



Thursday, June 29, 2023
Time of Issue: 0830 hours IST
(MORNING)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features

Advance of Southwest Monsoon:

- ❖ The Northern Limit of Monsoon (NLM) continues to pass through Lat. 29.4°N/ Long. 70.7°E, Bikaner, Narnaul, Firozpur and Lat. 32.5°N/ Long. 72.5°E.
- ❖ Conditions are favourable for further advance of Southwest Monsoon into remaining parts of the country (i.e., remaining parts of Rajasthan and Haryana and Punjab) during next 2 days.

Weather Forecast and Warning due to strengthening of the Southwest Monsoon Flow over the Indian subcontinent:

Northwest India:

- ❖ Light/moderate fairly widespread to widespread rainfall with isolated **heavy rainfall** very likely over Uttar Pradesh, Rajasthan, Himachal Pradesh, Uttarakhand, Haryana during next 2 days. Isolated **Heavy to Very Heavy rainfall** very likely over East Rajasthan on 29th & 30th June and Uttarakhand on 29th June.

Central India:

- ❖ Light/moderate fairly widespread to widespread rainfall with isolated **heavy falls** with thunderstorm & lightning over Madhya Pradesh during next 2 days. Isolated **very heavy rainfall** very likely over West Madhya Pradesh on 29th & 30th June.

West India:

- ❖ Light/moderate fairly widespread to widespread rainfall with isolated **Heavy to very Heavy rainfall** is very likely over Konkan & Goa, Gujarat State and Ghat areas of Madhya Maharashtra during next 5 days.

East & adjoining Northeast India:

- ❖ Fairly widespread to widespread light/moderate rainfall with isolated **Heavy to Very Heavy falls** very likely over Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Arunachal Pradesh during next 5 days. Isolated **heavy rainfall** also likely over Bihar on 29th & 30th June.

South India:

- ❖ Light/moderate scattered to fairly widespread rainfall very likely over Kerala & Mahe, Coastal & South Interior Karnataka during next 5 days. **Isolated heavy rainfall** also likely over Coastal Karnataka during next 5 days; Kerala on 29th June, 02nd & 03rd July, South Interior Karnataka on 02nd & 03rd July.

Main Weather Observations

- ❖ **Rainfall/thundershowers observed** (from 0830 hours IST to 1730 hours IST of yesterday): **at most places** over Jharkhand, East Madhya Pradesh and Konkan & Goa; **at many places** over Andaman & Nicobar Islands, Assam & Meghalaya, Saurashtra & Kutch, West Bengal & Sikkim, Bihar, Marathwada and Coastal Karnataka; **at a few places** over Arunachal Pradesh, Haryana-Chandigarh-Delhi, East Uttar Pradesh, West Madhya Pradesh and Kerala & Mahe and **at isolated places** over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Rajasthan, Gujarat Region, North & South Interior Karnataka, Telangana and Lakshadweep.
- ❖ **Heavy Rainfall observed** (from 0830 hours IST to 1730 hours IST of yesterday): **Heavy to Very heavy rainfall** at isolated places over Gangetic West Bengal and Konkan; **heavy rainfalls** at isolated places over Saurashtra & Kutch and East Madhya Pradesh.
- ❖ **Significant rainfall recorded (in cm)** (from 0830 hours IST to 1730 hours IST of yesterday)(2cm and more): Dahisar(Konkan)-15; Bhayander (Konkan) 13; Haldia(Gangetic West Bengal -13; Damoh(East Madhya Pradesh) and Colaba & Santacruz(Konkan)-8 each; Diu(Saurashtra & Kutch) and Ram mandir &Dhanu(Konkan)-7 each; Digha, Ratanagiri and Harnai – 6 each; Shimla and Satna- 5 each; Burdwan and Goa- 4each; Shanti Niketan, Diamond Harbour, Bhiwani, Pachmarhi, Mahabaleshwar, Mahuva, Baroda and Bulsar -3 each; Kalim pong, Sagar Islands, Dharmasala, Umaria, Rewa, Bir, Honavar, Contai, Agartala, Shillong and Chindwada -2 each.
- ❖ **Thunderstorm observed** (from 0830 hours IST of yesterday to 0530 hours IST of today): at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Punjab, Haryana, East Uttar Pradesh, Bihar, Jharkhand, Rajasthan, Gangetic West Bengal, Gujarat State, Madhya Pradesh, Chhattisgarh, Nagaland, Manipur, Mizoram & Tripura and Telangana.
- ❖ **Minimum Temperature Departures (as on 28-06-2023):** Minimum temperatures were **above normal (1.6°C to 3.0°C)** at isolated places over Odisha, Coastal Andhra Pradesh & Yanam and Andaman & Nicobar Islands. They were **below normal (-1.6°C to -3.0°C)** at many places over East Rajasthan and Coastal Karnataka; at a few places over Gujarat Region, East Madhya Pradesh, Gangetic West Bengal, Nagaland, Manipur, Mizoram & Tripura, Telangana, Tamil Nadu, Puducherry & Karaikal, Konkan & Goa; at isolated places over Saurashtra & Kutch, Haryana-Chandigarh-Delhi, West Madhya Pradesh and Vidarbha and **near normal** over rest parts of the country. Yesterday, **the lowest minimum temperature of 18.6°C** was reported at **Narsinghpur (East Madhya Pradesh)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 28-06-2023):** Maximum temperatures were **above normal (1.6°C to 3.0°C)** at many places over Coastal Andhra Pradesh & Yanam and at isolated places over Tamil Nadu, Puducherry & Karaikal. They were **markedly below normal (-5.1°C or less)** at many places over Haryana Chandigarh & Delhi, East Madhya Pradesh and Jharkhand; at a few places over West Madhya Pradesh and Chhattisgarh; **appreciably below normal (-3.1°C to -5.0°C)** at many places over , Gangetic West Bengal and East Rajasthan and at few places over West Rajasthan, Vidarbha, Konkan & Goa, Saurashtra & Kutch and Odisha; **below normal (-1.6°C to -3.0°C)** at many places over Punjab, West Uttar Pradesh, Bihar and Marathawada; at a few places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Sub-Himalayan West Bengal & Sikkim, Gujarat Region and Madhya Maharashtra and at isolated places over East Uttar Pradesh and Telangana and **near normal** over rest parts of the country. Yesterday, **the highest maximum temperature of 40.4°C** was reported at **Madurai (Tamil Nadu)**.

Meteorological Analysis (Based on 0530 hours IST)

- ❖ The Northern Limit of Monsoon (NLM) continues to pass through Lat. 29.4°N/ Long. 70.7°E, Bikaner, Narnaul, Firozpur and Lat. 32.5°N/ Long. 72.5°E.
- ❖ Conditions are favourable for further advance of Southwest Monsoon into remaining parts of the country (i.e. remaining parts of Rajasthan and Haryana and Punjab) during next 2 days.
- ❖ The **Low Pressure Area** over northeast Madhya Pradesh and neighbourhood with associated cyclonic circulation extending upto 7.6 km above mean sea level persists. It is very likely to move west-northwestwards towards northwest Madhya Pradesh during next 2 days.
- ❖ The east-west trough from northwest Rajasthan to Northeast Bay of Bengal across northeast Rajasthan, northwest Madhya Pradesh, **Low Pressure Area** over Northeast Madhya Pradesh & neighbourhood, south Jharkhand and Gangetic West Bengal extending upto 1.5 km above mean sea level persists.
- ❖ The off-shore trough at mean sea level from Maharashtra coast to Kerala coast persists.
- ❖ The cyclonic circulation over south Gujarat coast & neighbourhood between 3.1 km & 5.8 km above mean sea level persists.
- ❖ The Western Disturbance as a cyclonic circulation over Jammu & Kashmir at 5.8 km above mean sea level persists.

Weather Forecast for next 5 days (Upto 0830 hours IST of 04th July, 2023)

- ❖ Meteorological sub-division wise detailed 5 days rainfall forecast is given in Table-1.
- ❖ **Maximum Temperatures Forecast:**
- ❖ **East India:** No significant change in maximum temperatures very likely next 24 hours and rise by 2-4°C thereafter.
- ❖ No significant change in maximum temperatures likely over rest parts of country during next 5 days.

Weather Outlook for subsequent 2 days (During 04th July-06th July, 2023)

- ❖ Fairly widespread to widespread light/moderate rainfall with thunderstorm likely to continue over northeast India, central India, Western Himalayan Region along the west coast and islands.
- ❖ Isolated to scattered rainfall over remaining part of the country India.



Table-1

5 Day Rainfall Forecast

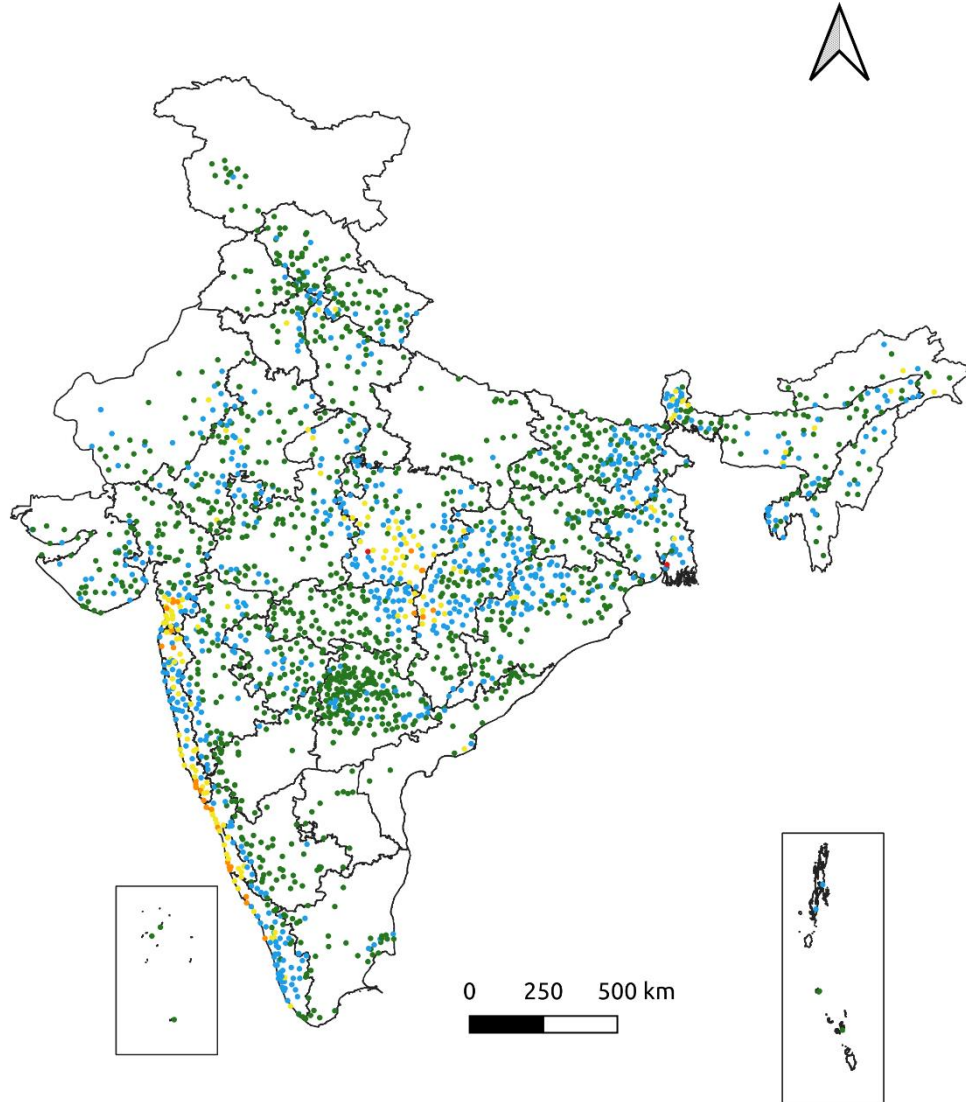
S. No.	Subdivision	29-Jun	30-Jun	1-Jul	2-Jul	3-Jul
		Day 1	Day 2	Day 3	Day 4	Day 5
1	ANDAMAN & NICOBAR ISLANDS	WS	WS	WS	WS	FWS
2	ARUNACHAL PRADESH	WS	WS	WS	WS	WS
3	ASSAM & MEGHALAYA	WS	WS	WS	WS	WS
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	WS	WS	WS	WS	WS
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	WS	WS	WS	WS	WS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



24 Hr cumulative rainfall recorded over different stations
during 0830 IST of 27-6-2023 to 0830 IST of 28-6-2023



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)

Fig. 2: Maximum Temperatures Dated 28.06.2023

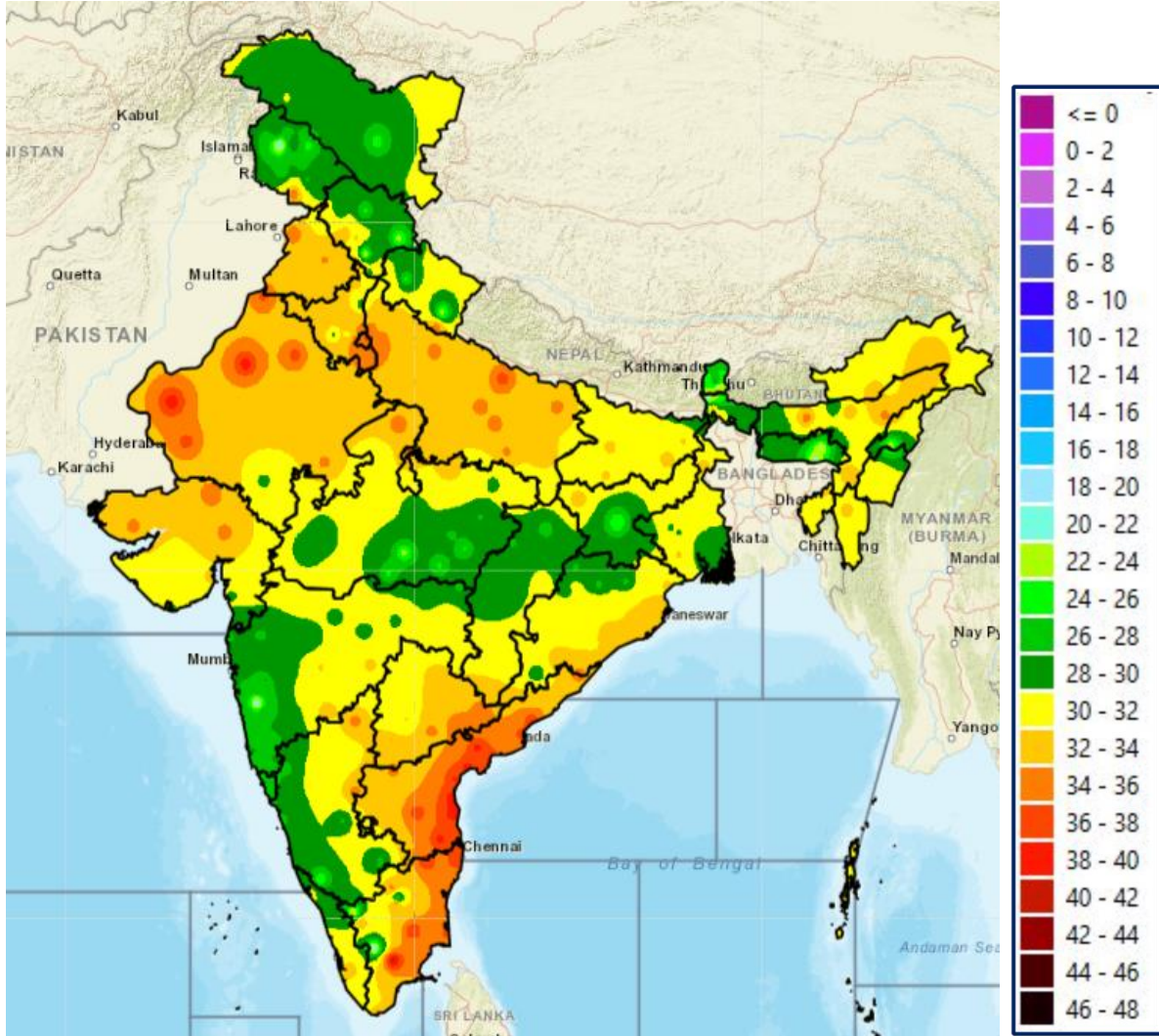


Fig. 3: Minimum Temperatures Dated 28.06.2023

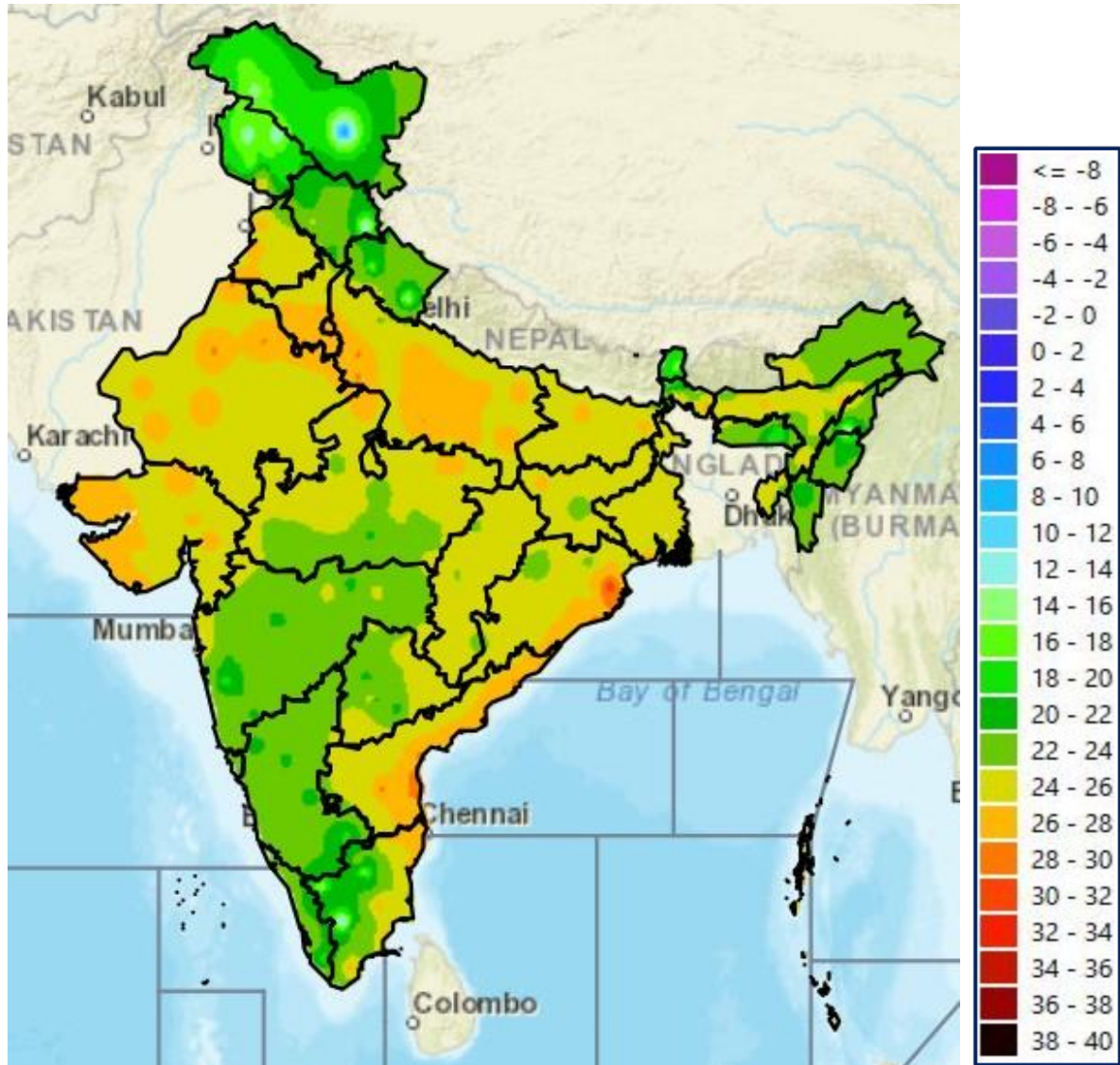


Fig. 4: Departure from Normal of Maximum Temperatures Dated 28.06.2023

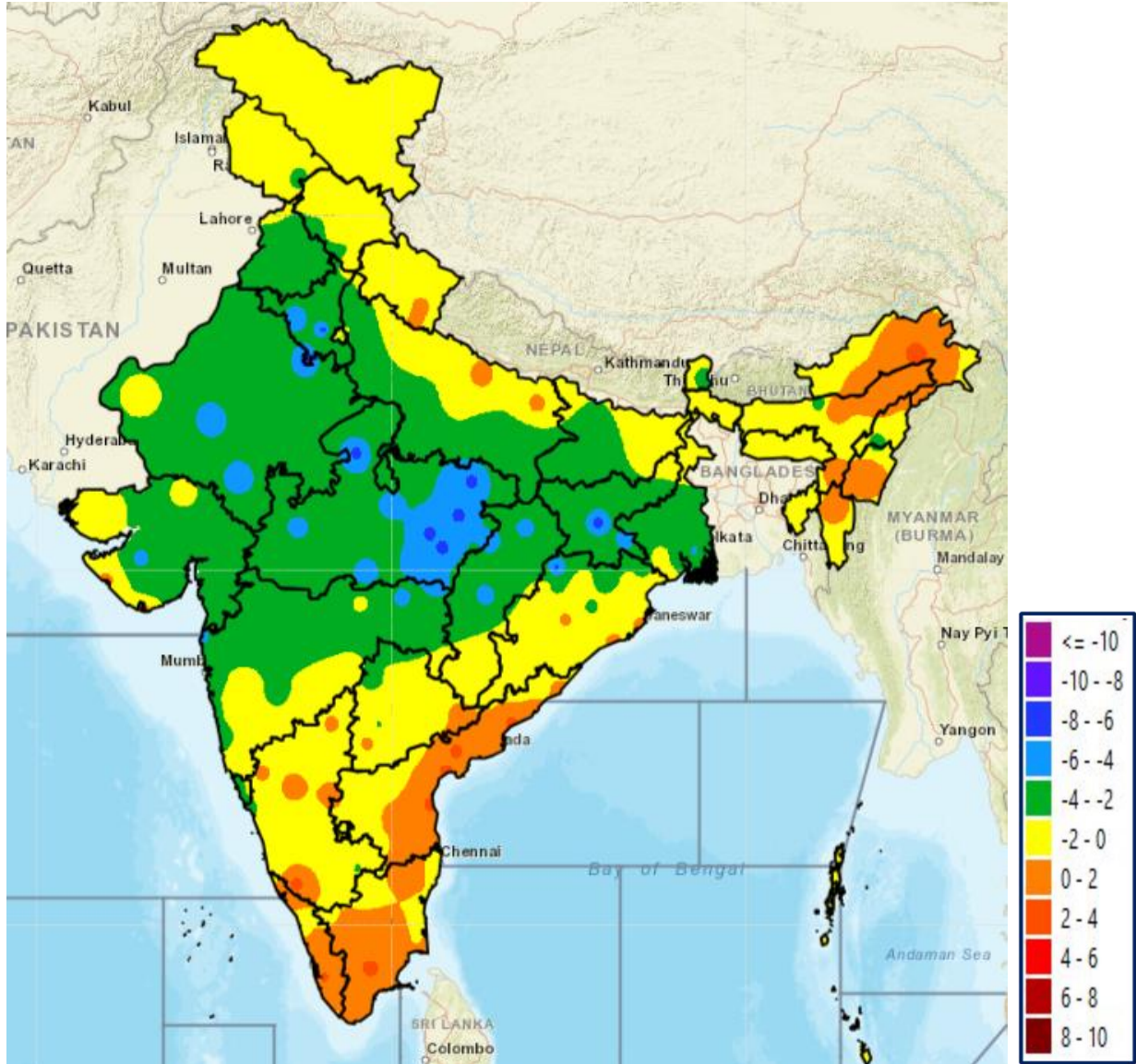


Fig. 5: Departure from Normal of Minimum Temperatures Dated 28.06.2023

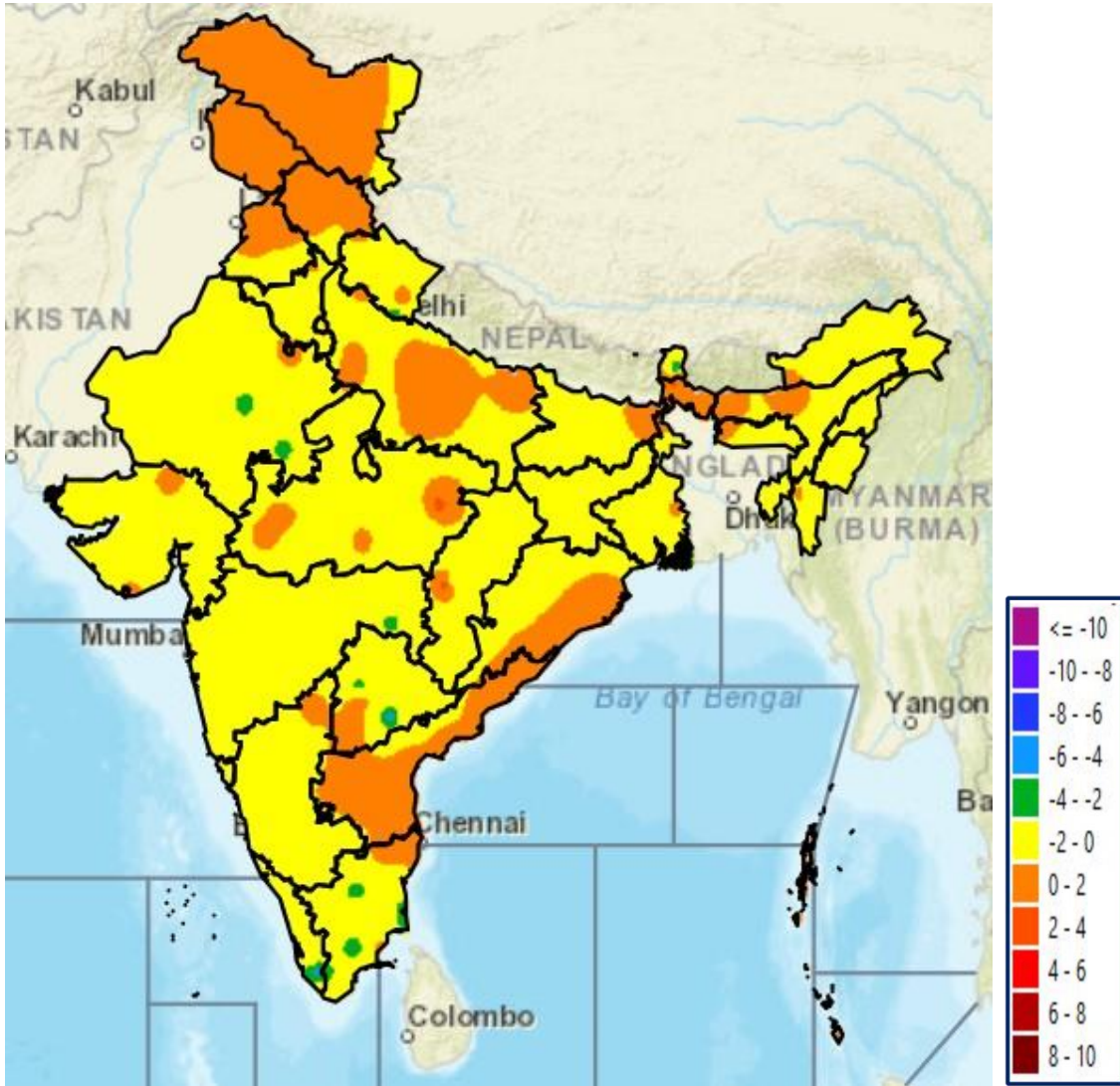
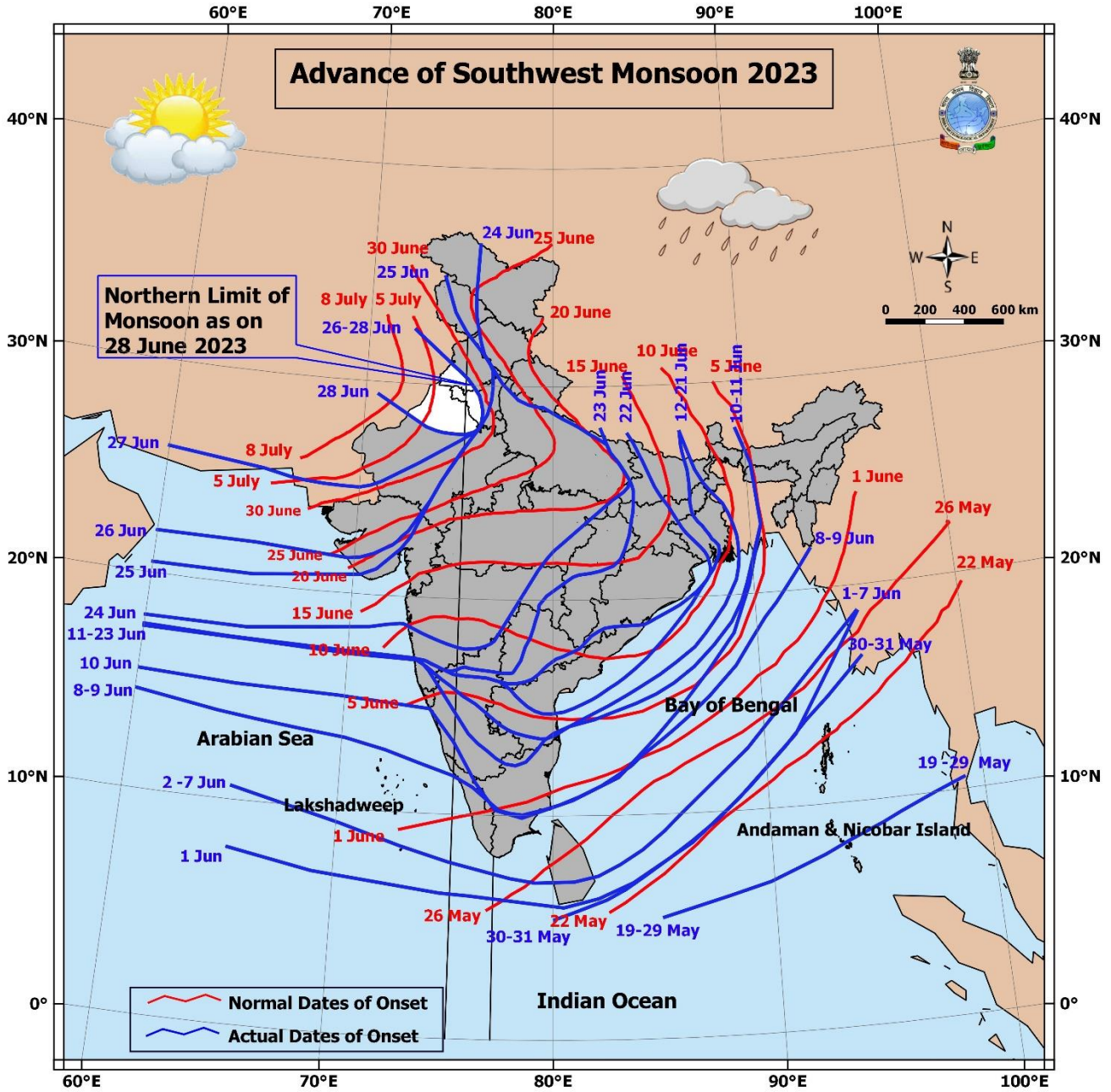




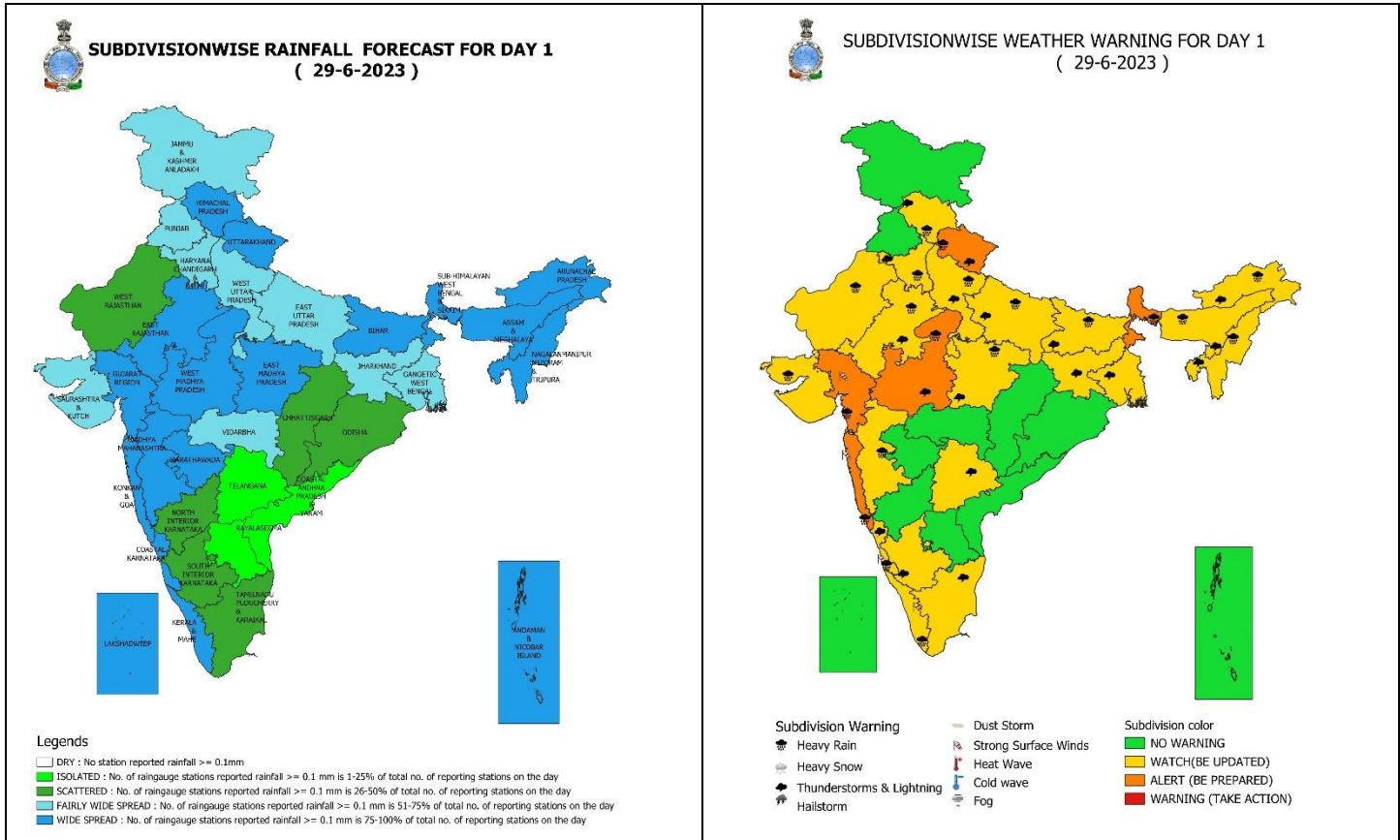
Fig. 6: Advance of Southwest Monsoon



* 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

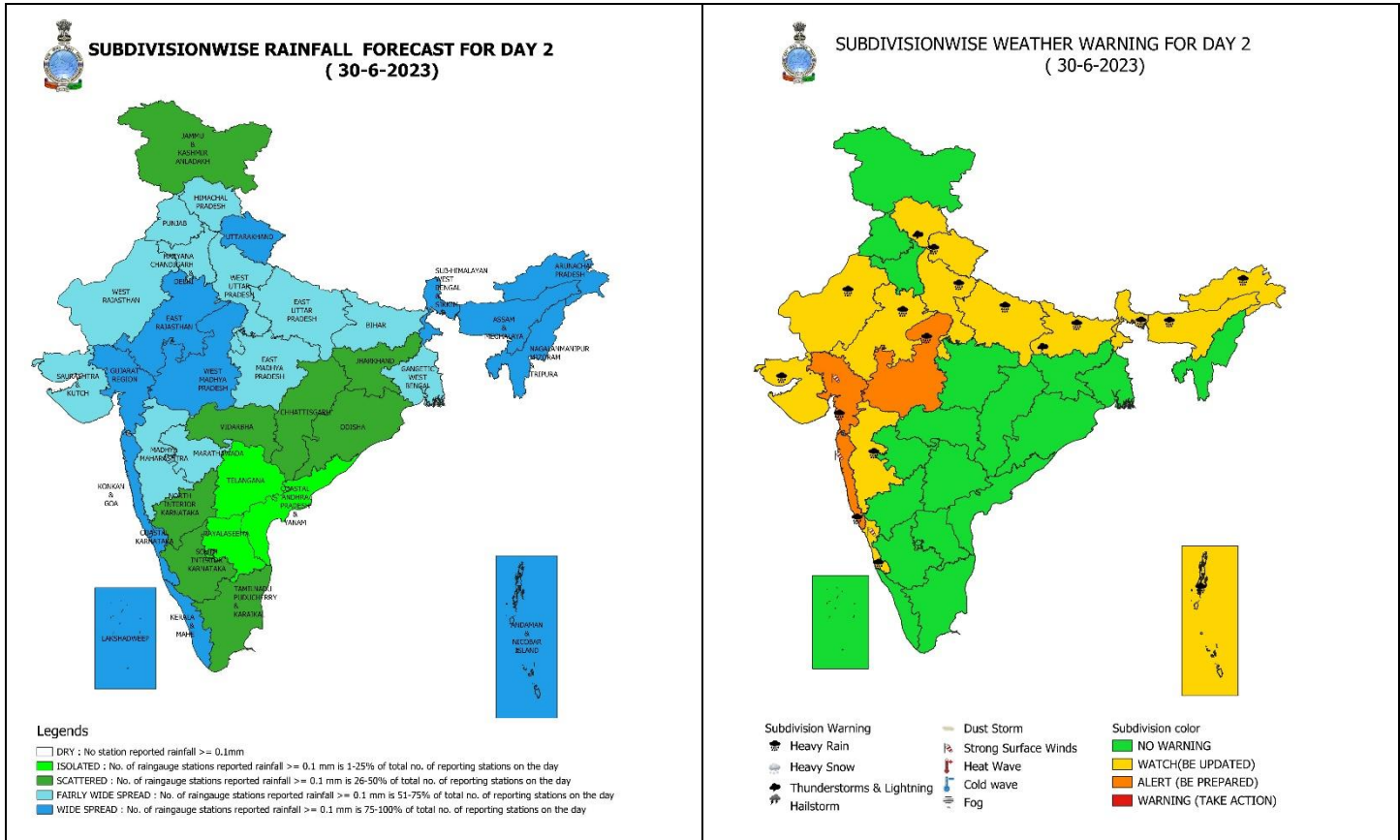
(Service to the Nation since 1875)



29 June (Day 1): ♦ Heavy to very heavy rainfall very likely at isolated places over Uttarakhand, East Rajasthan, West Madhya Pradesh, Gujarat Region, Konkan & Goa, Madhya Maharashtra, Assam & Meghalaya, Bihar, Sub-Himalayan West Bengal & Sikkim and **heavy rainfall** at isolated places over Himachal Pradesh, Uttar Pradesh, West Rajasthan, Haryana, East Madhya Pradesh, Saurashtra & Kutch, Coastal Karnataka, Kerala & Mahe, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura.

♦ **Thunderstorm with lightning** very likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Pradesh, Gangetic West Bengal, Jharkhand, Bihar, Uttar Pradesh, Himachal Pradesh, Uttarakhand, East Rajasthan, Telangana, Tamil Nadu, Puducherry & Karaikal, Coastal Karnataka, South Interior Karnataka.

♦ **Squally wind** speed reaching 45-55 kmph gusting to 65 kmph very likely over Westcentral & Southwest and adjoining parts of Eastcentral Arabian Sea. **Squally weather speed reaching 40-45 kmph gusting to 50 kmph** likely along & off Kerala-Karnataka-Maharashtra-south Gujarat coasts, Gulf of Mannar, Lakshadweep area, southwest Bay of Bengal off Sri-Lanka coast. Fishermen are advised not to venture into these areas.



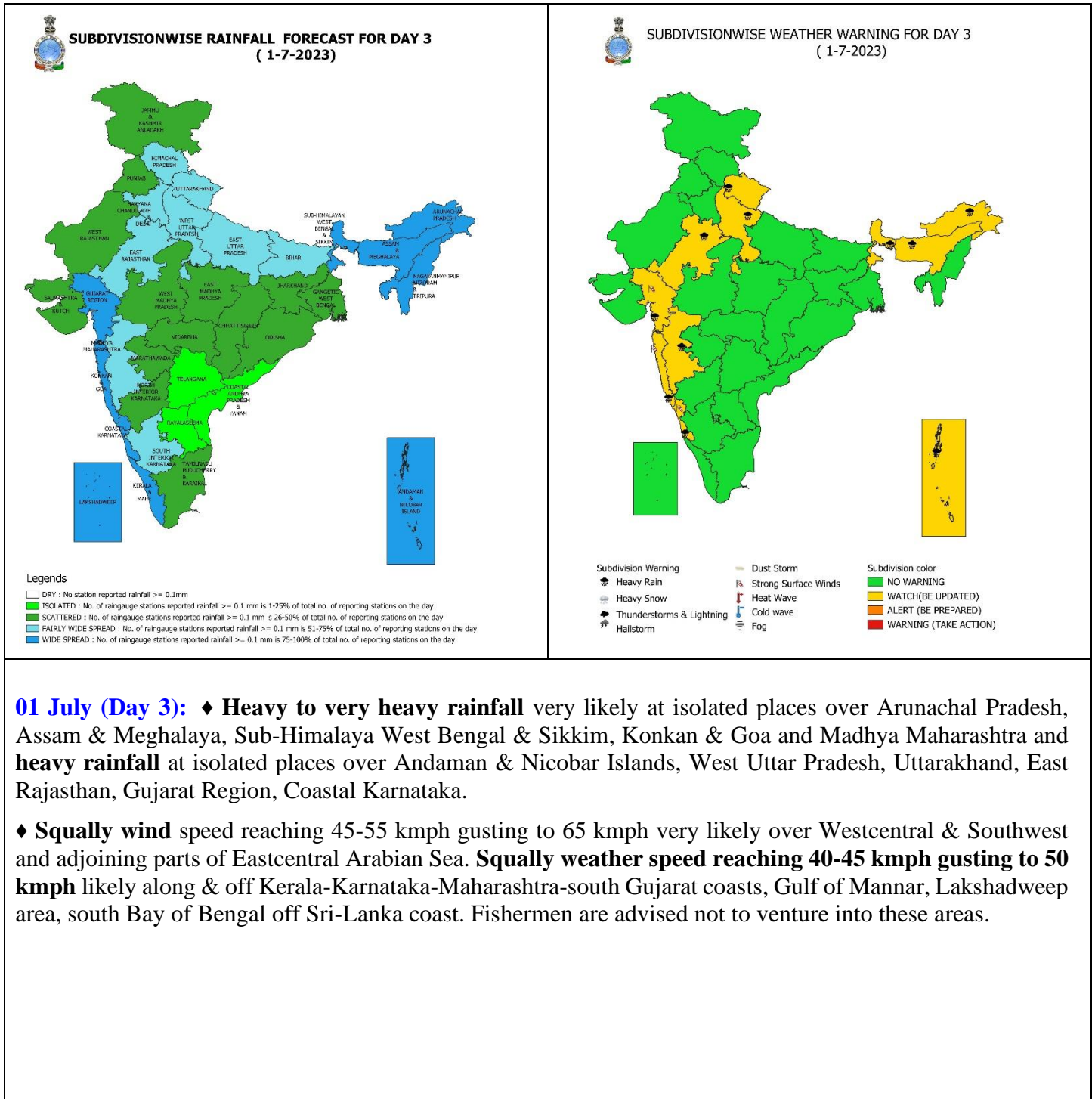
30 June (Day 2): ♦ Heavy to very heavy rainfall very likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, East Rajasthan, West Madhya Pradesh, Gujarat Region, Konkan & Goa, Madhya Maharashtra and **heavy rainfall** at isolated places over Andaman & Nicobar Islands, Sub-Himalaya West Bengal & Sikkim, Bihar, Uttar Pradesh, Uttarakhnad, West Rajasthan, Saurashtra & Kutch, Coastal Karnataka.

♦ **Thunderstorm with lightning** very likely at isolated places over Bihar, Himachal Pradesh.

♦ **Squally wind** speed reaching 45-55 kmph gusting to 65 kmph very likely over Westcentral & Southwest and adjoining parts of Eastcentral Arabian Sea. **Squally weather speed reaching 40-45 kmph gusting to 50 kmph** likely along & off Kerala-Karnataka-Maharashtra-south Gujarat coasts, Gulf of Mannar, Lakshadweep area, southwest & adjoining southeast Bay of Bengal off Sri-Lanka coast. Fishermen are advised not to venture into these areas.

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

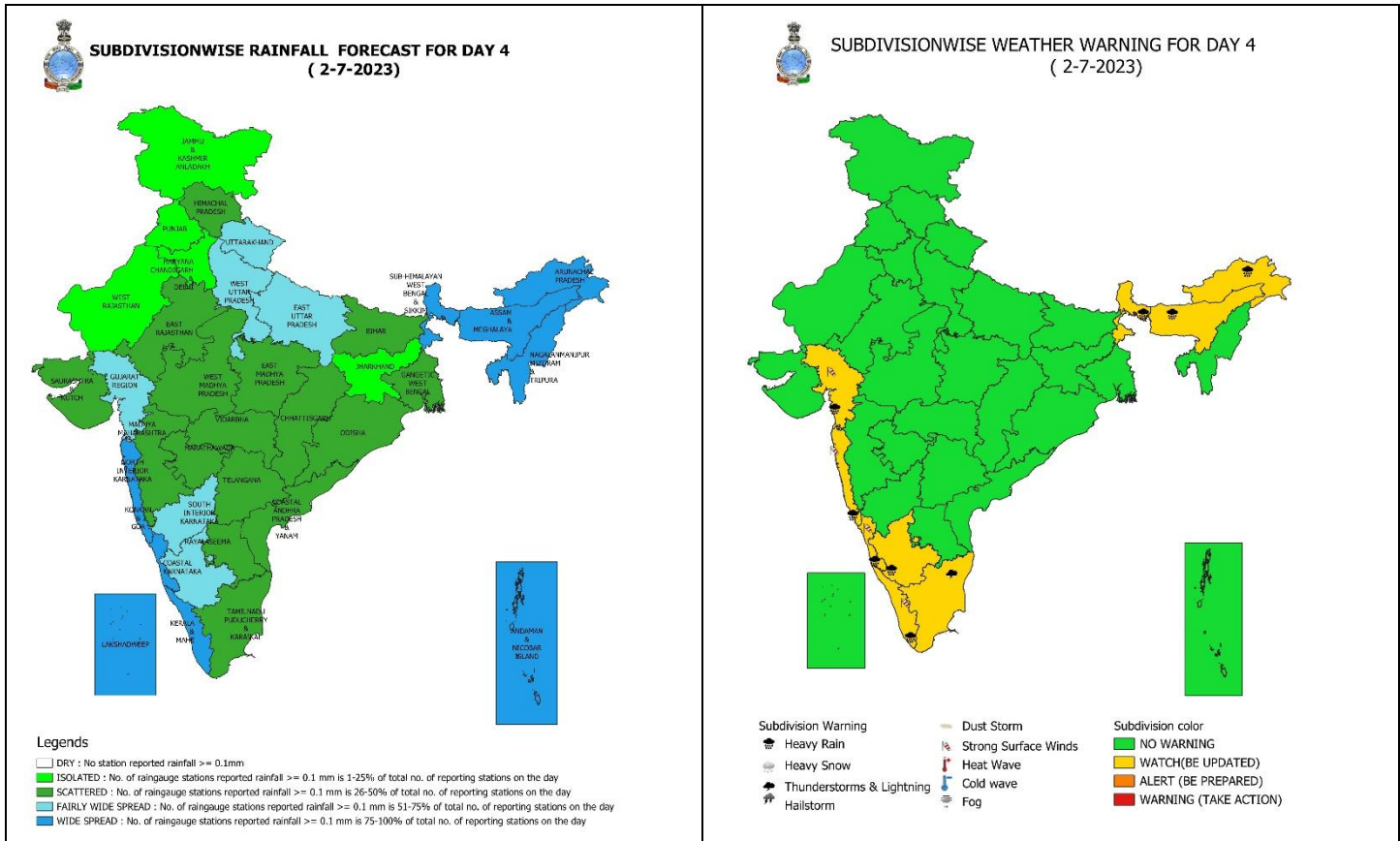
Forecast and Warning for any day is valid from 0830 hours IST of day till 0830 hours IST of next day For more details kindly visit <https://mausam.imd.gov.in> or contact : 011-2434-4599 (Service to the Nation since 1875)



* 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)



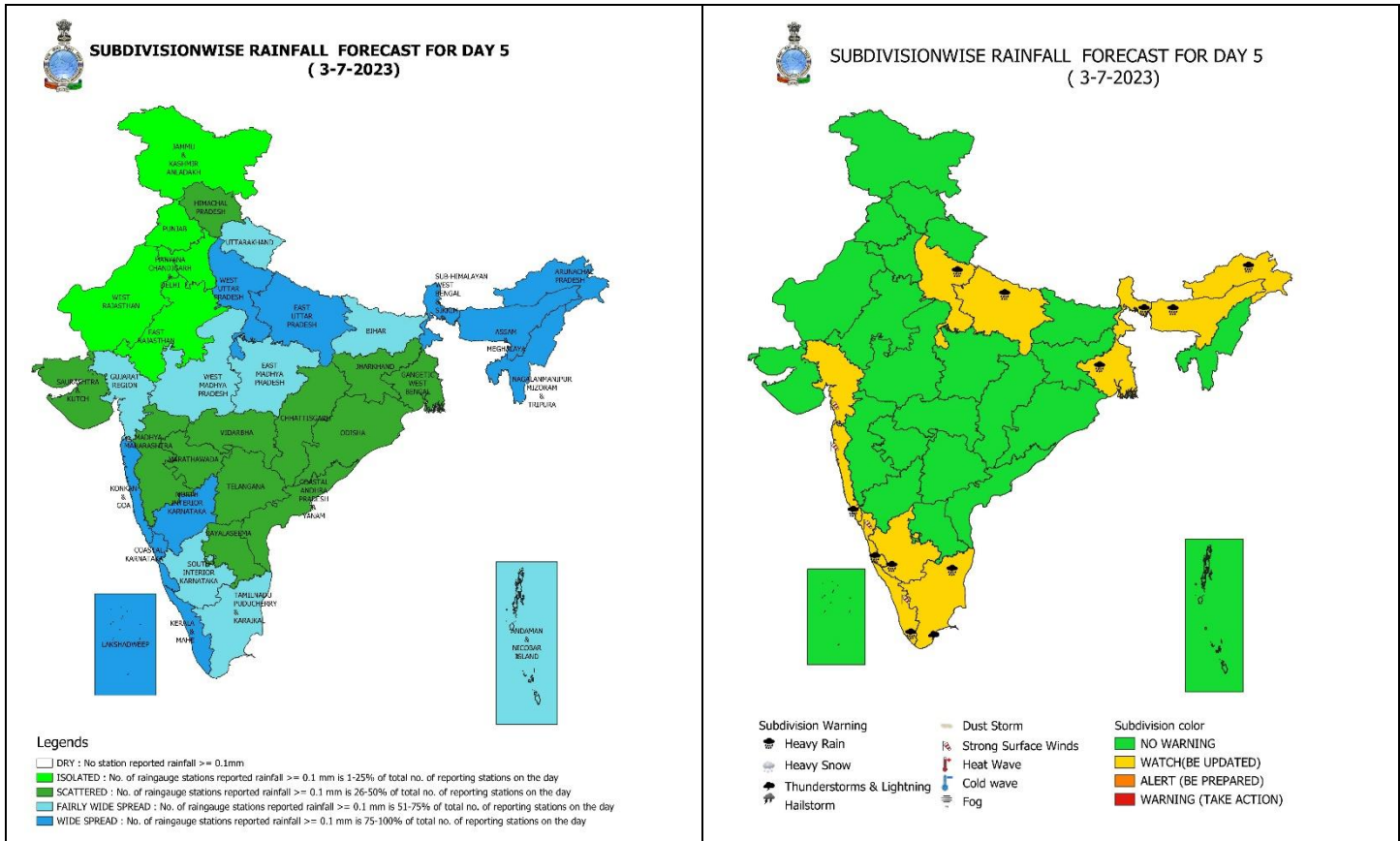
02 July (Day 4): ♦ **Heavy to very heavy rainfall** likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Sub-Himalaya West Bengal & Sikkim and **heavy rainfall** at isolated places over Gujarat Region, Konkan & Goa, Coastal Karnataka, South Interior Karnataka, Kerala & Mahe

♦ **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 along & off Kerala-Karnataka-Maharashtra-south Gujarat coasts, Gulf of Mannar, Lakshadweep area, south Bay of Bengal off Sri-Lanka coast. Fishermen are advised not to venture into these areas.

* 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)

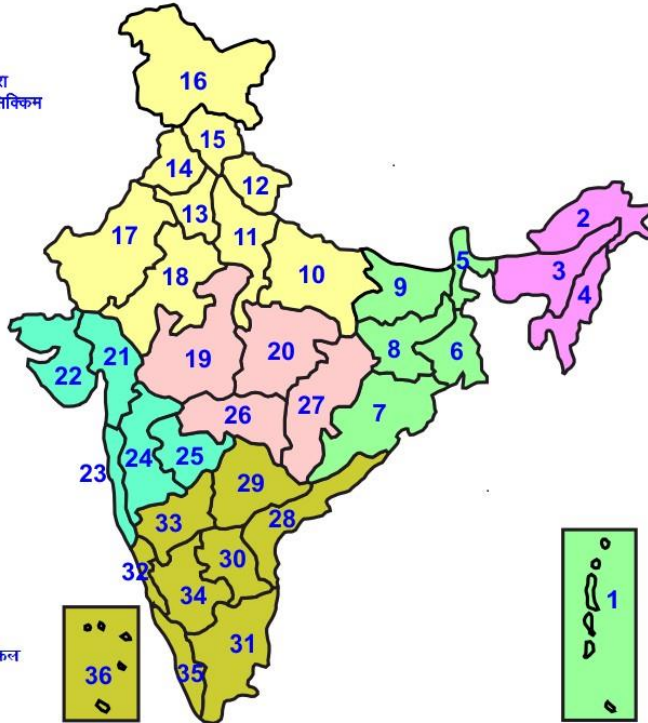


03 July (Day 5): ♦ Heavy to very heavy rainfall likely at isolated places over Assam & Meghalaya, Sub-Himalaya West Bengal & Sikkim and Kerala & Mahe and **heavy rainfall** at isolated places over Arunachal Pradesh, Gangetic West Bengal, Uttar Pradesh, Konkan & Goa, Coastal & South Interior Karnataka and Tamil Nadu, Puducherry & Karaikal.

♦ **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 along & off Kerala-Karnataka-Maharashtra-south Gujarat coasts, Gulf of Mannar, Lakshadweep area, south Bay of Bengal off Sri-Lanka coast. 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. Marathawada
26. Vidharbha
27. Chhattisgarh
28. Coastal Andhra Pradesh & Yanam
29. Telangana
30. Rayalaseema
31. Tamilnadu, Puducherry & Karaikal
32. Coastal Karnataka
33. North Interior Karnataka
34. South Interior Karnataka
35. Kerala & Mahe
36. Lakshadweep

SPATIAL DISTRIBUTION (% of Stations reporting)

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

WARNING

WARNING (TAKE ACTION)
ALERT (BE PREPARED)
WATCH (BE UPDATED)
NO WARNING (NO ACTION)

Probabilistic Forecast

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



Heavy Rain



Heavy Snow



Thunderstorm



Dust Storm



Strong Winds



Visibility



Cyclone



Squall/ Hail



Frost



Cold Wave



Heat Wave



Sea State

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

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



Heavy: 64.5 to 115.5 mm/cm *
Very Heavy: 115.6 to 204.4 mm/cm*
Extremely Heavy: > 204.4 mm/cm *

Rain/ Snow *



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

(Service to the Nation since 1875)