



**Tuesday, July 11, 2023**  
**Time of Issue: 1330 hours IST**  
**(MID-DAY)**

## **ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN**

### **Significant Weather Features**

#### **Significant Weather features, Forecast and Warning during next 5 days:**

- ❖ The monsoon trough is active with its western end to the south of its normal position and eastern end to the north of its normal position.
- ❖ A cyclonic circulation lies over northeast Rajasthan & neighbourhood in lower & middle tropospheric levels.
- ❖ A cyclonic circulation lies over Haryana & neighbourhood in lower tropospheric levels.
- ❖ The Western Disturbance as a trough lies over East Pakistan in middle & upper tropospheric levels.
- ❖ The off-shore trough at mean sea level runs from south Maharashtra coast to north Kerala coast.

#### **Weather Forecast and Warning:**

**Northwest India:** Light/moderate fairly widespread to widespread rainfall with **isolated heavy to very heavy rainfall** is very likely over Uttarakhand during next 5 days; over Uttar Pradesh during next 2 days and isolated heavy rainfall thereafter. **Isolated heavy rainfall also very likely** over East Rajasthan during 5 days and **over Himachal Pradesh on 11<sup>th</sup> and reduction thereafter.**

**Isolated extremely heavy rainfall also very likely over Uttarakhand and northwest Uttar Pradesh on 11<sup>th</sup> July.**

**East & adjoining Northeast India:** Fairly widespread to widespread light/moderate rainfall with isolated **Heavy to very heavy rainfall** very likely over Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Arunachal Pradesh, Nagaland, Manipur and Bihar during next 3 days and isolated heavy rainfall thereafter. Isolated **heavy rainfall** very likely over Odisha on 11<sup>th</sup>, 14<sup>th</sup> & 15<sup>th</sup>; Jharkhand during 12<sup>th</sup>-14<sup>th</sup> July.

**Isolated extremely heavy rainfall also very likely over Arunachal Pradesh, Assam & Meghalaya and Sub-Himalayan West Bengal & Sikkim on 11<sup>th</sup> & 12<sup>th</sup> July.**

**Central India:** Light/moderate fairly widespread to widespread rainfall with **isolated heavy rainfall** is very likely over Madhya Pradesh and Vidarbha during next 5 days. **Isolated heavy to very heavy rainfall** likely over West Madhya Pradesh on 12<sup>th</sup> & 13<sup>th</sup> July.

**West India:** Light/moderate widespread rainfall with **isolated heavy rainfall** very likely to continue over Konkan & Goa during next 5 days. **Isolated heavy rainfall** very likely over ghat areas of Madhya Maharashtra on 11<sup>th</sup>, 14<sup>th</sup> & 15<sup>th</sup> July.

**South India:** Light/moderate fairly widespread to widespread rainfall with **isolated heavy rainfall** very likely to over Coastal Karnataka, Telangana and Kerala during next 4 days; Coastal Andhra Pradesh on 11<sup>th</sup> & 12<sup>th</sup>, Tamil Nadu on 11<sup>th</sup> and South Interior Karnataka on 13<sup>th</sup> & 14<sup>th</sup> July.

## Main Weather Observations

- ❖ **Rainfall/thundershowers observed** (from 0830 hours IST of yesterday to 0830 hours IST of today): **at most places** over Andaman & Nicobar Islands, Arunachal Pradesh, Sub-Himalaya West Bengal & Sikkim, Uttarakhand, Haryana-Chandigarh-Delhi, Himachal Pradesh, East Rajasthan, Gujarat Region, Konkan & Goa, Vidarbha, Coastal Karnataka and Lakshadweep; **at many places over** Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Uttar Pradesh, **Madhya Pradesh**, Saurashtra & Kutch, Chhattisgarh, Telangana, Tamil Nadu, Puducherry & Karaikal, South Interior Karnataka and Kerala & Mahe; **at a few places over** Odisha, Bihar, Punjab and **at isolated places over** Gangetic West Bengal, Jharkhand, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, West Rajasthan, Marathwada, Rayalaseema and North Interior Karnataka.
- ❖ **Heavy Rainfall observed** (from 0830 hours IST of yesterday to 0830 hours IST of today): **Heavy Rainfall observed: Extremely heavy rainfall** at isolated places over Himachal Pradesh, Uttarakhand, Chandigarh, West Uttar Pradesh; **Heavy to Very heavy rainfall** at isolated places over Punjab, Haryana, East Rajasthan, Gujarat State, Meghalaya, Sub-Himalaya West Bengal & Sikkim, Bihar, Telangana and **Heavy rainfall** at isolated places over Delhi, West Rajasthan, East Uttar Pradesh, Madhya Pradesh, Vidarbha, Chhattisgarh, Odisha, Jharkhand, Assam, Arunachal Pradesh, Coastal Andhra Pradesh, Tamil Nadu and Konkan.
- ❖ **Significant rainfall recorded (from 0830 hours IST of yesterday to 0830 hours IST of today): (in cm): Uttarakhand: Dehradun:** Rishikesh(CWC)-31, Asharori-21, Rishikesh-19, Vikasnagar, Raiwala-16 each, Jollygrant- 12, Haripur-10, Tuini, Chakrata, Dehradun-8 each, Mussorie-7, **Haridwar:** Roshnabad-23, Dhanuri-22, Rani Mazra-20, Bhagwanpur-17, Laksar-15, Bhagwanpur-10, Khanpur-7; **Uttarkashi:** Purola-13, **Tehri:** Narendranagar-12, Dhanulti-8; **Pauri:** Kotdwar-9, Lansdown-6; **Chamoli:** Gairsain-9**Himachal Pradesh:** Nahan (dist Sirmaur) 25, Jatton Barrage (dist Sirmaur) 24, Kasauli (dist Solan) 20, Naina Davi (dist Bilaspur) 19, Rohru (dist Shimla) 15, Gohar (dist Mandi) 12, Kandaghat (dist Solan) 12, Rajgarh (dist Sirmaur) 12; **Haryana, Chandigarh:** Chandigarh Iaf (dist Chandigarh) 21, Ambala (dist Ambala) 18, Partapnagar Rev (dist Yamuna Nagar) 16, Naraingarh (dist Ambala) 15, Morni (dist Panchkula) 15, Dadupur (dist Yamuna Nagar) 15, Jagadhari (dist Yamuna Nagar) 14, Kalka (dist Panchkula) 13, Panchkula (dist Panchkula) 12, Ambala Rev (dist Ambala) 12,; **West Uttar Pradesh:** Behat (dist Saharanpur) 21, Saharanpur (dist Saharanpur) 12, Nakur (dist Saharanpur) 11, Jansath (dist Muzaffarnagar) 9, Muzaffarnagar(t) (dist Muzaffarnagar) 7, Budhana (dist Muzaffarnagar) 7, Rampur Maniharan (dist Saharanpur) 7, Muzaffarnagar (dist Muzaffarnagar) 7; **Punjab:** Sirhind (dist Fatehgarh Sahib) 14, Fatehgarh Sahib (dist Fatehgarh Sahib) 14, Anandpur Sahib (dist Rupnagar) 11; **East Rajasthan:** Sheoganj (dist Sirohi) 13, Abu Road Sr (dist Sirohi) 11, Pratapgarh (dist Pratapgarh) 9, Dholpur Tehsil Sr (dist Dholpur) 9, Sangod (dist Kota) 8, Paowta (dist Jaipur) 8, Chomu (dist Jaipur) 8, Bari-sadri (dist Chittorgarh) 7, Jaipur Tehsil Sr (dist Jaipur) 7; **Gujarat Region:** Idar (dist Sabarkantha) 15, Talod (dist Sabarkantha) 14, Modasa (dist Aravalli) 13; Lunawada (dist Mahisagar) 13, Virpur (dist Mahisagar) 13, Santrampur (dist Mahisagar) 12, Dhansura (dist Aravalli) 12 **Saurashtra & Kutch:** Upleta (dist Rajkot) 12, Visavadar (dist Junagadh) 11, Malia (dist Junagadh) 8, Upleta (dist Rajkot) 12, Visavadar (dist Junagadh) 11, Malia (dist Junagadh) 8; **East Uttar Pradesh:** Elgin Bridge (dist Barabanki) 7; **Madhya Pradesh:** Bhabhra (dist Alirajpur) 8, Timarni (dist Harda) 7, Bhimpur (dist Betul) 7, Badoda (dist Sheopur) 7, Ater (dist Bhind) 7, Pandhurna (dist Chhindwara) 7; **Delhi:** Pusa Aws (dist Central Delhi) 7, Sps Mayur Vihar (dist East Delhi) 4, Delhi University Obs (dist North Delhi) 3; **Konkan:** Ambernath (dist Thane) 9; **West Rajasthan:** Sumerpur Sr (dist Pali) 8; **Bihar:** Araria-8; **Jharkhand: Garhwa-7; Odisha :** Gaisilet (dist Bargarh) 9, Barpalli (dist Bargarh) 8, Bolangir (dist Bolangir) 8, Kantamal (dist Boudhgarh) 8, Pipili (dist Puri) 7; **Vidarbha:** Mulchera (dist Gadchiroli) 8; **Telangana:** Jainoor (dist Kumaram Bheem) 13, Wankdi (dist Kumaram Bheem) 12, Utnur (dist Adilabad) 12, Tadwai Mlg (dist Mulugu) 11, Narsampet (dist Warangal) 9, Kerameri (dist Kumaram Bheem) 9, Sirpuru (dist Kumaram Bheem) 9, Kotapalle (dist Mancherial) 8, Pegadapalle (dist Jagtial) 7, Kathlapur (dist Jagtial) 7, Atmakurwrgl (dist Warangal) 7, Govindaraopet (dist Mulugu) 7; **Tamil Nadu:** Tirupuvanam (dist Sivaganga) 11, Arimalam (dist Pudukkottai) 8, Arantangi (dist Pudukkottai), Tirupathur (dist Sivaganga), Marakkanam (dist Villupuram), Nagudi (dist Pudukkottai) 7 each; **Coastal Andhra Pradesh:** Chodavaram (dist Anakapalli) 9, Salur (dist Parvathipuram Manyam) 8, Bobbili (dist Vizianagaram); **Sub-Himalaya West Bengal & Sikkim:** Jalpaiguri-15, Cooch Behar-8; **Arunachal Pradesh:** Pasighat\_ Aero (dist East Siang) 9, Miao (dist Changlang) 9, Roing (dist Lower Dibang Valley) 8; **Assam & Meghalaya:** Mawkyrwat\_arg (dist South West Khasi Hills) 12, Cherrapunji(rkm) (dist East Khasi Hills) 11, Cherrapunji (dist East Khasi Hills) 10, Mawkyrwat (dist South West Khasi Hills) 8, Udaipur (dist Tinsukia) 8, Williamnagar (dist East Garo Hills) 7
- ❖ **Thunderstorm observed** (from 0830 hours IST of yesterday to 0830 hours IST of today): at isolated places over Haryana-Chandigarh-Delhi, East Rajasthan, Sub-Himalaya West Bengal & Sikkim, Gujarat State, Himachal Pradesh, Uttarakhand, East Uttar Pradesh, West Madhya Pradesh, Bihar, Odisha, Chhattisgarh, Coastal Andhra Pradesh & Yanam, Assam & Meghalaya and Tamil Nadu, Puducherry & Karaikal.
- ❖ **Minimum Temperature Departures (as on 11-07-2023):** Minimum temperatures are **above normal (1.6°C to 3.0°C)** at most places over Jharkhand and Kerala & Mahe; at many places over Bihar and Rayalaseema; at a few places over Chhattisgarh, Odisha, Gangetic West Bengal, Marathwada and Lakshadweep and at isolated places over East Madhya Pradesh, Coastal Karnataka and Coastal Andhra Pradesh & Yanam. They are **appreciably below normal (-3.1°C to -5.0°C)** at isolate places over Haryana-Chandigarh-Delhi and Tamil Nadu, Puducherry & Karaikal; **below normal (-1.6°C to -3.0°C)** at a few places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Punjab and **near normal** over rest parts of the country. Today, **the lowest minimum temperature of 18.6°C** is reported at **Mangalore (Coastal Karnataka)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 10-07-2023):** Maximum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Telangana, Coastal Andhra Pradesh & Yanam, Odisha, Gangetic West Bengal and Bihar; **above normal (1.6°C to 3.0°C)** at many places over North Interior Karnataka, Kerala & Mahe, Jharkhand and Sub-Himalaya West Bengal & Sikkim; at a few places over East Uttar Pradesh, Madhya Maharashtra, Vidarbha and Chhattisgarh and at isolated places over East Madhya Pradesh, Konkan & Goa, Tamil Nadu, Puducherry & Karaikal and Assam & Meghalaya. They were **markedly below normal (-5.1°C or less)** at many places over Himachal Pradesh and Punjab; at a few places over Haryana-Chandigarh-Delhi and at isolated places over Rajasthan; **appreciably below normal (-3.1°C to -5.0°C)** at a few places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Gujarat Region; **below normal (-1.6°C to -3.0°C)** at a few places over Saurashtra & Kutch, West Madhya Pradesh and Nagaland, Manipur, Mizoram & Tripura and at isolated places over West Uttar Pradesh, Vidarbha, Assam & Meghalaya and Andaman & Nicobar Islands and **near normal** over rest parts of the country. Yesterday, **the highest maximum temperature of 39.2°C** was reported at **Madurai (Tamil Nadu)**.

\* 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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### Meteorological Analysis (Based on 0830 hours IST)

- ❖ The cyclonic circulation Northeast Rajasthan & adjoining northwest Madhya Pradesh extending upto 5.8 km above mean sea level.
- ❖ The Monsoon Trough at mean sea level now passes through Jaisalmer, Sikar, Orai, Sultanpur, Patna, Malda and thence eastwards to Arunachal Pradesh and extends upto 0.9 km above mean sea level.
- ❖ The Western Disturbance as a trough now seen between 3.1 & 9.5 km above mean sea level with its axis at 5.8 km above mean sea level now runs roughly along Long. 68°E to the north of Lat. 28°N.
- ❖ The off-shore trough at mean sea level now runs from south Maharashtra coast to north Kerala coast.
- ❖ A cyclonic circulation lies over south Haryana & neighbourhood at 1.5 km above mean sea level.
- ❖ The cyclonic circulation over Southwest Bay of Bengal off north Tamil Nadu coast now lies over Southwest Bay of Bengal between 4.5 km & 7.6 km above mean sea level tilting southwestwards with height.

### Weather Forecast for next 5 days (Upto 0830 hours IST of 16<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 (During 16<sup>th</sup> July-18<sup>th</sup> July, 2023)

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



**Table-1**

**7 Days Rainfall Forecast**

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

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Fig. 1: Maximum Temperatures Dated 10.07.2023

Fig. 2: Departure of Maximum Temp. Dated 10.07.2023

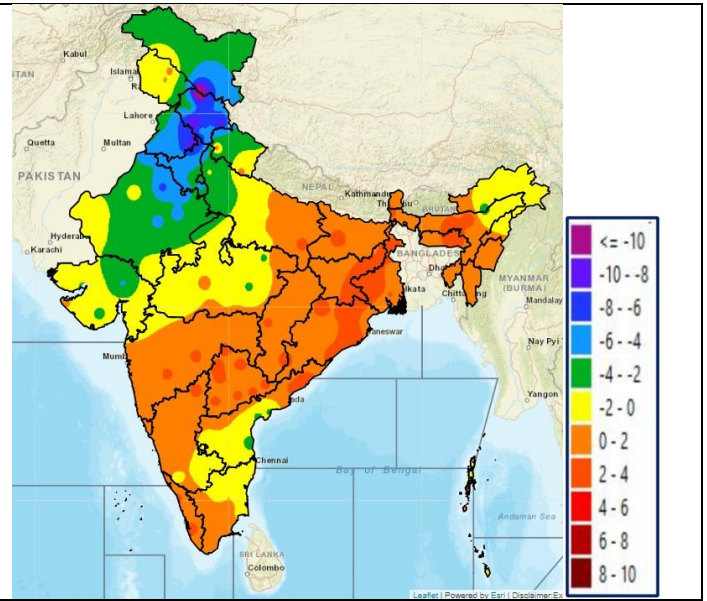
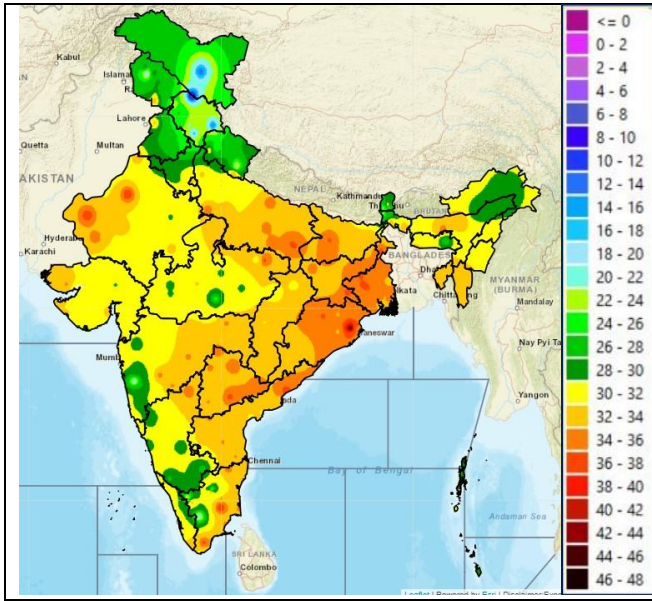


Fig. 3: Minimum Temperatures Dated 11.07.2023

Fig. 4: Departure of Minimum Temp. Dated 11.07.2023

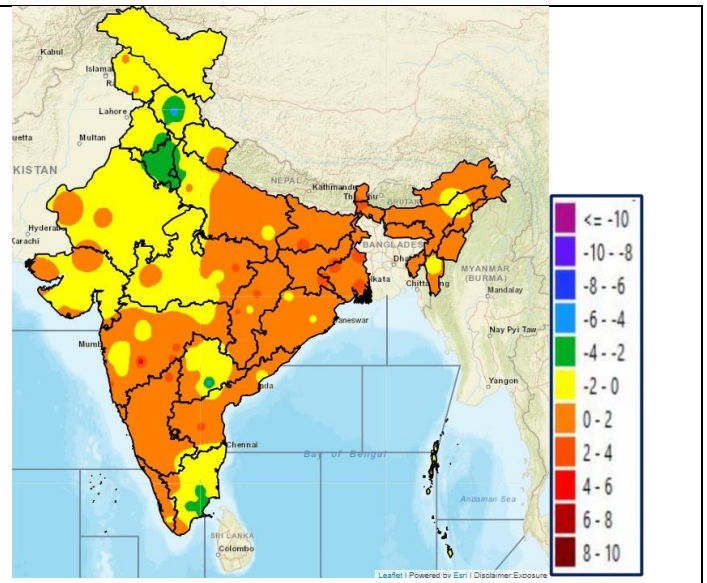
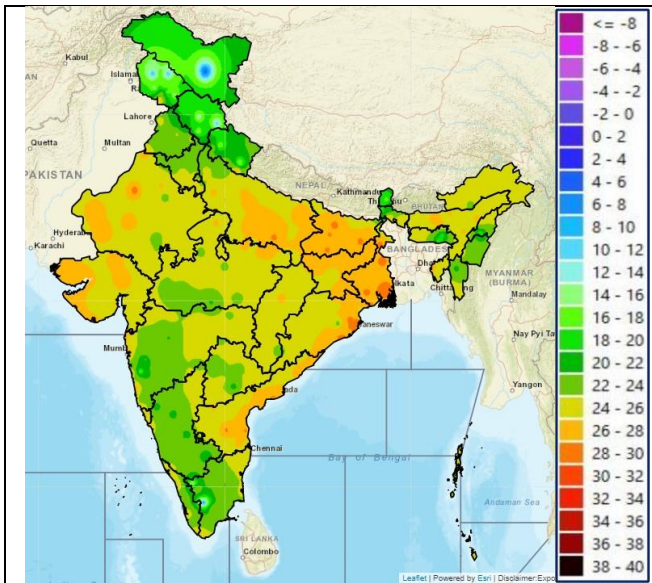
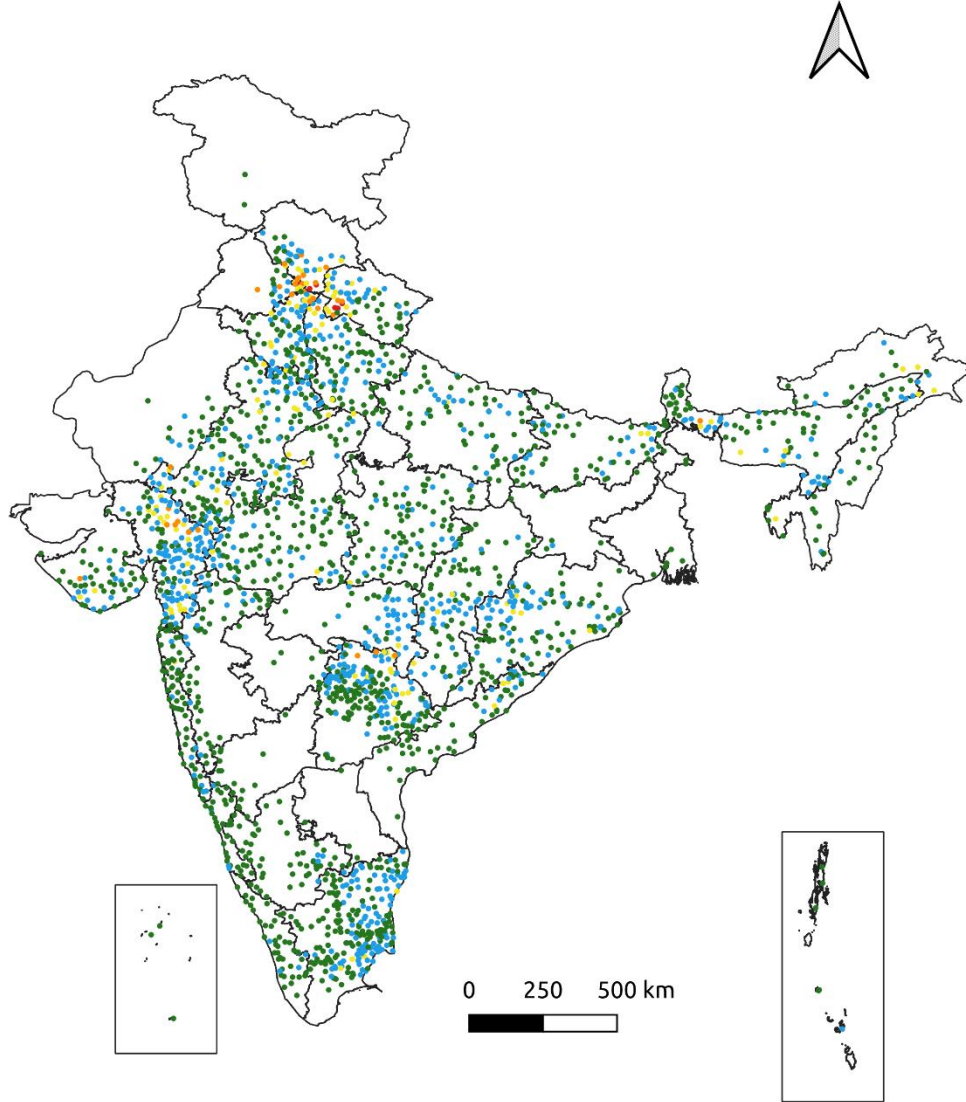


Fig. 5: Accumulated Rainfall (mm) during past 24 hours

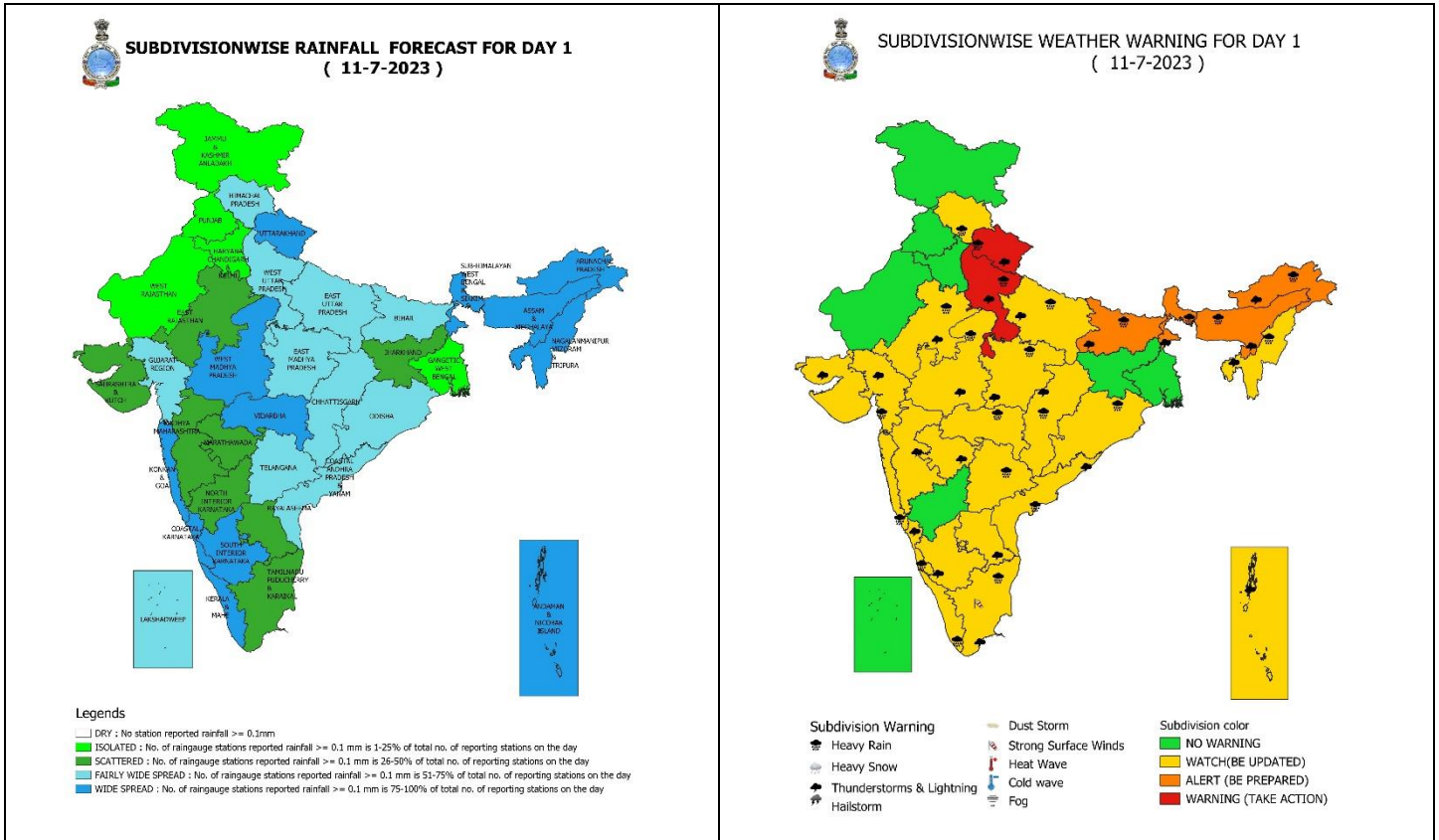


24 Hr cumulative rainfall recorded over different stations during 0830 IST of 10-7-2023 to 0830 IST of 11-7-2023



## Legends

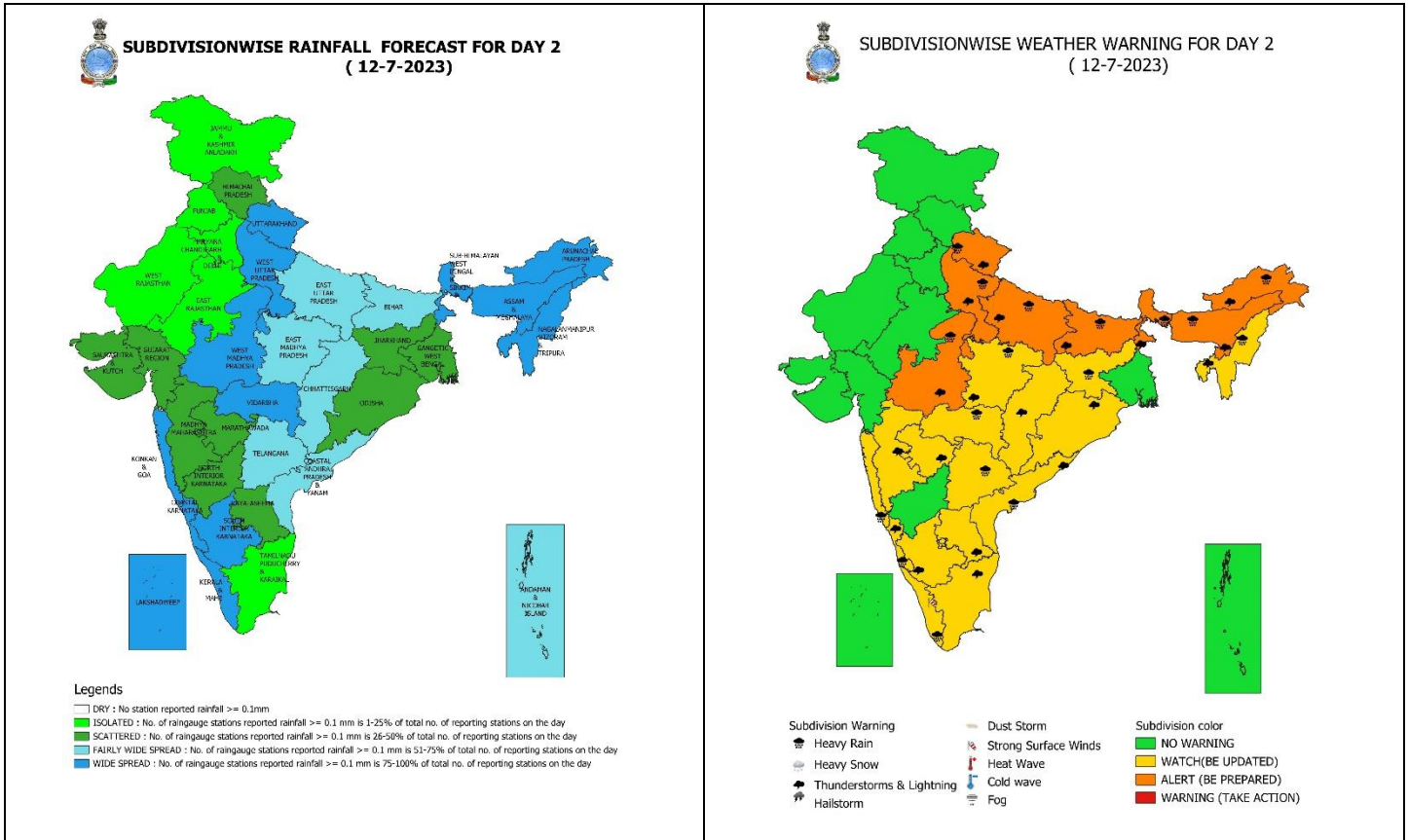
- Very Light to Light Rainfall (0.1 - 15.5 mm)
- Moderate Rainfall (15.6 - 64.4 mm)
- Heavy Rainfall (64.5 - 115.5 mm)
- Very Heavy Rainfall (115.6 - 204.4 mm)
- Extremely Heavy Rainfall ( $\geq 204.5$  mm)



### 11 July (Day 1):

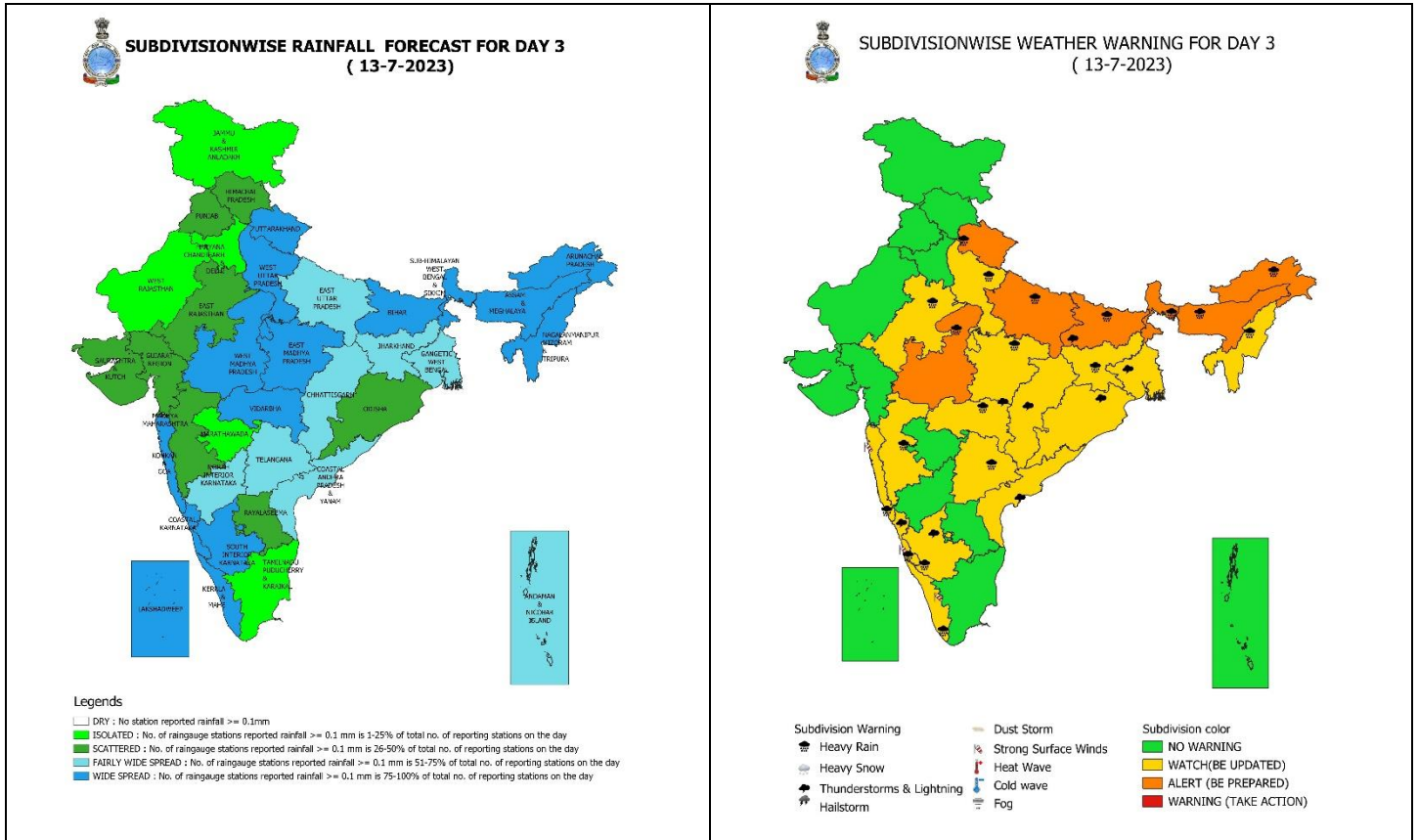
- ❖ **Heavy to very heavy rainfall with extremely heavy falls** very likely at isolated places over Uttarakhand, adjoining West Uttar Pradesh, Arunachal Pradesh, Assam & Meghalaya, Sub-Himalaya West Bengal & Sikkim; **Heavy to very heavy rainfall** at isolated places over Nagaland, Manipur, Bihar; **heavy rainfall** at isolated places over Himachal Pradesh, Odisha, East Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Gujarat Region, Konkan & Goa, Madhya Maharashtra, Coastal Andhra Pradesh, Telangana, Tamil Nadu, Coastal Karnataka and Kerala & Mahe.
- ❖ **Thunderstorm with lightning** likely at isolated places over Andaman & Nicobar Islands, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Sub-Himalaya West Bengal & Sikkim, Uttar Pradesh, Uttarakhand, East Rajasthan, Madhya Pradesh, Chhattisgarh, Gujarat State, Madhya Maharashtra, Marathwada, Coastal Andhra Pradesh & Yanam, Rayalaseema, Tamil Nadu, Puducherry & Karaikal, Coastal & South Interior Karnataka.

**Squally wind** speed reaching 45-55 kmph gusting to 65 kmph likely over Westcentral & Southwest Arabian Sea. **Squally weather speed reaching 40-45 kmph gusting to 50 kmph** likely over Southwest & adjoining Westcentral Bay of Bengal, along & off Andhra Pradesh-north Tamilnadu coast and Gulf of Mannar. Fishermen are advised not to venture into these areas.



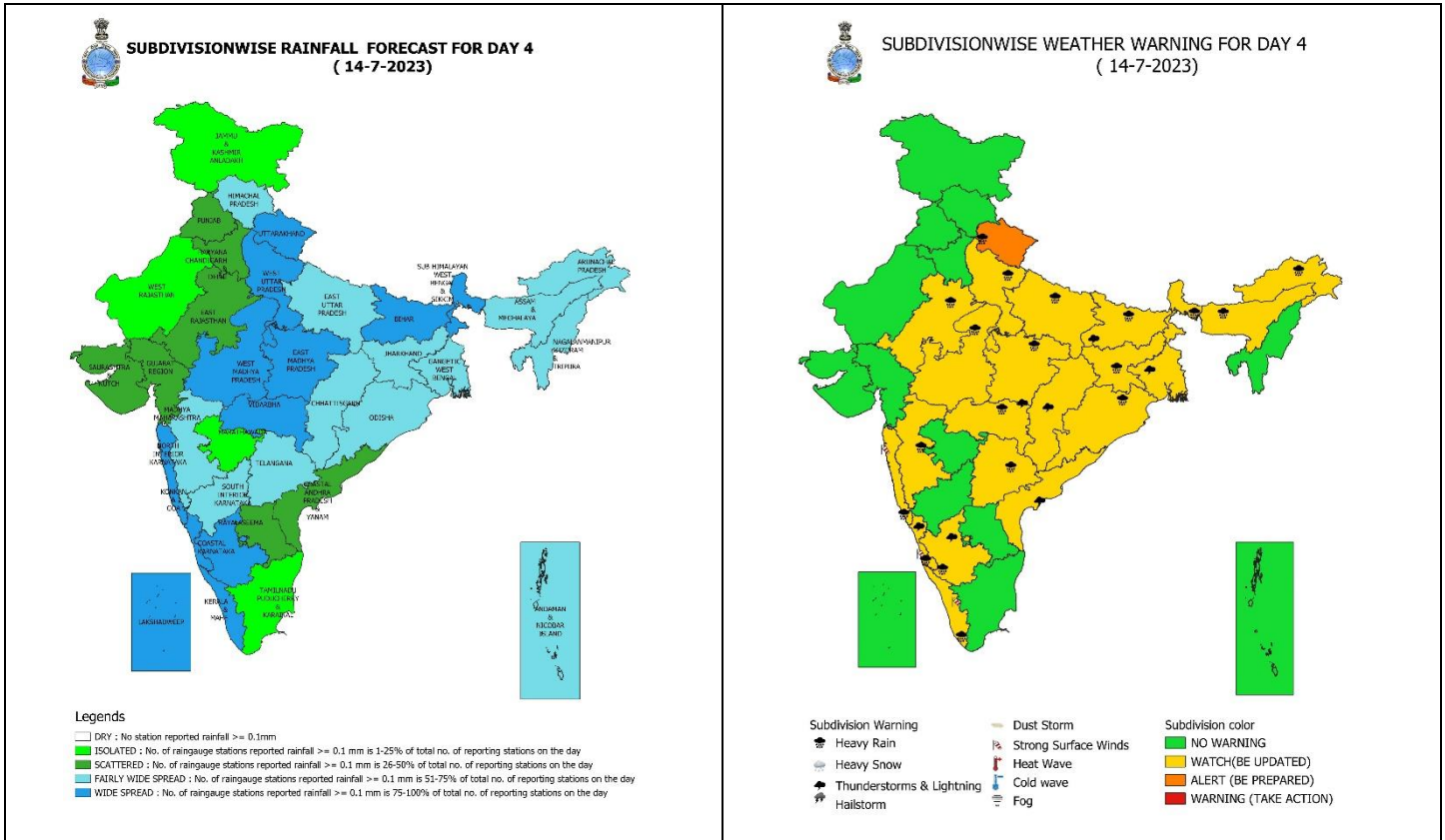
**12 July (Day 2):**

- ❖ **Heavy to very heavy rainfall with extremely heavy falls** very likely at isolated places over, West Arunachal Pradesh, Assam & Meghalaya, Sub-Himalaya West Bengal & Sikkim; **Heavy to very heavy rainfall** at isolated places over Uttarakhand, West Uttar Pradesh, Bihar, West Madhya Pradesh; **heavy rainfall** at isolated places over Jharkhand, East Madhya Pradesh, Vidarbha, Konkan & Goa, Coastal Andhra Pradesh, Telangana, Coastal Karnataka and Kerala & Mahe.
- ❖ **Thunderstorm with lightning** likely at isolated places over Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Sub-Himalaya West Bengal & Sikkim, Uttar Pradesh, Uttarakhand, Madhya Pradesh, Chhattisgarh, Madhya Maharashtra, Marathwada, Coastal Andhra Pradesh & Yanam, Rayalaseema, Tamil Nadu, Puducherry & Karaikal, Coastal & South Interior Karnataka.
- ❖ **Squally wind** speed reaching 45-55 kmph gusting to 65 kmph likely over Westcentral & Southwest and adjoining parts of Eastcentral Arabian Sea. **Squally weather speed reaching 40-45 kmph gusting to 50 kmph** likely over north Kerala-Karnataka coasts, Comorin Area and Southeast & adjoining Southwest Bay of Bengal. Fishermen are advised not to venture into these areas.



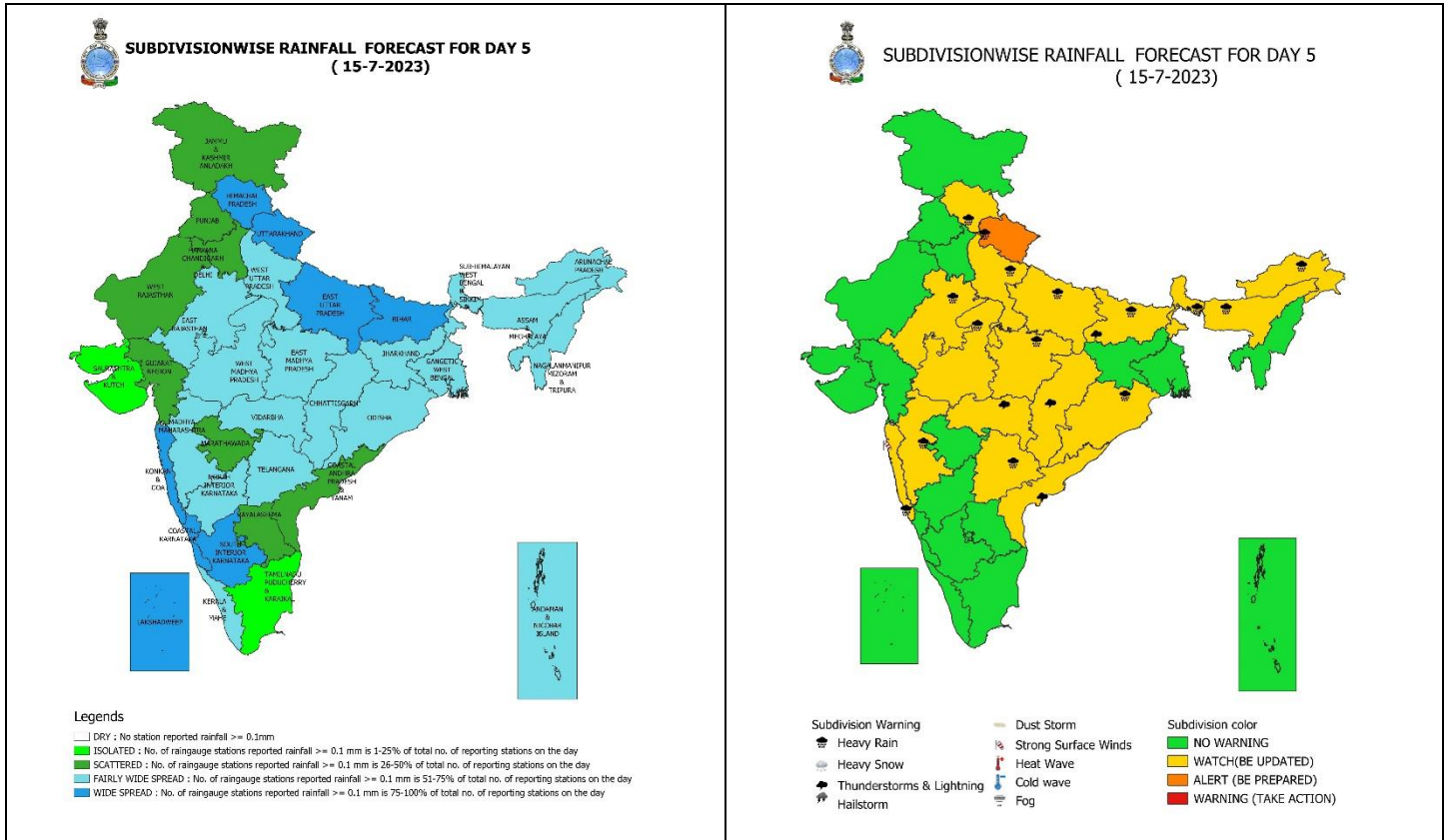
**13 July (Day 3):**

- ❖ **Heavy to very heavy rainfall** likely at isolated places over Uttarakhand, Bihar, West Uttar Pradesh, West Madhya Pradesh, Sub-Himalaya West Bengal & Sikkim, Arunachal Pradesh; **heavy rainfall** at isolated places over Jharkhand, East Rajasthan, East Madhya Pradesh, Konkan & Goa, Vidarbha, Telangana, Coastal Karnataka, Nagaland, Manipur, Mizoram & Tripura South Interior Karnataka and Kerala & Mahe.
- ❖ **Thunderstorm with lightning** likely at isolated places over Gangetic West Bengal, Odisha, Vidarbha, Chhattisgarh, Coastal Andhra Pradesh & Yanam, Coastal & South Interior Karnataka.
- ❖ **Squally wind** speed reaching 45-55 kmph gusting to 65 kmph likely over Westcentral & Southwest and adjoining parts of Eastcentral Arabian Sea, Gulf of Mannar **Squally weather speed reaching 40-45 kmph gusting to 50 kmph** likely over Kerala-Karnataka-Maharashtra coasts. Fishermen are advised not to venture into these areas.



### 14 July (Day 4):

- ❖ **Heavy to very heavy rainfall** likely at isolated places over Uttarakhand; **heavy rainfall** likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Sub-Himalaya West Bengal & Sikkim, Odisha, Jharkhand, Bihar, Uttar Pradesh, East Rajasthan, Madhya Pradesh, Konkan & Goa, Madhya Maharashtra, Vidarbha, Telangana, Coastal Karnataka, South Interior Karnataka and Kerala & Mahe.
- ❖ **Thunderstorm with lightning** likely at isolated places over Himachal Pradesh, Uttarakhand, Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh, East Rajasthan, Gangetic West Bengal, Vidarbha, Chhattisgarh, Coastal Andhra Pradesh & Yanam, Coastal Karnataka and South Interior Karnataka.
- ❖ **Squally wind** speed reaching 45-55 kmph gusting to 65 kmph likely over Westcentral & Southwest and adjoining parts of Eastcentral Arabian Sea, Gulf of Mannar **Squally weather speed reaching 40-45 kmph gusting to 50 kmph** likely over Kerala-Karnataka-Maharashtra coasts. Fishermen are advised not to venture into these areas.



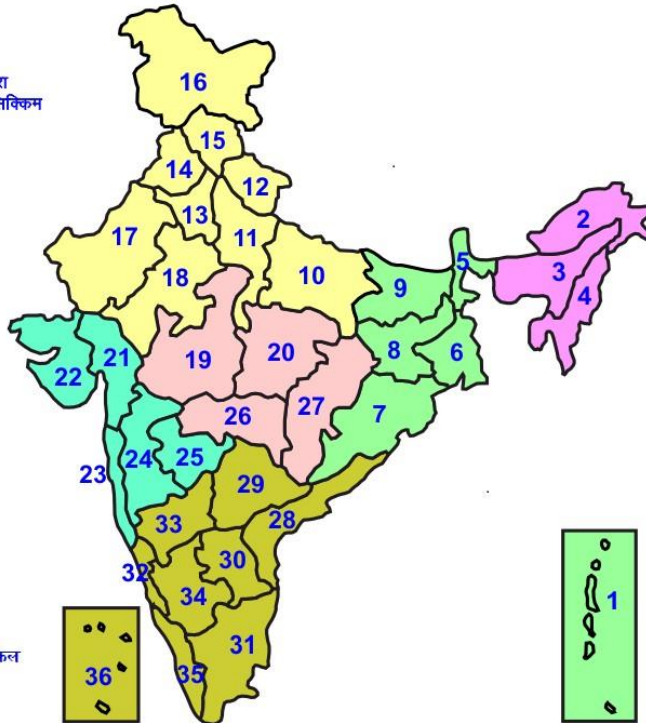
**15 July (Day 5):**

- ❖ **Heavy to very heavy rainfall** likely at isolated places over Uttarakhand; **heavy rainfall** likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Sub-Himalaya West Bengal & Sikkim, Odisha, Bihar, Himachal Pradesh, Uttar Pradesh, East Rajasthan, Madhya Pradesh, Konkan & Goa, Madhya Maharashtra, Telangana.
- ❖ **Thunderstorm with lightning** likely at isolated places over Himachal Pradesh, Uttarakhand, Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh, East Rajasthan, Vidarbha, Chhattisgarh and Coastal Andhra Pradesh & Yanam.
- ❖ **Squally wind** speed reaching 45-55 kmph gusting to 65 kmph likely over Westcentral & Southwest and adjoining parts of Eastcentral Arabian Sea, Gulf of Mannar **Squally weather speed reaching 40-45 kmph gusting to 50 kmph** likely over north Kerala-Karnataka-Maharashtra coasts. Fishermen are advised not to venture into these areas.



## LEGENDS

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



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

## SPATIAL DISTRIBUTION (% of Stations reporting)

% Stations	Category	% Stations	Category
76-100	Widespread (WS/ Most Places)	26-50	Scattered (SCT/ A Few Places)
51-75	Fairly Widespread (FWS/ Many Places)	1-25	Isolated (ISOL)

## WARNING

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

## Probabilistic Forecast

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



Heavy Rain



Heavy Snow



Thunderstorm



Dust Storm



Strong Winds



Visibility



Cyclone



Squall/ Hail



Frost



Cold Wave



Heat Wave



Sea State

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

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)

## 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  $4.5^{\circ}\text{C}$  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 Storm: Wind speed  $> 220$  kmph ( $> 119$  knots)

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