



Wednesday, July 19, 2023
Time of Issue: 1645 hours IST
(EVENING)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features

Significant Weather features:

- ❖ A cyclonic circulation lies over Northwest & adjoining Westcentral Bay of Bengal and adjoining areas of north Andhra Pradesh-south Odisha coasts extending upto mid-tropospheric levels tilting southwards with height. Under its influence, a low-pressure area is likely to form over Northwest & adjoining Westcentral Bay of Bengal during next 24 hours.
- ❖ The Monsoon Trough at mean sea level runs south of its normal position and now passes through Phalodi, Kota, Raisen, Seoni, Raipur, Puri and thence east-southeastwards to Eastcentral Bay of Bengal.
- ❖ A cyclonic circulation lies over south Chhattisgarh and another cyclonic circulation lies over south Punjab in lower tropospheric levels.
- ❖ The shear zone runs roughly along Lat. 20° N between 3.1 km & 7.6 km above mean sea level tilting southwards with height.

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, Himachal Pradesh, Uttarakhand and Rajasthan during 19th-23rd; over Punjab and Haryana on 19th, 22nd & 23rd July 2023.

Isolated very heavy rainfall also very likely over Jammu & Kashmir on 19th and over Uttarakhand on 22nd 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 Madhya Pradesh on 19th and over Vidarbha & Chhattisgarh on 19th & 20th 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 and Gujarat state during next 5 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 on 19th and Gujarat state on 19th & 21st July.

South India: Light/moderate fairly widespread to widespread rainfall with **isolated heavy rainfall** very likely to over Kerala, Karnataka & Telangana during next 5 days; over coastal Andhra Pradesh on 19th, 22nd & 23rd and over Tamil Nadu and Rayalaseema on 19th July. **Isolated very heavy rainfall** also likely over coastal Andhra Pradesh & north interior Karnataka on 19th and over Telangana and coastal Karnataka on 19th, 20th & 23rd July.

East India: Light/moderate widespread rainfall with isolated **heavy to very heavy rainfall** very likely over Odisha during 19th to 23rd and isolated **heavy rainfall** over Andaman & Nicobar Islands during 21st-23rd July.

Northeast India: Light/moderate Scattered to Fairly widespread rainfall likely over the region. **Isolated heavy rainfall** likely over Assam & Meghalaya on 21st & 22nd and over Tripura on 21st 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

(Service to the Nation since 1875)

Main Weather Observations

- ❖ **Rainfall/thundershowers observed** (from 0830 hours IST of yesterday to 0830 hours IST of today): **at most places** over Himachal Pradesh, Uttarakhand, Vidarbha, Chhattisgarh, Andaman & Nicobar Islands, Odisha, Konkan & Goa, Madhya Maharashtra, Marathwada, Saurashtra & Kutch, Coastal Andhra Pradesh & Yanam, Telangana, Coastal Karnataka, North Interior Karnataka, Kerala & Mahe; **at many places** over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Haryana-Chandigarh-Delhi, East Rajasthan, Madhya Pradesh, Gangetic West Bengal, Nagaland, Manipur, Mizoram & Tripura, Gujarat Region, South Interior Karnataka, Lakshadweep; **at a few places** over Punjab, West Uttar Pradesh, West Rajasthan, Jharkhand, Rayalaseema and **at isolated places** over East Uttar Pradesh, Sub-Himalaya West Bengal & Sikkim, Bihar, Arunachal Pradesh, Assam & Meghalaya, Tamil Nadu, Puducherry & Karaikal.
- ❖ **Heavy Rainfall observed** (from 0830 hours IST of yesterday to 0830 hours IST of today): **Exceptionally heavy rainfall** at isolated places over Saurashtra & Kutch; **Extremely heavy rainfall** at isolated places over Vidarbha, Konkan & Goa, Madhya Maharashtra, Gujarat Region, Jammu-Kashmir; **Very heavy rainfall** at isolated places over Himachal Pradesh, Uttarakhand, Telangana, Coastal Karnataka, Interior Karnataka, Odisha and **heavy rainfall** at isolated places over Punjab, Rajasthan, Madhya Pradesh, Marathwada, Coastal Andhra Pradesh & Yanam, Kerala & Mahe.
- ❖ **Significant rainfall recorded** (from 0830 hours IST of yesterday to 0830 hours IST of today): **(in cm): GUJARAT REGION:** Daman (dist Daman) 23; **SAURASHTRA & KUTCH:** Sutrapada (dist Gir Somnath) 54, Veraval (dist Gir Somnath) 52; **KONKAN & GOA:** Matheran (dist Raigad) 34; **MADHYA MAHARASHTRA:** Mahabaleshwar- Imd Obsy (dist Satara) 28; **MARATHWADA:** Dharmabad (dist Nanded) 8; **ORISSA:** Chitrakunda K Guma (dist Malkangiri) 20; **KERALA & MAHE:** Padinjathara Dam Aws (dist Wynad) 8; **COASTAL KARNATAKA:** Castle Rock (dist Uttara Kannada) 24; **NORTH INTERIOR KARNATAKA:** Londa (dist Belagavi) 15; **SOUTH INTERIOR KARNATAKA:** Linganamakki Hms (dist Shivamogga) 9, Kammardi (dist Chikkamagaluru) 9; **COASTAL ANDHRA PRADESH:** Chintur (dist Alluri Sitharamaraju) 8; **TELANGANA:** Manuguru (dist B. Kothagudem) 14; **VIDARBHA:** Chandrapur (dist Chandrapur) 20; **HIMACHAL PRADESH:** Dharmasala (dist Kangra) 13; **JAMMU & KASHMIR:** Katra 31; **UTTARAKHAND:** Rishikesh 13; **PUNJAB:** Patiala and Malikipur 7 each.
- ❖ **Thunderstorm observed** (from 0830 hours IST to 1430 hours IST of today): at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Punjab, Haryana-Chandigarh-Delhi, Gujarat Region, Nagaland, Manipur, Mizoram & Tripura, Telangana.
- ❖ **Minimum Temperature Departures (as on 19-07-2023):** Minimum temperatures are **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Bihar; **above normal (1.6°C to 3.0°C)** at many places over Himachal Pradesh, East Uttar Pradesh, Sub-Himalaya West Bengal & Sikkim, Andaman & Nicobar Islands; at a few places over West Rajasthan, East Madhya Pradesh, Tamil Nadu, Puducherry & Karaikal and at isolated places over Gujarat Region, Kerala & Mahe. They are **below normal (-1.6°C to -3.0°C)** at many places over Telangana; at a few places over Coastal Andhra Pradesh & Yanam, Marathwada; at isolated places over East Madhya Pradesh and **near normal** over rest parts of the country. Today, **the lowest minimum temperature of 19.8°C** was reported at **Nalgonda (Telangana)** 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 1430 hours IST)

- ❖ The Monsoon Trough at mean sea level continue to pass through Phalodi, Kota, Raisen, Seoni, Raipur, Puri and thence east-southeastwards to Eastcentral Bay of Bengal and extends upto 2.1 km above mean sea level.
- ❖ The cyclonic circulation over Northwest & adjoining Westcentral Bay of Bengal and adjoining areas of north Andhra Pradesh-south Odisha coasts 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 & adjoining Westcentral Bay of Bengal during next 24 hours.
- ❖ The cyclonic circulation over south Chhattisgarh extending upto 1.5 km above mean sea level persists.
- ❖ The shear zone roughly along Lat. 20° N between 3.1 & 7.6 km above mean sea level tilting southwards with height persists.
- ❖ The cyclonic circulation over south Punjab & neighbourhood and extends upto 3.1 km above mean sea level 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 | FWS |
| 3 | ASSAM & MEGHALAYA | SCT | SCT | SCT | FWS | FWS | FWS | FWS |
| 4 | NAGALAND, MANIPUR, MIZORAM & TRIPURA | SCT | SCT | FWS | FWS | FWS | FWS | FWS |
| 5 | SUB-HIMALAYAN WEST BENGAL & SIKKIM | ISOL | SCT | FWS | FWS | FWS | FWS | FWS |
| 6 | GANGETIC WEST BENGAL | SCT | SCT | SCT | SCT | SCT | SCT | SCT |
| 7 | ODISHA | WS | WS | WS | WS | WS | WS | WS |
| 8 | JHARKHAND | SCT | ISOL | ISOL | SCT | SCT | SCT | SCT |
| 9 | BIHAR | ISOL | ISOL | ISOL | ISOL | SCT | SCT | SCT |
| 10 | EAST UTTAR PRADESH | ISOL | ISOL | ISOL | ISOL | ISOL | ISOL | ISOL |
| 11 | WEST UTTAR PRADESH | ISOL | ISOL | ISOL | ISOL | SCT | SCT | FWS |
| 12 | UTTARAKHAND | WS | WS | WS | WS | WS | WS | WS |
| 13 | HARYANA CHANDIGARH & DELHI | FWS | SCT | SCT | FWS | FWS | FWS | FWS |
| 14 | PUNJAB | FWS | FWS | FWS | FWS | WS | WS | WS |
| 15 | HIMACHAL PRADESH | WS | WS | WS | WS | WS | WS | WS |
| 16 | JAMMU & KASHMIR AND LADAKH | WS | WS | WS | WS | FWS | FWS | FWS |
| 17 | WEST RAJASTHAN | SCT | FWS | FWS | FWS | FWS | FWS | FWS |
| 18 | EAST RAJASTHAN | FWS | FWS | FWS | FWS | FWS | WS | WS |
| 19 | WEST MADHYA PRADESH | FWS | FWS | FWS | FWS | FWS | FWS | WS |
| 20 | EAST MADHYA PRADESH | FWS | FWS | FWS | FWS | FWS | FWS | FWS |
| 21 | GUJARAT REGION | WS | WS | WS | WS | FWS | FWS | SCT |
| 22 | SAURASHTRA & KUTCH | WS | WS | WS | WS | FWS | FWS | SCT |
| 23 | KONKAN & GOA | WS | WS | WS | WS | WS | WS | WS |
| 24 | MADHYA MAHARASHTRA | WS | FWS | FWS | FWS | FWS | FWS | FWS |
| 25 | MARATHAWADA | WS | WS | FWS | FWS | FWS | FWS | FWS |
| 26 | VIDARBHA | WS | WS | WS | WS | WS | WS | WS |
| 27 | CHHATTISGARH | WS | WS | WS | WS | WS | WS | FWS |
| 28 | COASTAL ANDHRA PRADESH & YANAM | WS | SCT | SCT | FWS | WS | WS | WS |
| 29 | TELANGANA | WS | WS | FWS | FWS | WS | WS | WS |
| 30 | RAYALASEEMA | SCT | ISOL | ISOL | SCT | FWS | FWS | 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 | WS | WS | WS |
| 34 | SOUTH INTERIOR KARNATAKA | FWS | FWS | FWS | FWS | WS | 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 |

Fig. 1: Maximum Temperatures Dated 18.07.2023

Fig. 2: Departure of Maximum Temp. Dated 18.07.2023

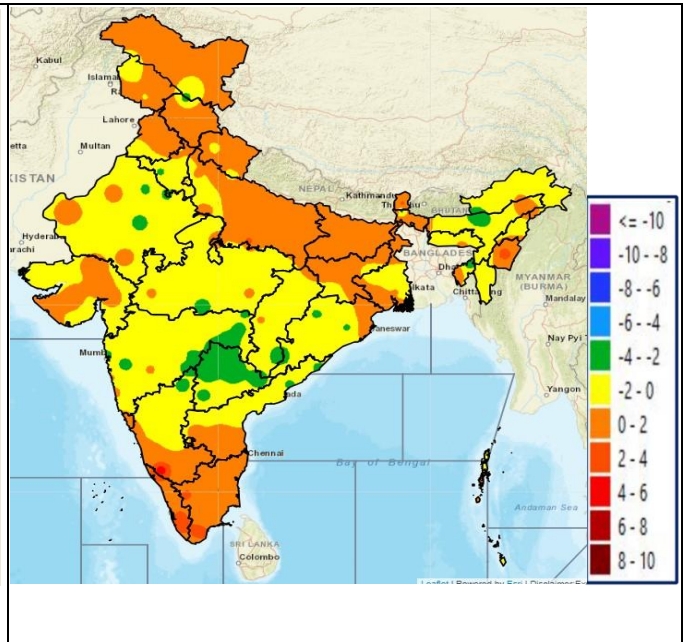
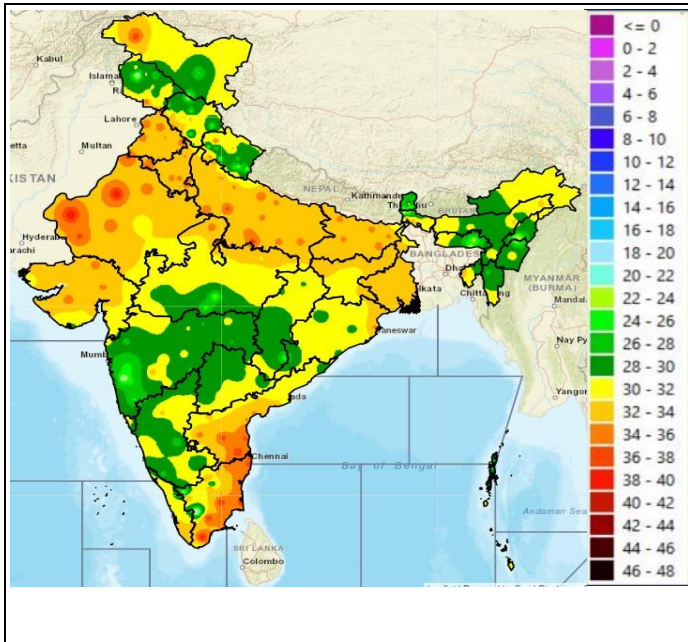


Fig. 3: Minimum Temperatures Dated 19.07.2023

Fig. 4: Departure of Minimum Temp. Dated 19.07.2023

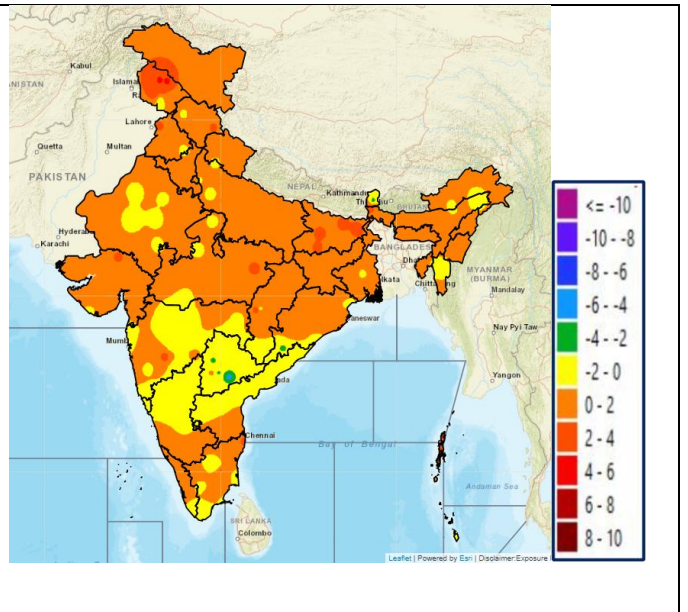
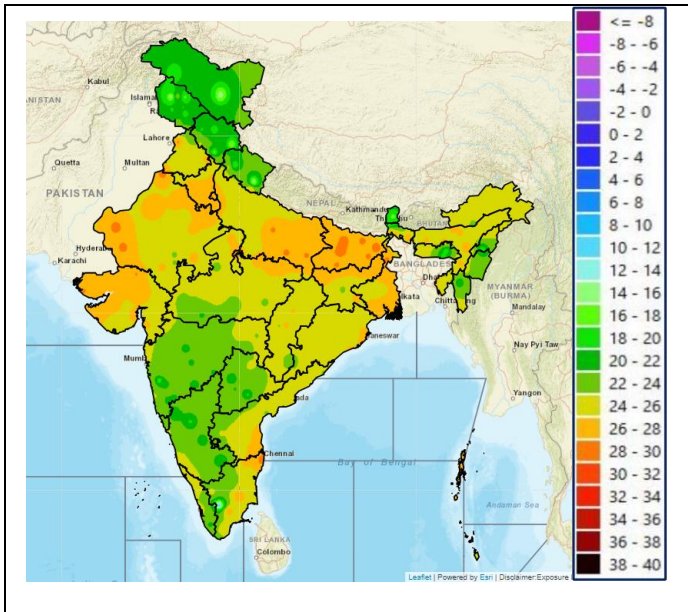
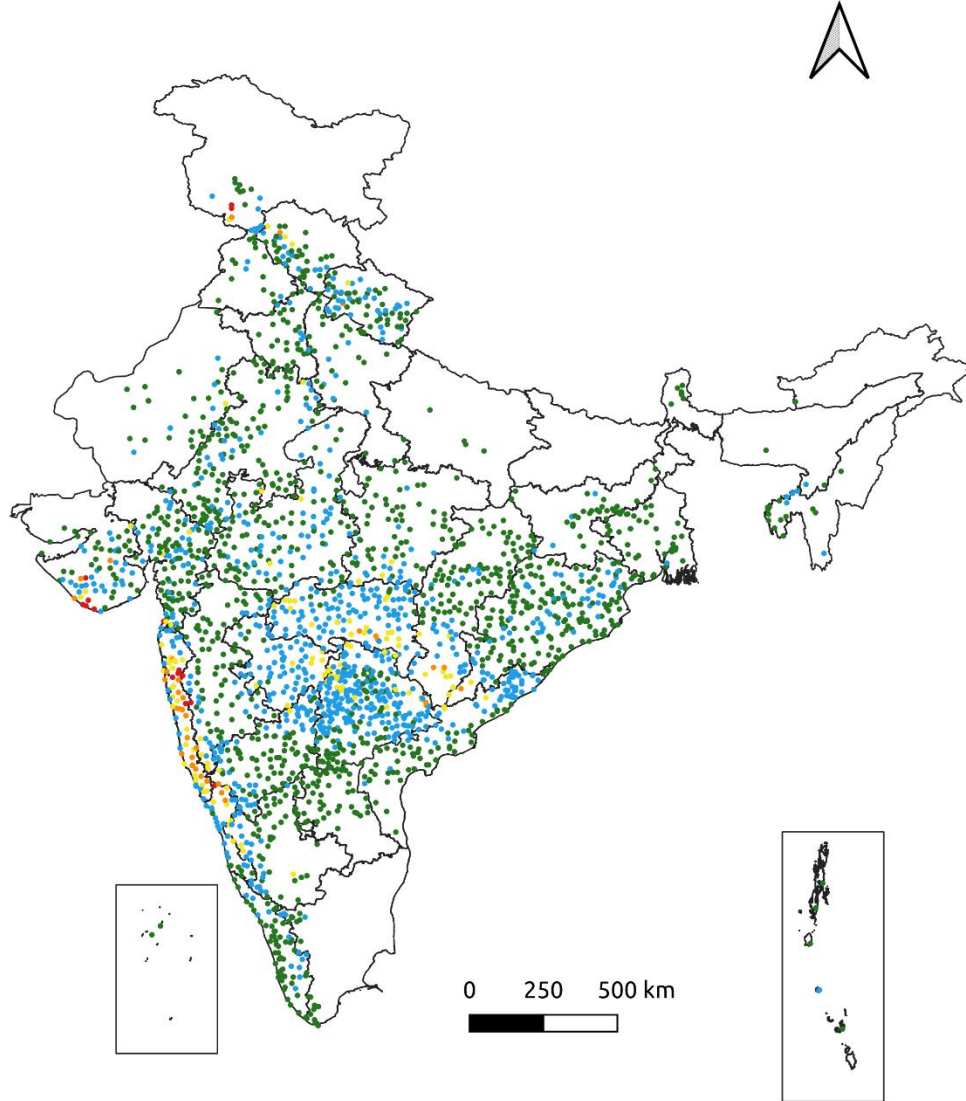


Fig. 5: Accumulated Rainfall (mm) during past 24 hours

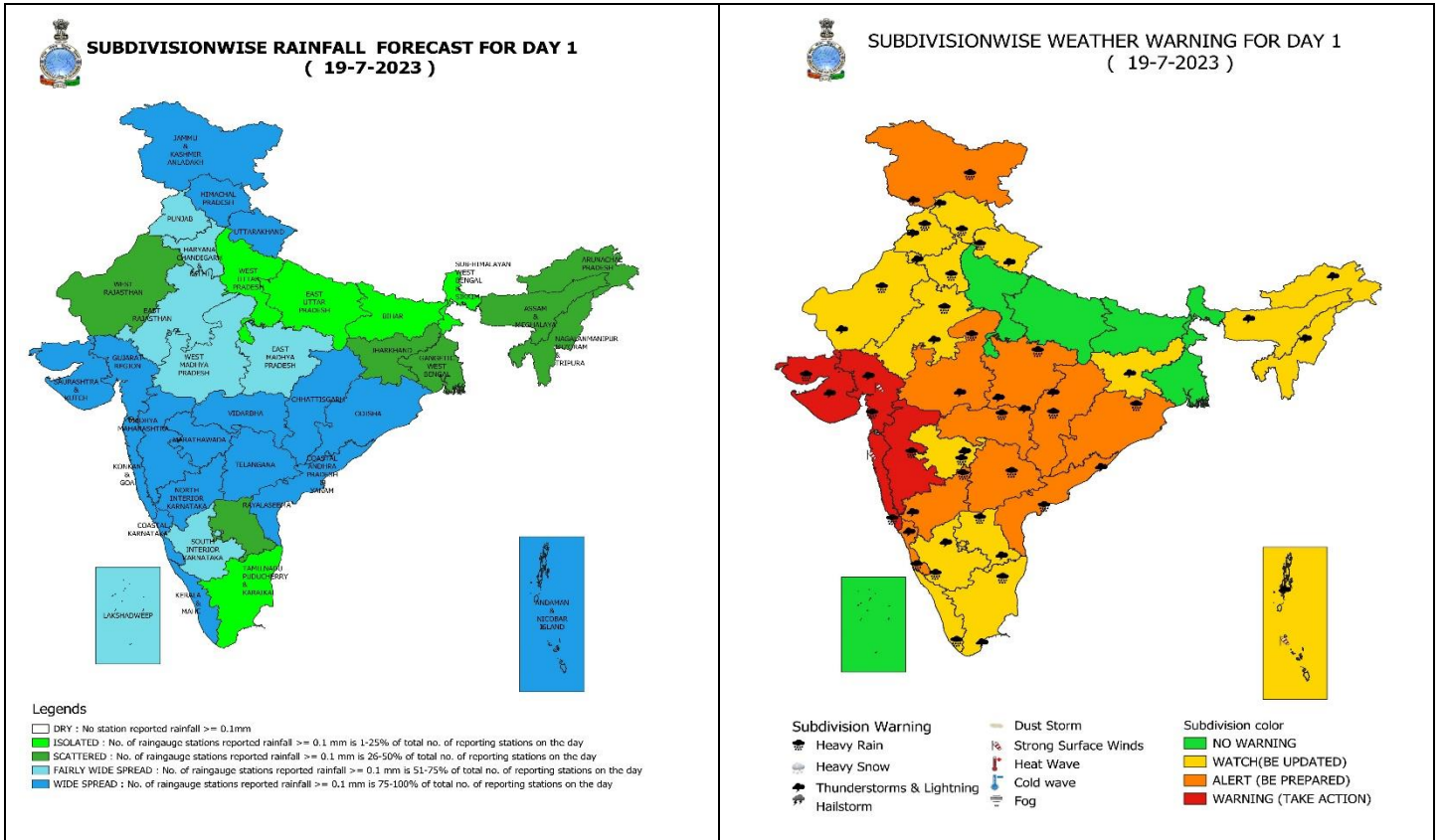


24 Hr cumulative rainfall recorded over different stations during 0830 IST of 18-7-2023 to 0830 IST of 19-7-2023



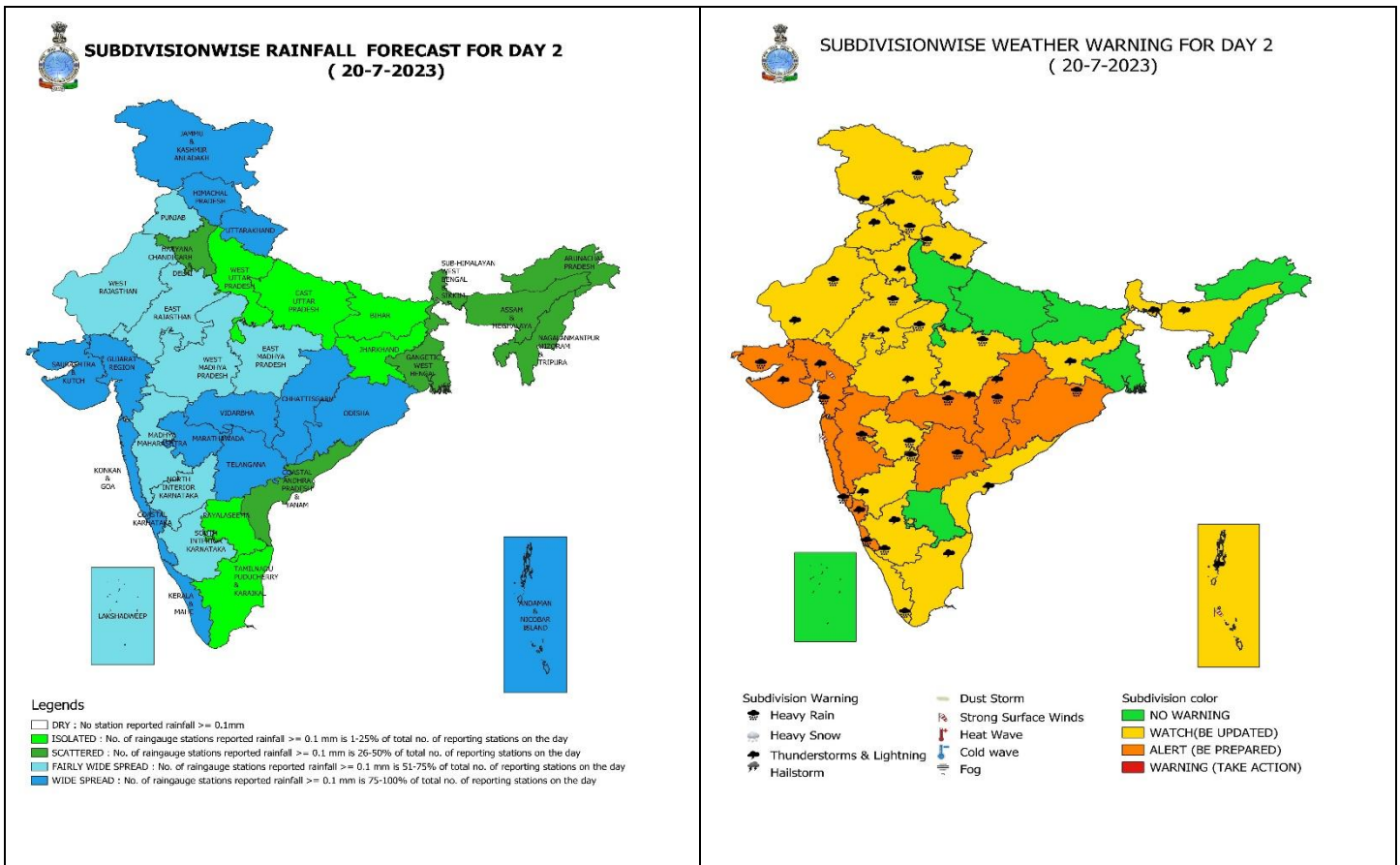
Legends

- 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 Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Madhya Pradesh, Vidarbha, Chhattisgarh, Odisha, Coastal Andhra Pradesh & Yanam, Telangana, Coastal Karnataka, North Interior Karnataka and **heavy rainfall** at isolated places over Himachal Pradesh, Uttarakhand, Punjab, Haryana-Chandigarh-Delhi, Rajasthan, Marathwada, South Interior Karnataka, Rayalaseema, Tamil Nadu, Puducherry & Karaikal, 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, Chhattisgarh, Jharkhand, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Marathwada, Gujarat, Coastal Andhra Pradesh & Yanam, Rayalaseema, Karnataka, Tamil Nadu, Puducherry & Karaikal.
- ❖ **Squally weather with wind speed of 40-45 kmph** gusting to 55 kmph over along and off Kerala and Karnataka coasts, over Andaman Sea; **Squally weather with wind speed of 45-55 kmph** gusting to 65 kmph over along and off Goa, Maharashtra, Gujarat coasts, over central and south Bay of Bengal, along and off north Andhra Pradesh coast, and along and off Sri Lanka 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.

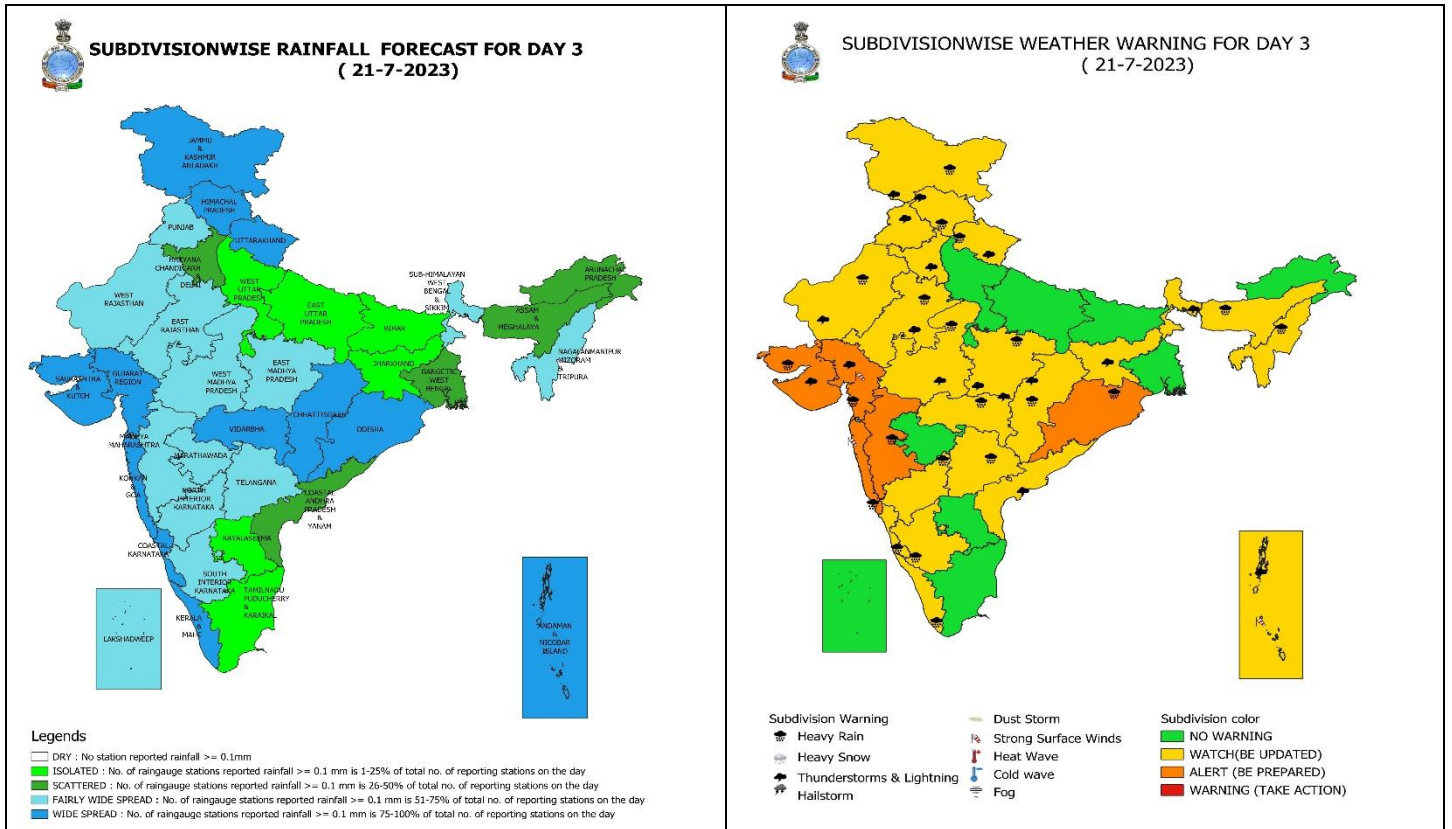


20 July (Day 2):

- ❖ **Heavy to very heavy rainfall** at isolated places over Vidarbha, Chhattisgarh, Odisha, Konkan & Goa, Madhya Maharashtra, Gujarat, Telangana, Coastal Karnataka and **heavy rainfall** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Rajasthan, Madhya Pradesh, Marathwada, North Interior 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, Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Sub-Himalaya West Bengal & Sikkim, Jharkhand, Assam & Meghalaya, 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 Kerala, Karnataka, Odisha coasts, over south east and south west Bay of Bengal and along and off Sri Lanka coast; **Squally weather with wind speed of 45-55 kmph gusting to 65 kmph** over along and off Goa, Maharashtra, Gujarat coasts, over central and adjoining south Bay of Bengal, adjoining north west Bay of Bengal and 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.

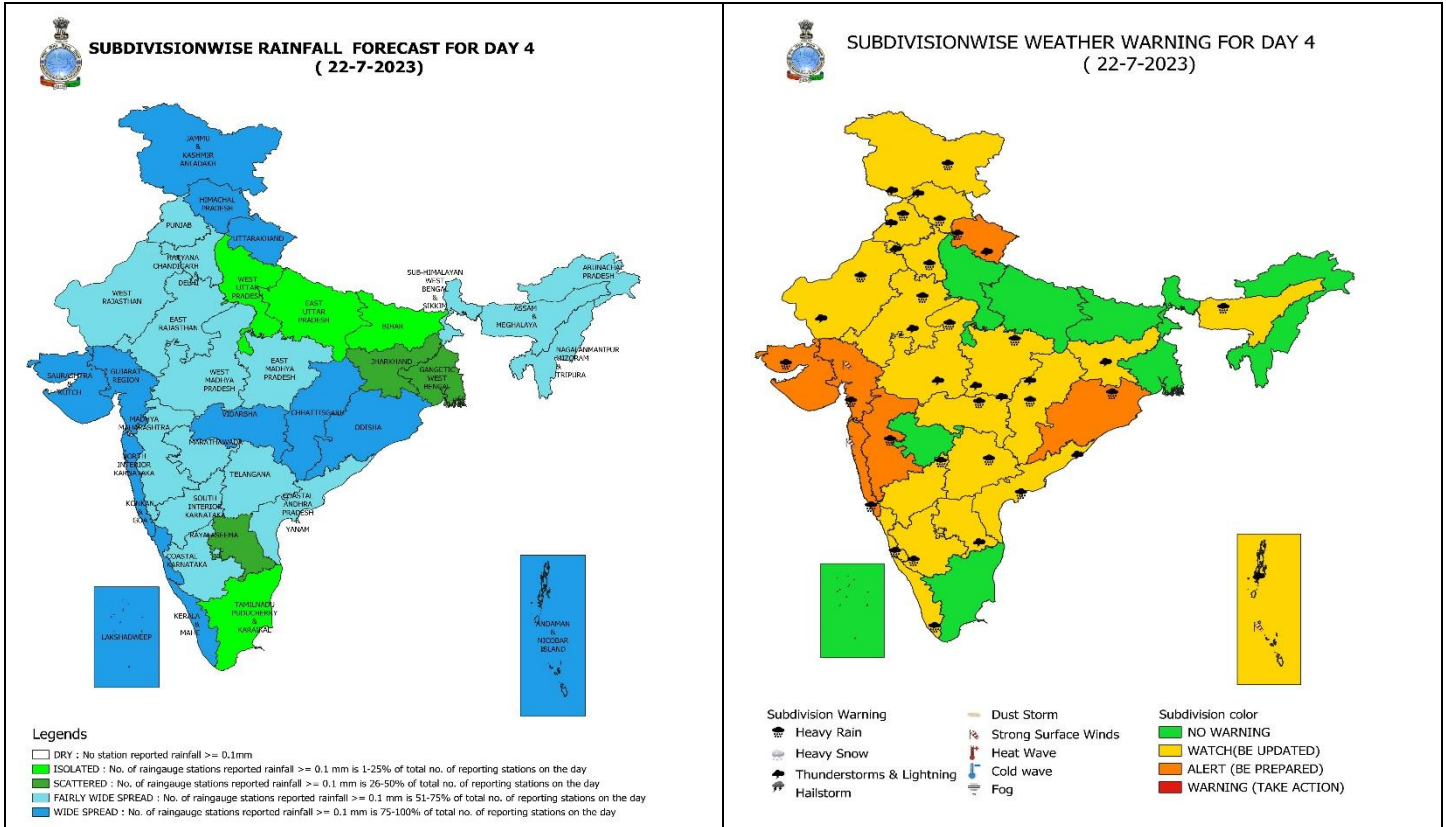
* Red color warning does not mean "Red Alert" Red color warning means "Take Action".

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)



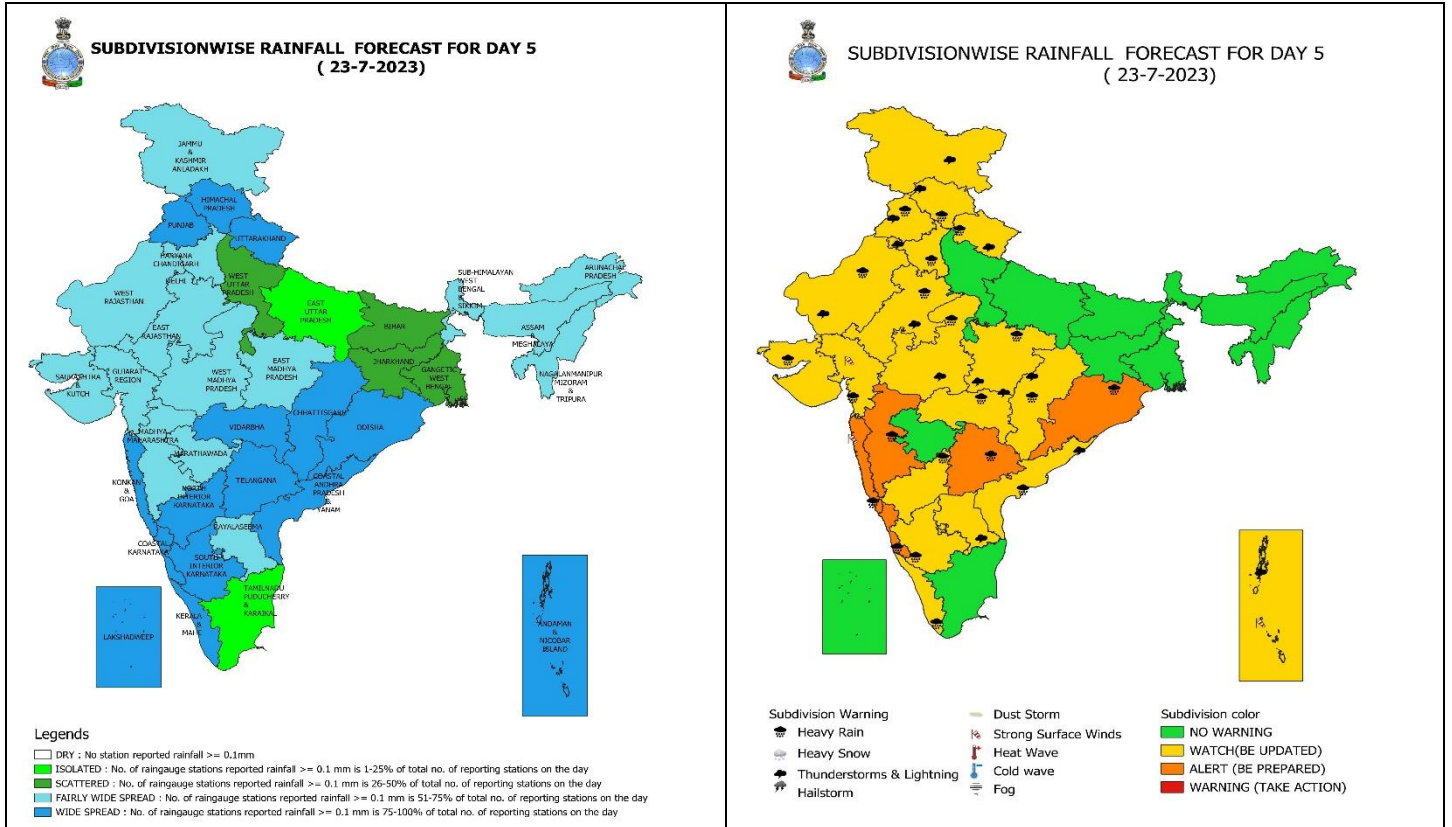
21 July (Day 3):

- ❖ **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 Odisha, Konkan & Goa, Madhya Maharashtra, Saurashtra & Kutch; **heavy rainfall** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Andaman & Nicobar Islands, South Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Telangana, 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, Chhattisgarh, Sub-Himalaya West Bengal & Sikkim, Jharkhand, Gujarat, Coastal Andhra Pradesh & Yanam.
- ❖ **Squally weather with wind speed of 40-45 kmph gusting to 55 kmph** over along and off 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 south west and 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 4):

- ❖ **Heavy to very heavy rainfall** likely at isolated places Uttarakhand, Odisha, Konkan & Goa, Madhya Maharashtra, Gujarat state; **heavy rainfall** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Punjab, Haryana-Chandigarh-Delhi, Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Andaman & Nicobar Islands, South Assam & Meghalaya, Telangana, 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, Madhya Pradesh, Vidarbha, Chhattisgarh, 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, Maharashtra, Gujarat and Odisha 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.



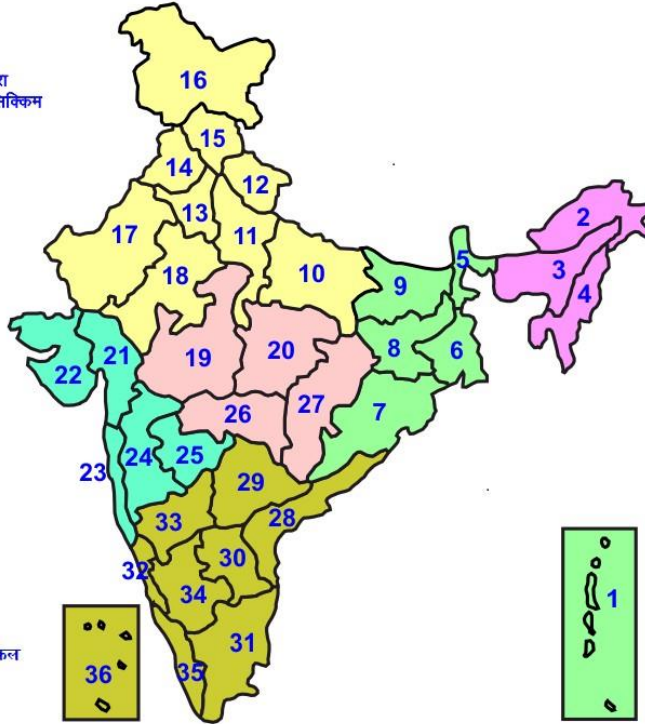
23 July (Day 5):

- ❖ **Heavy to very heavy rainfall** likely at isolated places Odisha, Konkan & Goa, Ghat areas of Madhya Maharashtra, Telangana, Coastal Karnataka; **heavy rainfall** at isolated places over Himachal Pradesh, Uttarakhand, Punjab, Haryana-Chandigarh-Delhi, Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Andaman & Nicobar Islands, Gujarat state, Coastal Andhra Pradesh & Yanam, Interior Karnataka and south Kerala.
- ❖ **Thunderstorm with lightning** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana-Chandigarh-Delhi, Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, 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.



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 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. 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

| |
|--------------------------------|
| 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".

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°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)

* 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)