



Friday, July 21, 2023
Time of Issue: 0800 hours IST
(MORNING)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features

Weather observed during past 24 hours ending at 0830 hours IST of today:

Significant Weather features:

- ❖ A Low Pressure Area lies over Northwest Bay of Bengal & adjoining Odisha coast. It is likely to move slowly west-northwestwards across Odisha during next 2 days.
- ❖ The Monsoon Trough is active, runs south of its normal position and passes through Jaisalmer, Kota, Sagar, Raipur, , centre of low pressure area over northwest Bay of Bengal and adjoining and thence east-southeast wards to East central Bay of Bengal at mean sea level.
- ❖ The shear zone runs roughly along Lat. 20° N in lower & middle tropospheric levels tilting southwards with height.
- ❖ A fresh Western Disturbance as cyclonic circulation is seen over east Iran and neighbourhood.
- ❖ A fresh low pressure area is likely to form over Northwest & adjoining Westcentral Bay of Bengal 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 during 21st -23rd; over Himachal Pradesh, Uttarakhand and East Rajasthan during 21st -24th; over Punjab and Haryana on 22nd; over West Rajasthan during 23rd - 25th; over West Uttar Pradesh on 24th and over East Uttar Pradesh on 25th July 2023.

Isolated very heavy rainfall also very likely over Uttarakhand on 21st-22nd and over southeast Rajasthan on 21st July.

Central India: Light/moderate fairly widespread to widespread rainfall with isolated **heavy rainfall** is very likely over the region during next 5 days. **Isolated very heavy rainfall** also likely over West Madhya Pradesh and Vidarbha on 21st July.

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, Gujarat State during next 5 days;

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, Gujarat state on 21st July.

South India: Light/moderate fairly widespread to widespread rainfall with **isolated heavy rainfall** very likely to over Kerala, Karnataka, Coastal Andhra Pradesh & Yanam & Telangana during next 5 days and **Isolated very heavy rainfall** very likely over Telangana on 21st & 24th; over Coastal Andhra Pradesh & Yanam on 25th July.

East India: Light/moderate widespread rainfall with isolated **heavy to very heavy rainfall** very likely over Odisha during 21th to 24th and isolated **heavy rainfall** over Andaman & Nicobar Islands during 21st-24th July.

Northeast India: Light/moderate Scattered to Fairly widespread rainfall likely over the region. **Isolated heavy rainfall** likely over Nagaland, Manipur, Mizoram & Tripura on 21st & 22nd; over Assam & Meghalaya on 22nd to 25th and over Arunachal Pradesh during 23rd - 25th July.

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Main Weather Observations

- ❖ **Rainfall/thundershowers observed** (from 0830 hours IST to 1730 hours IST of yesterday): **at most places** over Konkan & Go and Coastal & North Interior Karnataka; **at many places** over Gangetic West Bengal, Jharkhand, Odisha, Saurashtra & Kutch, Madhya Maharashtra, Rayalaseema and Telangana; **at a few places** over Nagaland, Manipur, Mizoram & Tripura, Arunachal Pradesh, East Rajasthan, Gujarat Region and Marathwada and **at isolated places** over Assam & Meghalaya, Sub-Himalaya West Bengal & Sikkim, Chhattisgarh, Coastal Andhra Pradesh & Yanam, Punjab, West Rajasthan, Madhya Pradesh, South Interior Karnataka, Kerala & Mahe and Andaman & Nicobar Islands.
- ❖ **Heavy Rainfall observed** (from 0830 hours IST to 1730 hours IST of yesterday): **Exceptional heavy rainfall observed over** at isolated places over Saurashtra & Kutch and **heavy rainfall** at isolated places over Konkan & Goa,
- ❖ **Significant rainfall recorded** (from 0830 hours IST to 1730 hours IST of yesterday) **(in cm)**: Dwarka-23(Saurashtra & Kutch); Porbandar -14(Saurashtra & Kutch); Matheran-9(Konkan & Goa); Keshod -8; Mahuva & Hyderabad-5 each; Gulbarga -4; Rajkot, Medak, Mahabaleshwar, Belgaum, Honavar -3 each; Lengpui, Bikaner, Kolhapur, Ddharwad, Gadag, Hanamkonda, Varaval, Goa and Santacruz -2 each; Shillong, Silchar, Itanagar, Ranchi, Puri, Amritsar, Sikar, Jaipur, Jabalpur, Deesa, Bulsar, Calaba, Raichur, Karwar, Nazamabad and Khammam -1 each.
- ❖ **Thunderstorm observed** (from 0830 hours IST of yesterday to 0530 hours IST of today): at isolated places over West Rajasthan, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Telangana, Madhya Pradesh, Chhattisgarh, Jharkhand, Punjab, Odisha and Saurashtra & Kutch.
- ❖ **Minimum Temperature Departures (as on 20-07-2023)**: Minimum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at many places over Punjab; at a few places over Sub-Himalaya West Bengal & Sikkim; at isolated places over East Uttar Pradesh, East Madhya Pradesh, Bihar; **above normal (1.6°C to 3.0°C)** at most places over Haryana-Chandigarh-Delhi; at many places over West Uttar Pradesh, West Madhya Pradesh, Himachal Pradesh, East Rajasthan, Lakshadweep, Andaman & Nicobar Islands; at a few places over Uttarakhand, West Rajasthan, Vidarbha, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal, Assam & Meghalaya and at isolated places over Gangetic West Bengal, Odisha, Chhattisgarh. They were **appreciably below normal (-3.1°C to -5.0°C)** at isolated places over Telangana; **below normal (-1.6°C to -3.0°C)** at isolated places over Saurashtra & Kutch and **near normal** over rest parts of the country. Yesterday, **the lowest minimum temperature of 19.8°C** was reported at **Medak (Telangana)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 20-07-2023)**: Maximum temperatures were **markedly below normal (5.1°C or more)** at isolated places over Assam & Meghalaya and East Madhya Pradesh; **appreciably above normal (3.1°C to 5.0°C)** at most places over Sub-Himalaya West Bengal & Sikkim and East Uttar Pradesh; at many places over Uttarakhand and West Uttar Pradesh; at a few places over Nagaland, Manipur, Mizoram & Tripura, West Madhya Pradesh and Punjab and at isolated places over Haryana-Chandigarh-Delhi; **above normal (1.6°C to 3.0°C)** at most places over Kerala & Mahe; at many places over East Rajasthan, Chhattisgarh and Gangetic West Bengal; at a few places over Himachal Pradesh, Gujarat Region, Coastal Karnataka and Tamil Nadu, Puducherry & Karaikal and at isolated places over Odisha. They were **markedly below normal (-5.1°C or less)** at many places over Telangana; at a few places over North Interior Karnataka and at isolated places over Coastal Andhra Pradesh & Yanam; **below normal (-1.6°C to -3.0°C)** at many places over Saurashtra & Kutch; at a few places over Madhya Maharashtra and Konkan & Goa, Rayalaseema and Vidarbha and **near normal** over rest parts of the country. Yesterday, **the highest maximum temperature of 39.4°C** was reported at **Tondi (Tamil Nadu, Puducherry & Karaikal)**.



Meteorological Analysis (Based on 0530 hours IST)

- ❖ The **Low Pressure Area** over Northwest Bay of Bengal & adjoining Odisha coast with associated cyclonic circulation extending upto 7.6 km above mean sea level tilting southwards with height persists. It is likely to move slowly west-northwestwards across Odisha during next 2 days.
- ❖ The Monsoon Trough at mean sea level now passes through Jaisalmer, Kota, Sagar, Raipur, center of the low-pressure area over northwest Bay of Bengal & adjoining Odisha coast and thence east-southeastwards to Eastcentral Bay of Bengal extending upto 2.1 km above mean sea level.
- ❖ The shear zone roughly along Lat. 20° N between 3.1 & 7.6 km above mean sea level tilting southwards with height persists.
- ❖ The Western Disturbance as a cyclonic circulation now seen over east Iran & neighbourhood at 5.8 km above mean sea level.
- ❖ A fresh Low Pressure Area is likely to form over Northwest & adjoining Westcentral Bay of Bengal around 24th July.

Weather Forecast for next 5 days (Upto 0830 hours IST of 26th 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	21-Jul	22-Jul	23-Jul	24-Jul	25-Jul	26-Jul	27-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	FWS
2	ARUNACHAL PRADESH	SCT	FWS	FWS	FWS	FWS	FWS	FWS
3	ASSAM & MEGHALAYA	SCT	FWS	FWS	FWS	FWS	FWS	WS
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	FWS	FWS	FWS	FWS	FWS	FWS	WS
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	FWS	FWS	FWS	FWS	SCT	SCT	FWS
6	GANGETIC WEST BENGAL	FWS	FWS	SCT	SCT	SCT	SCT	FWS
7	ODISHA	WS	WS	WS	WS	FWS	FWS	WS
8	JHARKHAND	SCT	SCT	SCT	ISOL	ISOL	ISOL	FWS
9	BIHAR	ISOL	ISOL	SCT	SCT	SCT	ISOL	SCT
10	EAST UTTAR PRADESH	ISOL	ISOL	ISOL	SCT	SCT	SCT	FWS
11	WEST UTTAR PRADESH	ISOL	ISOL	FWS	SCT	FWS	FWS	FWS
12	UTTARAKHAND	WS	WS	WS	WS	WS	WS	FWS
13	HARYANA CHANDIGARH & DELHI	SCT	FWS	FWS	FWS	FWS	FWS	FWS
14	PUNJAB	FWS	FWS	FWS	WS	WS	WS	WS
15	HIMACHAL PRADESH	WS	WS	WS	WS	WS	WS	FWS
16	JAMMU & KASHMIR AND LADAKH	WS	WS	FWS	FWS	FWS	FWS	SCT
17	WEST RAJASTHAN	SCT	FWS	FWS	FWS	FWS	FWS	ISOL
18	EAST RAJASTHAN	FWS	FWS	FWS	FWS	WS	WS	FWS
19	WEST MADHYA PRADESH	WS	FWS	FWS	FWS	WS	WS	FWS
20	EAST MADHYA PRADESH	FWS	WS	WS	WS	FWS	FWS	FWS
21	GUJARAT REGION	WS	WS	WS	FWS	SCT	SCT	FWS
22	SAURASHTRA & KUTCH	WS	WS	FWS	FWS	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	FWS	SCT	FWS	FWS	FWS	FWS	FWS
26	VIDARBHA	WS	WS	FWS	FWS	WS	WS	FWS
27	CHHATTISGARH	WS	WS	WS	WS	FWS	FWS	FWS
28	COASTAL ANDHRA PRADESH & YANAM	SCT	SCT	FWS	WS	WS	WS	WS
29	TELANGANA	WS	WS	WS	WS	WS	WS	WS
30	RAYALASEEMA	SCT	ISOL	FWS	WS	WS	WS	FWS
31	TAMILNADU PUDUCHERRY & KARAIKAL	ISOL	ISOL	ISOL	SCT	SCT	ISOL	SCT
32	COASTAL KARNATAKA	WS	WS	WS	WS	WS	WS	WS
33	NORTH INTERIOR KARNATAKA	FWS	FWS	WS	WS	WS	WS	FWS
34	SOUTH INTERIOR KARNATAKA	FWS	FWS	FWS	WS	WS	WS	FWS
35	KERALA & MAHE	WS	WS	WS	WS	WS	WS	FWS
36	LAKSHADWEEP	FWS	WS	WS	WS	WS	WS	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

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Fig. 1: Maximum Temperatures Dated 20.07.2023

Fig. 2: Departure of Maximum Temp. Dated 20.07.2023

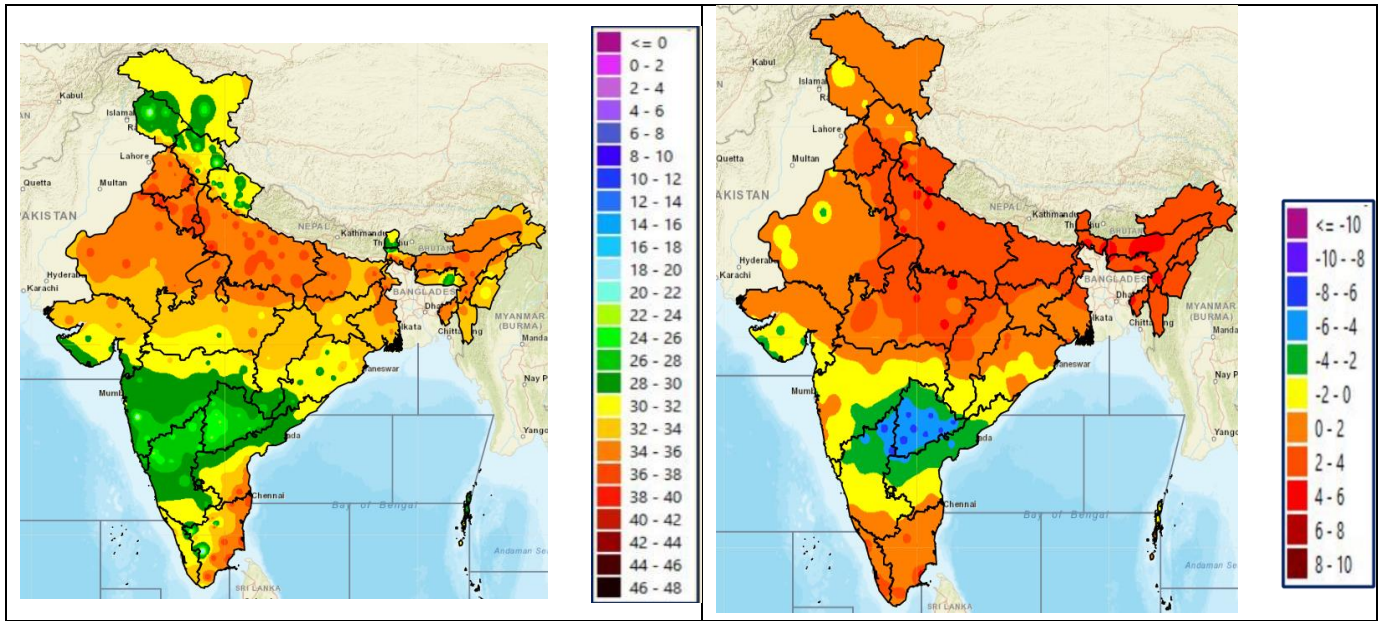


Fig. 3: Minimum Temperatures Dated 20.07.2023

Fig. 4: Departure of Minimum Temp. Dated 20.07.2023

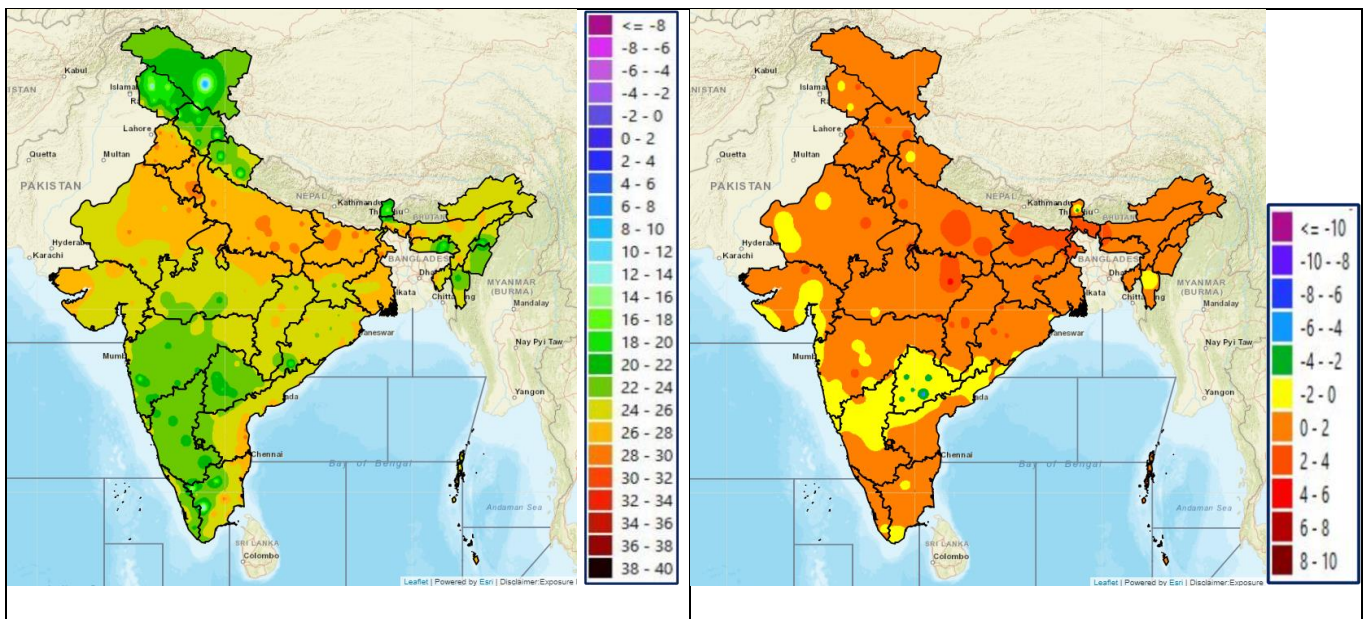
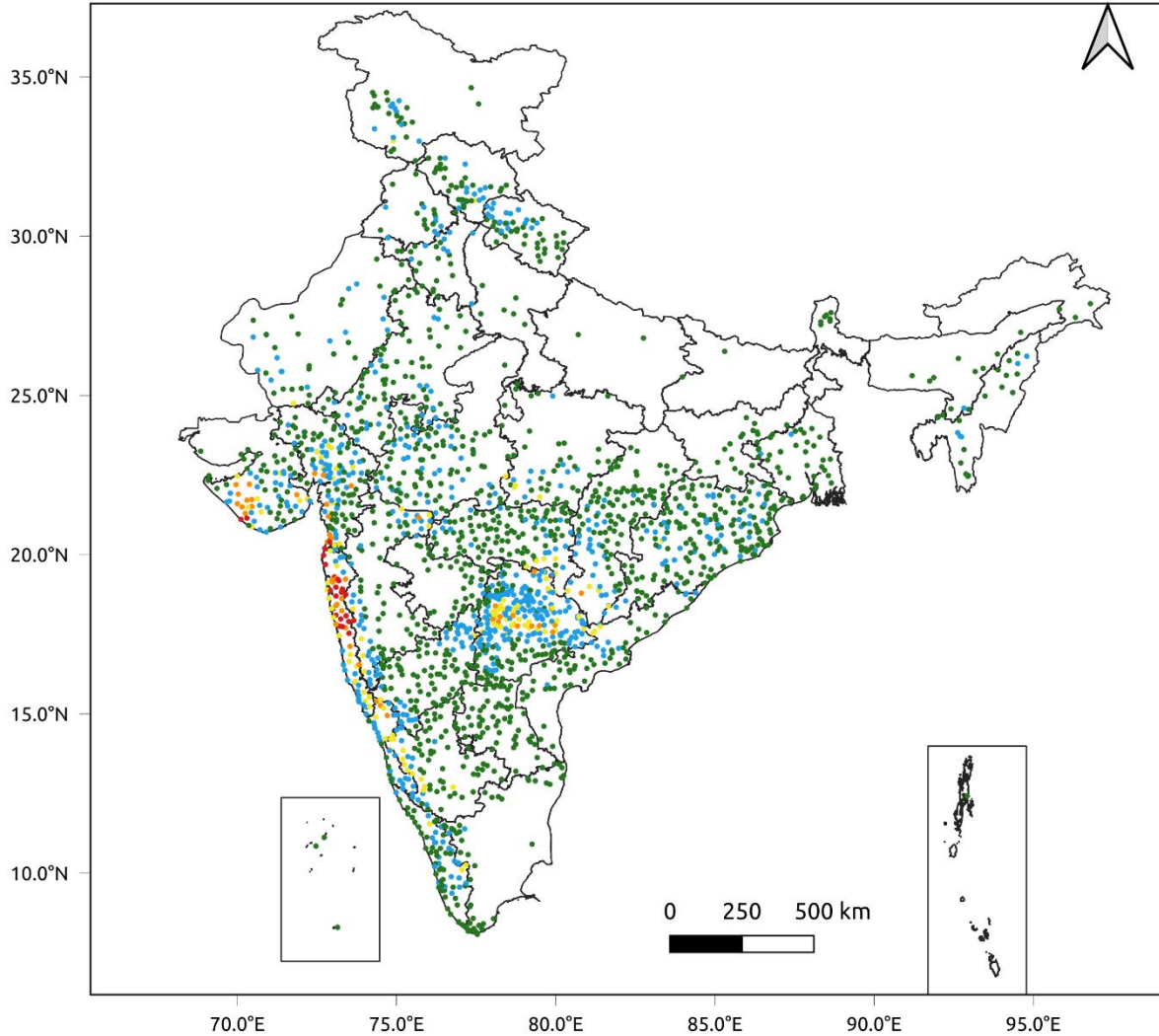


Fig. 5: Accumulated Rainfall (mm) during past 24 hours

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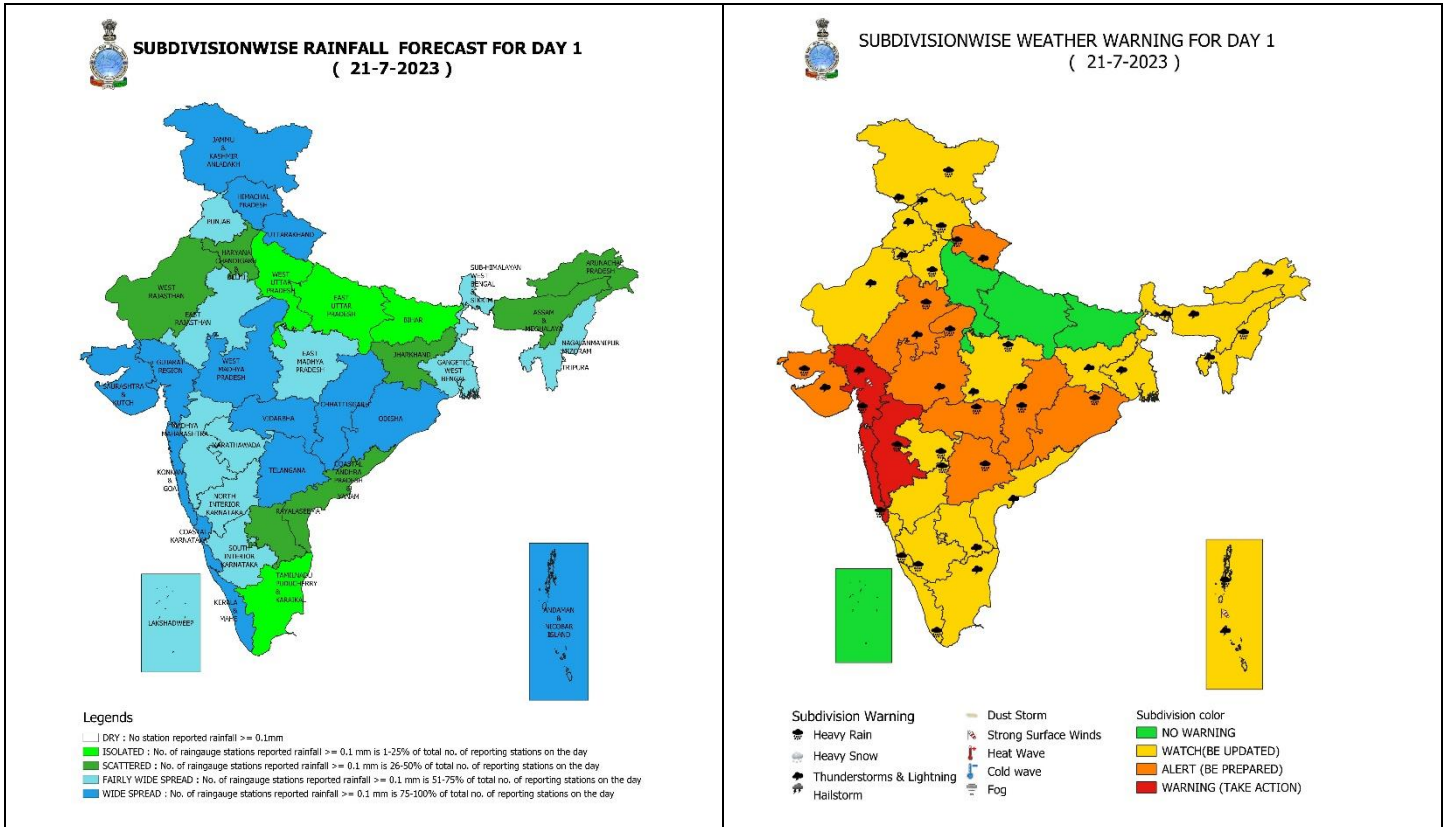


24 Hr cumulative rainfall recorded over different stations during 0830 IST of 19-7-2023 to 0830 IST of 20-7-2023



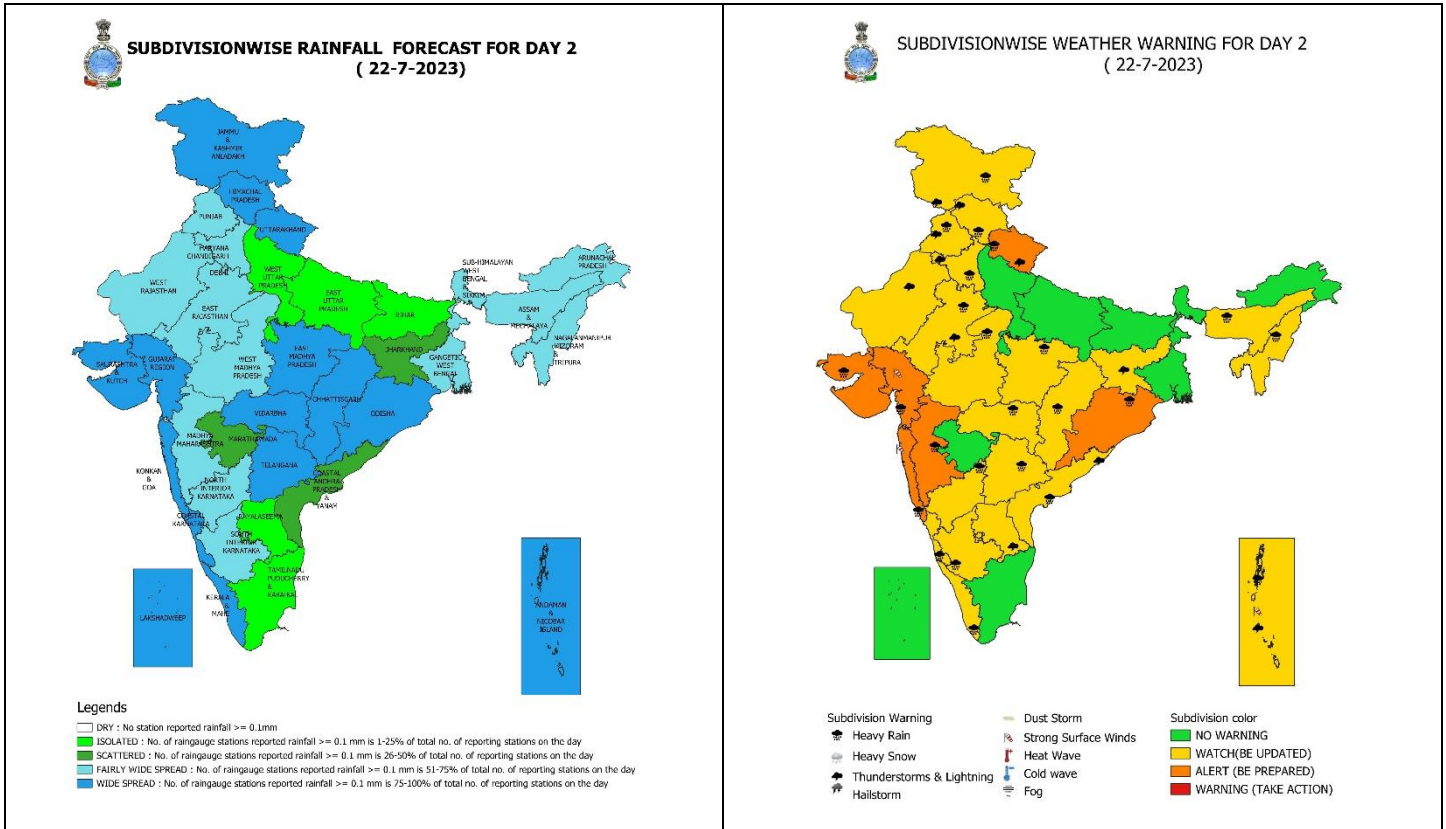
Legends

- 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 (≥ 204.5 mm)



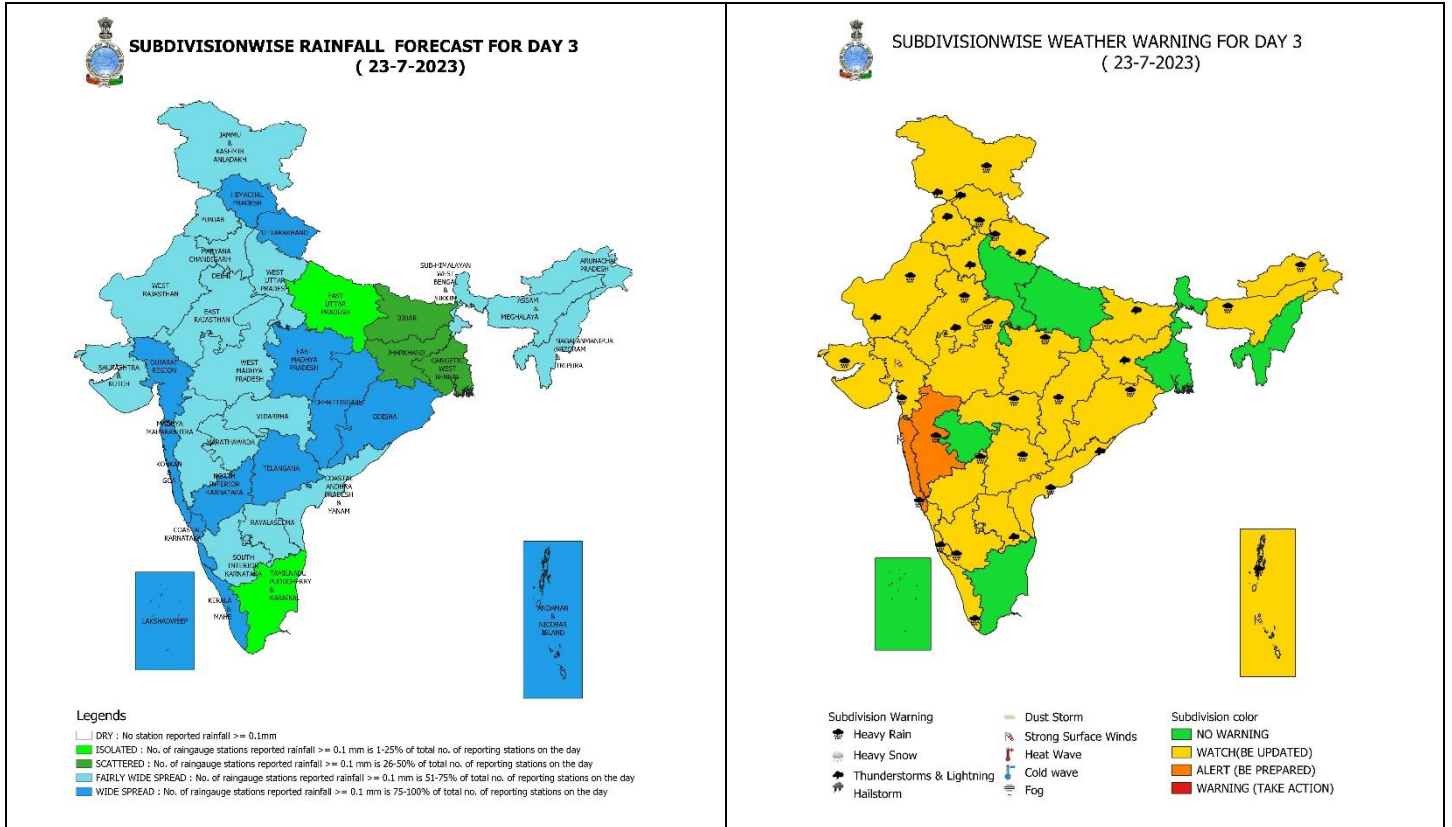
21 July (Day 1):

- ❖ **Heavy to very heavy rainfall with extremely heavy falls** very likely at isolated places over Konkan & Goa, Madhya Maharashtra, Gujarat Region; **heavy to very heavy rainfall** likely at isolated places Uttarakhand, East Rajasthan, West Madhya Pradesh, Vidarbha, Odisha, Telangana; **heavy rainfall** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Haryana-Chandigarh-Delhi, East Madhya Pradesh, Chhattisgarh, Marathwada, Andaman & Nicobar Islands, Nagaland, Manipur, Mizoram & Tripura, Karnataka, Kerala & Mahe.
- ❖ **Thunderstorm with lightning & gusty winds (speed 40-50 kmph)** very likely at isolated places over Andaman & Nicobar Islands and **with lightning** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana-Chandigarh-Delhi, Rajasthan, Madhya Pradesh, Vidarbha, West Bengal & Sikkim, Jharkhand, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gujarat, Coastal Andhra Pradesh & Yanam, Rayalaseema, Tamil Nadu, Puducherry & Karaikal.
- ❖ **Squally weather with wind speed of 40-45 kmph gusting to 55 kmph** over along and off north Kerala, Karnataka, Goa, Maharashtra, Gujarat and Odisha coasts and over Andaman Sea; **Squally weather with wind speed of 45-55 kmph gusting to 65 kmph** over west central and adjoining north west Bay of Bengal, along and off Andhra Pradesh 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.



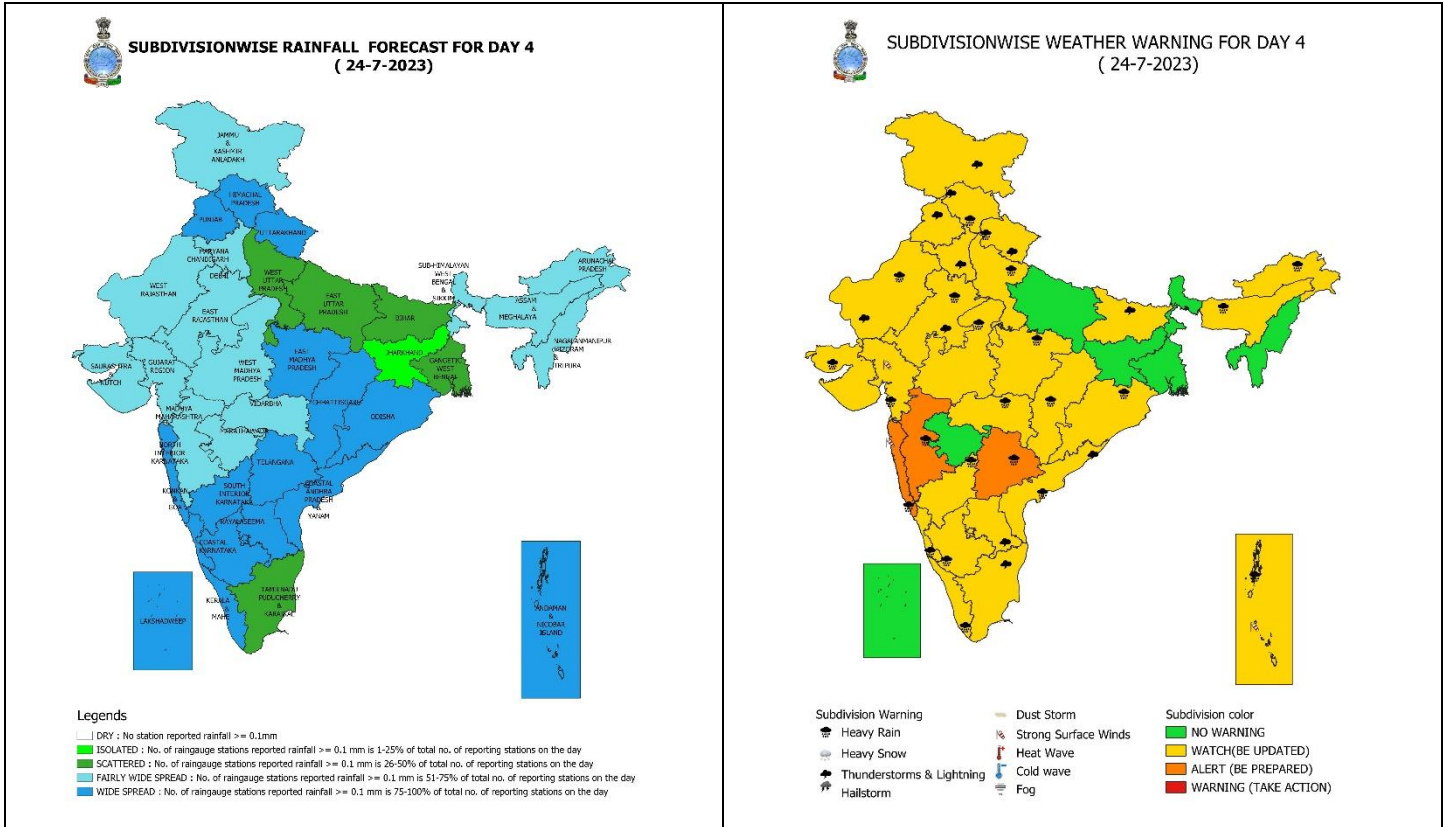
22 July (Day 2):

- ❖ **Heavy to very heavy rainfall with extremely heavy falls** very likely at isolated places over Gujarat Region; **Heavy to very heavy rainfall** likely at isolated places Uttarakhand, Odisha, Konkan & Goa, Madhya Maharashtra, Saurashtra & Kutch; **heavy rainfall** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Punjab, Haryana-Chandigarh-Delhi, East Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Andaman & Nicobar Islands, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Telangana, Karnataka and Kerala & Mahe.
- ❖ **Thunderstorm with lightning** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana-Chandigarh-Delhi, Rajasthan, Jharkhand, Coastal Andhra Pradesh & Yanam, Rayalaseema.
- ❖ **Squally weather with wind speed of 40-45 kmph gusting to 55 kmph** over along and off Karnataka, Goa, southwest and adjoining central Bay of Bengal; **Squally weather with wind speed of 45-55 kmph gusting to 65 kmph** over Maharashtra, Gujarat and over west central along and off Andhra Pradesh 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.



23 July (Day 3):

- ❖ **Heavy to very heavy rainfall** likely at isolated places Konkan & Goa, Ghat areas of Madhya Maharashtra, Gujarat state; **heavy rainfall** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Andaman & Nicobar Islands, Odisha, Arunachal Pradesh, Assam & Meghalaya, Coastal Andhra Pradesh & Yanam, Telangana, Karnataka and Kerala & Mahe.
- ❖ **Thunderstorm with lightning** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana-Chandigarh-Delhi, Rajasthan, Bihar, Jharkhand, Marathwada, Coastal Andhra Pradesh & Yanam, Rayalaseema.
- ❖ **Squally weather with wind speed of 40-45 kmph gusting to 55 kmph** over along and off Karnataka, Goa, Maharashtra, Gujarat coasts, over south and east central Bay of Bengal; **Squally weather with wind speed of 45-55 kmph gusting to 65 kmph** over west central and adjoining south west south Bay of Bengal and off Andhra Pradesh 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.

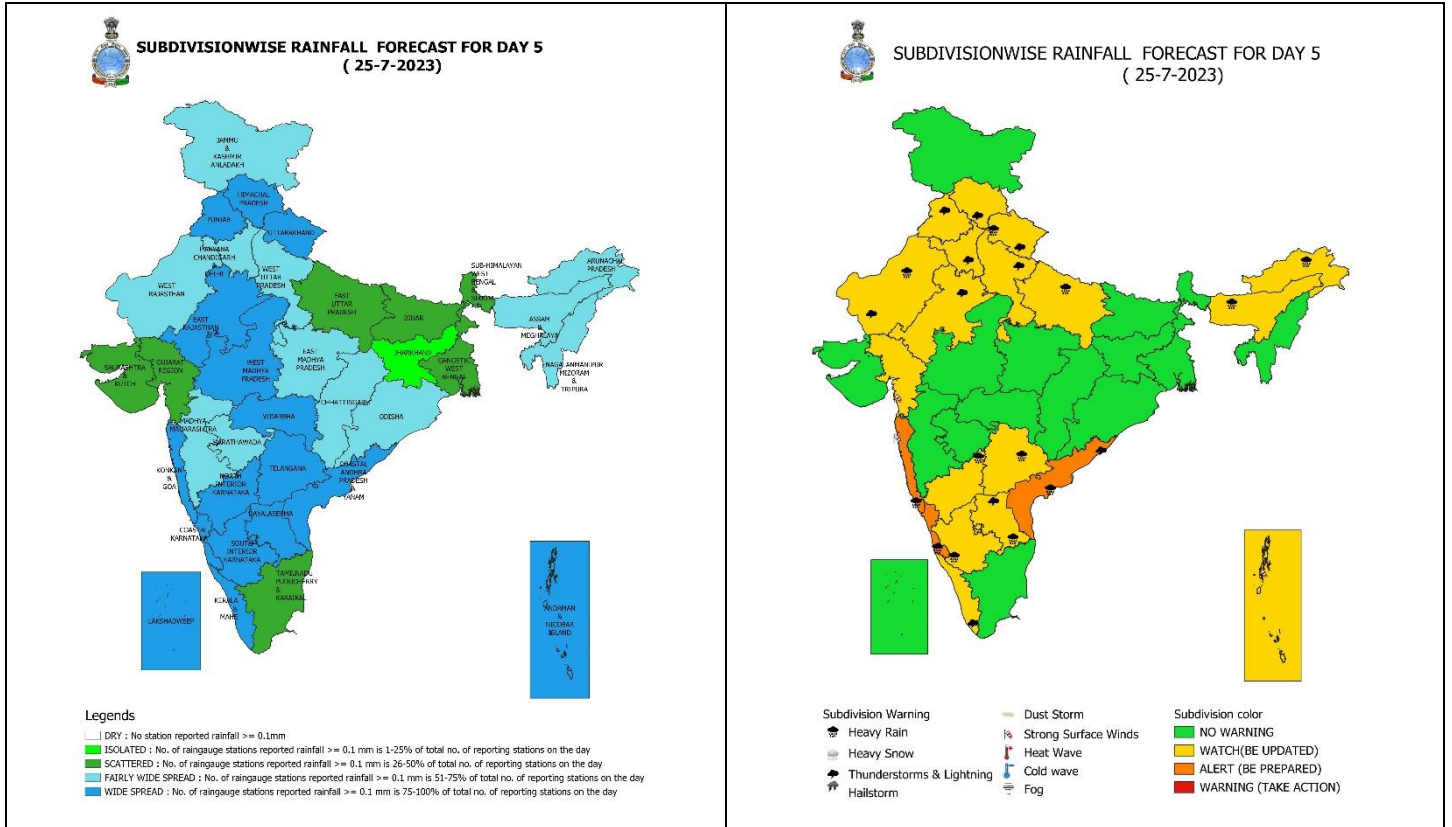


24 July (Day 4):

- ❖ **Heavy to very heavy rainfall** likely at isolated places Chhattisgarh, Konkan & Goa, ghat areas of Madhya Maharashtra, Telangana; **heavy rainfall** at isolated places over Himachal Pradesh, Uttarakhand, West Uttar Pradesh, Rajasthan, Madhya Pradesh, Vidarbha, Andaman & Nicobar Islands, Odisha, Arunachal Pradesh, Assam & Meghalaya, Gujarat Region, Coastal Andhra Pradesh & Yanam, Karnataka and Kerala & Mahe.
- ❖ **Thunderstorm with lightning** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana-Chandigarh-Delhi, Rajasthan, Bihar, Marathwada, Coastal Andhra Pradesh & Yanam, Rayalaseema.
- ❖ **Squally weather with wind speed of 40-45 kmph gusting to 55 kmph** over along and off Kerala, Karnataka, 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. **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.

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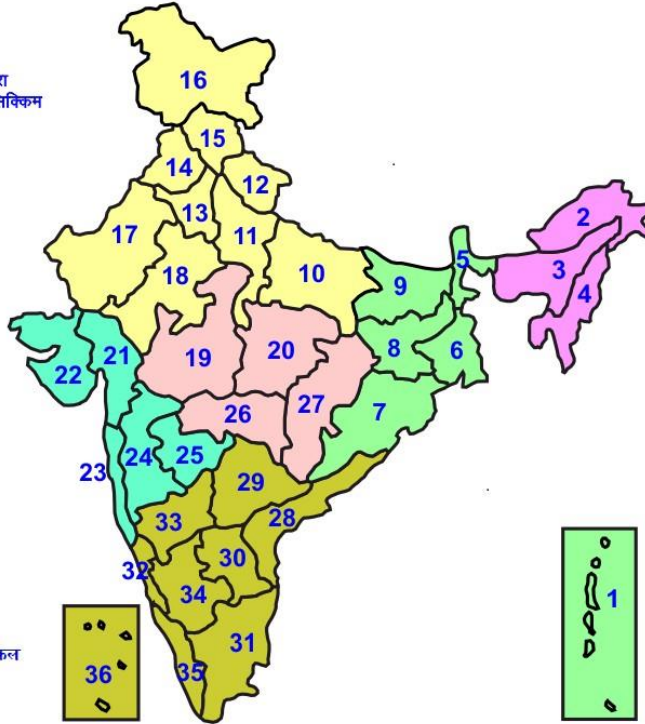
25 July (Day 5):

- ❖ **Heavy to very heavy rainfall** likely at isolated places south Konkan & Goa, Coastal Karnataka, Coastal Andhra Pradesh & Yanam and East Uttar Pradesh; **heavy rainfall** at isolated places over Uttarakhand, Interior Karnataka, Telangana, Rayalaseema, West Rajasthan, Arunachal Pradesh and Assam & Meghalaya.
- ❖ **Thunderstorm with lightning** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, East Rajasthan, West Uttar Pradesh, Himachal Pradesh, Uttarakhand, Punjab, Haryana-Chandigarh-Delhi, Rajasthan, Bihar, Marathwada, Coastal Andhra Pradesh & Yanam, Rayalaseema, Kerala & Mahe and Andaman & Nicobar Islands.
- ❖ **Squally weather with wind speed of 40-45 kmph gusting to 55 kmph** over along and off Kerala, Karnataka, 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 Gulf of Mannar, along and off south Tamil Nadu coast, 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

WARNING (TAKE ACTION)
ALERT (BE PREPARED)
WATCH (BE UPDATED)
NO WARNING (NO ACTION)

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

WARNING (TAKE ACTION)
ALERT (BE PREPARED)
WATCH (BE UPDATED)
NO WARNING (NO ACTION)

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°C to 6.4°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°C

Warm Night: When minimum temperature departure 4.5°C to 6.4°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°C to -6.4°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°C to -6.4°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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