



Wednesday, July 19, 2023
Time of Issue: 0830 hours IST
(MORNING)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features

Significant Weather features:

- ❖ A cyclonic circulation lies over Northwest Bay of Bengal & adjoining coastal Odisha and extends up to middle tropospheric levels. Under its influence, a **Low-Pressure Area** is likely to form over Northwest Bay of Bengal during next 48 hours.
- ❖ A cyclonic circulation lies over south Chhattisgarh & another cyclonic circulation lies over northwest Madhya Pradesh in lower tropospheric levels.
- ❖ The shear zone runs roughly along Lat. 18° N between 4.5 km & 7.6 km above mean sea level tilting southwards with height.

Weather Forecast and Warning (Annexure II):

Northwest India: Light/moderate Fairly widespread to widespread rainfall with isolated **heavy rainfall** is very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, East Rajasthan during 19th-23rd; Himachal Pradesh on 20th & 21nd; West Rajasthan on 19th July 2023.

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

Central India: Light/moderate fairly widespread to widespread rainfall **and thunderstorm & lightning** and **isolated heavy rainfall** is very likely over the region during next 5 days. **Isolated very heavy rainfall** also likely over Madhya Pradesh on 19th & 23rd, Vidarbha during 19th -20th and over Chhattisgarh during 19th-23rd July.

West India: Light/moderate fairly widespread to widespread rainfall with **isolated heavy to very heavy rainfall** very likely to continue over Maharashtra (except Marathwada) during next 5 days and over Gujarat during next 3 days.

Isolated heavy to very heavy rainfall very likely to continue over Mumbai during next 02 days.

Isolated extremely heavy rainfall likely over Konkan & Goa, ghat areas of Madhya Maharashtra and over Gujarat state on 19th July.

South India: Light/moderate fairly widespread to widespread rainfall with **isolated heavy rainfall** very likely to over Kerala, Coastal & South Interior Karnataka & Telangana during next 5 days; over coastal Andhra Pradesh on 19th & 22nd and over North interior Karnataka during 19th-20nd July. **Isolated very heavy rainfall** also likely over coastal Karnataka on 19th & 23rd and over Telangana (including Hyderabad) during 19th -20th July.

East India: Light/moderate Fairly widespread to widespread rainfall with isolated **heavy to very heavy rainfall** very likely over Odisha and **heavy rainfall** over Andaman & Nicobar Islands during next 5 days.

Northeast India: Light/moderate Scattered to Fairly widespread rainfall likely over the region. **Isolated heavy rainfall** likely over South Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura 20th-23rd July.

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

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Main Weather Observations

- ❖ **Rainfall/thundershowers observed** (from 0830 hours IST to 1730 hours IST of yesterday): **at most places** over Uttarakhand, East Rajasthan, West Madhya Pradesh, Vidarbha, Chhattisgarh, Konkan & Goa, Telangana, Coastal Karnataka, North Interior Karnataka, North Interior Karnataka; **at many places** over Himachal Pradesh, East Madhya Pradesh, Andaman & Nicobar Islands, Gangetic West Bengal, Jharkhand, Madhya Maharashtra, Saurashtra & Kutch, Kerala & Mahe; **at a few places** over Haryana-Chandigarh-Delhi, Odisha, Gujarat Region, Coastal Andhra Pradesh & Yanam, Lakshadweep and **at isolated places** over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, West Uttar Pradesh, West Rajasthan, Sub-Himalaya West Bengal & Sikkim, Nagaland, Manipur, Mizoram & Tripura, Marathwada, Rayalaseema, South Interior Karnataka, Tamil Nadu, Puducherry & Karaikal.
- ❖ **Heavy Rainfall observed** (from 0830 hours IST to 1730 hours IST of yesterday): **Extremely heavy rainfall** at isolated places over Vidarbha; **Very heavy rainfall** at isolated places over Odisha and **heavy rainfall** at isolated places over Konkan & Goa, Madhya Maharashtra and Saurashtra & Kutch.
- ❖ **Significant rainfall recorded** (from 0830 hours IST to 1730 hours IST of yesterday): **(in cm): Vidarbha:** Chnadrapur-24 and Vardha-2; **Odisha:** Malkangiri-12, Sambalpur-4; **Madhya Maharashtra:** Mahabaleshwar-8; **Saurashtra & Kutch:** Veraval-8, Keshod-5, Mahuva-4; **Konkan & Goa:** Valpoi-10, Goa/Panjim-6, Ela-5, Matheran-5, Harnai, Dahanu & Mumbai(Colaba)- each, Mumbai (Santacruz)-2; **Telangana:** Nizamabad-5, Medak-3, Adilabad-2, Hanamkonda-2; **East Rajasthan:** Ajmer-5; **West Madhya Pradesh:** Ujjain-3, Guna-2; **North Interior Karnataka:** Gulberga-3, Bidar-2, Belgaum-2; **Andaman & Nicobar Islands:** Car Nicobar-3; **Uttarakhand:** Chorgaliya-6, Chalthi-6, Nainidanda-5, Pantanagar-2; **Haryana-Chandigarh-Delhi:** Delhi-Reidge-2; **Gangetic West Bengal:** Bankura & Diamond Harbour-2 each; **Coastal Andhra Pradesh & Yanam:** Kalingpatnam-2.
- ❖ **Thunderstorm observed** (from 0830 hours IST of yesterday to 0530 hours IST of today): at isolated places over Uttarakhand, Haryana-Chandigarh-Delhi, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Gujarat State, Gangetic West Bengal, Punjab, Odisha, Rajasthan, Madhya Pradesh and Vidarbha.
- ❖ **Minimum Temperature Departures (as on 18-07-2023):** Minimum temperatures were **above normal (1.6°C to 3.0°C)** at many places over Punjab, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Kerala & Mahe; at a few places over Himachal Pradesh, East Madhya Pradesh, Gujarat State, Vidarbha and at isolated places over West Madhya Pradesh, Madhya Maharashtra, Coastal Andhra Pradesh & Yanam, Tamil Nadu, Puducherry & Karaikal. 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 21.0°C** was reported at **Narsinghpur (East Madhya Pradesh) & Khandwa (West Madhya Pradesh)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 18-07-2023):** Maximum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at a few places over Sub-Himalaya West Bengal & Sikkim, Nagaland, Manipur, Mizoram & Tripura; at isolated places over Coastal Karnataka, Assam & Meghalaya; **above normal (1.6°C to 3.0°C)** at many places over East Madhya Pradesh and Bihar; at a few places over Jharkhand, Tamil Nadu, Puducherry & Karaikal, Rayalaseema, South Interior Karnataka, Arunachal Pradesh; at isolated places over Gangetic West Bengal. They were **markedly below normal (-5.1°C or less)** at many places over North Interior Karnataka, Telangana; at isolated places over Haryana-Chandigarh-Delhi, Madhya Maharashtra; **appreciably below normal (-3.1°C to -5.0°C)** at most places over Marathwada; at many places over Coastal Andhra Pradesh & Yanam; at a few places over Madhya Maharashtra, Odisha; at isolated places over Uttarakhand, Vidarbha, Chhattisgarh; **below normal (-1.6°C to -3.0°C)** at a few place over Punjab, Konkan & Goa; at isolated places over Saurashtra & Kutch, East Madhya Pradesh and **near normal** over rest parts of the country. Yesterday, **the highest maximum temperature of 40.5°C** was reported at **Jaisalmer (West Rajasthan)**.



Meteorological Analysis (Based on 0530 hours IST)

- ❖ The Monsoon Trough at mean sea level now passes through Bikaner, Kota, Guna, Mandla, Pendra Road, Cuttack and thence southeastwards to Westcentral Bay of Bengal.
- ❖ The cyclonic circulation over northwest Bay of Bengal & adjoining Coastal Odisha extending upto 7.6 km above mean sea level tilting southwards with height persists. Under its influence, a low pressure area likely to form over northwest Bay of Bengal during next 48 hours.
- ❖ The cyclonic circulation over south Chhattisgarh extending upto 1.5 km above mean sea level persists.
- ❖ The cyclonic circulation over northwest Madhya Pradesh & neighbourhood at 0.9 km above mean sea level persists.
- ❖ The cyclonic circulation over Haryana & neighbourhood at 3.1 km above mean sea level persists.
- ❖ The shear zone roughly along Lat. 18° N between 4.5 km & 7.6 km above mean sea level tilting southwards with height persists.

Weather Forecast for next 5 days (Upto 0830 hours IST of 24th 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	19-Jul	20-Jul	21-Jul	22-Jul	23-Jul	24-Jul	25-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	SCT	SCT	SCT	FWS	FWS	FWS	WS
3	ASSAM & MEGHALAYA	SCT	SCT	SCT	FWS	FWS	FWS	WS
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	SCT	FWS	FWS	FWS	FWS	FWS	WS
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	FWS	FWS	WS	WS	WS	FWS	FWS
6	GANGETIC WEST BENGAL	SCT	SCT	SCT	FWS	SCT	SCT	SCT
7	ODISHA	FWS	FWS	WS	WS	FWS	FWS	WS
8	JHARKHAND	SCT	ISOL	ISOL	SCT	SCT	SCT	ISOL
9	BIHAR	ISOL	ISOL	ISOL	SCT	SCT	SCT	SCT
10	EAST UTTAR PRADESH	ISOL	ISOL	ISOL	SCT	SCT	SCT	SCT
11	WEST UTTAR PRADESH	ISOL	ISOL	ISOL	SCT	SCT	SCT	SCT
12	UTTARAKHAND	FWS	FWS	WS	WS	WS	WS	WS
13	HARYANA CHANDIGARH & DELHI	FWS	SCT	SCT	FWS	FWS	FWS	FWS
14	PUNJAB	FWS	SCT	FWS	FWS	WS	WS	WS
15	HIMACHAL PRADESH	WS	WS	WS	WS	WS	WS	WS
16	JAMMU & KASHMIR AND LADAKH	FWS	WS	WS	FWS	FWS	FWS	FWS
17	WEST RAJASTHAN	SCT	FWS	FWS	FWS	FWS	FWS	FWS
18	EAST RAJASTHAN	FWS	FWS	FWS	FWS	WS	WS	WS
19	WEST MADHYA PRADESH	WS	WS	FWS	FWS	FWS	FWS	WS
20	EAST MADHYA PRADESH	FWS	FWS	FWS	WS	WS	WS	FWS
21	GUJARAT REGION	WS	WS	FWS	FWS	FWS	FWS	WS
22	SAURASHTRA & KUTCH	WS	WS	FWS	SCT	SCT	SCT	FWS
23	KONKAN & GOA	WS	WS	WS	WS	WS	WS	WS
24	MADHYA MAHARASHTRA	WS	WS	FWS	FWS	FWS	FWS	WS
25	MARATHAWADA	WS	FWS	FWS	FWS	FWS	FWS	FWS
26	VIDARBHA	WS	WS	WS	WS	WS	WS	WS
27	CHHATTISGARH	WS	WS	WS	WS	WS	WS	WS
28	COASTAL ANDHRA PRADESH & YANAM	FWS	SCT	SCT	FWS	FWS	FWS	WS
29	TELANGANA	WS	WS	FWS	FWS	FWS	FWS	WS
30	RAYALASEEMA	SCT	ISOL	ISOL	SCT	ISOL	ISOL	FWS
31	TAMILNADU PUDUCHERRY & KARAIKAL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	SCT
32	COASTAL KARNATAKA	WS	WS	WS	WS	WS	WS	WS
33	NORTH INTERIOR KARNATAKA	WS	FWS	FWS	FWS	FWS	FWS	WS
34	SOUTH INTERIOR KARNATAKA	FWS	FWS	FWS	FWS	FWS	WS	WS
35	KERALA & MAHE	WS	WS	WS	WS	WS	WS	WS
36	LAKSHADWEEP	FWS	FWS	FWS	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 17.07.2023

Fig. 2: Departure of Maximum Temp. Dated 17.07.2023

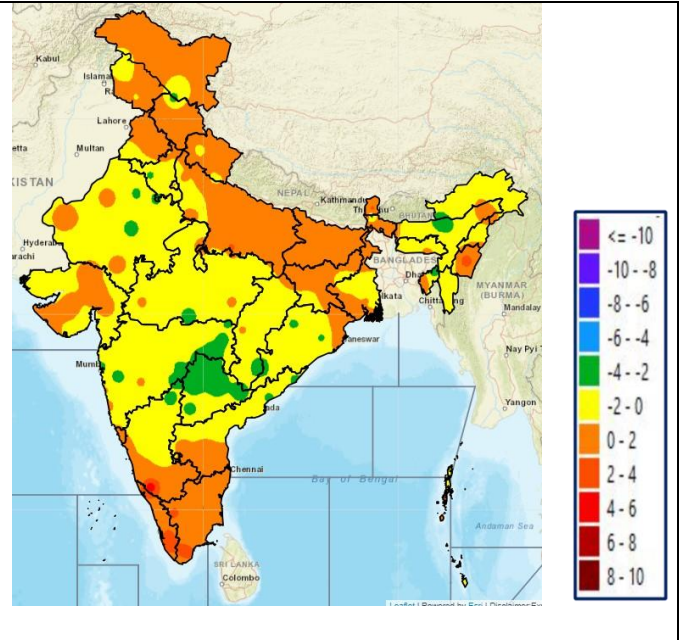
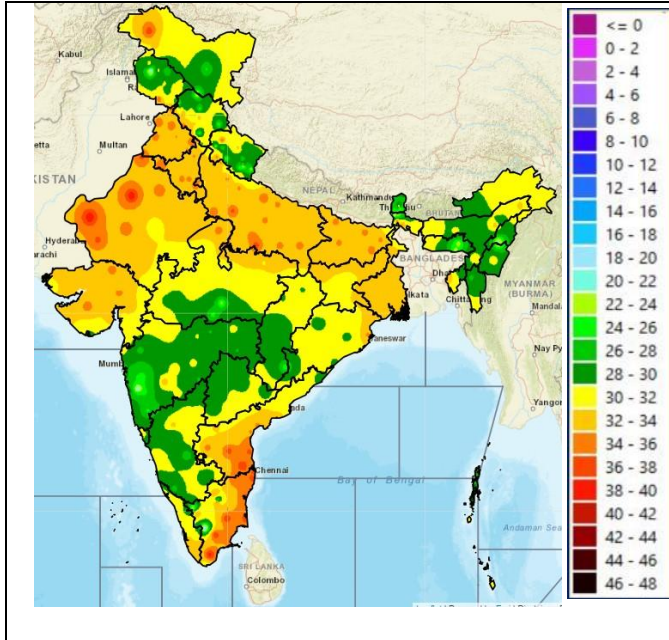


Fig. 3: Minimum Temperatures Dated 18.07.2023

Fig. 4: Departure of Minimum Temp. Dated 18.07.2023

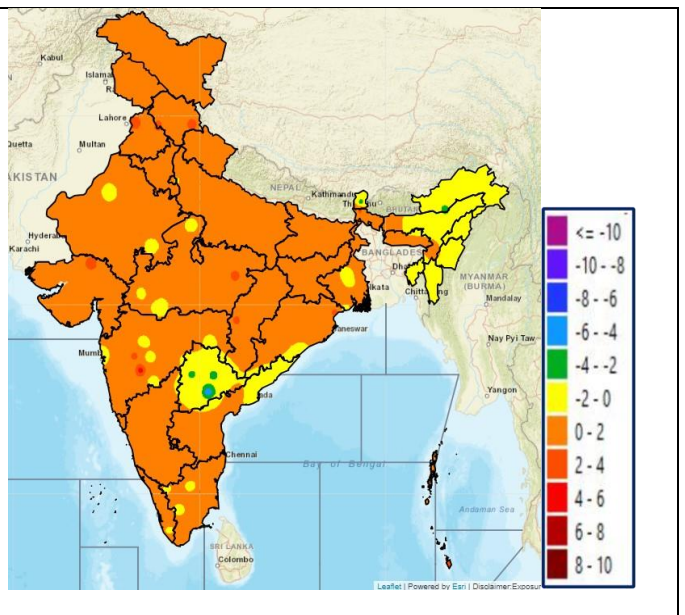
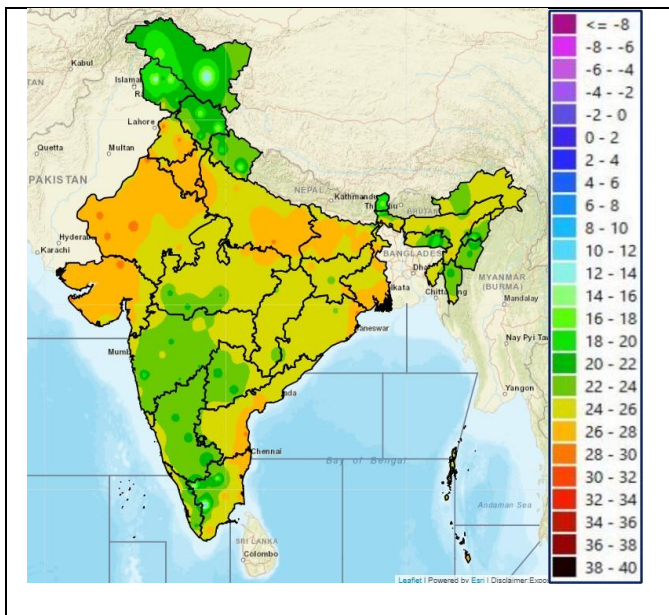
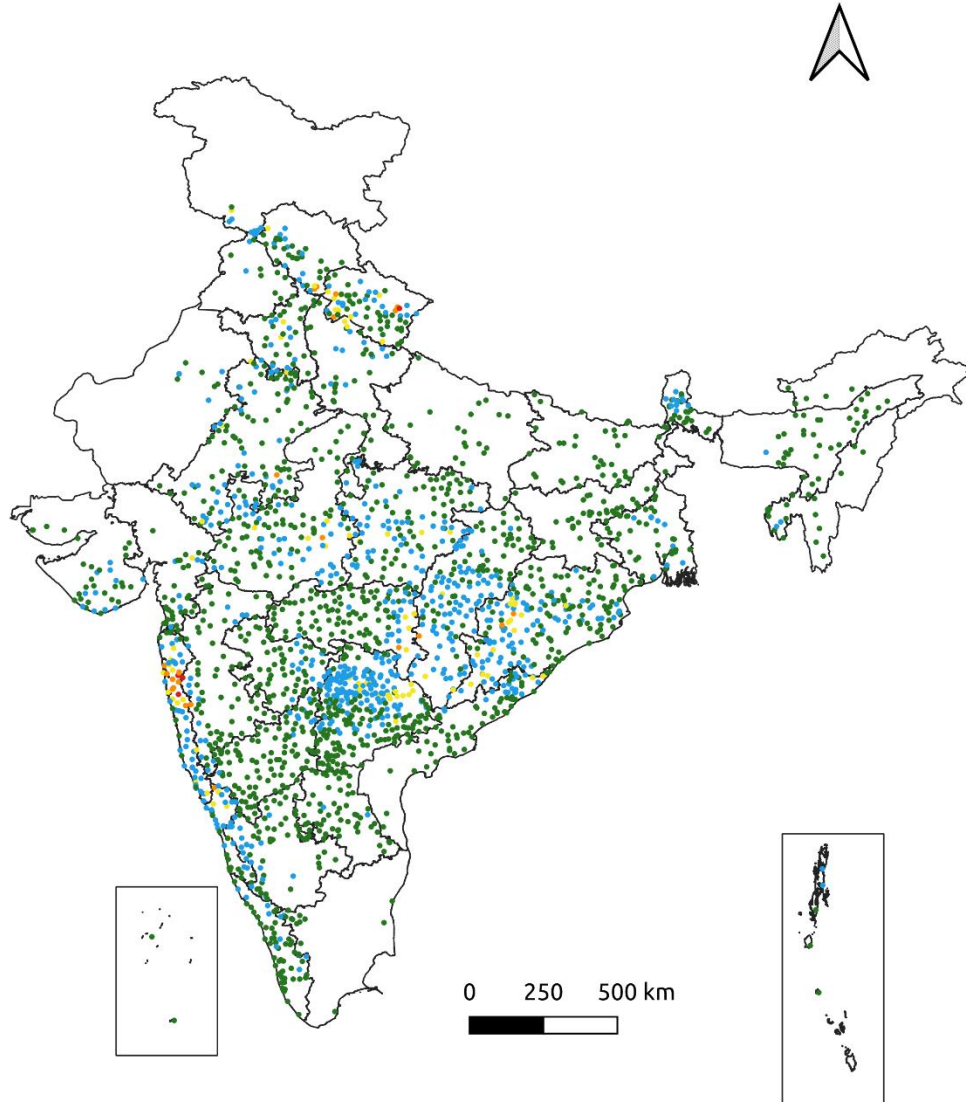


Fig. 5: Accumulated Rainfall (mm) during past 24 hours

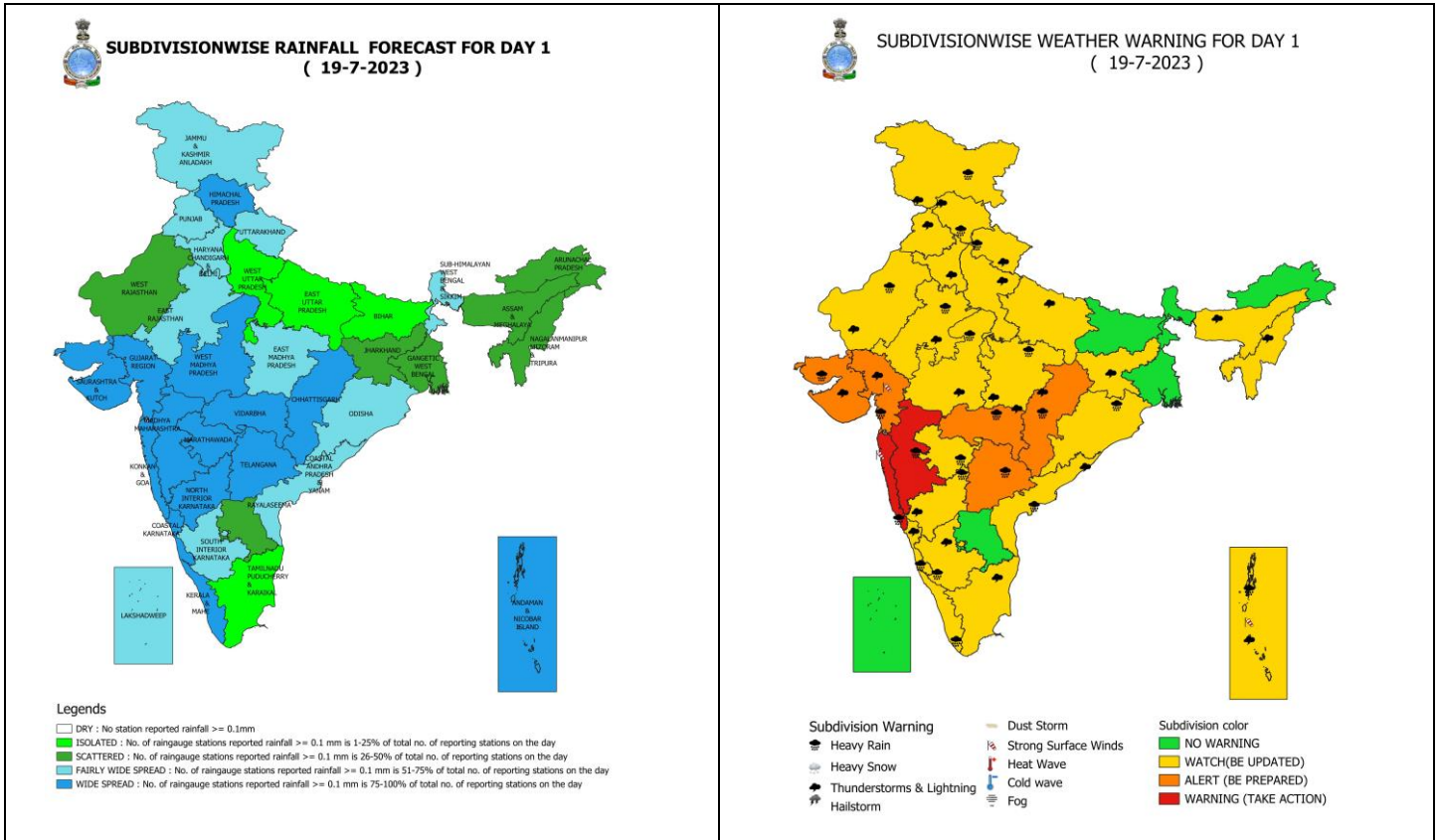


24 Hr cumulative rainfall recorded over different stations during 0830 IST of 17-7-2023 to 0830 IST of 18-7-2023



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)



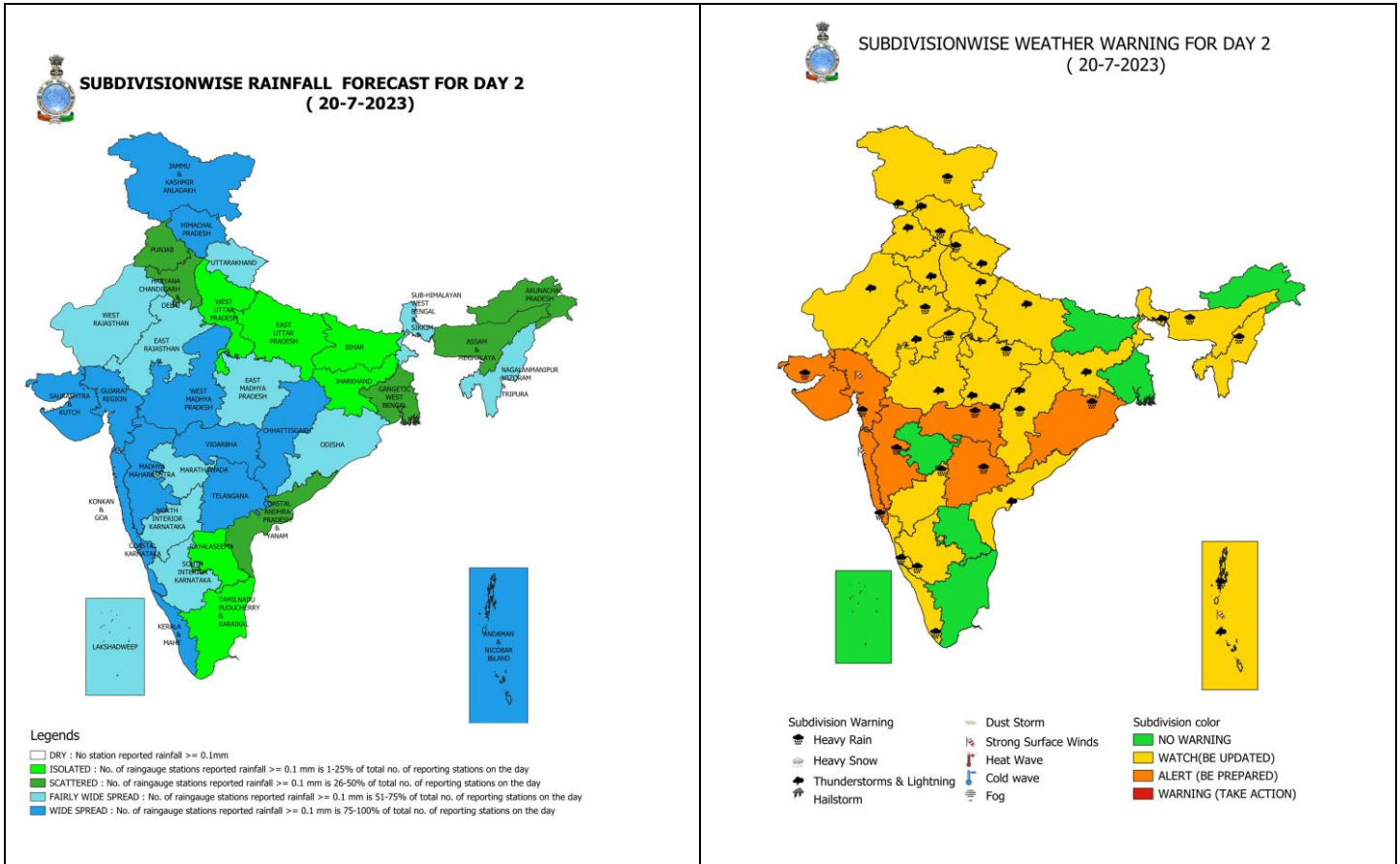
19 July (Day 1):

- ❖ **Heavy to very heavy rainfall with extremely heavy falls** very likely at isolated places over Konkan & Goa, Madhya Maharashtra, Gujarat; **heavy to very heavy rainfall** at isolated places over Vidarbha, Chhattisgarh, Telangana, Coastal Karnataka and **heavy rainfall** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh Uttarakhand, Rajasthan, Madhya Pradesh, Andaman & Nicobar Islands, Odisha, Marathwada, Coastal Andhra Pradesh & Yanam, Interior 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, Uttar Pradesh, Rayalaseema, Madhya Pradesh, Vidarbha, Chhattisgarh, Jharkhand, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gujarat, Coastal Andhra Pradesh & Yanam, Karnataka, Tamil Nadu, Puducherry & Karaikal.

Squally weather with wind speed of 40-45 kmph gusting to 55 kmph over along and off north Kerala, Karnataka and Gujarat coasts; **Squally weather with wind speed of 45-55 kmph** gusting to 65 kmph over along and off Goa, Maharashtra coasts, over south and central Bay of Bengal and along and off north Andhra Pradesh coast, over 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.

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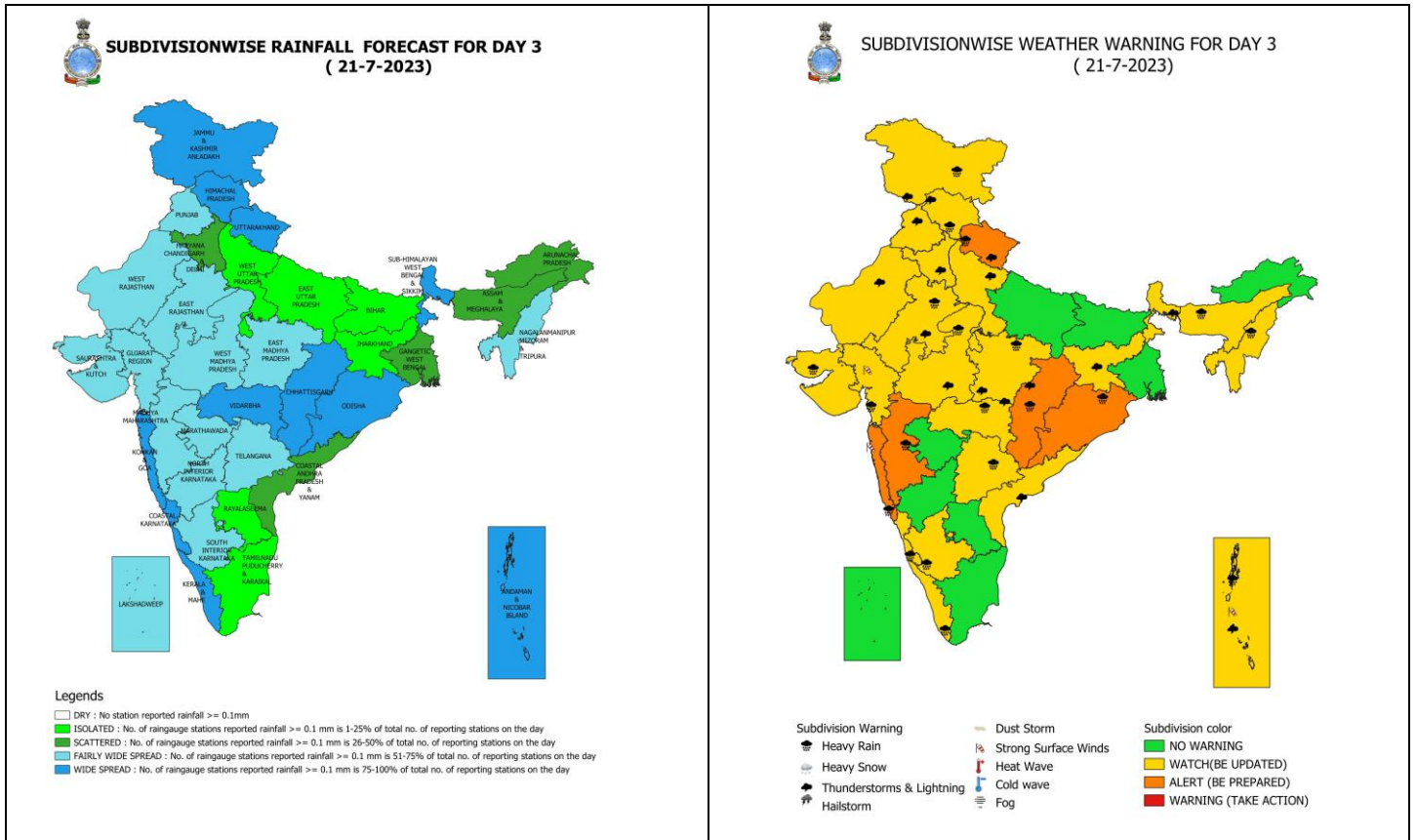
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20 July (Day 2):

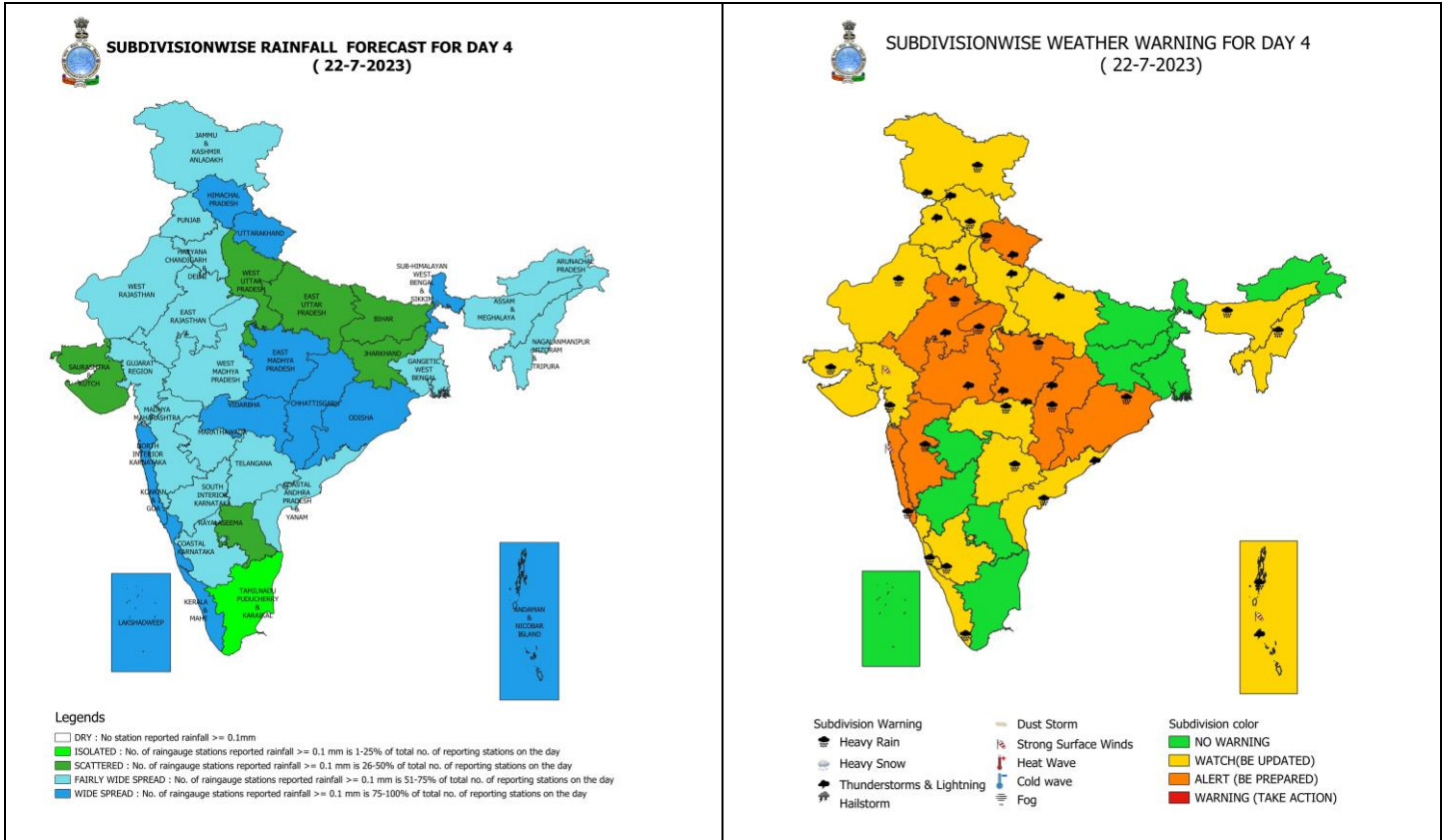
- ❖ **Heavy to very heavy rainfall** at isolated places over Vidarbha, Odisha, Konkan & Goa, Madhya Maharashtra, Gujarat, Telangana and **heavy rainfall** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, East Rajasthan, Madhya Pradesh, Chhattisgarh, Andaman & Nicobar Islands, South Assam & Meghalaya, 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, Uttar Pradesh, Rayalaseema, Madhya Pradesh, Vidarbha, Sub-Himalaya West Bengal & Sikkim, Chhattisgarh, Jharkhand, Coastal Andhra Pradesh & Yanam.

Squally weather with wind speed of 40-45 kmph gusting to 55 kmph over along and off north Kerala, Karnataka, Gujarat and Odisha coasts; **Squally weather with wind speed of 45-55 kmph** gusting to 65 kmph over along and off Goa, Maharashtra coasts, over south and central Bay of Bengal and along and off Andhra Pradesh coast, over 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.



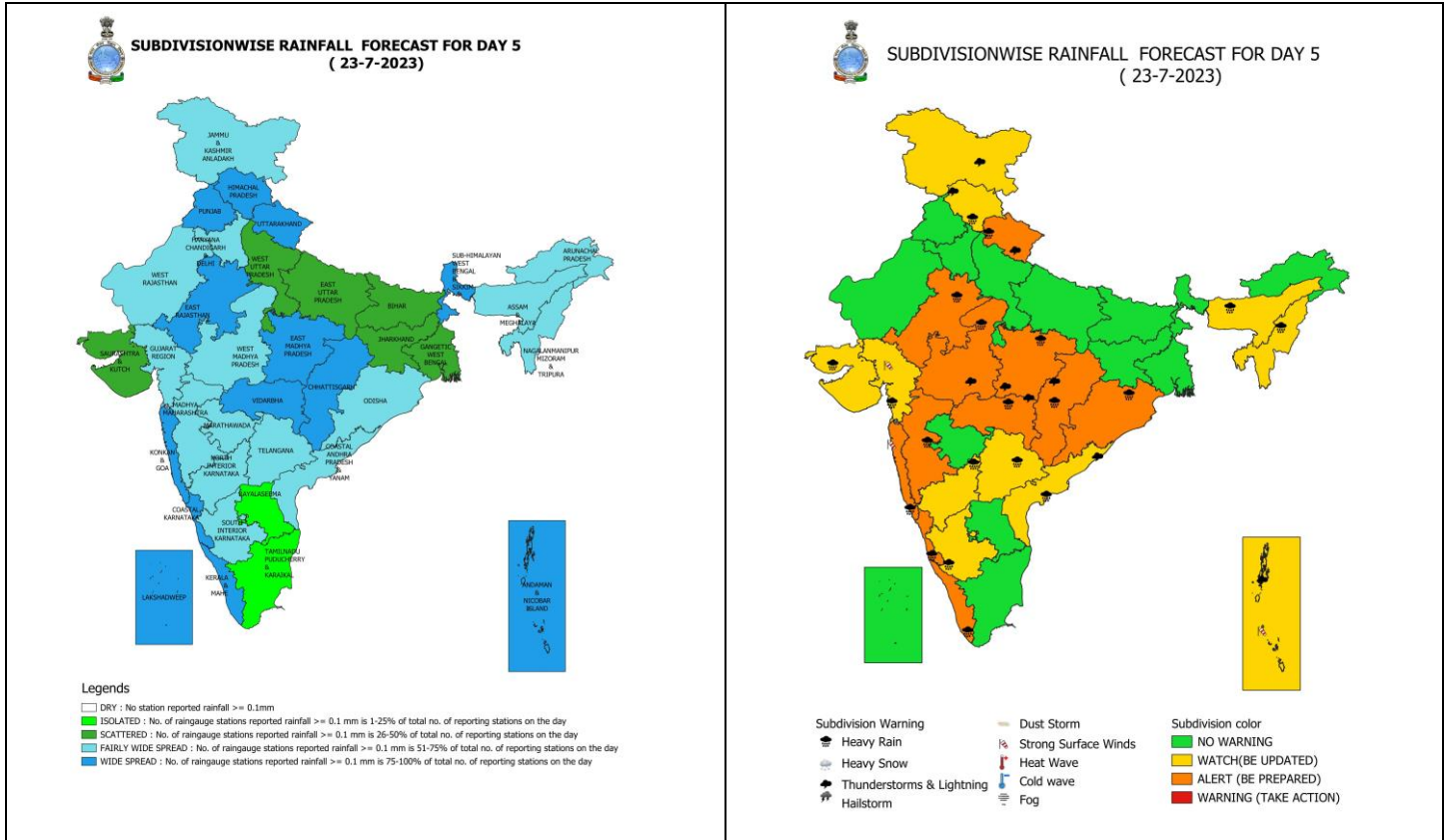
21 July (Day 3):

- ❖ **Heavy to very heavy rainfall** likely at isolated places Uttarakhand, Chhattisgarh, Odisha, Konkan & Goa, Madhya Maharashtra; **heavy rainfall** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, East Rajasthan, Madhya Pradesh, Vidarbha, Andaman & Nicobar Islands, South Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gujarat state, Telangana, Coastal Karnataka, South Interior 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, Uttar Pradesh, Rayalaseema, Madhya Pradesh, Vidarbha, Sub-Himalaya West Bengal & Sikkim, Chhattisgarh, Jharkhand, Coastal Andhra Pradesh & Yanam.
- ❖ **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 central and adjoining south Bay of Bengal and along and off north 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 4):

- ❖ **Heavy to very heavy rainfall** likely at isolated places Uttarakhand, East Rajasthan, Madhya Pradesh, Chhattisgarh, Odisha, Konkan & Goa, Madhya Maharashtra; **heavy rainfall** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, West Rajasthan, Vidarbha, Andaman & Nicobar Islands, South Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gujarat State, Telangana, Coastal Andhra Pradesh & Yanam, Coastal & South Interior Karnataka and 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, Uttar Pradesh, Rayalaseema, Madhya Pradesh, Vidarbha, Chhattisgarh.
- ❖ **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 central and adjoining south Bay of Bengal and along and off north 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.



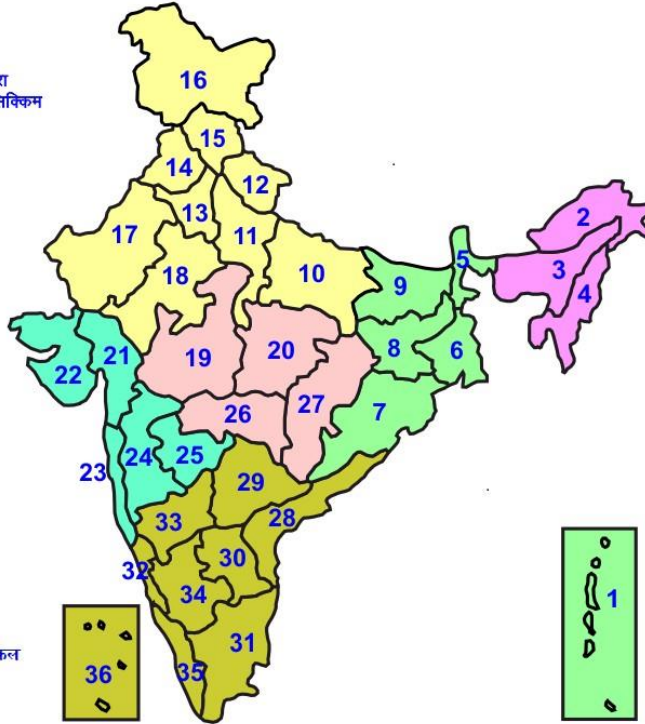
23 July (Day 5):

- ❖ **Heavy to very heavy rainfall** likely at isolated places Uttarakhand, East Rajasthan, Madhya Pradesh, Chhattisgarh, Odisha, north Kerala & Mahe, Coastal Karnataka, Konkan & Goa, Ghat areas of Madhya Maharashtra, Vidarbha; **heavy rainfall** at isolated places over Himachal Pradesh, South Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gujarat State, Telangana, Coastal Andhra Pradesh & Yanam, Interior Karnataka and south Kerala.
- ❖ **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, Rayalaseema, Madhya Pradesh, Vidarbha, Chhattisgarh.
- ❖ **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 central and adjoining south Bay of Bengal and along and off north 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.



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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