



Monday, July 10, 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 Low Pressure Area lies over southwest Rajasthan & neighbourhood.
- ❖ A Western Disturbance in lower & mid-tropospheric westerlies runs from north Pakistan to northeast Arabian Sea.
- ❖ The off-shore trough at mean sea level runs from south Gujarat 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 Western Himalayan Region, Punjab, Haryana-Chandigarh-Delhi, Rajasthan on 10th and Uttar Pradesh during next 5 days. **Isolated heavy to very heavy rainfall likely over Uttar Pradesh during 10th-13th July.**

West India: Light/moderate widespread rainfall with **isolated heavy rainfall** very likely to continue over Konkan & Goa, ghat areas of Madhya Maharashtra and Gujarat state during next 2 days and decrease thereafter.

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 during next 5 days. **Isolated heavy rainfall** likely over Odisha during next 5 days; Jharkhand during 10th-12th; Andaman & Nicobar Islands on 10th July and **isolated heavy to very heavy rainfall** over Bihar during 11th-13th 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 heavy to very heavy rainfall likely over West Madhya Pradesh on 10th July.**

South India: Light/moderate widespread rainfall with **isolated heavy rainfall** very likely to over Coastal Karnataka and Kerala during next 5 days.

No significant weather likely over rest parts of the country.



Main Weather Observations

- ❖ **Rainfall/thundershowers observed** (from 0830 hours IST to 1730 hours IST of yesterday): **at most places** over Himachal Pradesh, Uttarakhand, Haryana-Chandigarh-Delhi, Gujarat state, Konkan & Goa, Coastal Karnataka; **at many places** over East Rajasthan, East Madhya Pradesh, Madhya Maharashtra, South Interior Karnataka, Arunachal Pradesh, Andaman & Nicobar Islands, Punjab; **at a few places** over West Uttar Pradesh, West Madhya Pradesh, Jharkhand, North Interior Karnataka, Sub-Himalaya West Bengal & Sikkim and **at isolated places** over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, East Uttar Pradesh, West Rajasthan, Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Chhattisgarh, Lakshadweep, Vidarbha.
- ❖ **Heavy Rainfall observed** (from 0830 hours IST to 1730 hours IST of yesterday): **Heavy rainfall** at isolated places over Himachal Pradesh, Punjab and Delhi.
- ❖ **Significant rainfall recorded (from 0830 hours IST to 1730 hours IST of yesterday) (in cm): Himachal Pradesh:** Una-11, Nahan-9, Shimla & Mandi-6 each, Dharamshala, Shimla & Sundernagar-5 each; **Delhi:** Palam-11, Delhi-Ridge-7, Delhi-Ayanagar-4; **West Uttar Pradesh:** Meerut-6, Jhansi-4; **Punjab:** Patiala-7 and Ambala-4; **Uttarakhand:** Dehradun-4; **East Rajasthan:** Udaipur-3; **Saurashtra & Kutch:** Keshod & Rajkot-5 each, Naliya-3; **Konkan & Goa:** Dhanu-5; **Madhya Maharashtra:** Nadurbar-3; **Odisha:** Chandbali-5; **Andaman & Nicobar Islands:** Car Nicobar-6, Hut Bay-3; **East Madhya Pradesh:** Jabalpur-3.
- ❖ **Thunderstorm observed** (from 0830 hours IST of yesterday to 0530 hours IST of today): at isolated places over Haryana-Chandigarh-Delhi, Punjab, West Uttar Pradesh, East Rajasthan, Odisha, Tamil Nadu, Puducherry & Karaikal, Sub-Himalaya West Bengal & Sikkim, Gujarat state, East Madhya Pradesh and Uttarakhand.
- ❖ **Minimum Temperature Departures (as on 09-07-2023):** Minimum temperatures were **above normal (1.6°C to 3.0°C)** at a few places over Marathwada and North Interior Karnataka and at isolated places over Gangetic West Bengal, Bihar, Odisha, East Madhya Pradesh and Coastal Andhra Pradesh & Yanam. They were **appreciably below normal (-3.1°C to -5.0°C)** at many places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; **below normal (-1.6°C to -3.0°C)** at most places Punjab and Coastal Karnataka; at many places over Himachal Pradesh, Haryana-Chandigarh-Delhi and West Rajasthan and at isolated places over Vidarbha, Telangana, Saurashtra & Kutch and Tamil Nadu, Puducherry & Karaikal and **near normal** over rest parts of the country. Yesterday, **the lowest minimum temperature of 19.9°C** was reported at **Malanjkhanda (East Madhya Pradesh)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 09-07-2023):** Maximum temperatures were **above normal (1.6°C to 3.0°C)** at most places over Sub-Himalaya West Bengal & Sikkim, Coastal Andhra Pradesh & Yanam, Gangetic West Bengal; at many places over Rayalaseema, Tamil Nadu, Puducherry & Karaikal; at a few places over East Uttar Pradesh, Bihar, Jharkhand, Odisha, Chhattisgarh; at isolated places over Kerala & Mahe. They were **markedly below normal (-5.1°C or less)** at most places over Himachal Pradesh, Punjab, Haryana-Chandigarh-Delhi; at many places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; at a few places over West Uttar Pradesh, West Rajasthan; at isolated places over East Madhya Pradesh, Uttarakhand, Saurashtra & Kutch; **appreciably below normal (-3.1°C to -5.0°C)** at most places over East Rajasthan; at many places over Gujarat Region, West Madhya Pradesh; **below normal (-1.6°C to -3.0°C)** at isolated places over Vidarbha & Andaman & Nicobar Islands and **near normal** over rest parts of the country. Yesterday, **the highest maximum temperature of 40.0°C** was reported at **Madurai (Tamil Nadu)**.



Meteorological Analysis (Based on 0530 hours IST)

- ❖ The **Low Pressure Area** over southwest Rajasthan & neighbourhood with the associated cyclonic circulation extending upto 3.1 km above mean sea level persists.
- ❖ The Monsoon Trough at mean sea level now passes through the centre of Low Pressure Area over southwest Rajasthan & neighbourhood, Kota, Satna, Daltonganj, Bankura and thence eastwards to Manipur and extends upto 1.5 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 now runs roughly from Lat. 37°N./ Long. 68°E to Lat. 26°N./ Long. 65°E.
- ❖ The off-shore trough at mean sea level from south Gujarat coast to north Kerala coast persists.

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

Legend	Category	% Stations
WS	Widespread/Most Places	76-100
FWS	Fairly Widespread/Many places	51-75
SCT	Scattered/ A Few Places	26-50
ISOL	Isolated Places	1-25
DRY	No Rain	0

* 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 09.07.2023

Fig. 2: Departure of Maximum Temp. Dated 09.07.2023

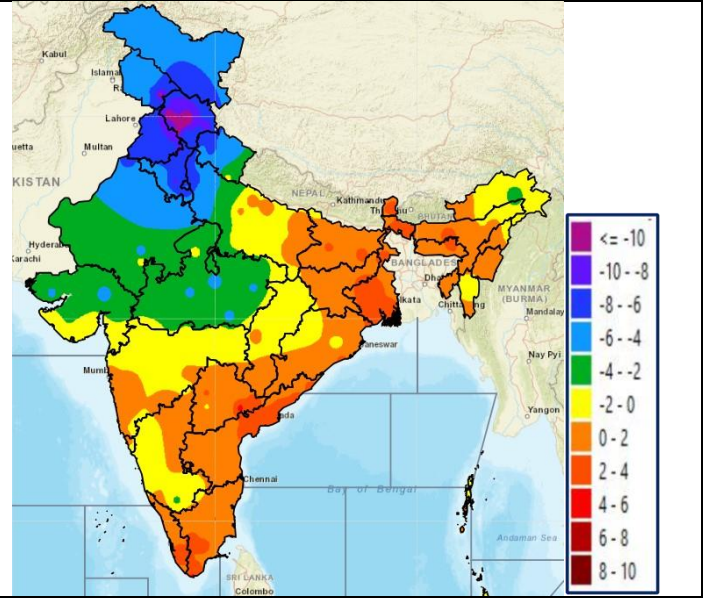
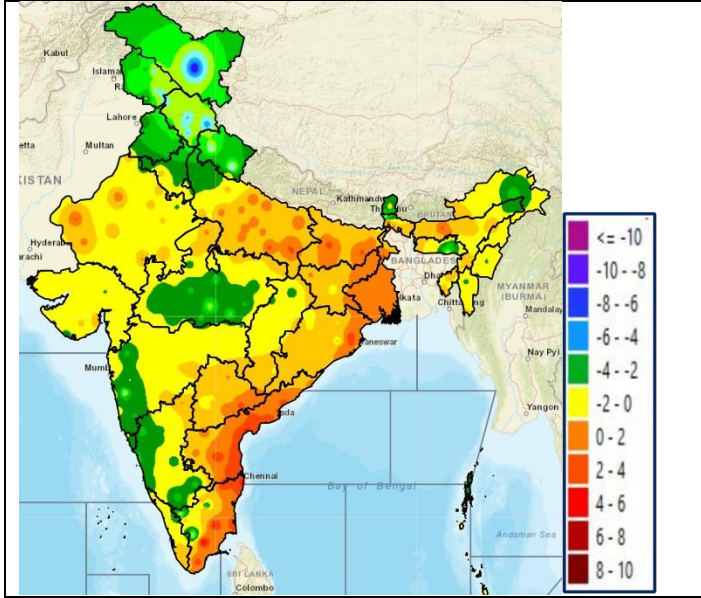


Fig. 3: Minimum Temperatures Dated 09.07.2023

Fig. 4: Departure of Minimum Temp. Dated 09.07.2023

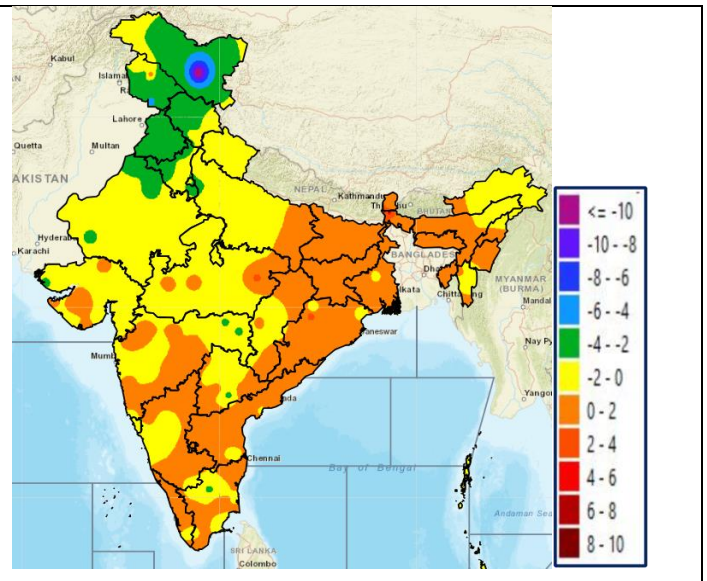
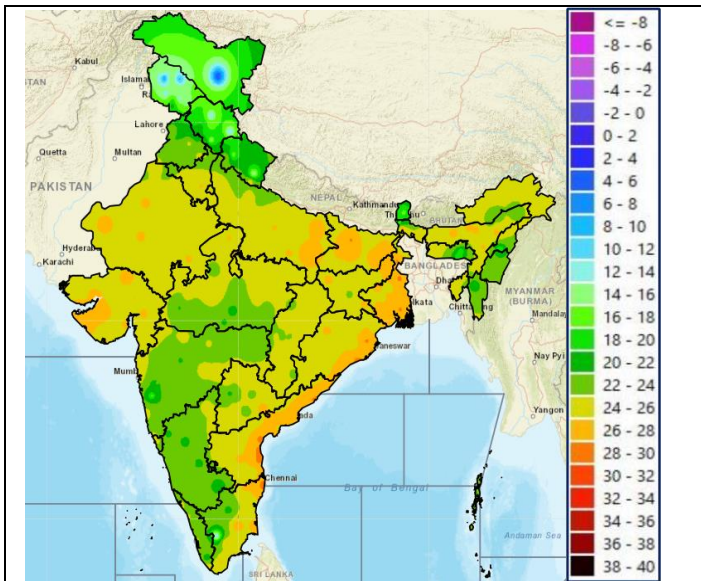
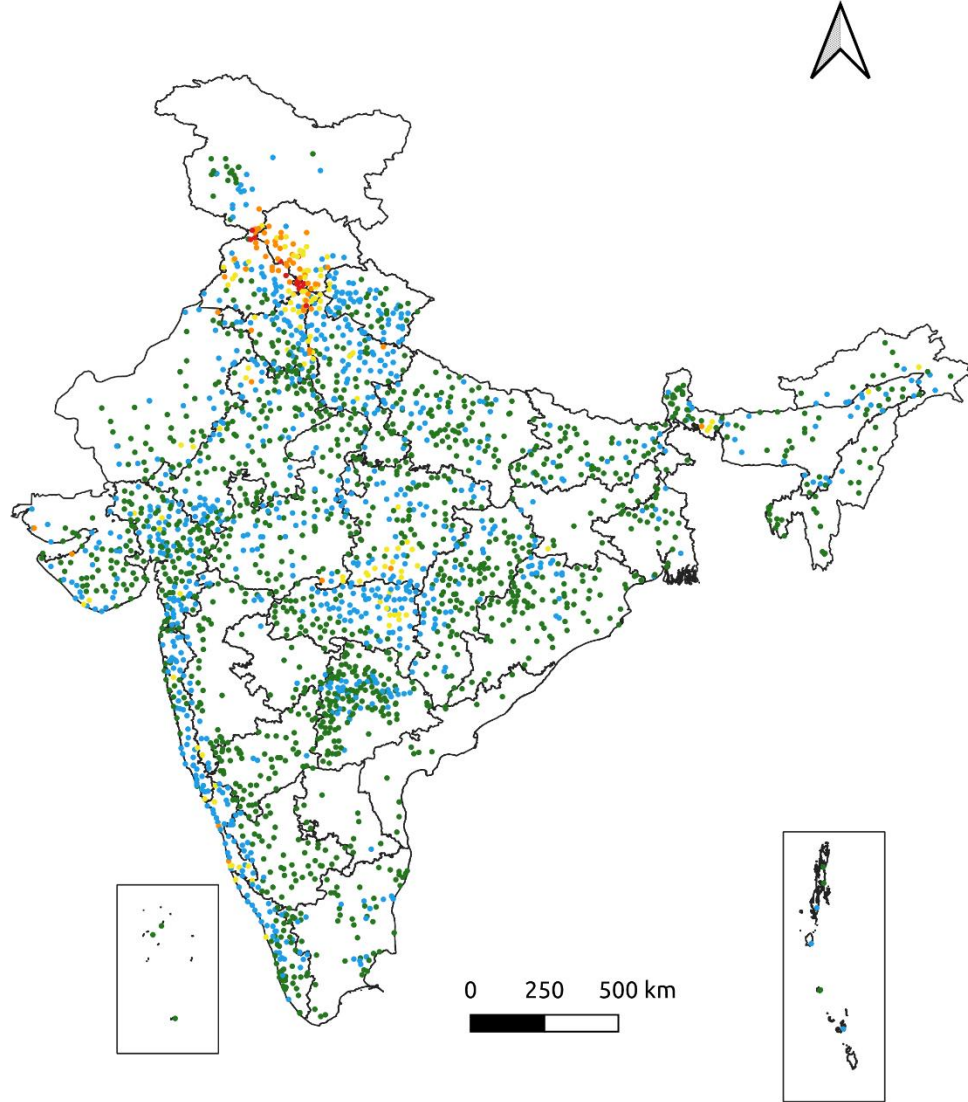


Fig. 5: Accumulated Rainfall (mm) during past 24 hours

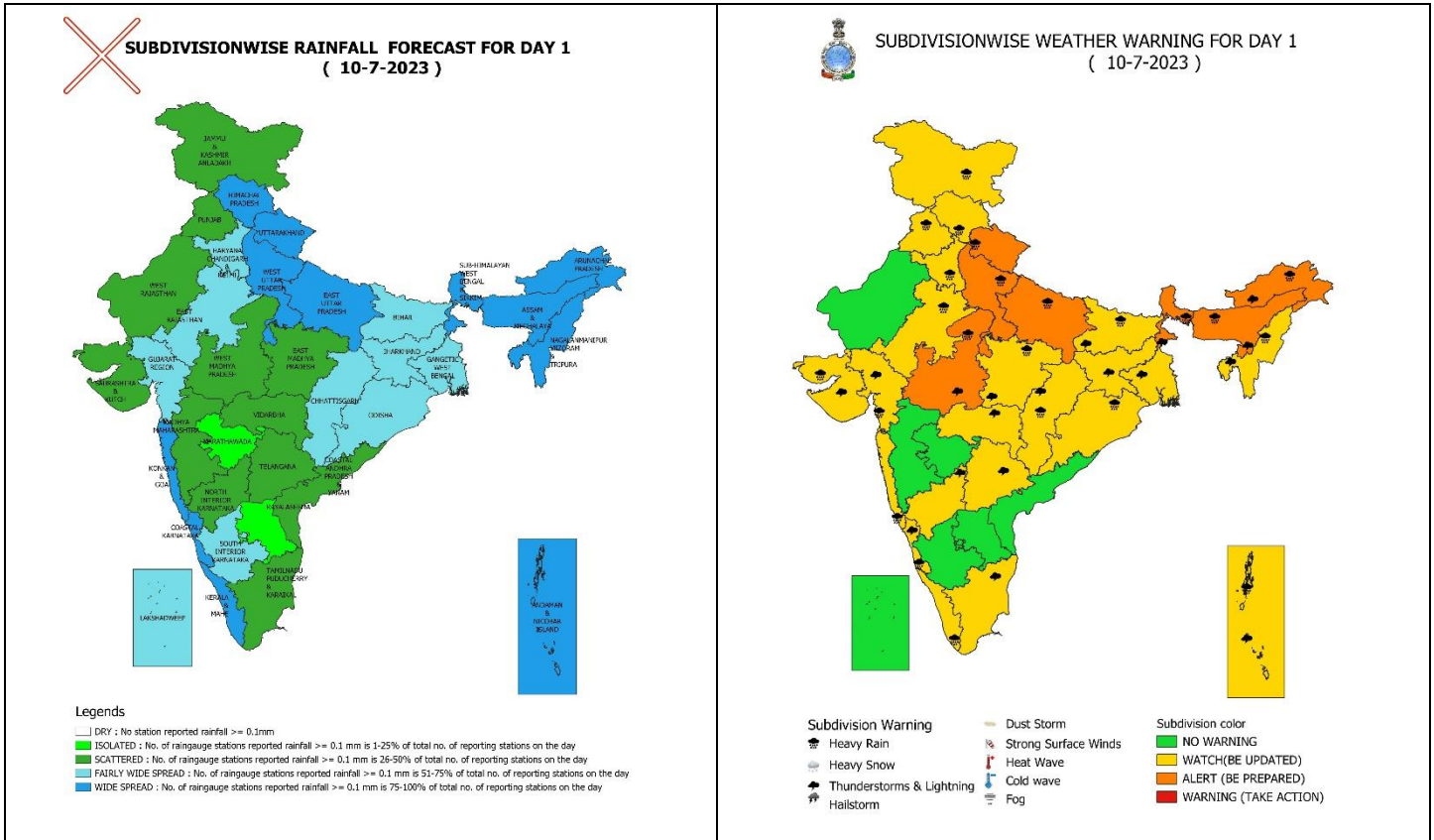


24 Hr cumulative rainfall recorded over different stations during 0830 IST of 8-7-2023 to 0830 IST of 9-7-2023



Legends

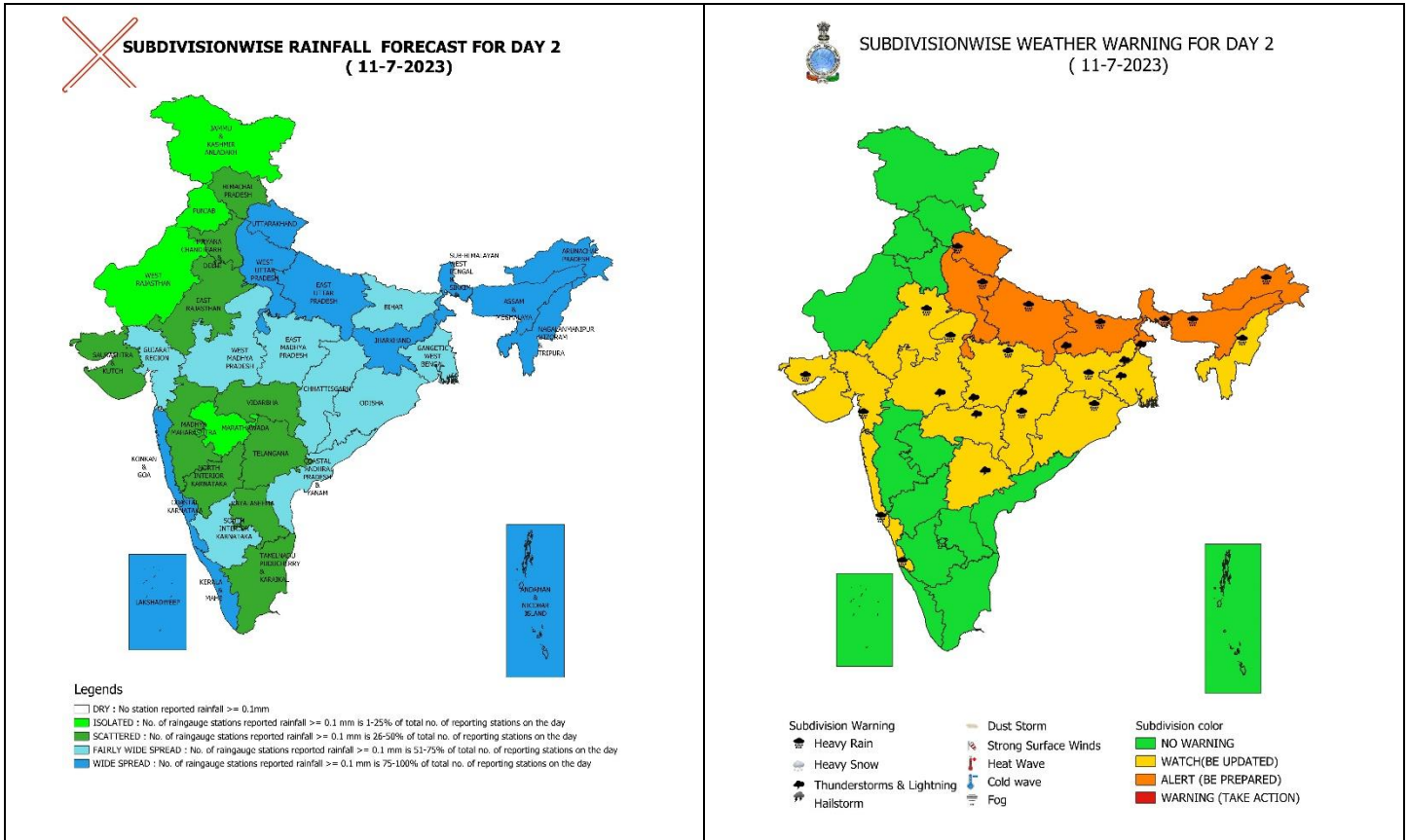
- Very Light to Light Rainfall (0.1 - 15.5 mm)
- Moderate Rainfall (15.6 - 64.4 mm)
- Heavy Rainfall (64.5 - 115.5 mm)
- Very Heavy Rainfall (115.6 - 204.4 mm)
- Extremely Heavy Rainfall (≥ 204.5 mm)



10 July (Day 1):

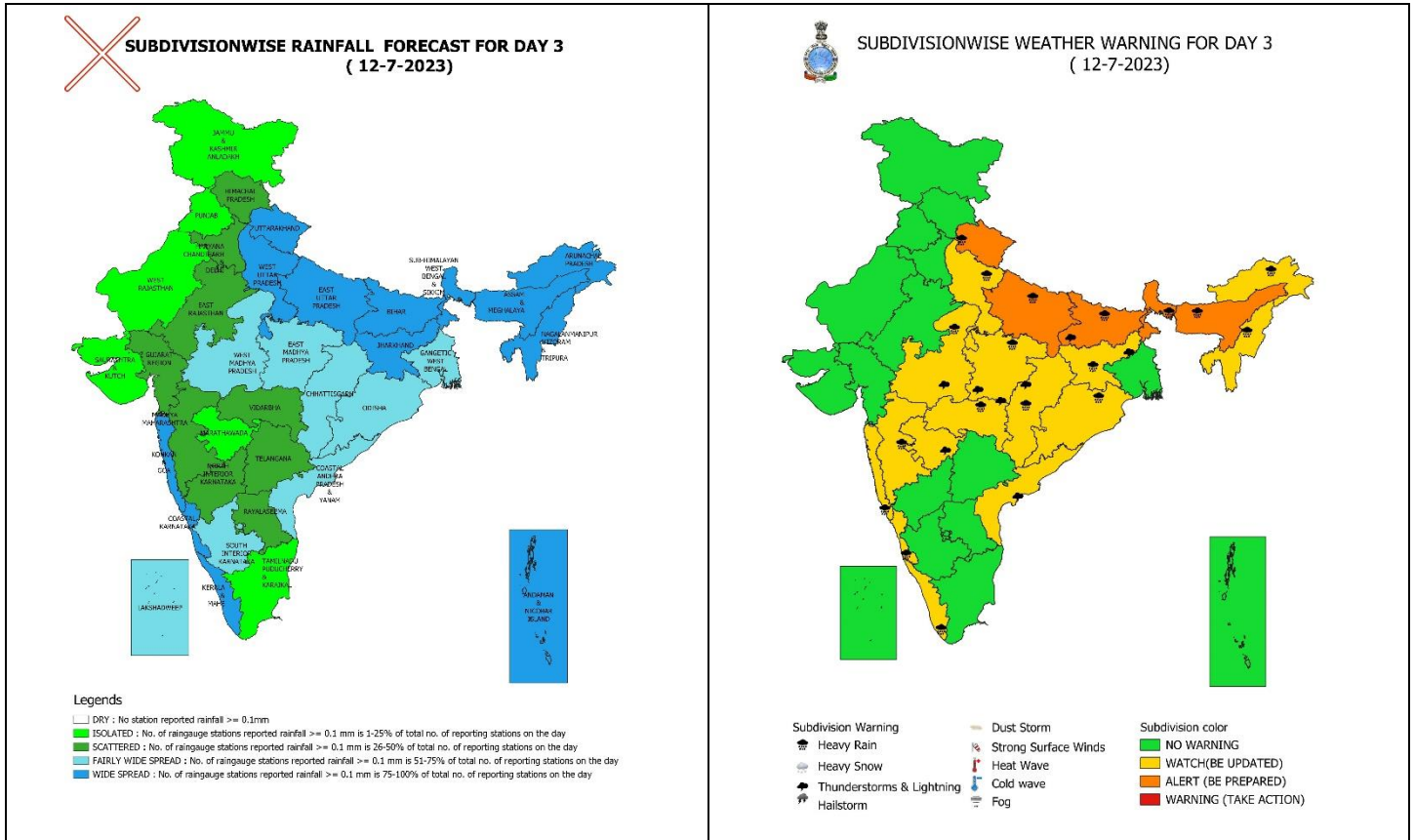
- ❖ **Heavy to very heavy rainfall** very likely at isolated places over Uttarakhand, Uttar Pradesh, Arunachal Pradesh, West Madhya Pradesh, Assam & Meghalaya, Gujarat Region, Sub-Himalaya West Bengal & Sikkim; **heavy rainfall** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Punjab, Haryana, East Rajasthan, East Madhya Pradesh, Chhattisgarh, Nagaland, Manipur, Mizoram & Tripura, Andaman & Nicobar Islands, Odisha, Bihar, Saurashtra & Kutch, Coastal Karnataka, Kerala & Mahe and Konkan & Goa.
- ❖ **Thunderstorm with lightning** very likely at isolated places over Andaman & Nicobar Islands, West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gujarat State, Bihar, Jharkhand, Madhya Pradesh, Vidarbha, Chhattisgarh, Telangana, Coastal & North Interior Karnataka and Tamil Nadu, Puducherry & Karaikal.

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. Fishermen are advised not to venture into these areas.



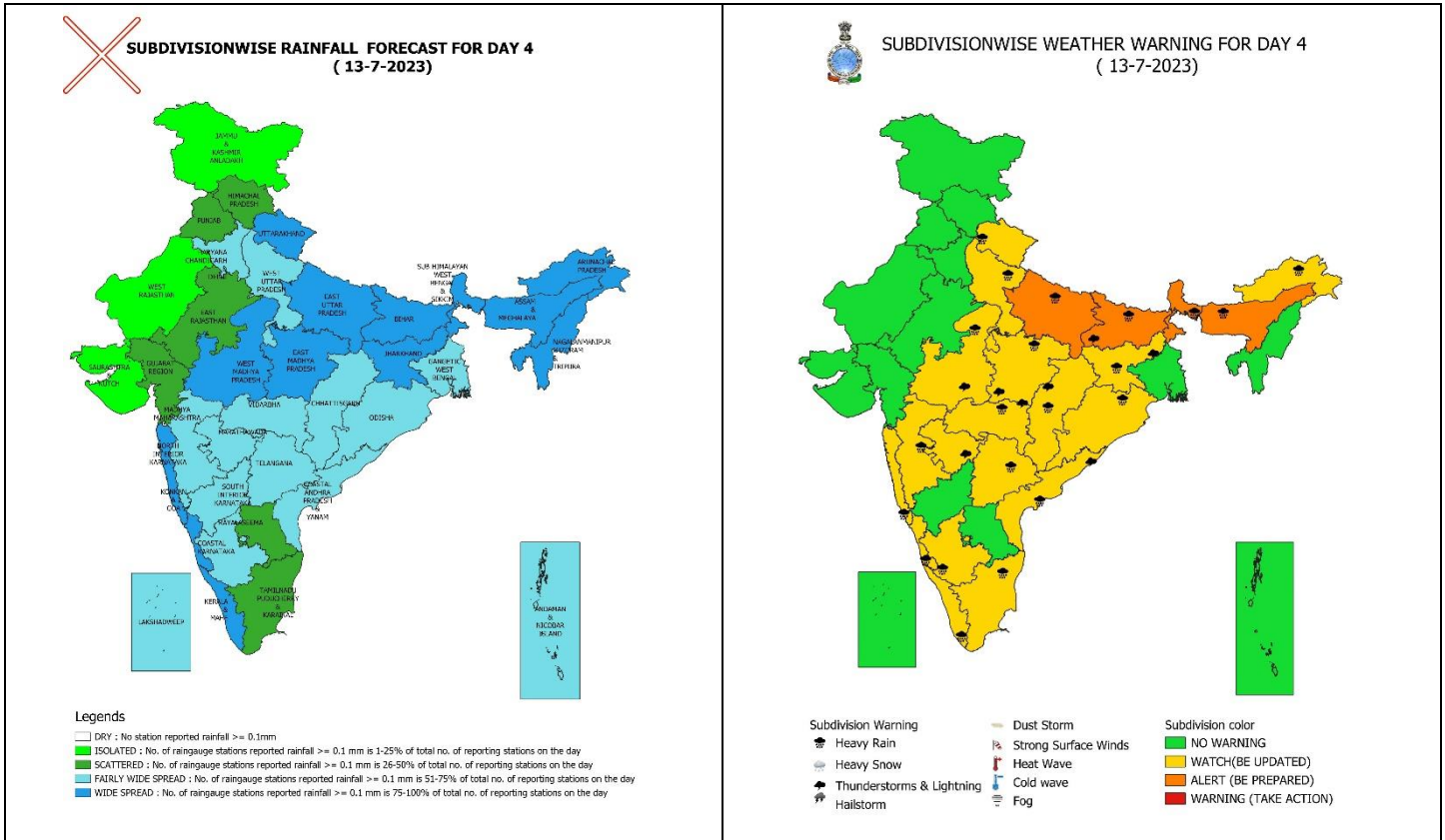
11 July (Day 2):

- ❖ **Heavy to very heavy rainfall with extremely heavy falls** very likely at isolated places over Sub-Himalaya West Bengal & Sikkim; **Heavy to very heavy rainfall** at isolated places over Uttarakhand, Uttar Pradesh, Arunachal Pradesh, Assam & Meghalaya and Bihar; **heavy rainfall** at isolated places over Nagaland, Manipur, Mizoram & Tripura, Odisha, East Rajasthan, Chhattisgarh, Jharkhand, Madhya Pradesh, Konkan & Goa and Gujarat State and Coastal Karnataka.
- ❖ **Thunderstorm with lightning** likely at isolated places over Madhya Pradesh, West Bengal & Sikkim, Bihar, Jharkhand, Vidarbha, Chhattisgarh and Telangana.
- ❖ **Squally wind** speed reaching 45-55 kmph gusting to 65 kmph likely over Westcentral & Southwest and adjoining parts of Eastcentral Arabian Sea. Fishermen are advised not to venture into these areas.



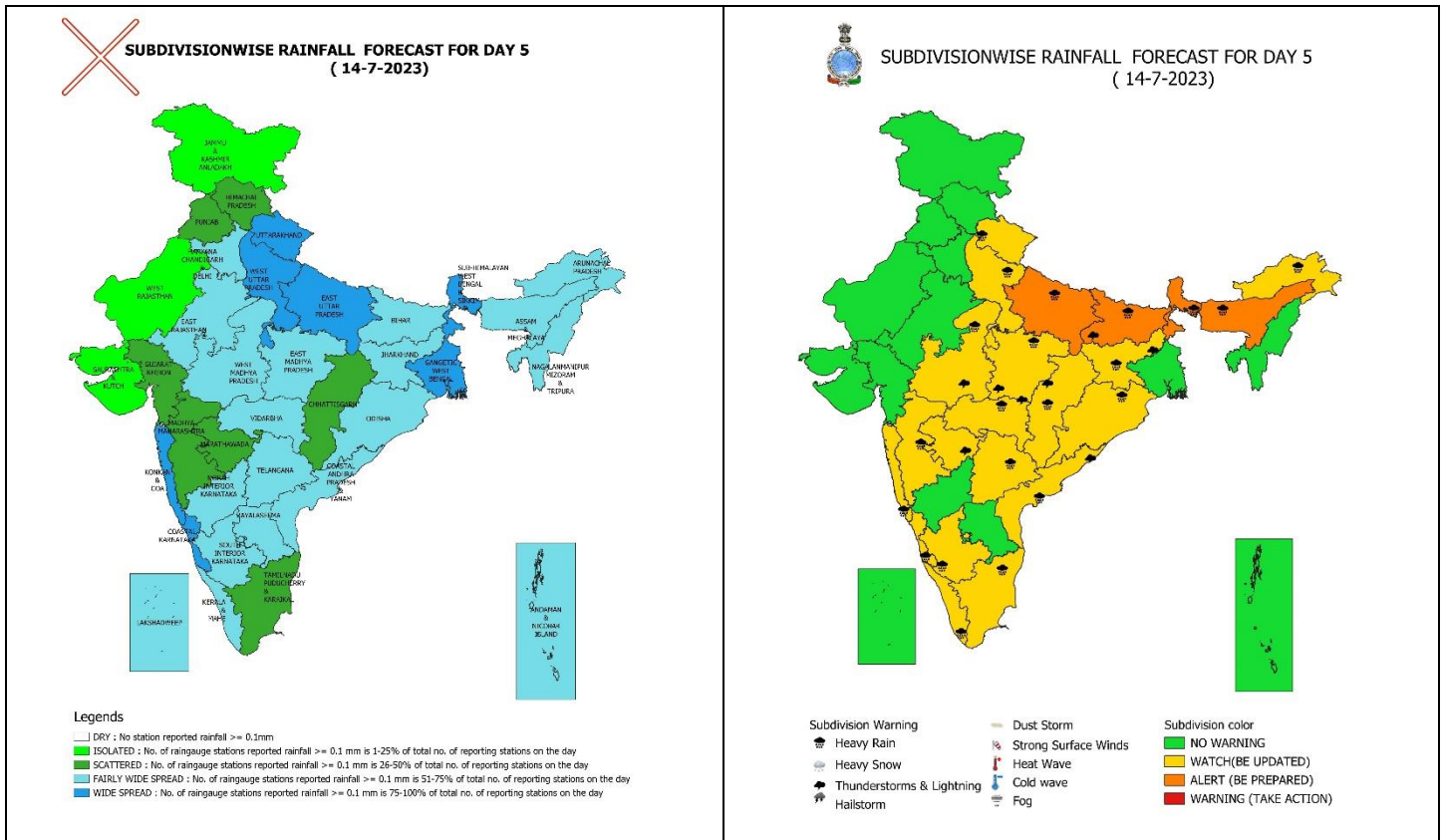
12 July (Day 3):

- ❖ **Heavy to very heavy rainfall** likely at isolated places over Uttarakhand, Assam & Meghalaya, Sub-Himalaya West Bengal & Sikkim, Bihar and East Uttar Pradesh; **heavy rainfall** at isolated places over Arunachal Pradesh, West Uttar Pradesh, Madhya Pradesh, Jharkhand, Odisha, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Coastal Karnataka, Kerala & Mahe, Madhya Maharashtra, Vidarbha and Chhattisgarh.
- ❖ **Thunderstorm with lightning** likely at isolated places over Marathwada, Coastal Andhra Pradesh & Yanam, Bihar, Jharkhand, Vidarbha, Chhattisgarh and Madhya Pradesh.
- ❖ **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 Kerala-Karnataka-south Maharashtra coasts and Westcentral & adjoining Southwest Bay of Bengal. Fishermen are advised not to venture into these areas.



13 July (Day 4):

- ❖ **Heavy to very heavy rainfall** likely at isolated places over East Uttar Pradesh, Sub-Himalaya West Bengal & Sikkim, Bihar, Konkan & Goa and Assam & Meghalaya; **heavy rainfall** at isolated places over Uttarakhand, West Uttar Pradesh, Madhya Pradesh, Vidarbha, Chhattisgarh, Jharkhand, Odisha, Arunachal Pradesh, Madhya Maharashtra, Coastal Andhra Pradesh & Yanam, Telangana, Coastal & South Interior Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- ❖ **Thunderstorm with lightning** likely at isolated places over Marathwada and Coastal Andhra Pradesh & Yanam, Bihar, Jharkhand, Vidarbha, Chhattisgarh and Madhya Pradesh.
- ❖ **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 Kerala-Karnataka-south Maharashtra coasts & Lakshadweep area and Westcentral, Southwest & adjoining Eastcentral, Southeast Bay of Bengal. Fishermen are advised not to venture into these areas.



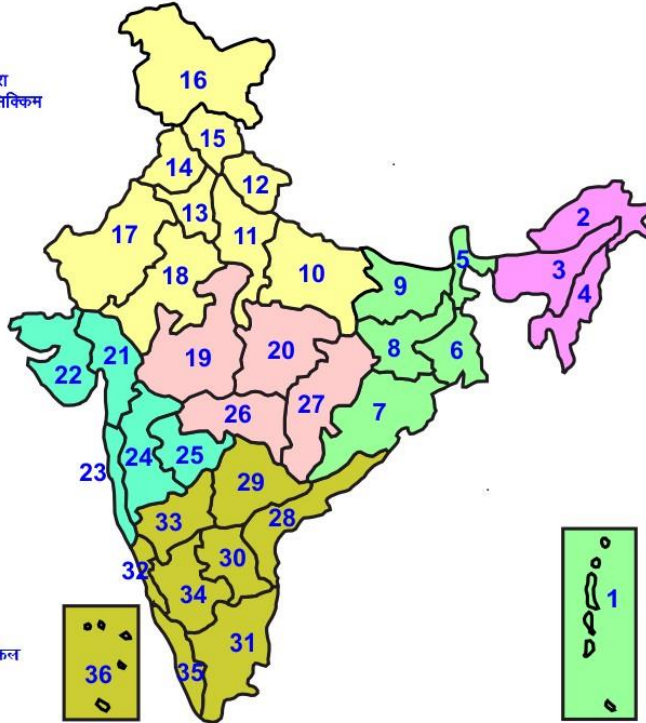
14 July (Day 5):

- ❖ **Heavy to very heavy rainfall** likely at isolated places over East Uttar Pradesh, Sub-Himalaya West Bengal & Sikkim, Bihar, Konkan & Goa and Assam & Meghalaya; **heavy rainfall** at isolated places over Uttarakhand, West Uttar Pradesh, Madhya Pradesh, Vidarbha, Chhattisgarh, Jharkhand, Odisha, Arunachal Pradesh, Madhya Maharashtra, Coastal Andhra Pradesh & Yanam, Telangana, Coastal & South Interior Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- ❖ **Thunderstorm with lightning** likely at isolated places over Marathwada and Coastal Andhra Pradesh & Yanam, Bihar, Jharkhand, Vidarbha, Chhattisgarh and Madhya Pradesh.
- ❖ **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 Kerala-Karnataka-south Maharashtra coasts & Lakshadweep area and Westcentral, Southwest & adjoining Eastcentral, Southeast Bay of Bengal. 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

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 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

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