



Saturday, July 22, 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 lies over south Odisha-north Andhra Pradesh and adjoining northwest & Westcentral Bay of Bengal.
- ❖ The Monsoon Trough is active and runs to the south of its normal position.
- ❖ A cyclonic circulation lies over south Chhattisgarh & neighbourhood in lower tropospheric levels.
- ❖ The shear zone roughly along Lat. 20° N between 3.1 & 7.6 km above mean sea level.
- ❖ The Western Disturbance as a trough with its axis at 5.8 km above mean sea level runs roughly along Long. 65° E to the north of 30° N.
- ❖ A fresh Low Pressure Area is likely to form over Northwest & adjoining Westcentral Bay of Bengal off south Odisha-north Andhra Pradesh coasts around 24th July.

#### Weather Forecast and Warning:

**Northwest India:** Light/moderate Fairly widespread to widespread rainfall with isolated **heavy rainfall** is very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Punjab, north Haryana & Chandigarh on 22<sup>nd</sup>; over Himachal Pradesh, Uttarakhand, East Rajasthan during 22<sup>nd</sup>-25<sup>th</sup>; over West Rajasthan on 22<sup>nd</sup> & 24<sup>th</sup>; over Uttar Pradesh on 24<sup>th</sup> & 25<sup>th</sup> July 2023.

**Isolated very heavy rainfall** also very likely over Himachal Pradesh and East Rajasthan on 22<sup>nd</sup> July.

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

**West India:** Light/moderate fairly widespread to widespread rainfall with **isolated heavy to very heavy rainfall** very likely to continue over Konkan & Goa, ghat areas of Madhya Maharashtra and Gujarat State during next 2 days and decrease thereafter;

**Isolated heavy to very heavy rainfall** very likely to continue over Mumbai during next 24 hours.

**Isolated extremely heavy rainfall likely over Konkan & Goa, ghat areas of Madhya Maharashtra and Gujarat State on 22<sup>nd</sup> July.**

**South India:** Light/moderate fairly widespread to widespread rainfall with **isolated heavy rainfall** very likely over Kerala, Karnataka, Coastal Andhra Pradesh & Yanam and Telangana during next 5 days. **Isolated very heavy rainfall** very likely over Coastal & South Interior Karnataka on 23<sup>rd</sup> and over north Coastal Andhra Pradesh on 25<sup>th</sup> July.

**East India:** Light/moderate Scattered to Fairly widespread rainfall with isolated **heavy to very heavy rainfall** very likely over Odisha on 25<sup>th</sup> and isolated **heavy rainfall** over Sub-Himalaya West Bengal & Sikkim and Andaman & Nicobar Islands during 22<sup>nd</sup>-24<sup>th</sup> July.

**Northeast India:** Light/moderate Fairly widespread rainfall likely over the region. **Isolated heavy rainfall** likely over Nagaland, Manipur, Mizoram & Tripura during 22<sup>nd</sup>-23<sup>rd</sup>; over Assam & Meghalaya during 22<sup>nd</sup>-25<sup>th</sup> and over Arunachal Pradesh during 23<sup>rd</sup>-25<sup>th</sup> July.

\* 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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## Main Weather Observations

- ❖ **Rainfall/thundershowers observed** (from 0830 hours IST to 1730 hours IST of yesterday): **at most places** over Chhattisgarh, Konkan & Goa, Madhya Maharashtra, Jharkhand, West Bengal & Sikkim; **at many places** over East Madhya Pradesh, Vidarbha, Marathwada, North Interior Karnataka, Telangana, Odisha; **at a few places** over Himachal Pradesh, Uttarakhand, Punjab, West Uttar Pradesh, West Madhya Pradesh, Coastal Karnataka, South Interior Karnataka, Kerala & Mahe, Andaman & Nicobar Islands and **at isolated places** over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Haryana-Chandigarh-Delhi, Rayalaseema, Coastal Andhra Pradesh & Yanam, Tamil Nadu, Puducherry & Karaikal, Bihar, Nagaland, Manipur, Mizoram & Tripura, Assam & Meghalaya.
- ❖ **Heavy Rainfall observed** (from 0830 hours IST to 1730 hours IST of yesterday): **Heavy rainfall** at isolated places over Konkan & Goa and Saurashtra & Kutch.
- ❖ **Significant rainfall recorded** (from 0830 hours IST to 1730 hours IST of yesterday) **(in cm)**: **Konkan & Goa**: Mumbai/Santacruz-11, Vidyavihar-10, Sion-10, Bandra-10, Mumbai/Colaba-9, Chembur-8, CSMT-8, Matunga-7, Ram mandir-7, Byculla-7, Alibag-6, Matheran-3; **Saurashtra & Kutch**: Okha-8, Dwarka-6, Naliya-6, Mahuva-3; **Vidarbha**: Wardha-6, Yeotmal-6, Chandrapur-5, Nagpur Sonegaon-4; **Madhya Maharashtra**: Mahabaleshwa-4; **Chhattisgarh**: Rajnandgaon-4, **North Interior Karnataka**: Gulberga-4, **Telangana**: Adilabad-3; **West Uttar Pradesh**: Moradabad-3.
- ❖ **Thunderstorm observed** (from 0830 hours IST of yesterday to 0530 hours IST of today): at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Rajasthan, West Uttar Pradesh, Saurashtra & Kutch, West Madhya Pradesh, Vidarbha, Chhattisgarh, Jharkhand, West Bengal & Sikkim, Odisha, Punjab, Haryana-Chandigarh-Delhi, Telangana, North Interior Karnataka, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Minimum Temperature Departures (as on 21-07-2023)**: Minimum temperatures were **appreciably above normal (3.1°C to 5.0°C)**; at a few places over Himachal Pradesh, Punjab, Haryana-Chandigarh-Delhi and East Rajasthan; **above normal (1.6°C to 3.0°C)** at most places over Sub-Himalaya West Bengal & Sikkim; at many places over Uttarakhand, West Uttar Pradesh, Chhattisgarh, Bihar, Jharkhand and Kerala & Mahe; at a few places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, West Rajasthan, Odisha and Andaman & Nicobar Islands and at isolated places over Gangetic West Bengal and West Madhya Pradesh. They were **below normal (-1.6°C to -3.0°C)** at a few places over Telangana and **near normal** over rest parts of the country. Yesterday, **the lowest minimum temperature of 20.4°C** was reported at **Khargone (West Madhya Pradesh)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 21-07-2023)**: Maximum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at most places over East Uttar Pradesh, East Madhya Pradesh; at many places over Punjab, West Uttar Pradesh, East Rajasthan; at a few places over West Madhya Pradesh, Arunachal Pradesh, Assam & Meghalaya and at isolated places over Uttarakhand; **above normal (1.6°C to 3.0°C)** at many places over Himachal Pradesh, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal; at a few places over Gangetic West Bengal, Odisha, Jharkhand, Nagaland, Manipur, Mizoram & Tripura, Lakshadweep and at isolated places over West Rajasthan. They were **markedly below normal (-5.1°C or less)** at many places over Telangana; at a few places over North Interior Karnataka; **appreciably below normal (-3.1°C to -5.0°C)** at many places over Marathwada; at a few places over Vidarbha, Konkan & Goa, Coastal Andhra Pradesh & Yanam; **below normal (-1.6°C to -3.0°C)** at a few places over Saurashtra & Kutch, Rayalaseema, South Interior Karnataka and **near normal** over rest parts of the country. Yesterday, **the highest maximum temperature of 39.6°C** was reported at **Ganganagar (West Rajasthan)**.

### Meteorological Analysis (Based on 0530 hours IST)

- ❖ The **Low Pressure Area** over south Odisha – north Andhra Pradesh and adjoining northwest & Westcentral Bay of Bengal with associated cyclonic circulation extending upto 7.6 km above mean sea level persists. It is likely to move slowly west-northwestwards across south Odisha - north Andhra Pradesh coasts during next 2 days.
- ❖ The Monsoon Trough at mean sea level now passes through Jaisalmer, Deesa, Indore, Nagpur, Jagdalpur, center of the low pressure area over south Odisha–north Andhra Pradesh and thence east-southeastwards to Eastcentral Bay of Bengal extending upto 2.1 km above mean sea level.
- ❖ The cyclonic circulation over south Chhattisgarh & neighbourhood extending upto 2.1 km above mean sea level persists.
- ❖ The shear zone roughly along Lat. 20° N between 3.1 & 7.6 km above mean sea level persists.
- ❖ The Western Disturbance as a trough with its axis at 5.8 km above mean sea level now runs roughly along Long. 65° E to the north of 30° N.
- ❖ A fresh Low Pressure Area is likely to form over Northwest & adjoining Westcentral Bay of Bengal off south Odisha-north Andhra Pradesh around 24<sup>th</sup> July.

### Weather Forecast for next 5 days (Upto 0830 hours IST of 27<sup>th</sup> July, 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.

### Weather Outlook for subsequent 2 days

- ❖ Fairly widespread to widespread light/moderate rainfall likely over most parts of the country except over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, West Rajasthan, Andhra Pradesh, Rayalaseema, South Interior Karnataka and Tamil Nadu, Puducherry & Karaikal where isolated to scattered rainfall is likely.



Table-1

**7 Days Rainfall Forecast**

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

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

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Fig. 1: Maximum Temperatures Dated 21.07.2023

Fig. 2: Departure of Maximum Temp. Dated 21.07.2023

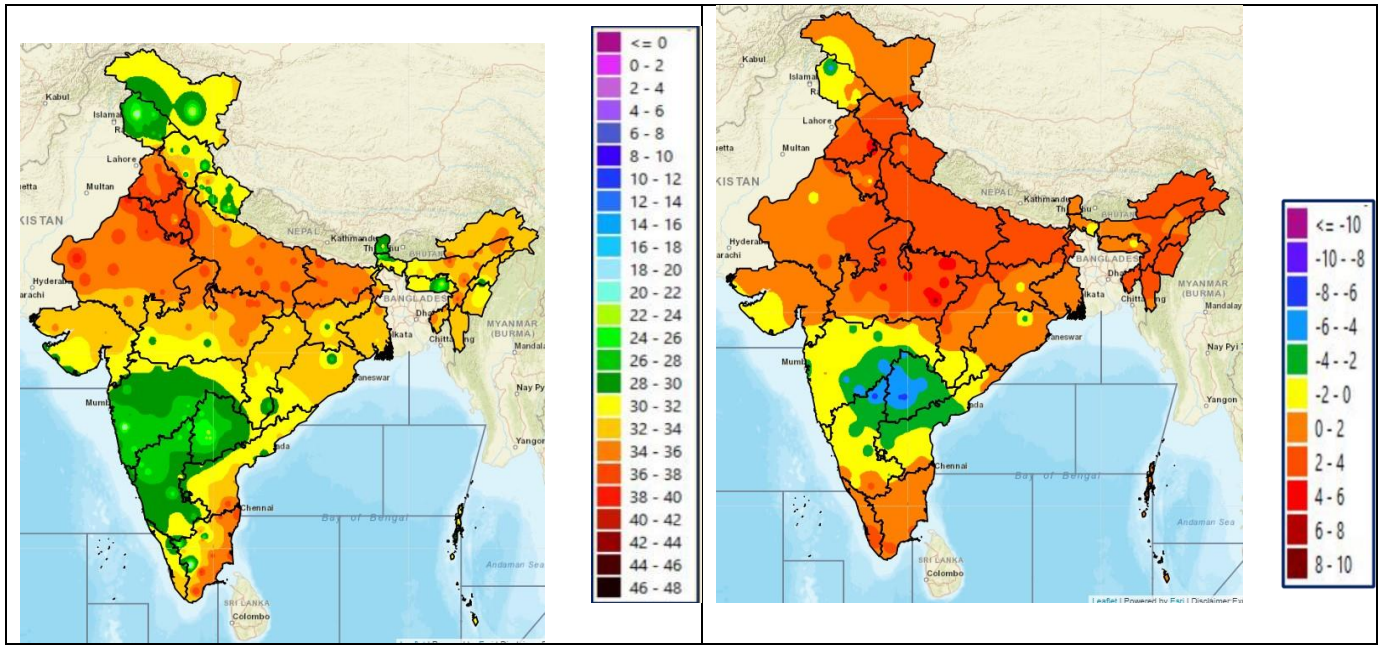
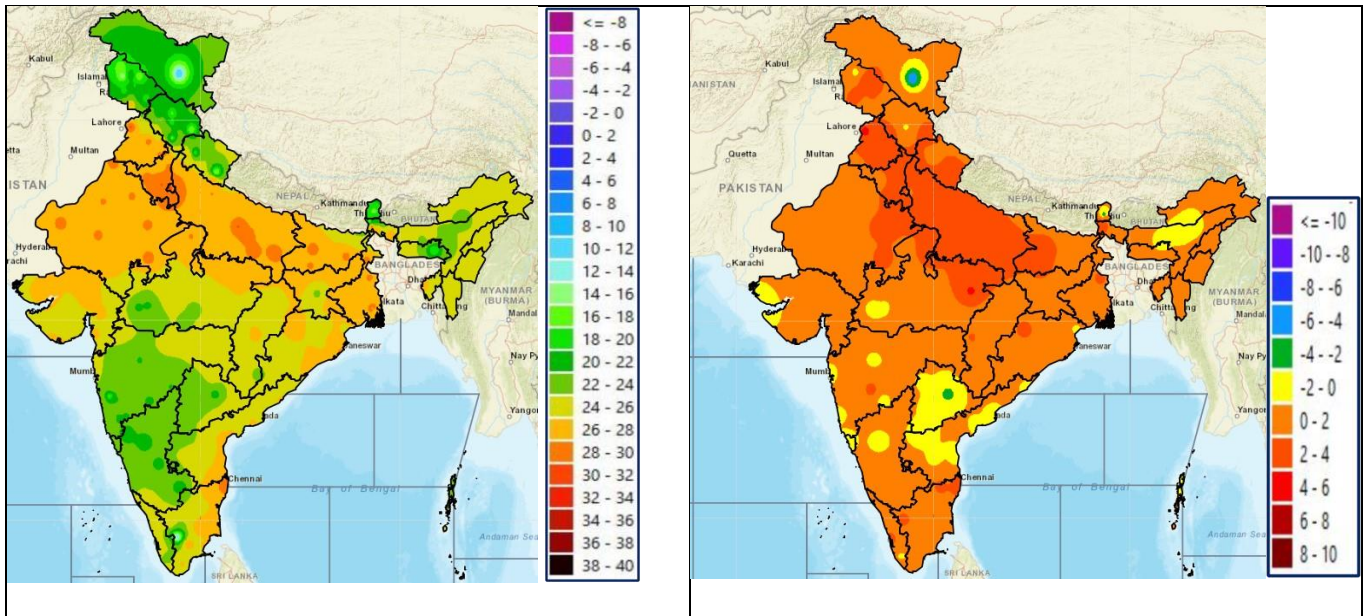


Fig. 3: Minimum Temperatures Dated 21.07.2023

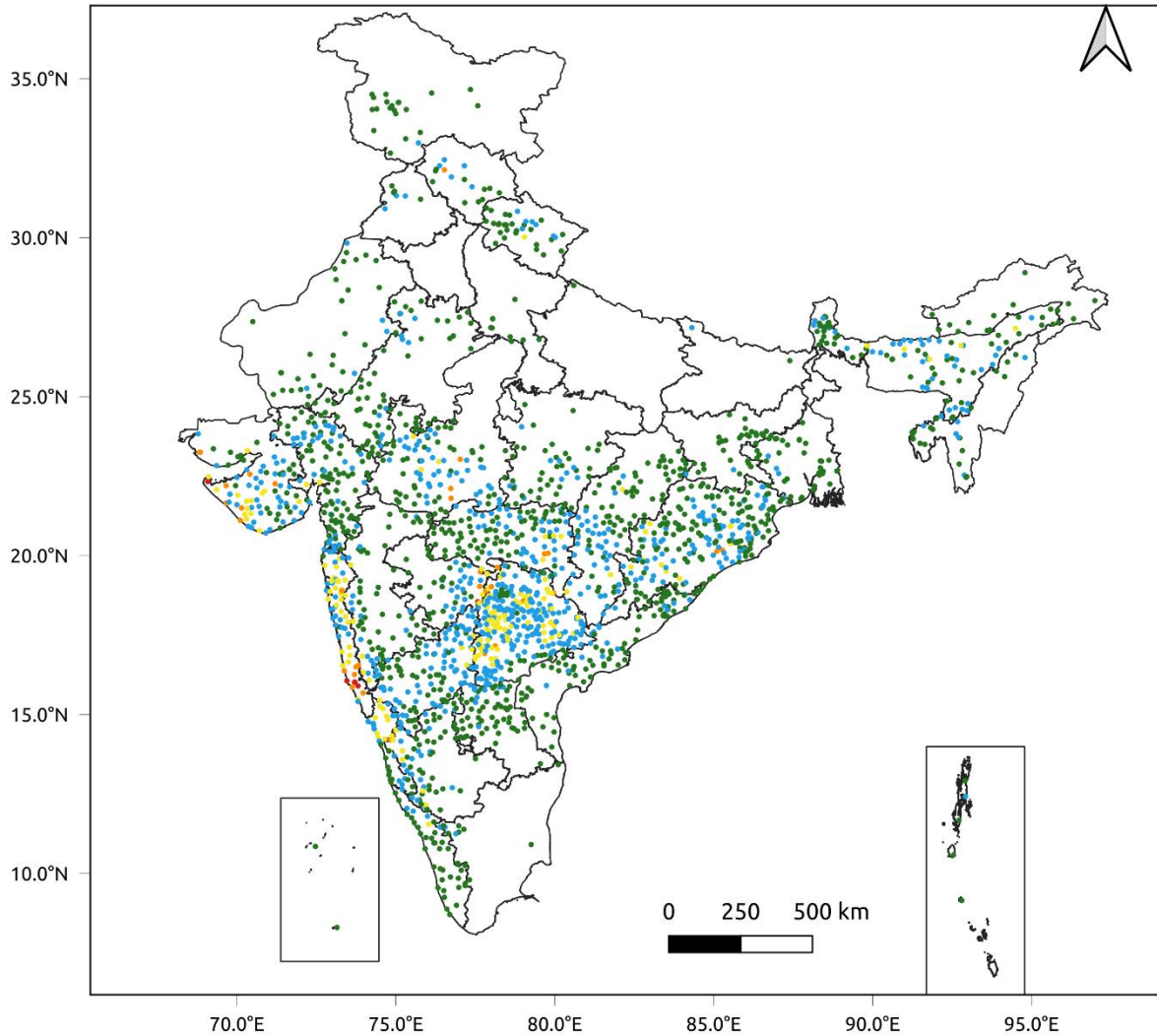
Fig. 4: Departure of Minimum Temp. Dated 21.07.2023



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

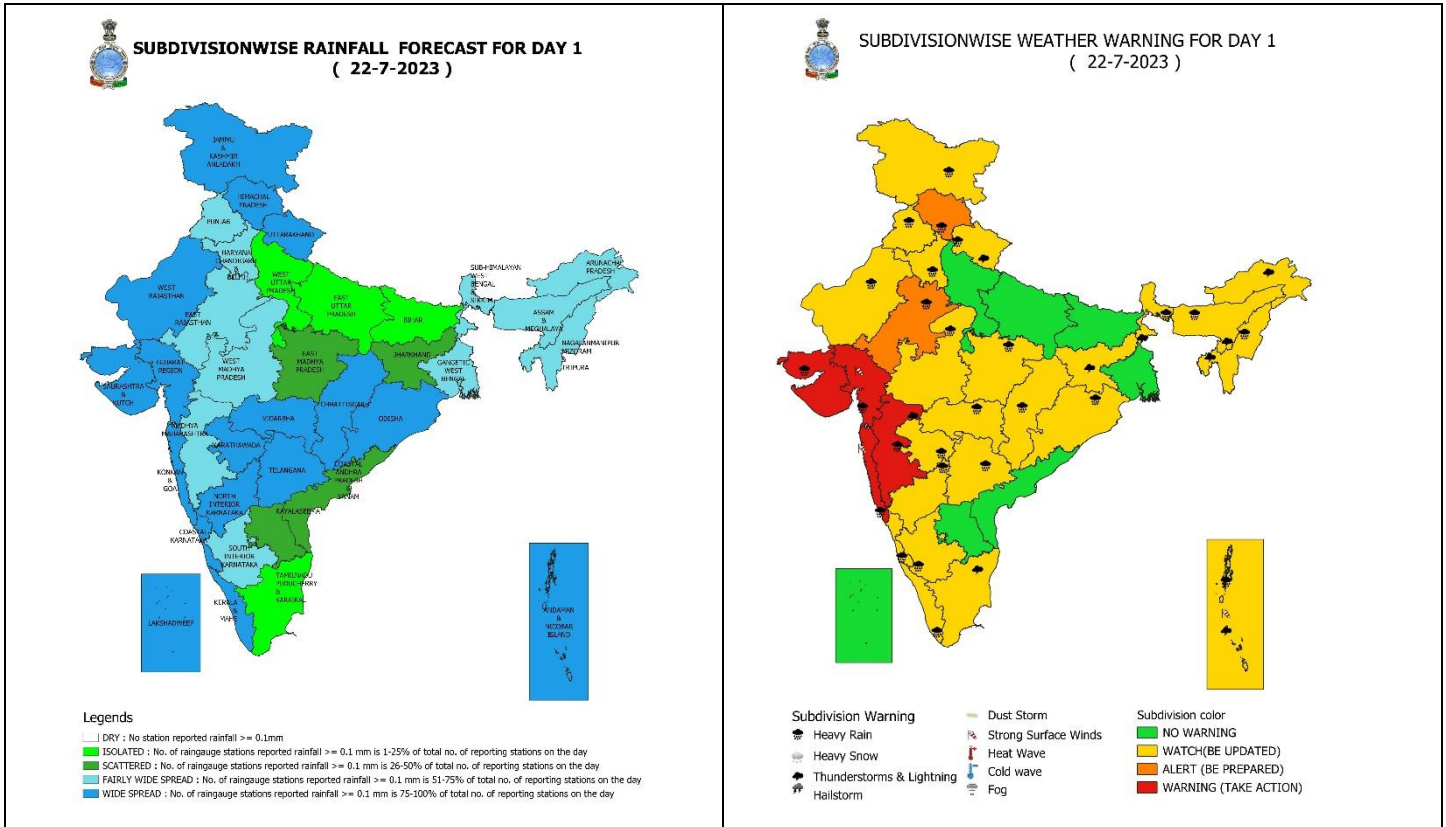


24 Hr cumulative rainfall recorded over different stations during 0830 IST of 20-7-2023 to 0830 IST of 21-7-2023



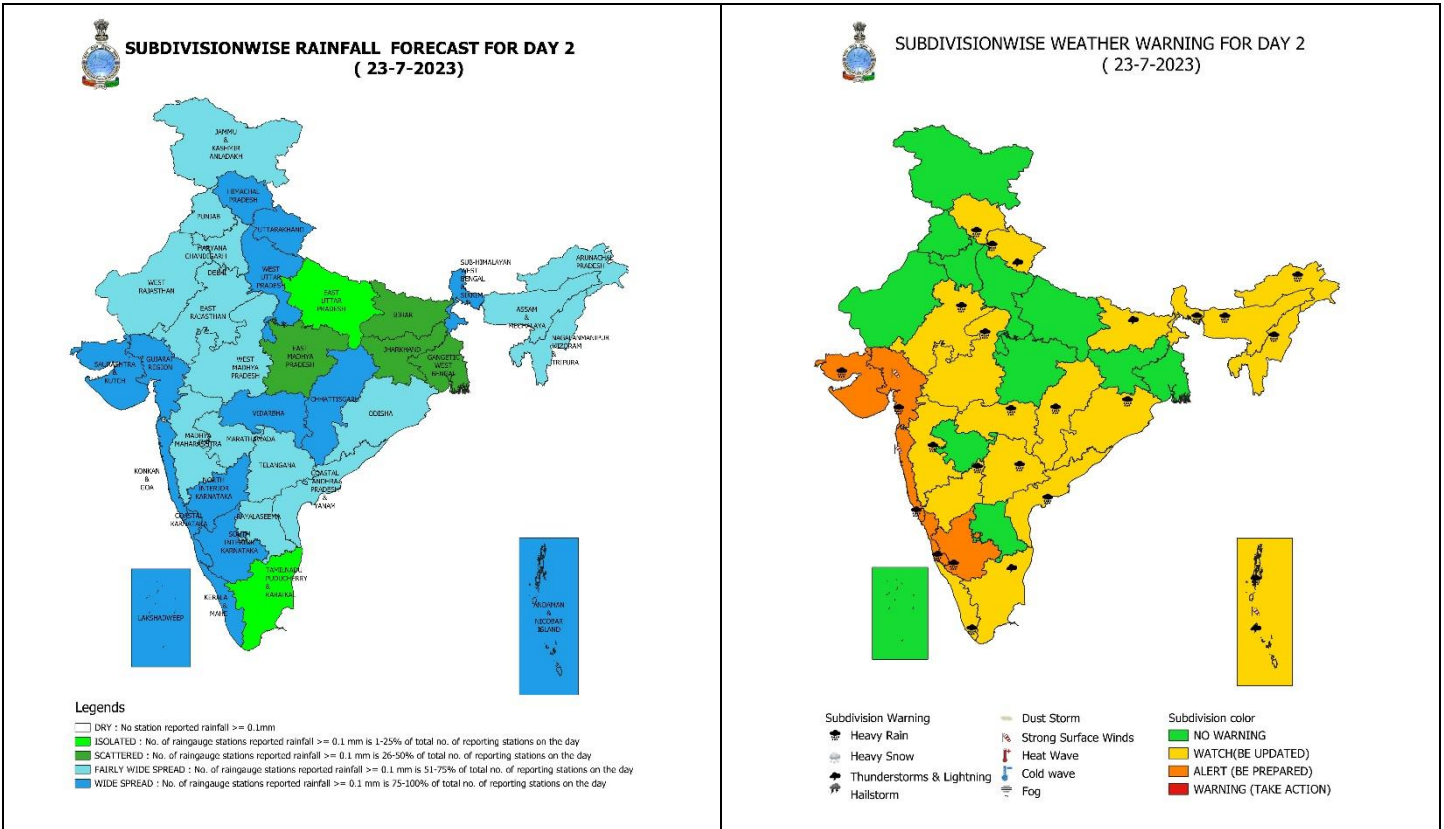
## Legends

- 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)



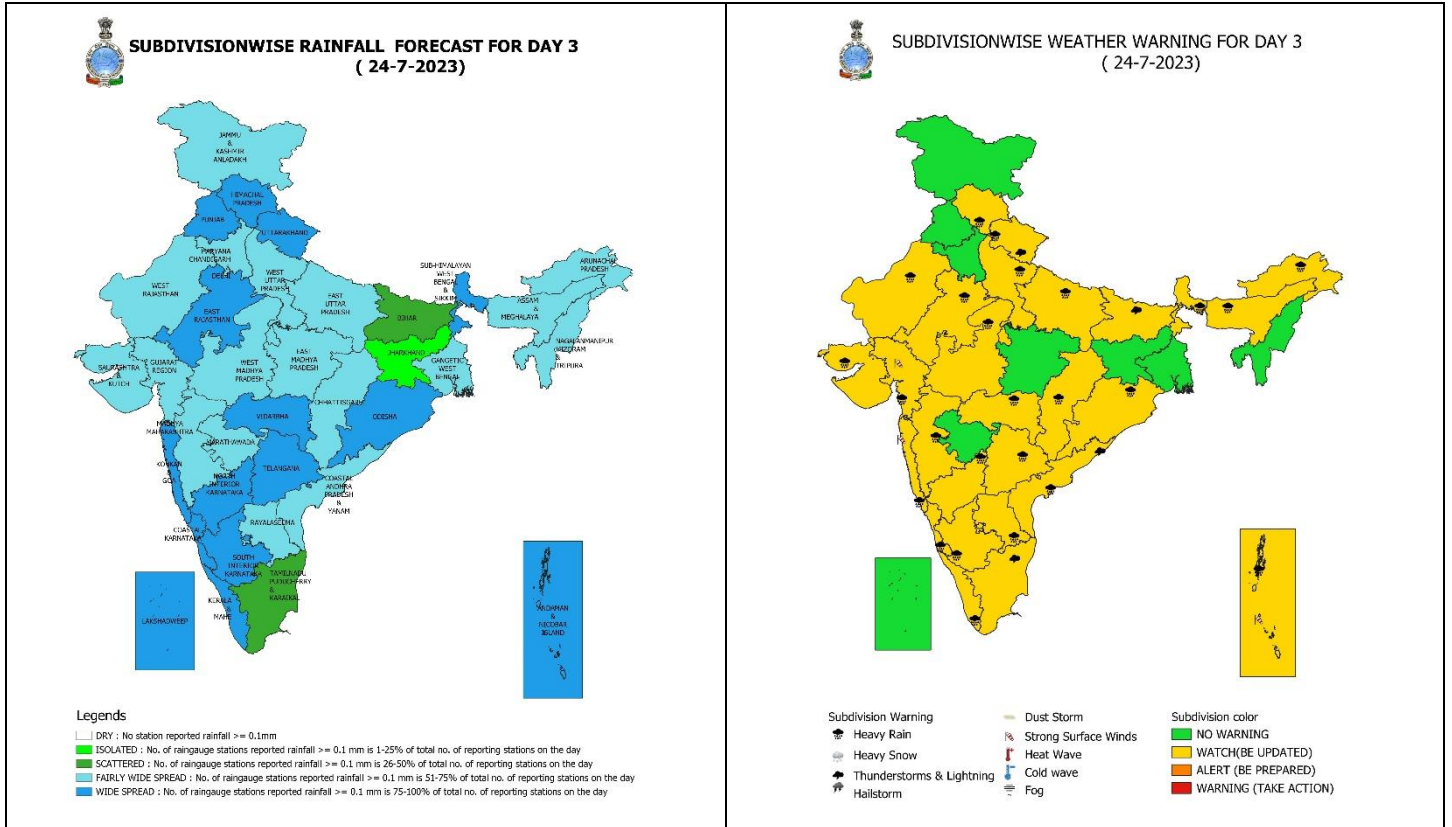
## 22 July (Day 1):

- ❖ **Heavy to very heavy rainfall with extremely heavy falls** very likely at isolated places over Konkan & Goa, Madhya Maharashtra, Gujarat state; **Heavy to very heavy rainfall** likely at isolated places Himachal Pradesh, East Rajasthan and **heavy rainfall** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Uttarakhand, Punjab, Haryana-Chandigarh-Delhi, West Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Andaman & Nicobar Islands, Sub-Himalaya West Bengal & Sikkim, Odisha, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura, Marathwada, Telangana, Karnataka and Kerala & Mahe.
- ❖ **Thunderstorm with lightning** at isolated places over Andaman & Nicobar Islands, Sub-Himalaya West Bengal & Sikkim, Jharkhand, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathwada and Tamil Nadu, Puducherry & Karaikal.
- ❖ **Squally weather with wind speed of 40-45 kmph gusting to 55 kmph** over along and off Karnataka, Konkan & Goa, Maharashtra, Gujarat, Coastal Andhra Pradesh & Yanam and central Bay of Bengal adjoining south Bay of Bengal, south Sri Lanka coast; **Squally weather with wind speed of 45-55 kmph gusting to 65 kmph** over along and off Maharashtra and north Coastal Andhra Pradesh & Yanam and **Squally wind speed of 45-55 kmph gusting to 65 kmph** over Gulf of Mannar, along and off south Tamil Nadu coast, over south west and central Arabian Sea.



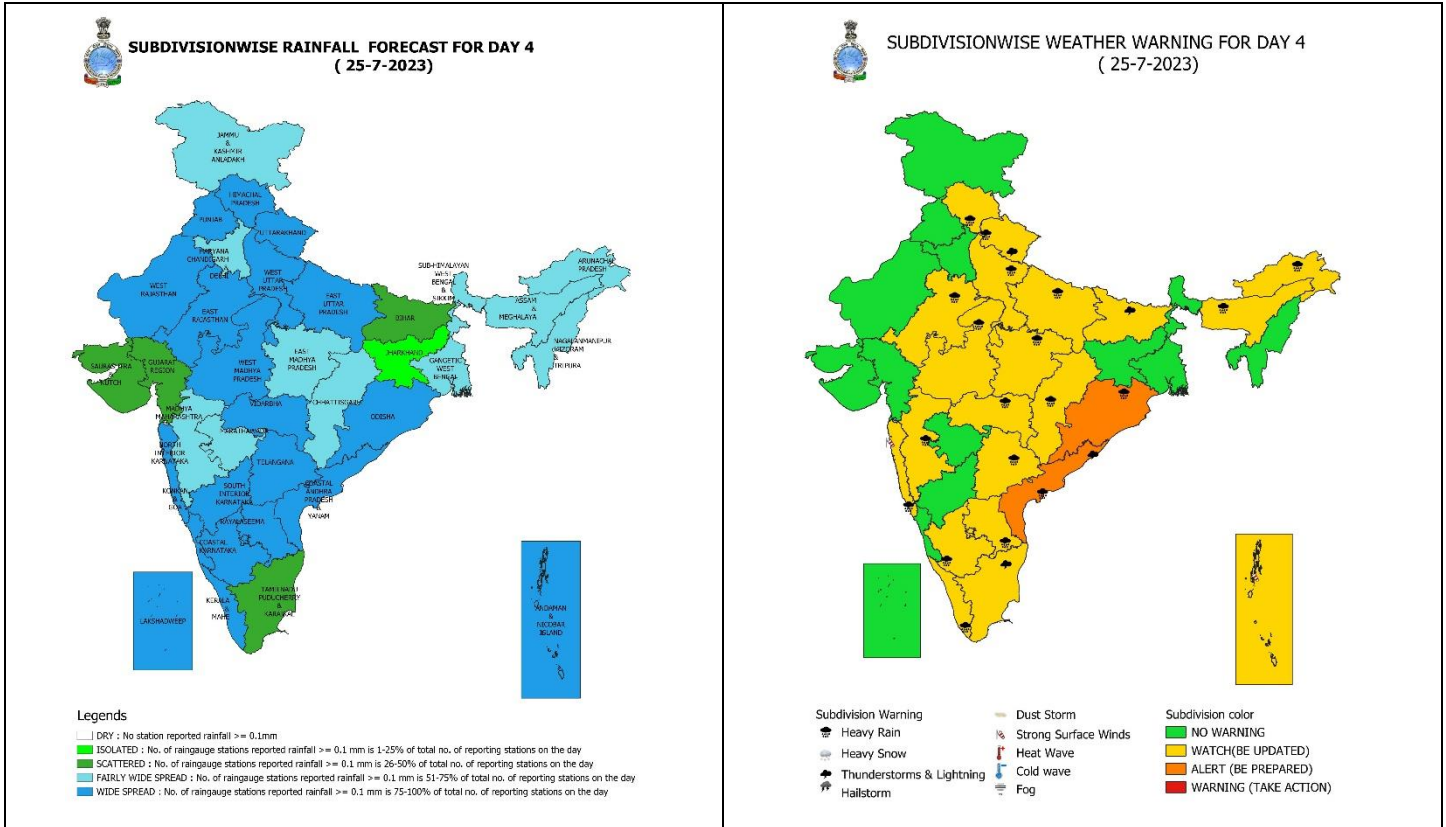
**23 July (Day 2):**

- ❖ **Heavy to very heavy rainfall** likely at isolated places Konkan & Goa, Gujarat state, Coastal & South Interior Karnataka; **heavy rainfall** at isolated places over Himachal Pradesh, Uttarakhand, East Rajasthan, West Madhya Pradesh, Vidarbha, Chhattisgarh, Andaman & Nicobar Islands, Sub-Himalaya West Bengal & Sikkim, Odisha, Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Telangana, Coastal Andhra Pradesh & Yanam, North Interior Karnataka and Kerala & Mahe.
- ❖ **Thunderstorm with lightning** at isolated places over Andaman & Nicobar Islands, Bihar, Marathwada and Tamil Nadu, Puducherry & Karaikal.
- ❖ **Squally weather with wind speed of 40-45 kmph gusting to 55 kmph** over along and off Karnataka, Konkan & Goa, Maharashtra, south Gujarat coasts, Coastal Andhra Pradesh & Yanam over south and central Bay of Bengal and south Sri Lanka coast; **Squally weather with wind speed of 45-55 kmph gusting to 65 kmph** over Maharashtra coast. **Squally wind speed of 45-55 kmph gusting to 65 kmph** over Gulf of Mannar, along and off south Tamil Nadu coast, over south west and central Arabian Sea.



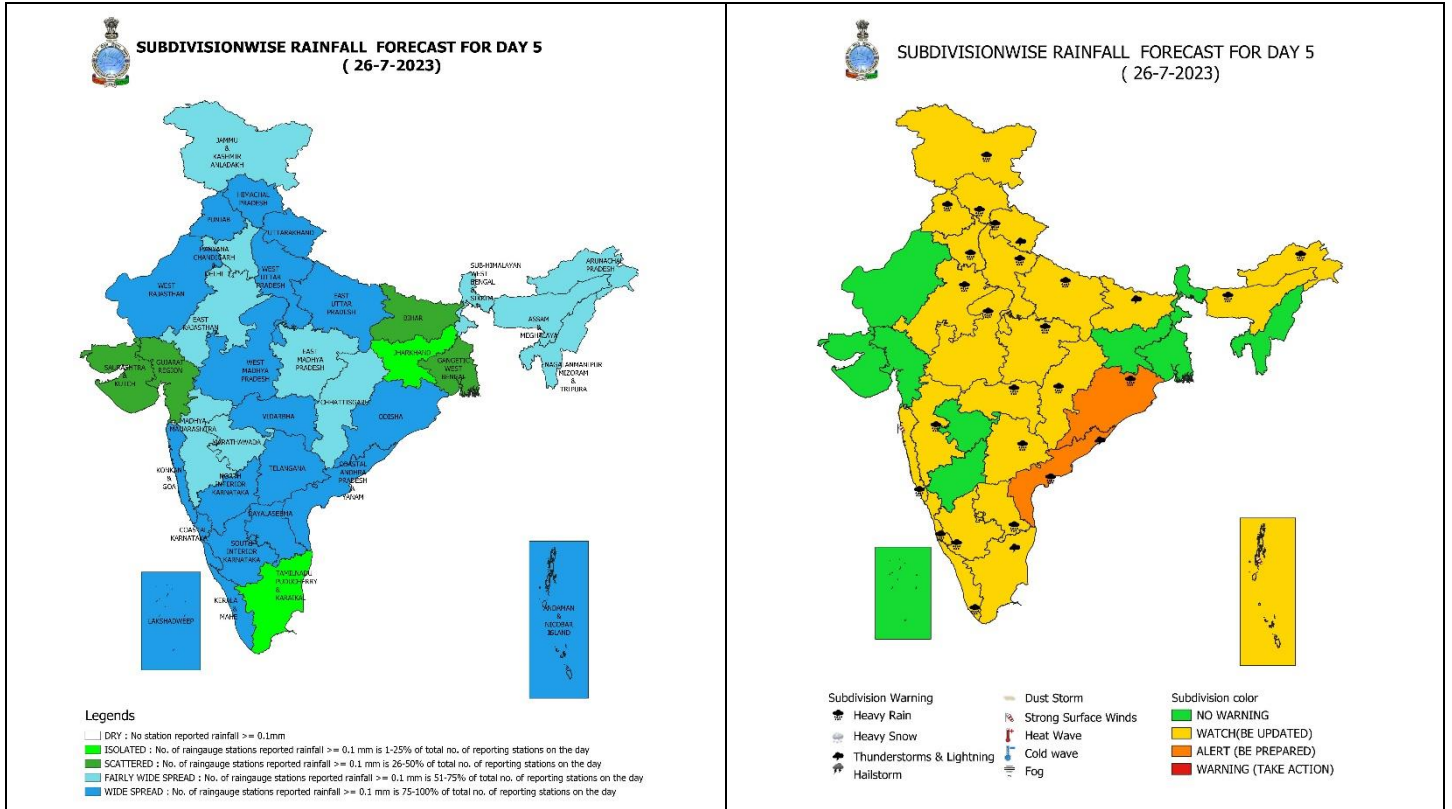
**24 July (Day 3):**

- ❖ **Heavy rainfall** at isolated places over Himachal Pradesh, Uttarakhand, Uttar Pradesh, East Rajasthan, West Madhya Pradesh, Vidarbha, Chhattisgarh, Andaman & Nicobar Islands, Sub-Himalaya West Bengal & Sikkim, Odisha, Arunachal Pradesh, Assam & Meghalaya, Konkan & Goa, Madhya Maharashtra, Telangana, Coastal Andhra Pradesh & Yanam, Rayalaseema, Karnataka and Kerala & Mahe.
- ❖ **Thunderstorm with lightning** at isolated places over Bihar, Marathwada, Gujarat state, Coastal Andhra Pradesh & Yanam and Tamil Nadu, Puducherry & Karaikal
- ❖ **Squally weather with wind speed of 40-45 kmph gusting to 55 kmph** over along and off Karnataka, Gulf of Mannar, Konkan & Goa, Maharashtra, Gujarat coasts, over south and central Bay of Bengal; **Squally weather with wind speed of 45-55 kmph gusting to 65 kmph** over west central Bay of Bengal and off Coastal Andhra Pradesh coast. **Squally wind speed of 45-55 kmph gusting to 65 kmph** over south west and central Arabian Sea.



**25 July (Day 4):**

- ❖ **Heavy to very heavy rainfall** likely at isolated places Odisha and Coastal Andhra Pradesh & Yanam and **heavy rainfall** at isolated places over Himachal Pradesh, Uttarakhand, Uttar Pradesh, East Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Konkan & Goa, Madhya Maharashtra, Rayalaseema, Telangana, South Interior Karnataka, Kerala & Mahe, Arunachal Pradesh and Assam & Meghalaya.
- ❖ **Thunderstorm with lightning** at isolated places over Bihar, Marathwada, Coastal Andhra Pradesh & Yanam and Tamil Nadu, Puducherry & Karaikal.
- ❖ **Squally weather with wind speed of 40-45 kmph gusting to 55 kmph** over along and off Karnataka, Konkan & Goa, Maharashtra, Gujarat coasts, over south and central and adjoining south west Bay of Bengal; **Squally weather with wind speed of 45-55 kmph gusting to 65 kmph** over west central Bay of Bengal and off Andhra Pradesh coast, Eastcentral Bay of Bengal & adjoining Andaman sea. **Squally wind speed of 45-55 kmph gusting to 65 kmph** over south west and central Arabian Sea.



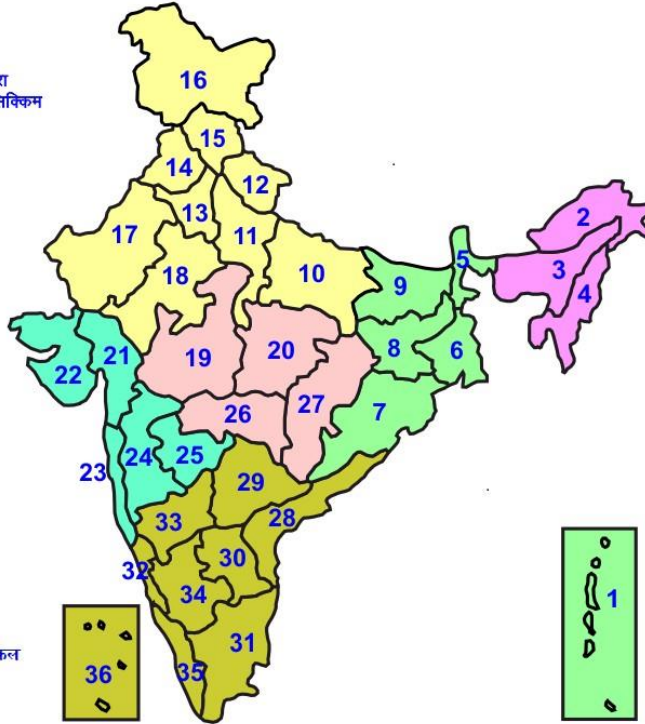
**26 July (Day 5):**

- ❖ **Heavy to very heavy rainfall** likely at isolated places south Odisha and north Coastal Andhra Pradesh & Yanam and **heavy rainfall** at isolated places over Jammu division Himachal Pradesh, Uttarakhand, Uttar Pradesh, East Rajasthan, north Punjab, north Haryana, Madhya Pradesh, Vidarbha, Chhattisgarh, Konkan & Goa, Madhya Maharashtra, Rayalaseema, Telangana, Coastal & South Interior Karnataka, Kerala & Mahe, Arunachal Pradesh and Assam & Meghalaya.
- ❖ **Thunderstorm with lightning** at isolated places over Bihar, Marathwada, Coastal Andhra Pradesh & Yanam and Tamil Nadu, Puducherry & Karaikal.
- ❖ **Squally weather with wind speed of 40-45 kmph gusting to 55 kmph** over along and off Karnataka, Konkan & Goa, Maharashtra, Gujarat coasts, over south and central and adjoining south west Bay of Bengal; **Squally weather with wind speed of 45-55 kmph gusting to 65 kmph** over west central Bay of Bengal and off Andhra Pradesh coast, Eastcentral Bay of Bengal & adjoining Andaman sea. **Squally wind speed of 45-55 kmph gusting to 65 kmph** over south west and central Arabian Sea.



## 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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