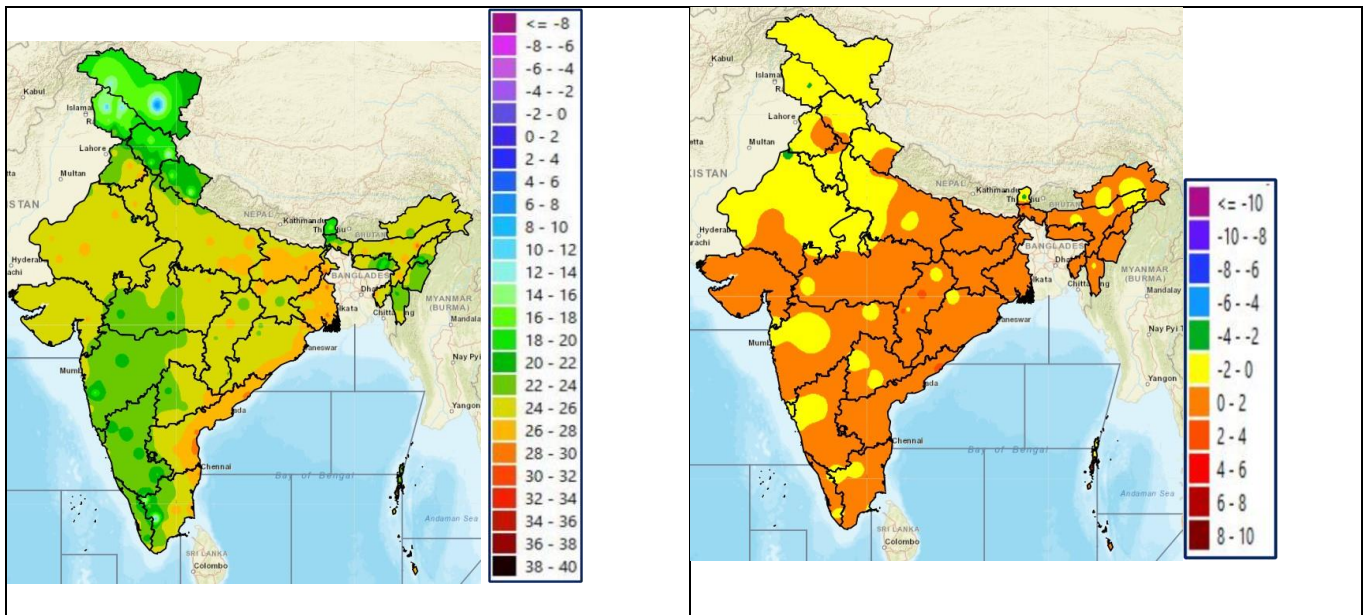


Fig. 3: Minimum Temperatures Dated 30.07.2023

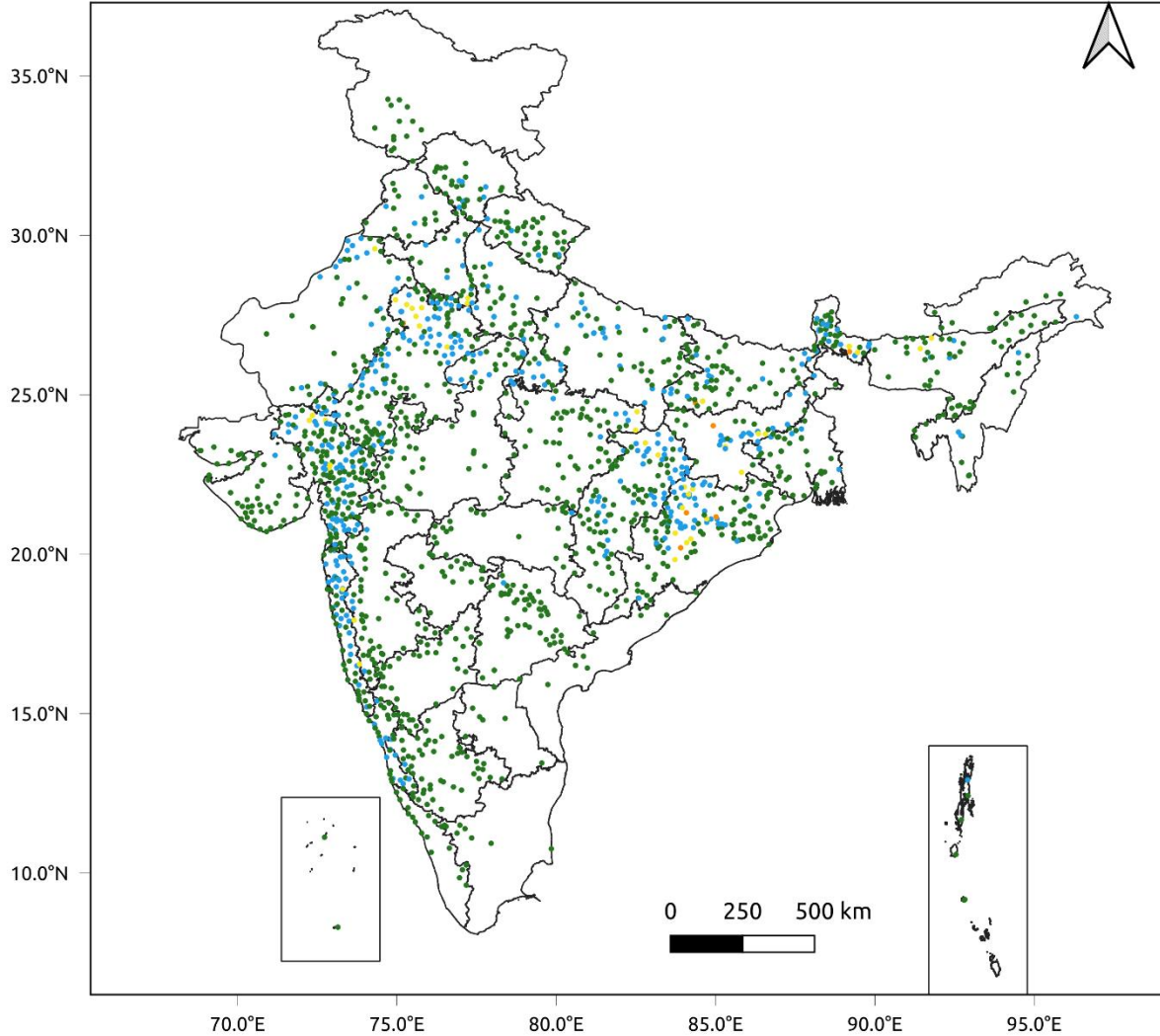
Fig. 4: Departure of Minimum Temp. Dated 30.07.2023



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

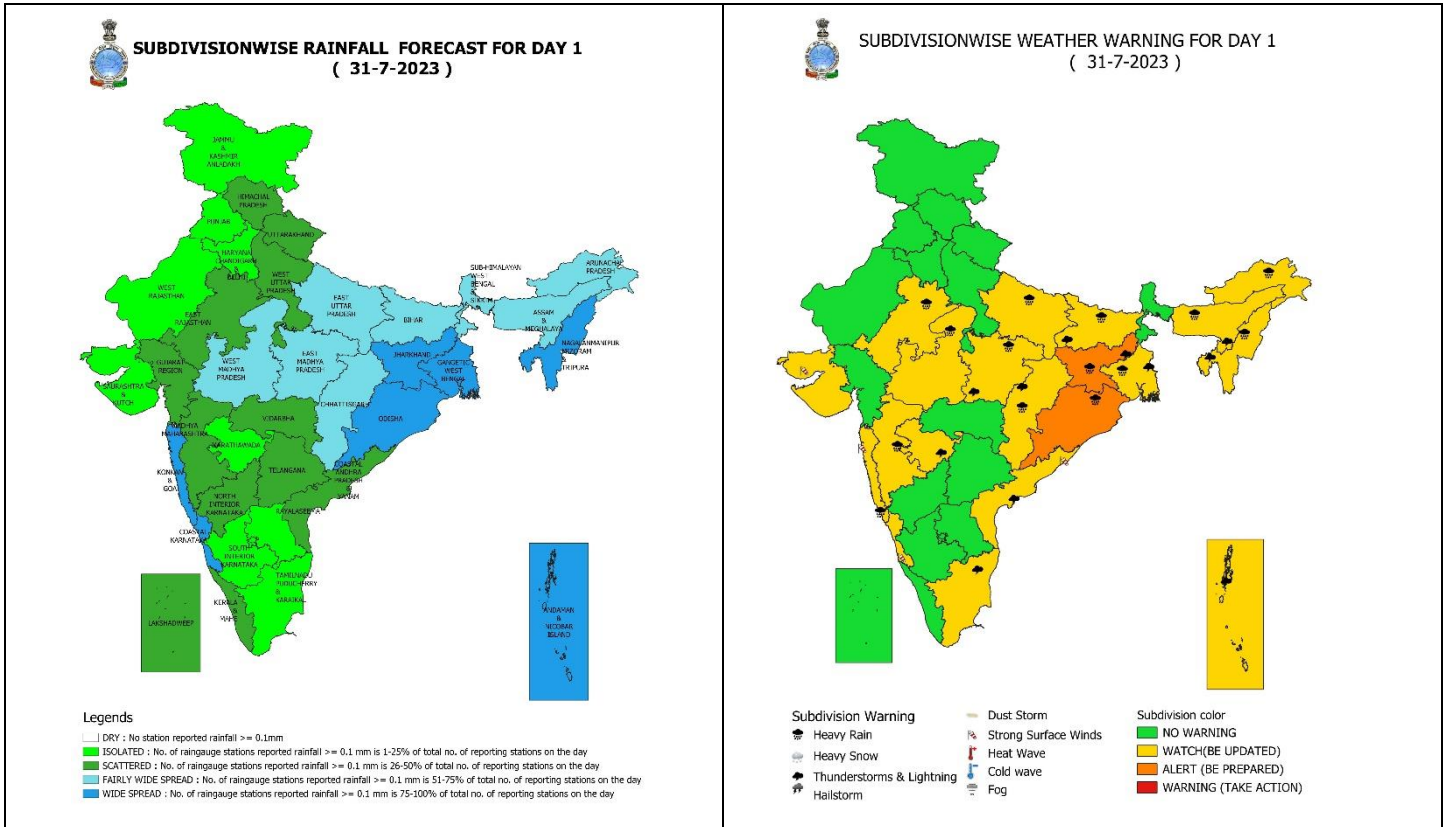


24 Hr cumulative rainfall recorded over different stations during 0830 IST of 29-7-2023 to 0830 IST of 30-7-2023



## 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)

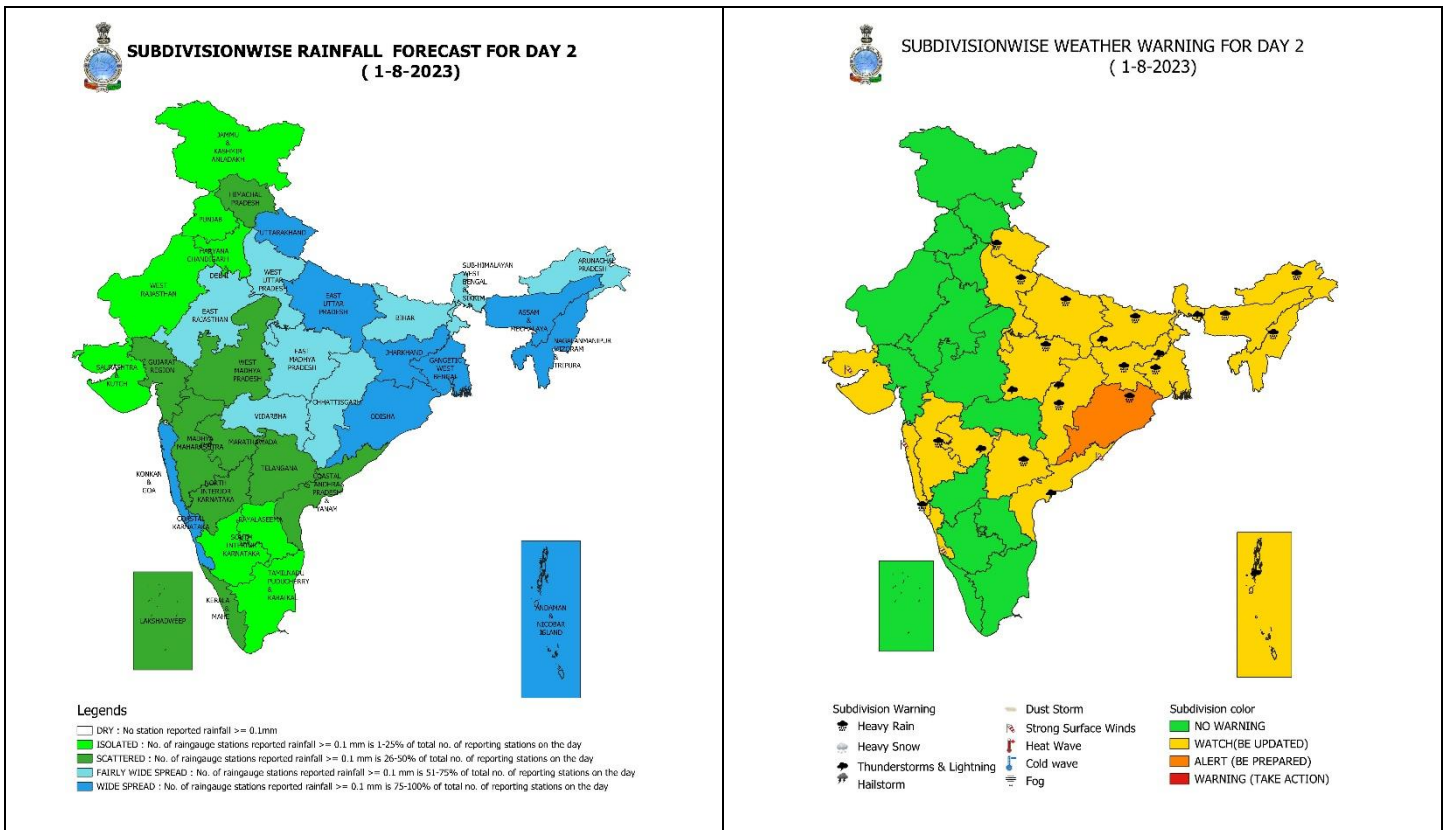


### 31 July (Day 1):

- ❖ **Heavy to very heavy rainfall** likely at isolated places over Odisha and Jharkhand; **Heavy rainfall** very likely at isolated places over East Uttar Pradesh, East Rajasthan, East Madhya Pradesh, North Chhattisgarh, Gangetic West Bengal, Bihar, East Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa and Madhya Maharashtra.
- ❖ **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 Madhya Pradesh, Chhattisgarh, Gangetic West Bengal, Bihar, Jharkhand, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Marathwada, Coastal Andhra Pradesh & Yanam and Tamil Nadu, Puducherry & Karaikal.
- ❖ **Squally weather wind speed reaching 40-50 kmph gusting to 60 kmph** very likely to prevail over North & adjoining Central Bay of Bengal and along & off Odisha-West Bengal-Bangladesh coasts. Fishermen are advised not to venture into these areas.
- ❖ **Squally wind speed of 45-55 kmph gusting to 65 kmph** over Southwest, Westcentral & adjoining Eastcentral Arabian Sea, along & off Gujarat coast; over Comorin area and southwest Bay of Bengal. **Squally weather with wind speed reaching 40-45 kmph gusting to 55 kmph** over south Bay of Bengal, north Andaman Sea. **Squally weather with wind speed reaching 45-55 kmph gusting to 65 kmph** over Eastcentral Bay of Bengal & adjoining north Andaman Sea. Fishermen are advised not to venture into these areas.

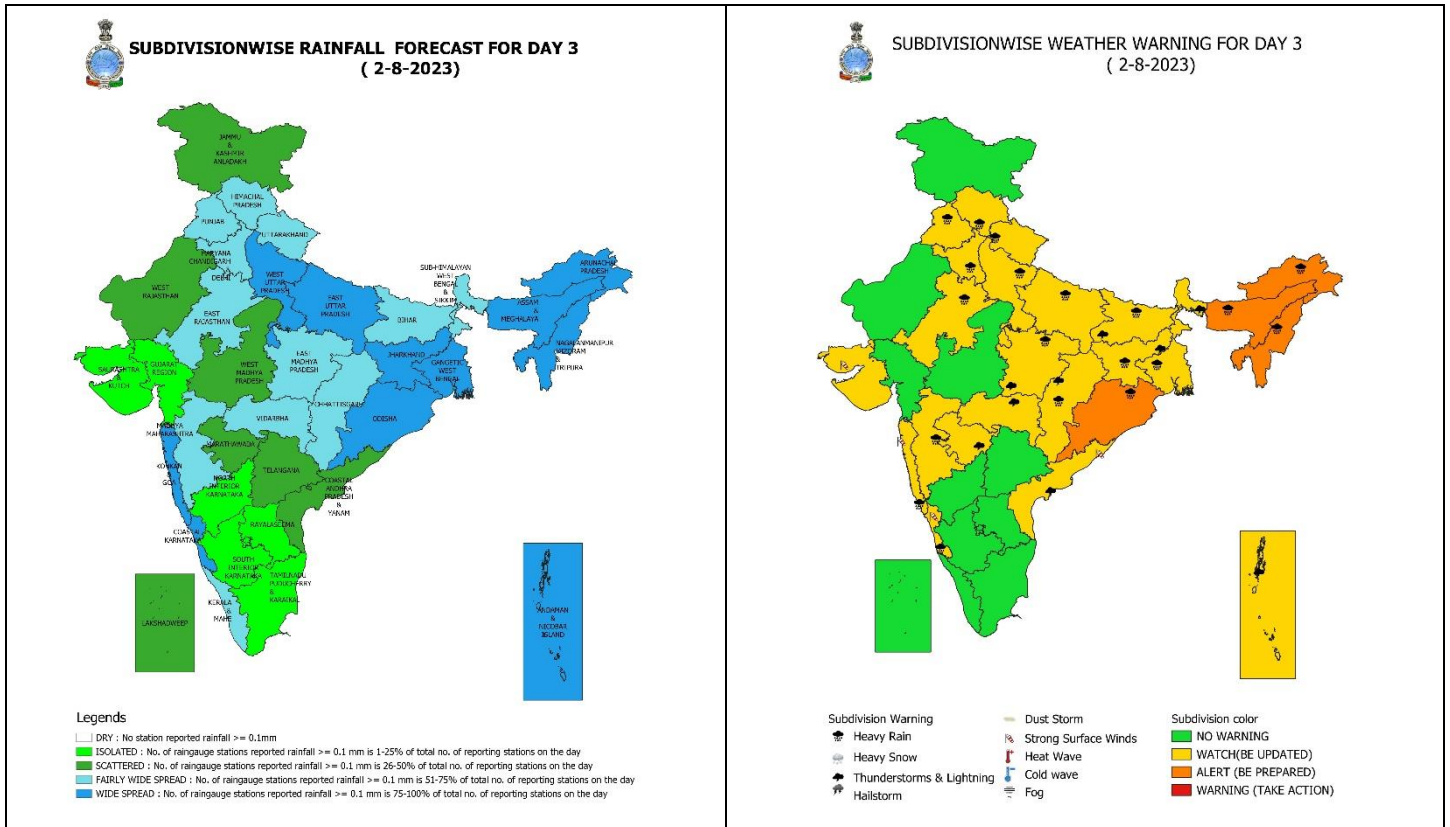
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### 01 August (Day 2):

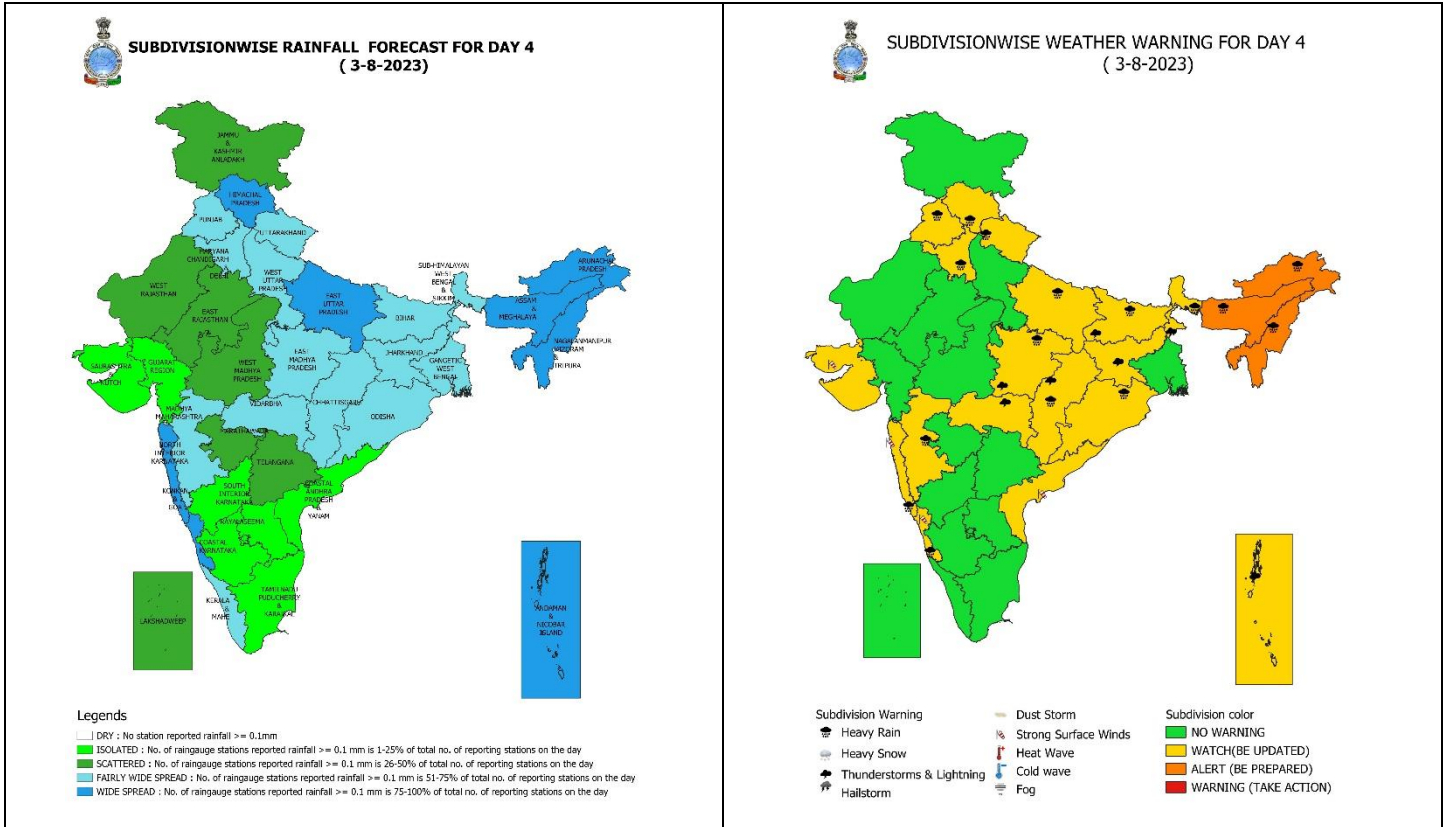
- ❖ **Heavy to very heavy rainfall** likely at isolated places over Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura; **Heavy rainfall** very likely at isolated places over Uttarakhand, Uttar Pradesh, East Madhya Pradesh, North Chhattisgarh, Gangetic West Bengal, Bihar, Jharkhand, East Arunachal Pradesh, Konkan & Goa, Madhya Maharashtra and Telangana.
- ❖ **Thunderstorm with lightning gusty (wind speed 40-50 kmph)** very likely at isolated places over Andaman & Nicobar Islands; **with lightning** likely at isolated places over East Madhya Pradesh, Chhattisgarh, Sub-Himalaya West Bengal & Sikkim, Bihar, Jharkhand, Madhya Maharashtra, Marathwada and Coastal Andhra Pradesh & Yanam.
- ❖ **Squally weather wind speed reaching 40-50 kmph gusting to 60 kmph** very likely to prevail over North & adjoining Central Bay of Bengal and along & off Odisha-West Bengal-Bangladesh coasts. Fishermen are advised not to venture into these areas.
- ❖ **Squally wind speed of 45-55 kmph gusting to 65 kmph** very likely over Southwest, Westcentral & adjoining Eastcentral Arabian Sea, along & off Gujarat, north Maharashtra coasts; over Comorin area and southwest Bay of Bengal. **Squally weather with wind speed reaching 40-45 kmph gusting to 55 kmph** over south & adjoining Westcentral Bay of Bengal and Andaman Sea. **Squally weather with wind speed reaching 45-55 kmph gusting to 65 kmph** over Southeast Bay of Bengal and adjoining north Andaman Sea. Fishermen are advised not to venture into these areas.



### 02 August (Day 3):

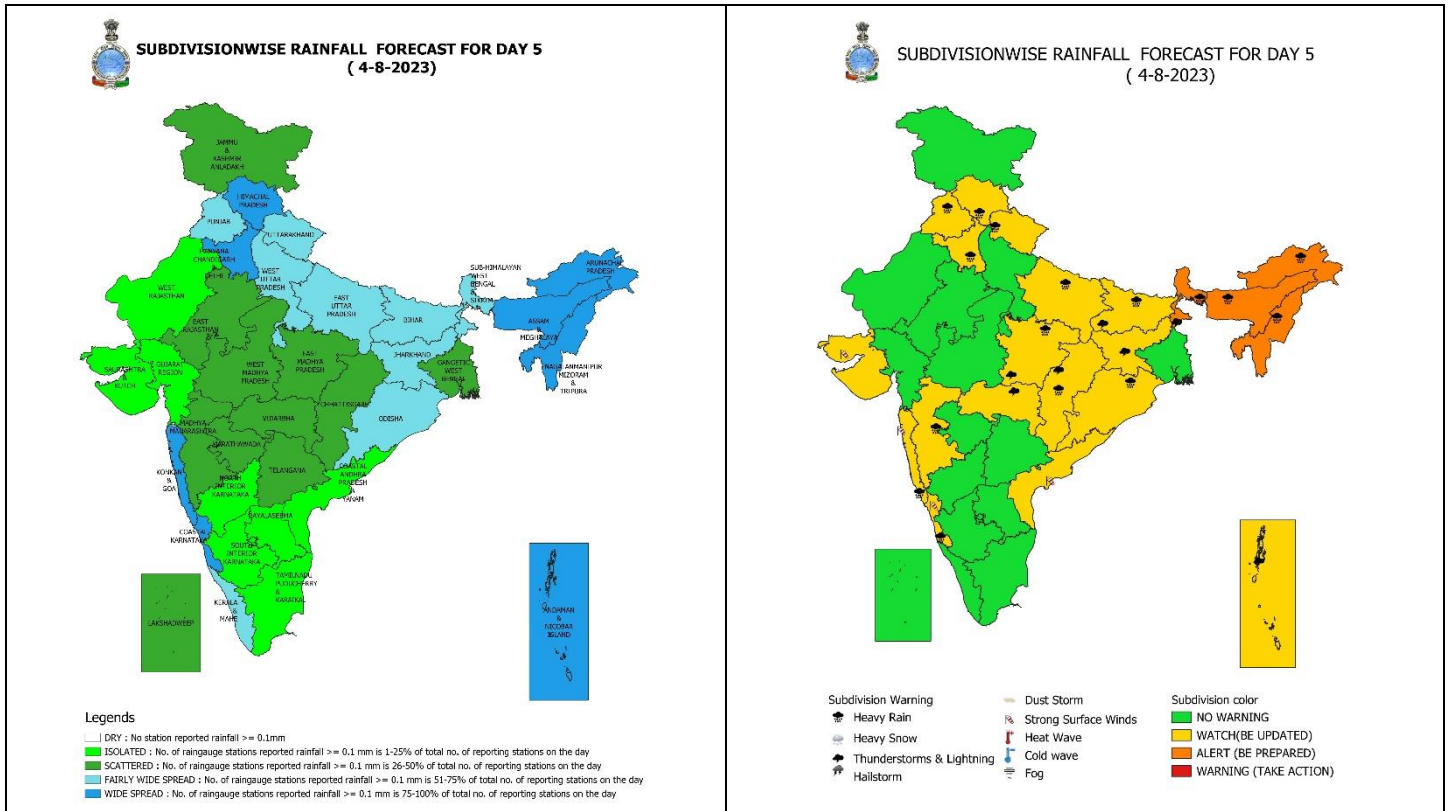
- ❖ **Heavy to very heavy rainfall** likely at isolated places over East Madhya Pradesh, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur; **Heavy rainfall** very likely at isolated places over Himachal Pradesh, Uttarakhand, Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh, East Rajasthan, north Chhattisgarh, Gangetic West Bengal, Bihar, Jharkhand, Konkan & Goa, Madhya Maharashtra and Telangana.
- ❖ **Thunderstorm with lightning gusty (wind speed 40-50 kmph) very likely** at isolated places over Andaman & Nicobar Islands; **with lightning** likely at isolated places over East Madhya Pradesh, Vidarbha, Chhattisgarh, Sub-Himalaya West Bengal & Sikkim, Jharkhand, Odisha, Madhya Maharashtra, Marathwada and Coastal Andhra Pradesh & Yanam.

**Squally wind speed of 45-55 kmph gusting to 65 kmph** over Southwest, Westcentral & adjoining Eastcentral and north Arabian Sea, along & off Gujarat, north Maharashtra coasts; over Comorin area and Southwest & adjoining Westcentral Bay of Bengal. **Squally weather with wind speed reaching 40-45 kmph gusting to 55 kmph** along & off West Bengal & Odisha coasts, north, south & adjoining Westcentral Bay of Bengal and Andaman Sea. **Squally weather with wind speed reaching 45-55 kmph gusting to 65 kmph** over central & adjoining Southeast Bay of Bengal and adjoining north Andaman Sea. Fishermen are advised not to venture into these areas.



### 03 August (Day 4):

- ❖ **Heavy to very heavy rainfall** likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur; **Heavy rainfall** very likely at isolated places over Himachal Pradesh, Uttarakhand, Punjab, Haryana-Chandigarh-Delhi, East Uttar Pradesh, East Madhya Pradesh, North Chhattisgarh, Sub-Himalaya West Bengal & Sikkim, Bihar, Odisha, Konkan & Goa, Madhya Maharashtra and Coastal Karnataka.
- ❖ **Thunderstorm with lightning gusty (wind speed 40-50 kmph) very likely** at isolated places over Andaman & Nicobar Islands; **with lightning** likely at isolated places over East Madhya Pradesh, Vidarbha, Chhattisgarh, Sub-Himalaya West Bengal & Sikkim, Bihar and Jharkhand.
- ❖ **Squally wind speed of 45-55 kmph gusting to 65 kmph** over Southwest, Westcentral & adjoining Eastcentral and north Arabian Sea, along & off Gujarat, north Maharashtra coasts, Comorin area. **Squally weather with wind speed reaching 40-45 kmph gusting to 55 kmph** along & off West Bengal & Odisha coasts, north, south & adjoining Westcentral Bay of Bengal and Andaman Sea. **Squally weather with wind speed reaching 45-55 kmph gusting to 65 kmph** over central & adjoining Southeast Bay of Bengal and adjoining north Andaman Sea. Fishermen are advised not to venture into these areas.



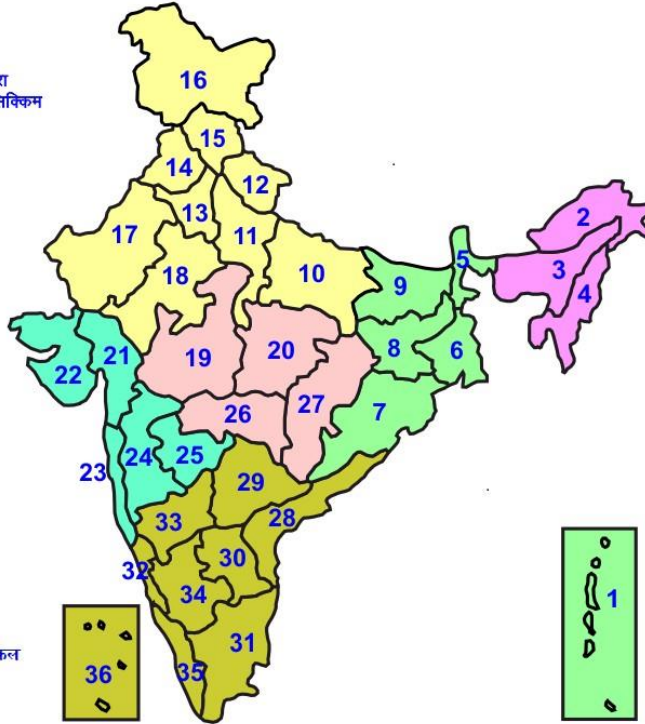
### 04 August (Day 5):

- ❖ **Heavy to very heavy rainfall** likely at isolated places over Sub-Himalaya West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur; **Heavy rainfall** very likely at isolated places over Himachal Pradesh, Uttarakhand, Punjab, Haryana-Chandigarh-Delhi, East Uttar Pradesh, East Madhya Pradesh, North Chhattisgarh, Bihar, Odisha, Konkan & Goa, Madhya Maharashtra and Coastal Karnataka.
- ❖ **Thunderstorm with lightning gusty (wind speed 40-50 kmph) very likely** at isolated places over Andaman & Nicobar Islands; **with lightning** likely at isolated places over East Madhya Pradesh, Vidarbha, Chhattisgarh, Sub-Himalaya West Bengal & Sikkim, Bihar and Jharkhand.
- ❖ **Squally wind speed of 45-55 kmph gusting to 65 kmph** over Southwest, Westcentral & adjoining Eastcentral and north Arabian Sea, along & off Gujarat, north Maharashtra coasts, Comorin area. **Squally weather with wind speed reaching 40-45 kmph gusting to 55 kmph** along & off West Bengal & Odisha coasts, north, south & adjoining Westcentral Bay of Bengal and Andaman Sea. **Squally weather with wind speed reaching 45-55 kmph gusting to 65 kmph** over central & adjoining Southeast Bay of Bengal and adjoining north Andaman Sea. 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 ओडिशा
- 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. Marathawada
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)

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