



Wednesday, July 12, 2023  
Time of Issue: 0800 hours IST  
(MORNING)

## 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 & adjoining Northwest Madhya Pradesh in lower & middle tropospheric levels.
- ❖ A cyclonic circulation lies over South Haryana 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 on 12<sup>th</sup> and isolated **heavy rainfall** thereafter. **Isolated heavy rainfall also very likely** over East Rajasthan during next 5 days.

**East & 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 2 days and isolated heavy rainfall thereafter. Isolated **heavy rainfall** very likely over Jharkhand during 12<sup>th</sup>-14<sup>th</sup> and Odisha during 14<sup>th</sup>-16<sup>th</sup> July.

**Isolated extremely heavy rainfall also very likely over West Arunachal Pradesh, Assam & Meghalaya and Sub-Himalayan West Bengal & Sikkim on 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 during 14<sup>th</sup>-16<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 3 days; Coastal Andhra Pradesh on 12<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 to 1730 hours IST of yesterday): **at most places** over Uttarakhand and Arunachal Pradesh; **at many places over** West Uttar Pradesh, Jharkhand, Marathwada, Coastal Karnataka and Kerala & Mahe; **at a few places over** Gangetic West Bengal, East Uttar Pradesh, Assam & Meghalaya, Gujarat state, Konkan & Goa, Telangana and Andaman & Nicobar Islands and **at isolated places over** Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Bihar, Sub-Himalaya West Bengal & Sikkim, Odisha, Madhya Maharashtra, Vidarbha, West Madhya Pradesh and Tamil Nadu, Puducherry & Karaikal.
- ❖ **Heavy Rainfall observed** (from 0830 hours IST to 1730 hours IST of yesterday): Nil.
- ❖ **Significant rainfall recorded** (from 0830 hours IST to 1730 hours IST of yesterday): **(in cm): Uttarakhand:** Mukteshwar Kumaon-3, Tehri & Dehradun-2 each; **West Uttar Pradesh:** Najibabad-4, Jhansi-3, Aligarh-2, Moradabad-1; **East Uttar Pradesh:** Hardoi-5; **Vidarbha:** Wardha-1; **Gujarat Region:** Bulsar and Daman-2 each; **Kerala:** Cochin-1; **Odisha:** Bhubaneswar and Cuttack- 2 each; **Jharkhand:** Jamshedpur-1; **Bihar:** Bhagalpur-3, Sabaur-1; **Arunachal Pradesh:** Pasighat-3; **Assam & Meghalaya:** Cherrapunji-2, Tezpur and Dhubri-1 each; **Andaman & Nicobar Islands:** Hut Bay-1 each.
- ❖ **Thunderstorm observed** (from 0830 hours IST of yesterday to 0530 hours IST of today): at isolated places over Uttar Pradesh, Bihar, West Madhya Pradesh, Saurashtra & Kutch, Odisha, Coastal Andhra Pradesh & Yanam and Coastal Karnataka.
- ❖ **Minimum Temperature Departures (as on 11-07-2023):** Minimum temperatures were **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 were **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. Yesterday, **the lowest minimum temperature** of 18.6°C was reported at **Mangalore (Coastal Karnataka)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 11-07-2023):** Maximum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Coastal Andhra Pradesh & Yanam and Gangetic West Bengal; **above normal (1.6°C to 3.0°C)** at many places over Jharkhand; at a few places over East Uttar Pradesh, Bihar and Odisha and at isolated places over East Madhya Pradesh, Madhya Maharashtra and Kerala & Mahe. They were **markedly below normal (-5.1°C or less)** at isolated places over Telangana; **appreciably below normal (-3.1°C to -5.0°C)** at many places over Vidarbha; at a few places over West Uttar Pradesh, Haryana-Chandigarh-Delhi, West Madhya Pradesh and Tamil Nadu, Puducherry & Karaikal; **below normal (-1.6°C to -3.0°C)** at many places over Uttarakhand and Marathwada; at a few places over Andaman & Nicobar Islands, Gujarat Region and Chhattisgarh and at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Punjab and East Rajasthan and **near normal** over rest parts of the country. Yesterday, **the highest maximum temperature** of 40.2°C was reported at **Phalodi (West Rajasthan)**.



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

- ❖ The cyclonic circulation over Northeast Rajasthan & adjoining northwest Madhya Pradesh extending upto 5.8 km above mean sea level persists.
- ❖ The Monsoon Trough at mean sea level now passes through Bikaner, Gwalior, Satna, Gaya, Bhagalpur and thence eastwards to Arunachal Pradesh and extends upto 0.9 km above mean sea level.
- ❖ The Western Disturbance as a trough between 3.1 & 9.5 km above mean sea level with its axis at 5.8 km above mean sea level roughly from Lat. 37°N/Long. 74°E to Lat. 28°N/ Long. 72°E persists.
- ❖ The off-shore trough at mean sea level from south Maharashtra coast to north Kerala coast persists.
- ❖ The cyclonic circulation over south Haryana & neighbourhood at 1.5 km above mean sea level persists.
- ❖ The cyclonic circulation over Southwest Bay of Bengal between 4.5 km & 7.6 km above mean sea level tilting southwestwards with height persists.

### Weather Forecast for next 5 days (Upto 0830 hours IST of 17<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 17<sup>th</sup> July-19<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	12-Jul	13-Jul	14-Jul	15-Jul	16-Jul	17-Jul	18-Jul
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	FWS	FWS	FWS	FWS	WS	WS	WS
2	ARUNACHAL PRADESH	WS	WS	FWS	FWS	FWS	FWS	FWS
3	ASSAM & MEGHALAYA	WS	WS	FWS	FWS	FWS	FWS	FWS
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	WS	WS	FWS	FWS	FWS	FWS	FWS
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	WS	WS	WS	WS	WS	WS	WS
6	GANGETIC WEST BENGAL	SCT	FWS	FWS	FWS	FWS	FWS	FWS
7	ODISHA	SCT	SCT	FWS	FWS	FWS	WS	WS
8	JHARKHAND	SCT	FWS	FWS	FWS	WS	WS	WS
9	BIHAR	FWS	FWS	FWS	FWS	SCT	SCT	SCT
10	EAST UTTAR PRADESH	FWS	WS	WS	WS	WS	FWS	FWS
11	WEST UTTAR PRADESH	WS	WS	WS	WS	WS	FWS	FWS
12	UTTARAKHAND	WS	WS	WS	WS	WS	WS	WS
13	HARYANA CHANDIGARH & DELHI	ISOL	SCT	SCT	SCT	SCT	SCT	SCT
14	PUNJAB	ISOL	SCT	SCT	SCT	SCT	SCT	SCT
15	HIMACHAL PRADESH	SCT	SCT	FWS	WS	WS	WS	WS
16	JAMMU & KASHMIR AND LADAKH	ISOL	ISOL	ISOL	SCT	SCT	SCT	SCT
17	WEST RAJASTHAN	ISOL	ISOL	ISOL	SCT	SCT	SCT	SCT
18	EAST RAJASTHAN	ISOL	SCT	SCT	FWS	FWS	WS	WS
19	WEST MADHYA PRADESH	WS	WS	WS	FWS	FWS	FWS	FWS
20	EAST MADHYA PRADESH	FWS	WS	WS	FWS	FWS	SCT	SCT
21	GUJARAT REGION	SCT	SCT	SCT	SCT	FWS	WS	WS
22	SAURASHTRA & KUTCH	SCT	SCT	SCT	ISOL	SCT	SCT	SCT
23	KONKAN & GOA	WS	WS	WS	WS	WS	WS	WS
24	MADHYA MAHARASHTRA	SCT	SCT	FWS	FWS	FWS	FWS	FWS
25	MARATHAWADA	SCT	ISOL	ISOL	SCT	SCT	SCT	SCT
26	VIDARBHA	WS	WS	WS	FWS	FWS	FWS	FWS
27	CHHATTISGARH	FWS	FWS	FWS	FWS	FWS	FWS	FWS
28	COASTAL ANDHRA PRADESH & YANAM	FWS	FWS	SCT	SCT	SCT	FWS	FWS
29	TELANGANA	FWS	FWS	FWS	FWS	FWS	FWS	FWS
30	RAYALASEEMA	SCT	SCT	SCT	SCT	SCT	ISOL	ISOL
31	TAMILNADU PUDUCHERRY & KARAIKAL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
32	COASTAL KARNATAKA	WS	WS	WS	WS	WS	WS	WS
33	NORTH INTERIOR KARNATAKA	SCT	FWS	FWS	FWS	SCT	SCT	SCT
34	SOUTH INTERIOR KARNATAKA	WS	WS	WS	WS	SCT	SCT	SCT
35	KERALA & MAHE	WS	WS	WS	FWS	SCT	SCT	SCT
36	LAKSHADWEEP	WS	WS	WS	WS	FWS	SCT	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

\* 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)

Fig. 1: Maximum Temperatures Dated 11.07.2023

Fig. 2: Departure of Maximum Temp. Dated 11.07.2023

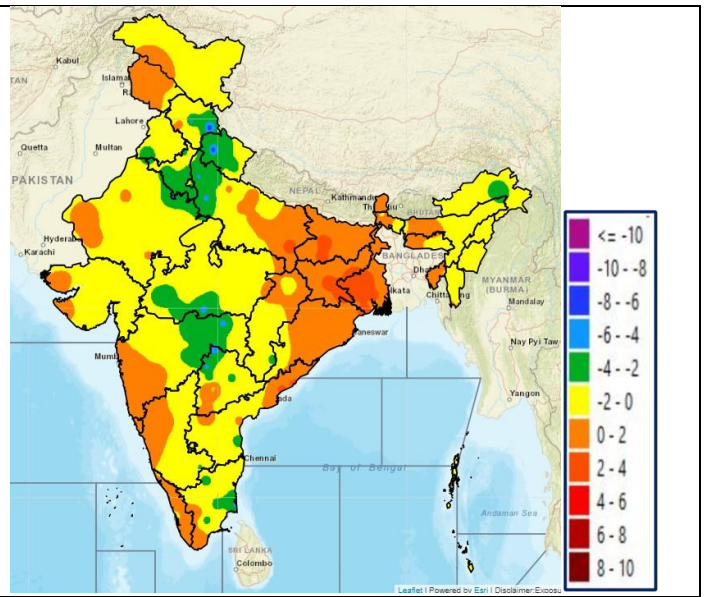
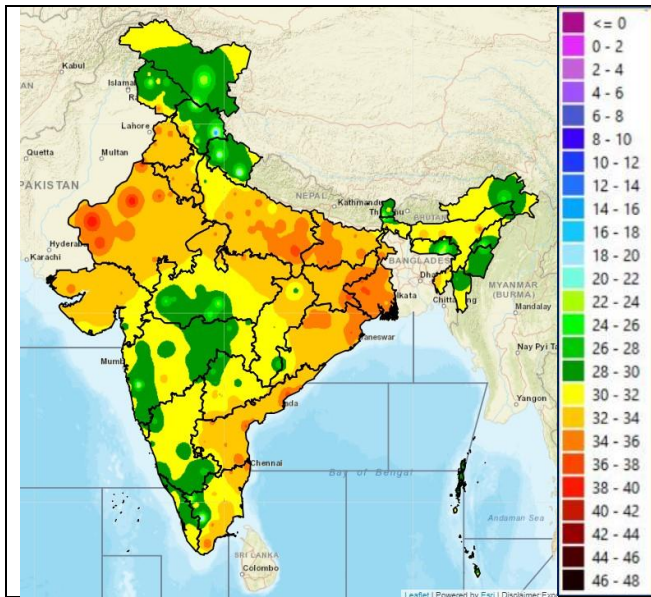


Fig. 3: Minimum Temperatures Dated 11.07.2023

Fig. 4: Departure of Minimum Temp. Dated 11.07.2023

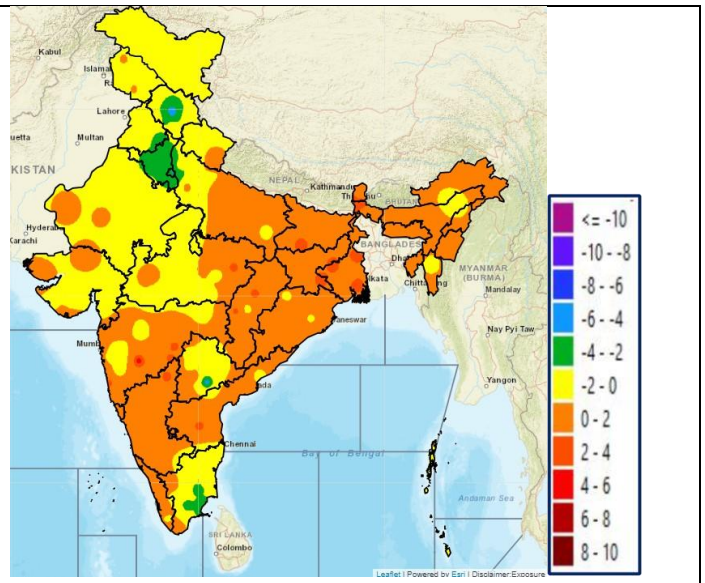
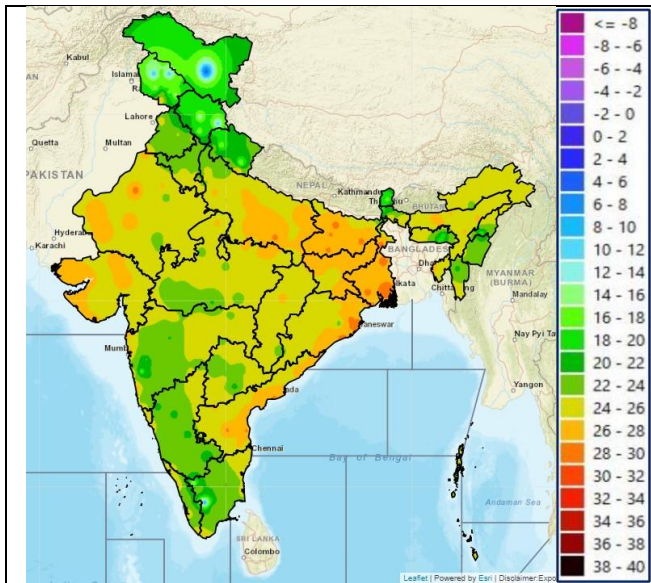
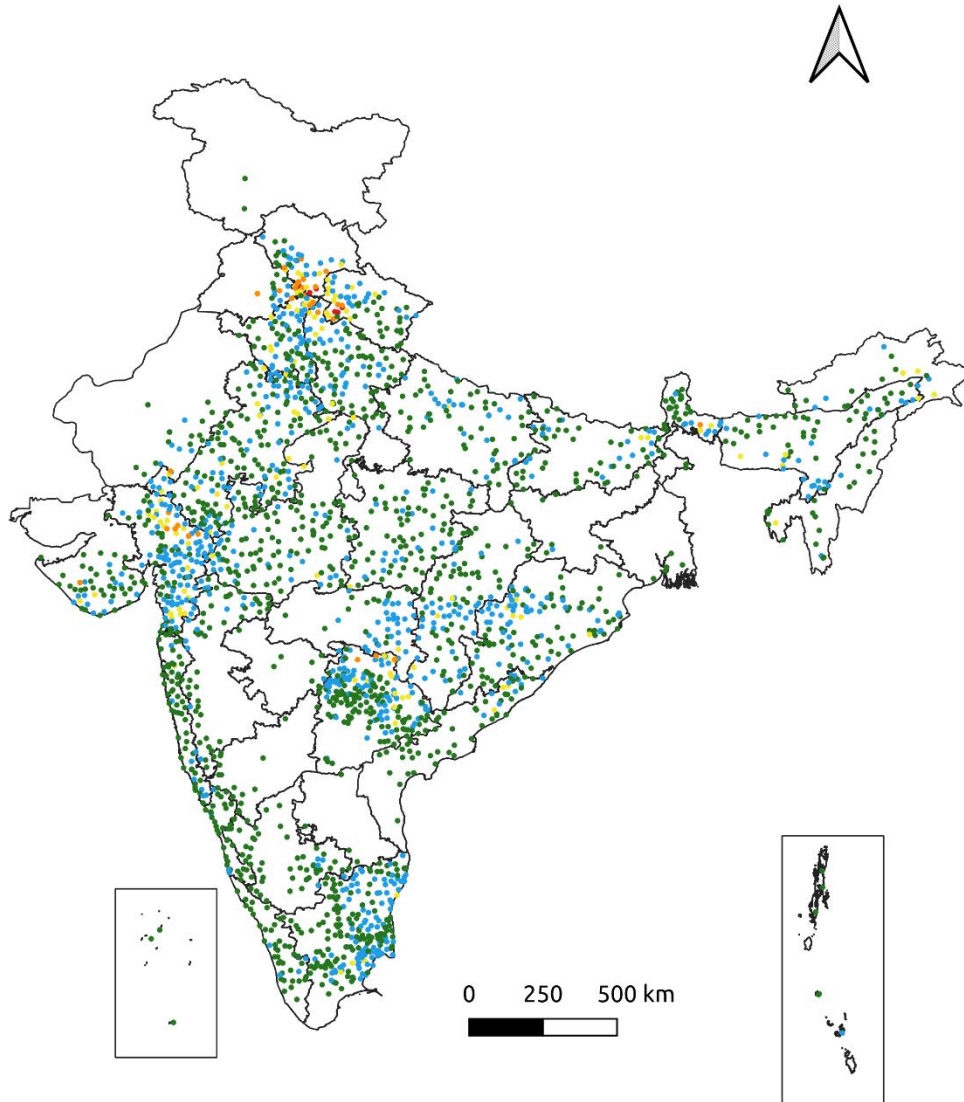


Fig. 5: Accumulated Rainfall (mm) during past 24 hours

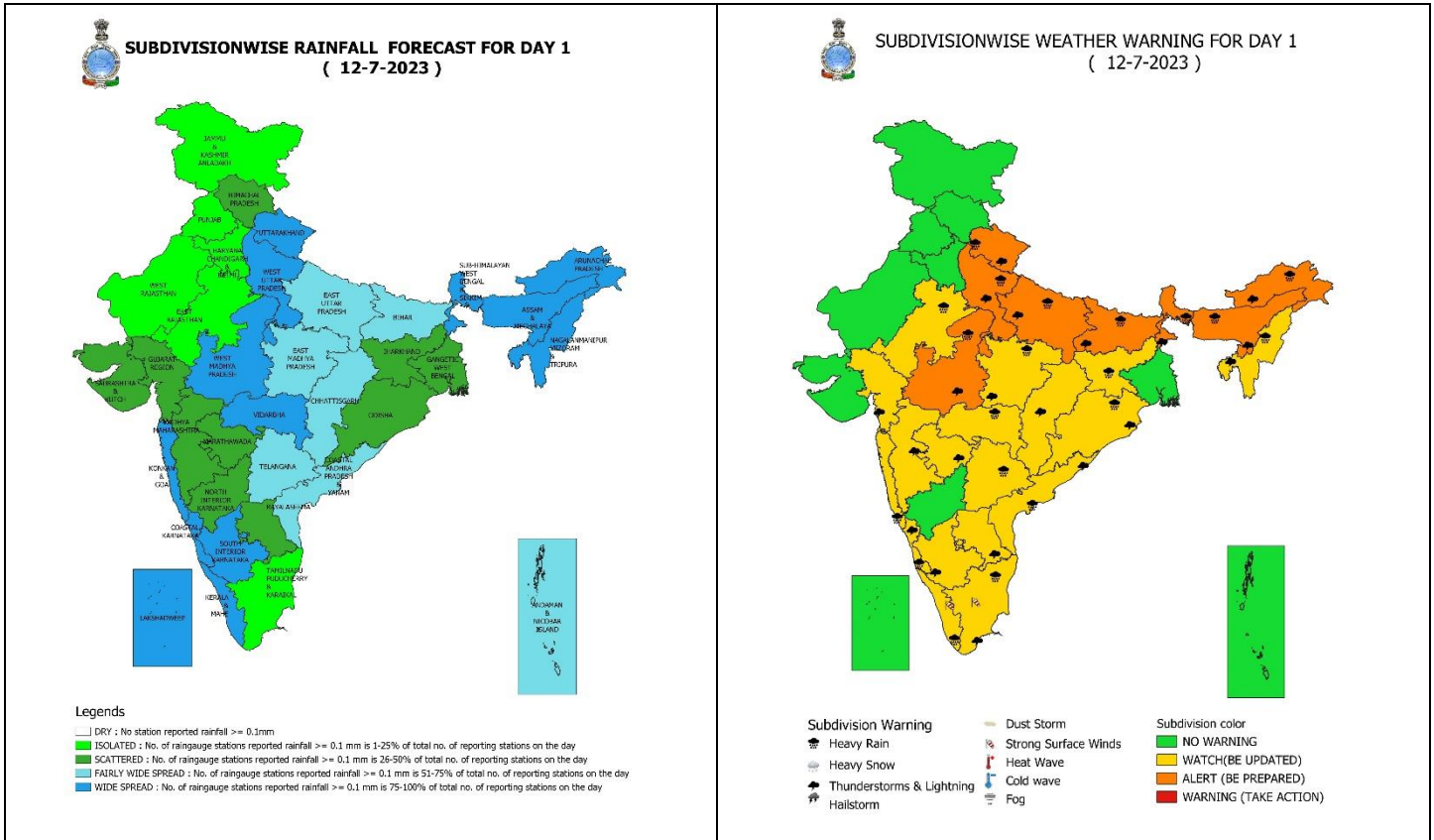


24 Hr cumulative rainfall recorded over different stations  
during 0830 IST of 10-7-2023 to 0830 IST of 11-7-2023



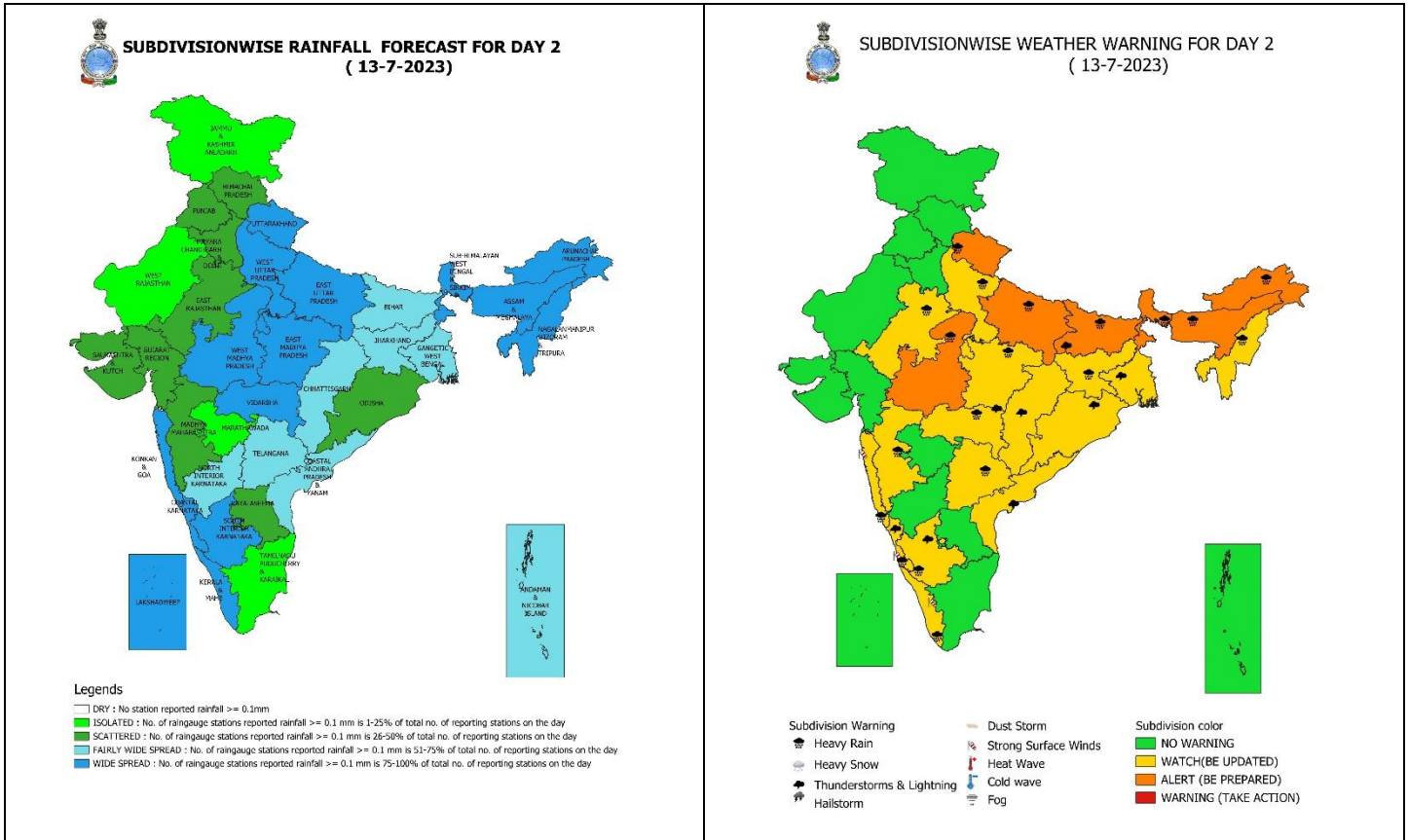
## Legends

- 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)



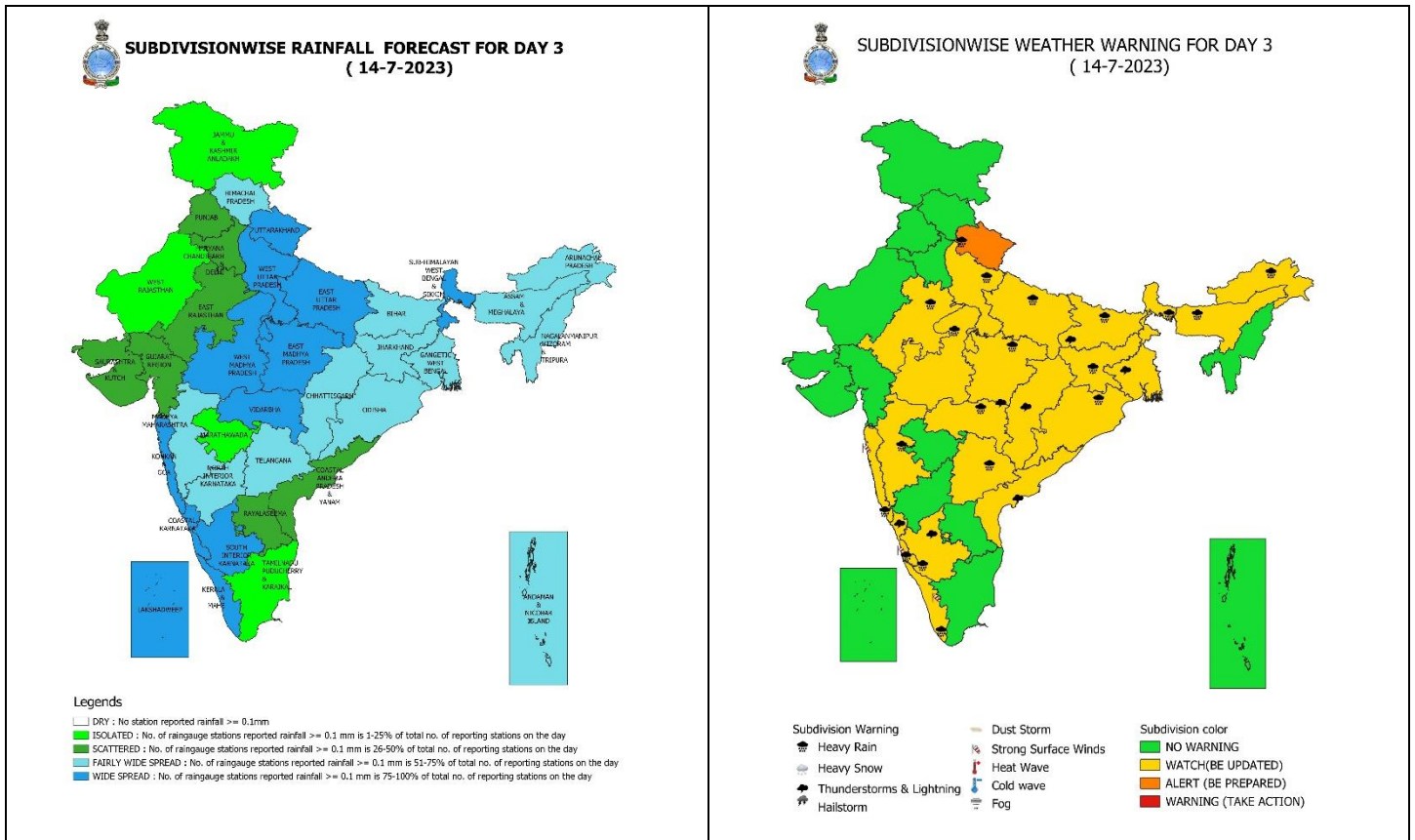
**12 July (Day 1):**

- ❖ **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, Uttar Pradesh, Bihar, West Madhya Pradesh; **heavy rainfall** at isolated places over Nagaland, Manipur, Mizoram & Tripura, 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, Gujarat region, 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.



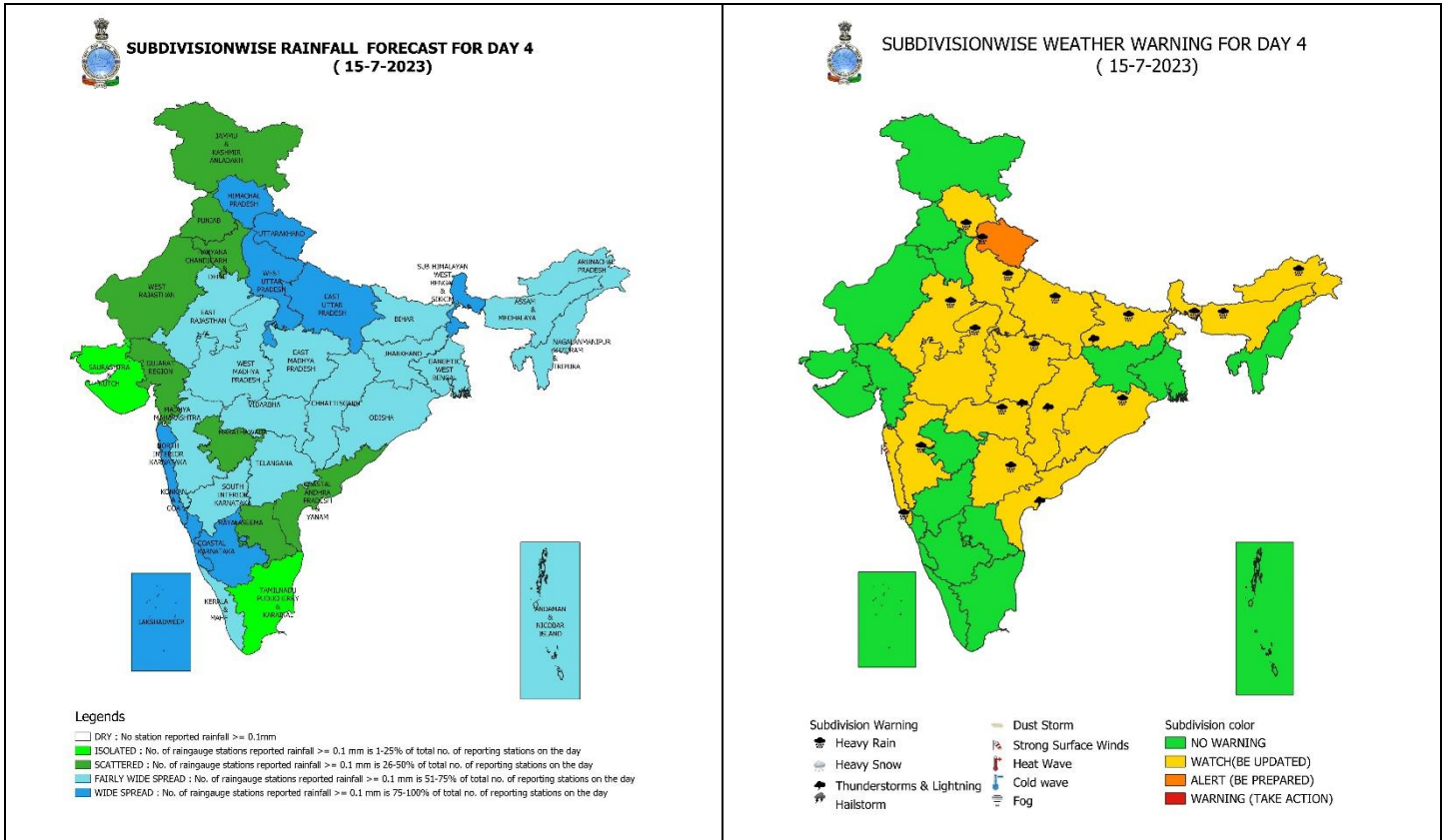
**13 July (Day 2):**

- ❖ **Heavy to very heavy rainfall** likely at isolated places over Uttarakhand, Bihar, East Uttar Pradesh, West Madhya Pradesh, Sub-Himalaya West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya; **heavy rainfall** at isolated places over West Uttar Pradesh, 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.



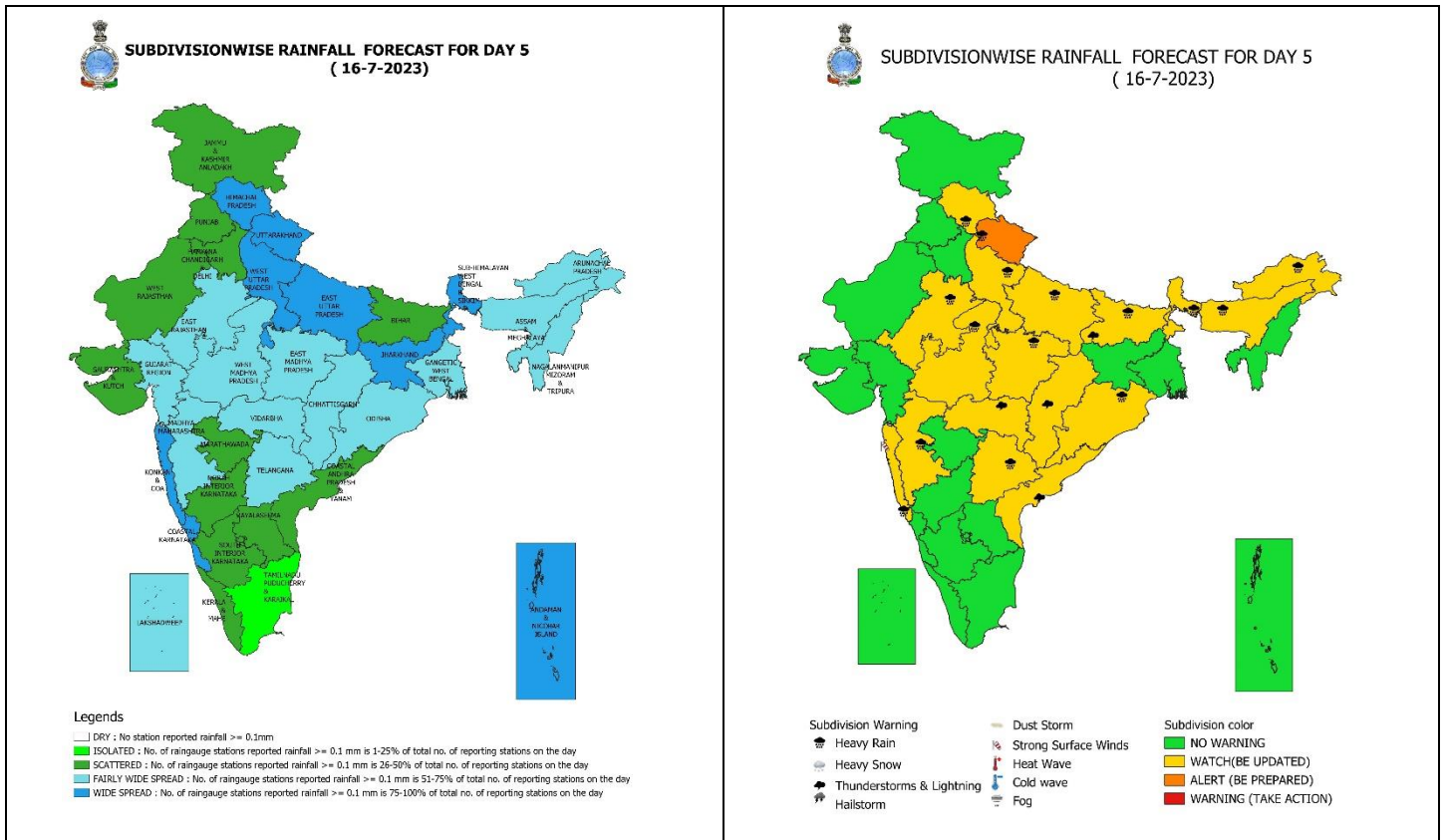
### 14 July (Day 3):

- ❖ **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 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, 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.

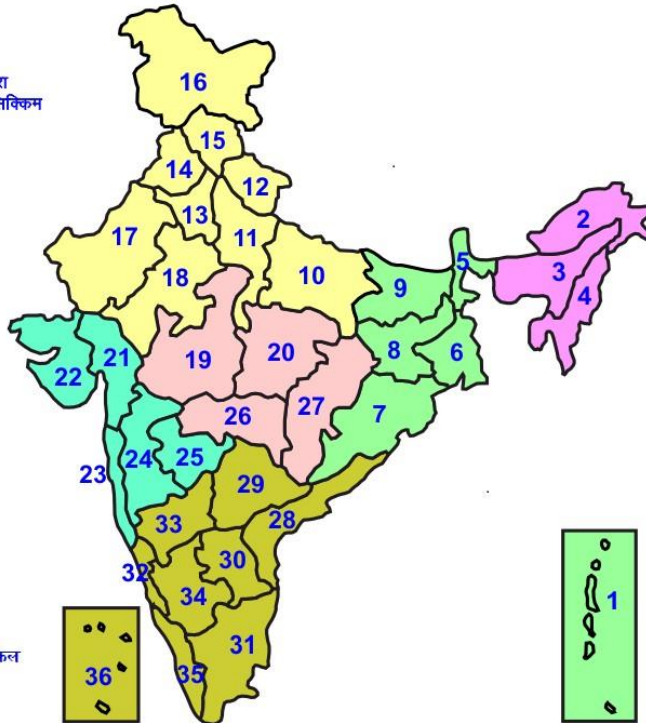


## 16 July (Day 5):

- ❖ **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)

\* 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)