



Sunday, November 26, 2023  
Time of Issue: 2000 hours IST  
(NIGHT)

## ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

### Significant Weather Features

#### Weather Systems and Forecast & Warnings during next 5 days

A **Western Disturbance** as a trough in middle & upper tropospheric westerlies runs roughly along Long. 66°E to north of Lat 15°N.

✓ An **Induced Cyclonic Circulation** lies over central Pakistan & adjoining West Rajasthan at lower levels.

✓ An upper air Trough in easterlies runs from Southwest Arabian Sea to Northeast Arabian Sea and extends upto mid-tropospheric levels with an embedded Cyclonic Circulation over Northeast Arabian Sea & adjoining Saurashtra & Kutch coasts in the lower tropospheric levels.

✓ Thus, there is interactions between the middle latitude westerlies with the lower level trough in easterlies. Due to such interaction:

- Light to moderate rainfall at many places accompanied with isolated thunderstorm & lightning is likely over Gujarat State, south Rajasthan on 26<sup>th</sup> November; over Konkan & Goa, Marathwada and Madhya Maharashtra and south Madhya Pradesh during 26<sup>th</sup> and 27<sup>th</sup> and over Vidarbha during 27<sup>th</sup> to 28<sup>th</sup> November with significant reduction thereafter.

- **Isolated heavy rainfall** likely over Gujarat state, southeast Rajasthan, southwest Madhya Pradesh, north Konkan, north Madhya Maharashtra, Marathwada and Tamil Nadu, Puducherry & Karaikal on 26<sup>th</sup>; over Vidarbha on 27<sup>th</sup> & 28<sup>th</sup> November, 2023. **Isolated very heavy rainfall** likely over Gujarat region on 26<sup>th</sup> November, 2023.

- **Hailstorm also likely** at isolated places over Uttarakhand, south Rajasthan, Gujarat region and north Madhya Maharashtra on 26<sup>th</sup>; over southwest Madhya Pradesh and north Marathwada on 26<sup>th</sup> & 27<sup>th</sup> November and over Uttarakhand, East Madhya Pradesh and Vidarbha on 27<sup>th</sup> November.

- Light rainfall at isolated places also likely over Western Himalayan Region and plains of Northwest India during 26<sup>th</sup>-28<sup>th</sup> November. **Thunderstorm & lightning** at isolated places over Himachal Pradesh and Uttarakhand on 27<sup>th</sup> November.

➤ The **Cyclonic Circulation** lies over South Andaman Sea & adjoining south Thailand and extends upto 5.8 km above mean sea level. Under its influence, a **Low Pressure Area** is likely to form over South Andaman Sea & adjoining Southeast Bay of Bengal around 27<sup>th</sup> November. It is likely to move west-northwestwards and intensify into a **Depression** over Southeast Bay of Bengal around 29<sup>th</sup> November, 2023. Under its influence:

- Light to moderate rainfall at many places accompanied with isolated **thunderstorm & lightning** is likely over Andaman & Nicobar Islands during 26<sup>th</sup>-29<sup>th</sup> November, 2023. Isolated **heavy rainfall** also likely over Nicobar Islands on 26<sup>th</sup>; and over Andaman Islands on 27<sup>th</sup> & 28<sup>th</sup>. Isolated **very heavy rainfall** very likely over Nicobar Islands on 27<sup>th</sup> November.

- **Squally weather (wind speed reaching 40-45 kmph gusting to 55 kmph)** very likely to prevail South and adjoining North Andaman Sea on 27<sup>th</sup> and **Squally weather (wind speed reaching 45-55 kmph gusting to 65 kmph)** over Southeast Bay of Bengal & adjoining Andaman Sea during 28<sup>th</sup>-29<sup>th</sup> November; over Central Bay of Bengal during 29<sup>th</sup> November to 02<sup>nd</sup> December. **Fishermen are advised not to venture into these areas.**

- ❖ **Minimum temperatures are likely to fall by 2-3°C over most parts of Northwest India from 27<sup>th</sup>; over most parts of central India from 29<sup>th</sup> November, 2023.**

- ❖ **No significant weather likely over rest parts of the country.**

## Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST to 1730 hours IST of today): **at many places** over Gujarat Region; **at a few places** over Rajasthan, Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra and Tamil Nadu, Puducherry & Karaikal; **at isolated places** over Coastal Andhra Pradesh & Yanam, South Interior Karnataka, Kerala & Mahe and Andaman & Nicobar Islands.
- ❖ **Significant Rainfall recorded** (from 0830 hours IST to 1730 hours IST of today) (in cm): **Gujarat state:** Surat-5, Banaskantha, Arnej, Dholka, Maktampur and Deesa-4 each, Surendranagar, Dhandhuka, Narmada and Amreli-3 each, Dahod, Ahmedabad, Barvala, Bilodara, Bhaunagar and Rajkot-2 each, Chhotaudepur, Gandhinagar, Dang, Daman, Targhadia, Jafrabad and Mahuva-1 each; **Tamil Nadu, Puducherry & Karaikal:** Chennai-4, Sathyabama University-3, Chidambaram-1; **Kerala & Mahe:** Thenmala-1; **Andaman & Nicobar Islands:** Car Nicobar-2; **Madhya Pradesh:** Khargone, Ratlam and Badwani-2 each; Indore and Dhar-1 each; **Rajasthan:** Jalore-2, Barmer, Phalodi, Sirohi and Dungerpur-1 each; **Maharashtra:** Khed (Pune)-2, Ambegaon (Pune)-1.
- ❖ **Hailstorm observed** (from 0830 hours IST to 1730 hours IST of today): Hail activity reported at isolated places over West Madhya Pradesh (in the districts of Ratlam, Ujjain, Khargone and Jhabua) and over Madhya Maharashtra (in the district of Nashik).
- ❖ **Minimum Temperature Departures (as on 26-11-2023):** Minimum temperatures are **markedly above normal (5.1°C or more)** at a few places over Madhya Maharashtra; at isolated places over Gujarat State and Telangana; **appreciably above normal (3.1°C to 5.0°C)** at most places over Konkan & Goa and Marathwada; at many places over North Interior Karnataka; at a few places over Rajasthan; at isolated places over Bihar, Odisha and West Madhya Pradesh; **above normal (1.6°C to 3.0°C)** at most places over Himachal Pradesh, Uttarakhand, Punjab, Coastal Andhra Pradesh & Yanam, Rayalaseema, Coastal & South Interior Karnataka; at many places over Haryana-Chandigarh-Delhi and Vidarbha; at a few places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Sub-Himalayan West Bengal & Sikkim and Chhattisgarh; at isolated places over East Uttar Pradesh, Gangetic West Bengal, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe. They are **below normal (-1.6°C to -3.0°C)** at a few places over East Madhya Pradesh and **near normal** over rest parts of the country. Today, **the lowest minimum temperature** of 8.3°C is reported at **Umaria (East Madhya Pradesh)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 26-11-2023):** Maximum temperatures are **above normal (1.6°C to 3.0°C)** at most places over Arunachal Pradesh and Assam & Meghalaya; at many places over Nagaland, Manipur, Mizoram & Tripura and Sub-Himalayan West Bengal & Sikkim; at isolated places over Himachal Pradesh, Bihar, East Uttar Pradesh, Chhattisgarh, Kerala & Mahe and Tamil Nadu, Puducherry & Karaikal. They are **markedly below normal (-5.1°C or less)** at many places over Gujarat Region; at a few places over West Rajasthan; at isolated places over Saurashtra & Kutch and East Rajasthan; **appreciably below normal (-3.1°C to -5.0°C)** at isolated places over West Madhya Pradesh; **below normal (-1.6°C to -3.0°C)** at isolated places over Konkan & Goa, Madhya Maharashtra, East Madhya Pradesh, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Punjab and Telangana and **near normal** over rest parts of the country. Today, the highest **maximum temperature** of 35.0°C is reported at **Ratnagiri (Konkan & Goa)**.



## Meteorological Analysis (Based on 1730 hours IST)

- ❖ The **Western Disturbance** as a trough in middle & upper tropospheric westerlies between 4.5 km & 12.0 km above mean sea level with its axis at 5.8 km above mean sea level now runs roughly along Long. 66°E to north of Lat. 15°N at 1730 hours IST of today.
- ❖ The **Induced Cyclonic Circulation** over central Pakistan & adjoining West Rajasthan between 1.5 & 3.1 km above mean sea level persists.
- ❖ The upper air **Trough** in easterlies from Southwest Arabian Sea to Northeast Arabian Sea extending upto mid-tropospheric levels with an embedded **Cyclonic Circulation** over Northeast Arabian Sea & adjoining Saurashtra & Kutch coasts extending upto 3.1 km above mean sea level persists.
- ❖ The **Cyclonic Circulation** over central parts of north Madhya Pradesh between 1.5 & 3.1 km above mean sea level persists.
- ❖ The **Cyclonic Circulation** over Northwest Bay of Bengal & adjoining areas of north Odisha-West Bengal coasts between 3.1 & 4.5 km above mean sea level persists.
- ❖ The **Cyclonic Circulation** over South Andaman Sea & adjoining south Thailand extending upto 5.8 km above mean sea level persists. Under its influence, a **Low Pressure Area** is likely to form over South Andaman Sea & adjoining Southeast Bay of Bengal around 27<sup>th</sup> November. It is likely to move west-northwestwards and intensify into a **Depression** over Southeast Bay of Bengal around 29<sup>th</sup> November, 2023.
- ❖ A fresh feeble **Western Disturbance** is likely to affect Western Himalayan Region from 30<sup>th</sup> November, 2023.

## Weather Forecast for next 7 days (Upto 0830 hours IST of 03<sup>rd</sup> December, 2023)

- ❖ Meteorological sub-division wise detailed 7 days rainfall forecast is given in Table-1.
- ❖ No significant change in Minimum Temperatures very likely over most parts of Northwest India during next 24 hours and fall by 2-3°C from 27<sup>th</sup> November, 2023.
- ❖ No significant change in Minimum Temperatures very likely over most parts of Central India during next 3 days and fall by 2-3°C from 29<sup>th</sup> November, 2023.
- ❖ Moderate to dense fog likely in isolated pockets likely over Uttarakhand, Punjab and Haryana-Chandigarh-Delhi in morning hours of 29<sup>th</sup> & 30<sup>th</sup> November, 2023. Shallow to moderate fog likely in isolated pockets likely over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura in morning hours of 27<sup>th</sup> & 28<sup>th</sup> November, 2023.

## Weather Outlook for subsequent 2 days

- ❖ Isolated to scattered light to moderate rainfall likely over parts of Nagaland, Manipur, Mizoram & Tripura, south Kerala, south Tamil Nadu and Islands.
- ❖ Mainly dry weather likely to prevail over rest parts of the country.



Table-1

7 Days Rainfall Forecast								
S. No.	Subdivision	26- Nov	27- Nov	28- Nov	29- Nov	30- Nov	01- Dec	02- Dec
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	FWS	WS	WS	WS	WS	FWS	FWS
2	ARUNACHAL PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
3	ASSAM & MEGHALAYA	DRY	DRY	DRY	DRY	DRY	DRY	ISOL
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	DRY	DRY	DRY	DRY	DRY	ISOL	SCT
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	DRY	DRY	DRY	DRY	DRY	DRY	DRY
6	GANGETIC WEST BENGAL	DRY	DRY	DRY	DRY	DRY	DRY	DRY
7	ODISHA	DRY	DRY	ISOL	DRY	DRY	DRY	DRY
8	JHARKHAND	DRY	DRY	DRY	DRY	DRY	DRY	DRY
9	BIHAR	DRY	DRY	DRY	DRY	DRY	DRY	DRY
10	EAST UTTAR PRADESH	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
11	WEST UTTAR PRADESH	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
12	UTTARAKHAND	ISOL	SCT	ISOL	DRY	DRY	DRY	DRY
13	HARYANA CHANDIGARH & DELHI	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
14	PUNJAB	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
15	HIMACHAL PRADESH	ISOL	SCT	ISOL	DRY	ISOL	ISOL	DRY
16	JAMMU & KASHMIR AND LADAKH	ISOL	ISOL	ISOL	FWS	SCT	ISOL	DRY
17	WEST RAJASTHAN	SCT	ISOL	DRY	DRY	DRY	DRY	DRY
18	EAST RAJASTHAN	SCT	ISOL	DRY	DRY	DRY	DRY	DRY
19	WEST MADHYA PRADESH	FWS	SCT	ISOL	ISOL	ISOL	DRY	DRY
20	EAST MADHYA PRADESH	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	DRY
21	GUJARAT REGION	WS	ISOL	DRY	DRY	DRY	DRY	DRY
22	SAURASHTRA & KUTCH	FWS	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
23	KONKAN & GOA	SCT	SCT	ISOL	ISOL	ISOL	DRY	DRY
24	MADHYA MAHARASHTRA	FWS	SCT	ISOL	ISOL	ISOL	DRY	DRY
25	MARATHAWADA	FWS	FWS	ISOL	ISOL	DRY	DRY	DRY
26	VIDARBHA	SCT	WS	FWS	SCT	ISOL	ISOL	DRY
27	CHHATTISGARH	ISOL	ISOL	ISOL	ISOL	DRY	DRY	DRY
28	COASTAL ANDHRA PRADESH & YANAM	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
29	TELANGANA	ISOL	ISOL	ISOL	ISOL	DRY	DRY	DRY
30	RAYALASEEMA	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
31	TAMILNADU PUDUCHERRY & KARAIKAL	SCT	SCT	ISOL	ISOL	ISOL	ISOL	ISOL
32	COASTAL KARNATAKA	SCT	SCT	SCT	SCT	SCT	SCT	DRY
33	NORTH INTERIOR KARNATAKA	ISOL	ISOL	SCT	ISOL	ISOL	DRY	DRY
34	SOUTH INTERIOR KARNATAKA	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	DRY
35	KERALA & MAHE	SCT	SCT	SCT	SCT	SCT	ISOL	ISOL
36	LAKSHADWEEP	SCT	SCT	SCT	SCT	SCT	DRY	DRY

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 colour warning does not mean "Red Alert" Red colour 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

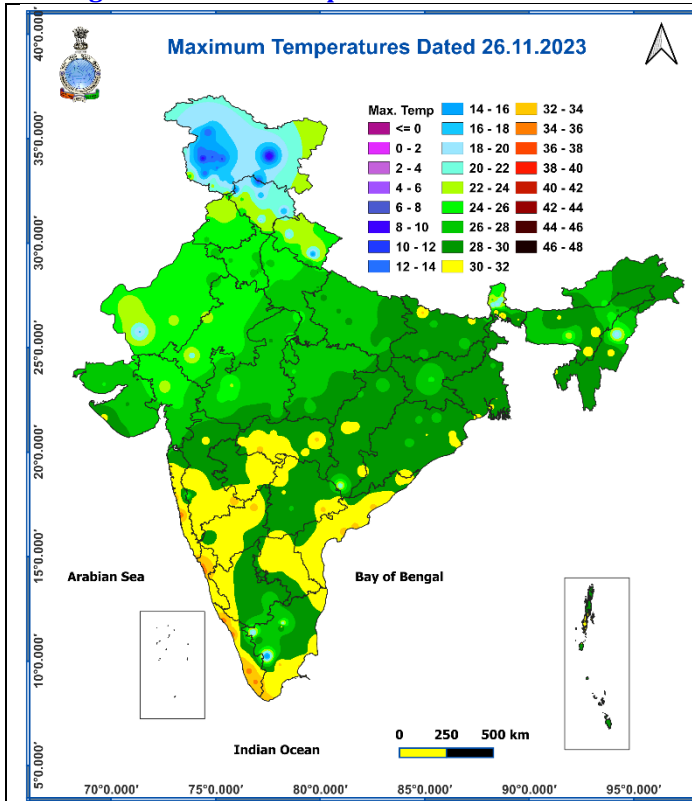


Fig. 2: Departure of Maximum Temperatures

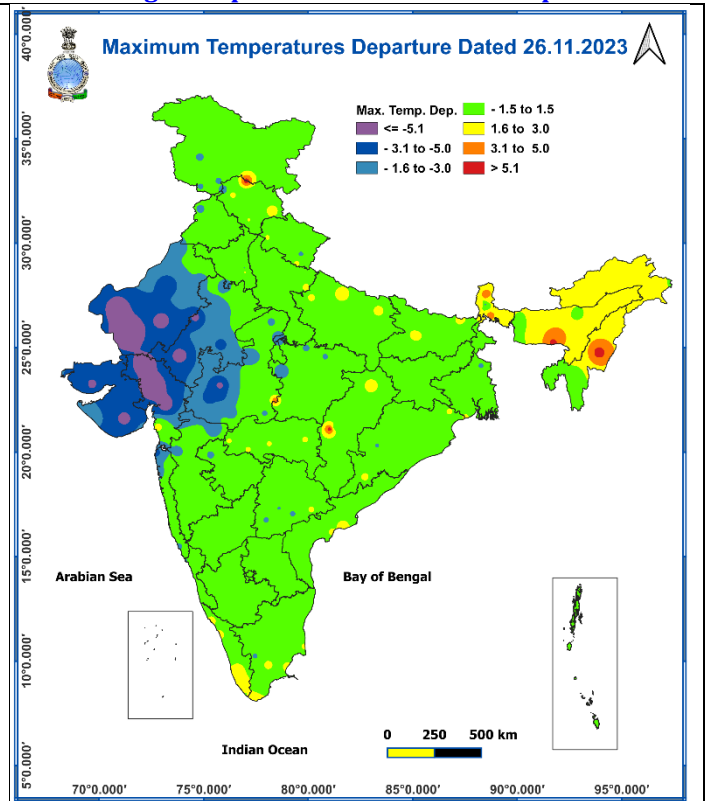


Fig. 3: Minimum Temperatures

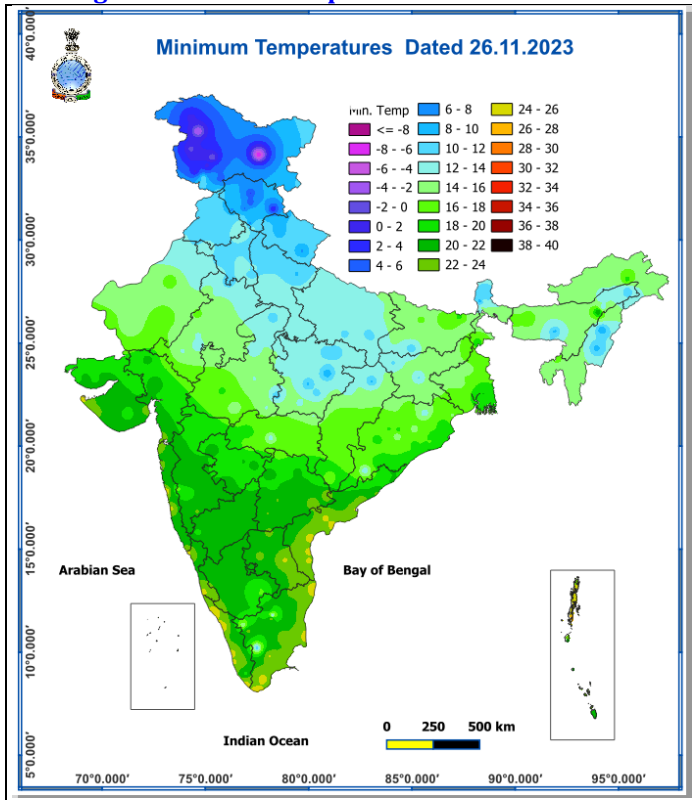
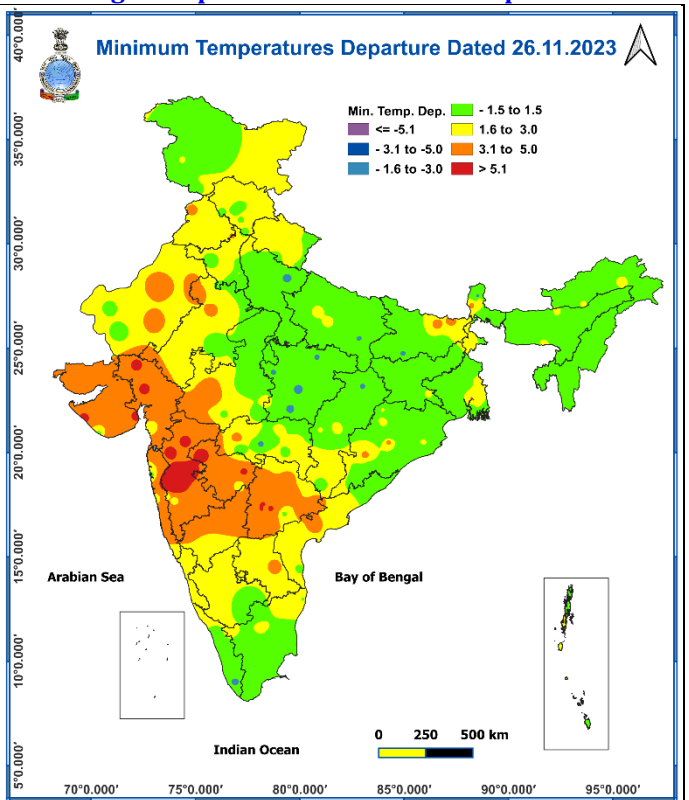


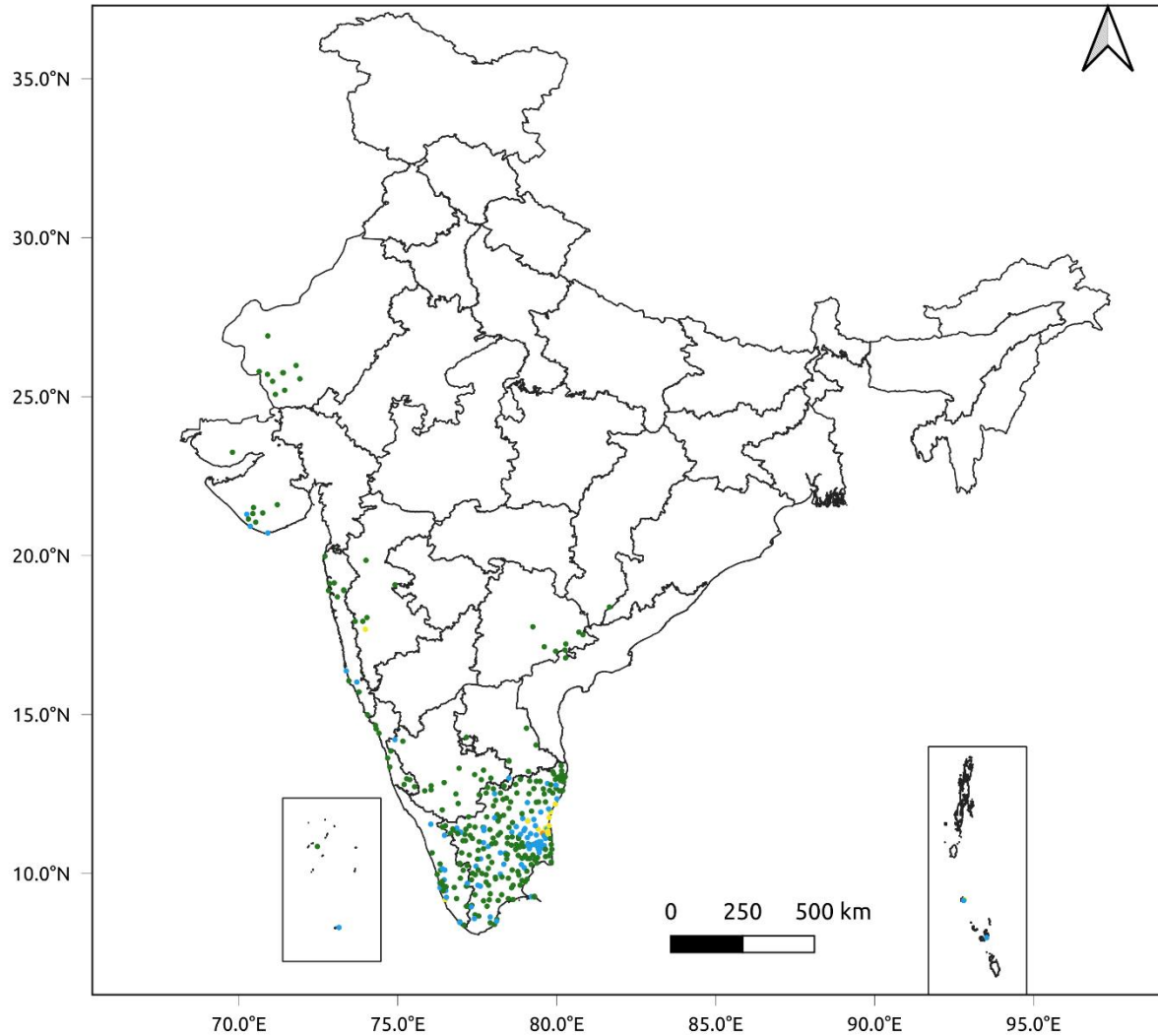
Fig. 4: Departure of Minimum Temperatures



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

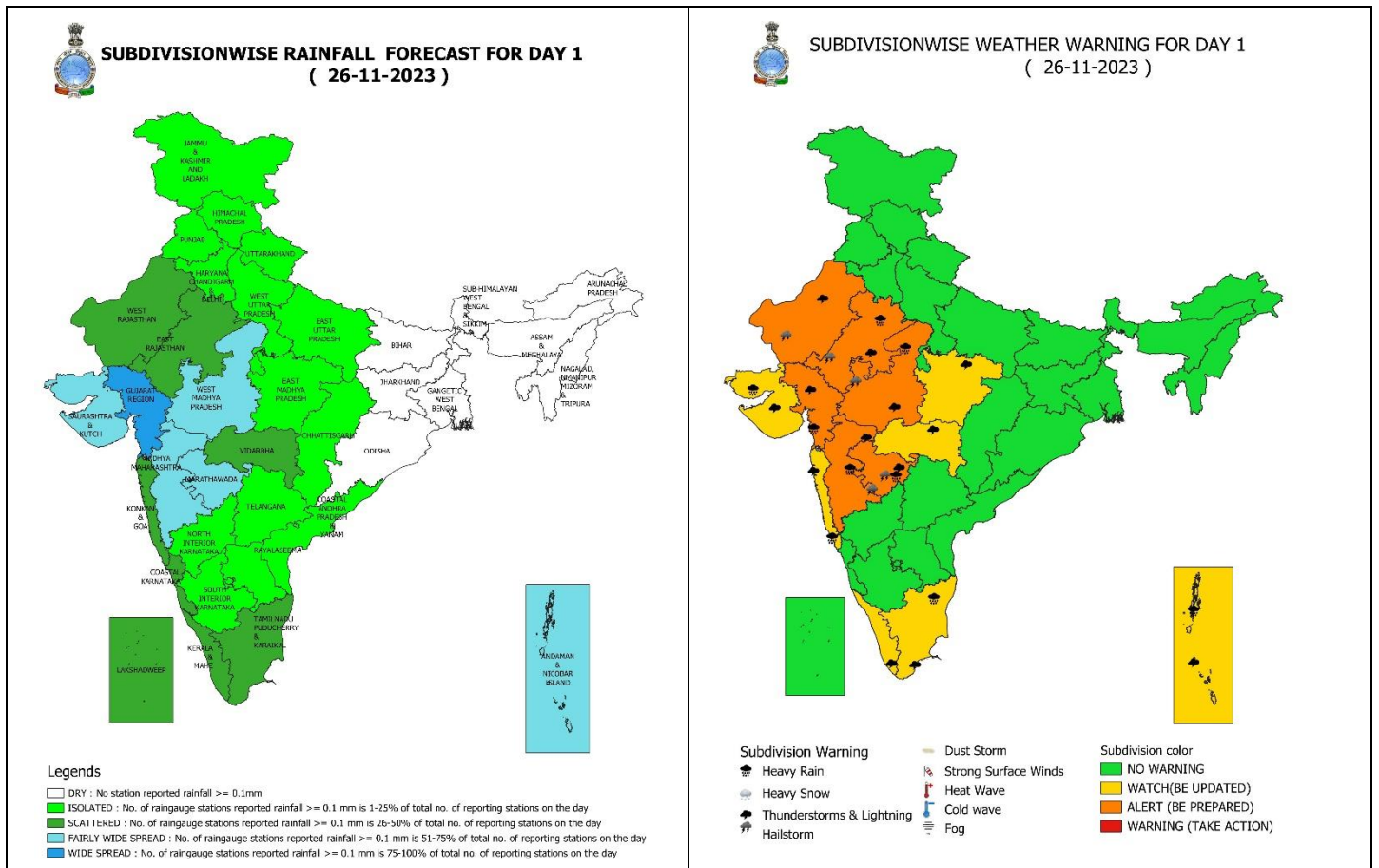


24 Hr cumulative rainfall recorded over different stations during 0830 IST of 25-11-2023 to 0830 IST of 26-11-2023



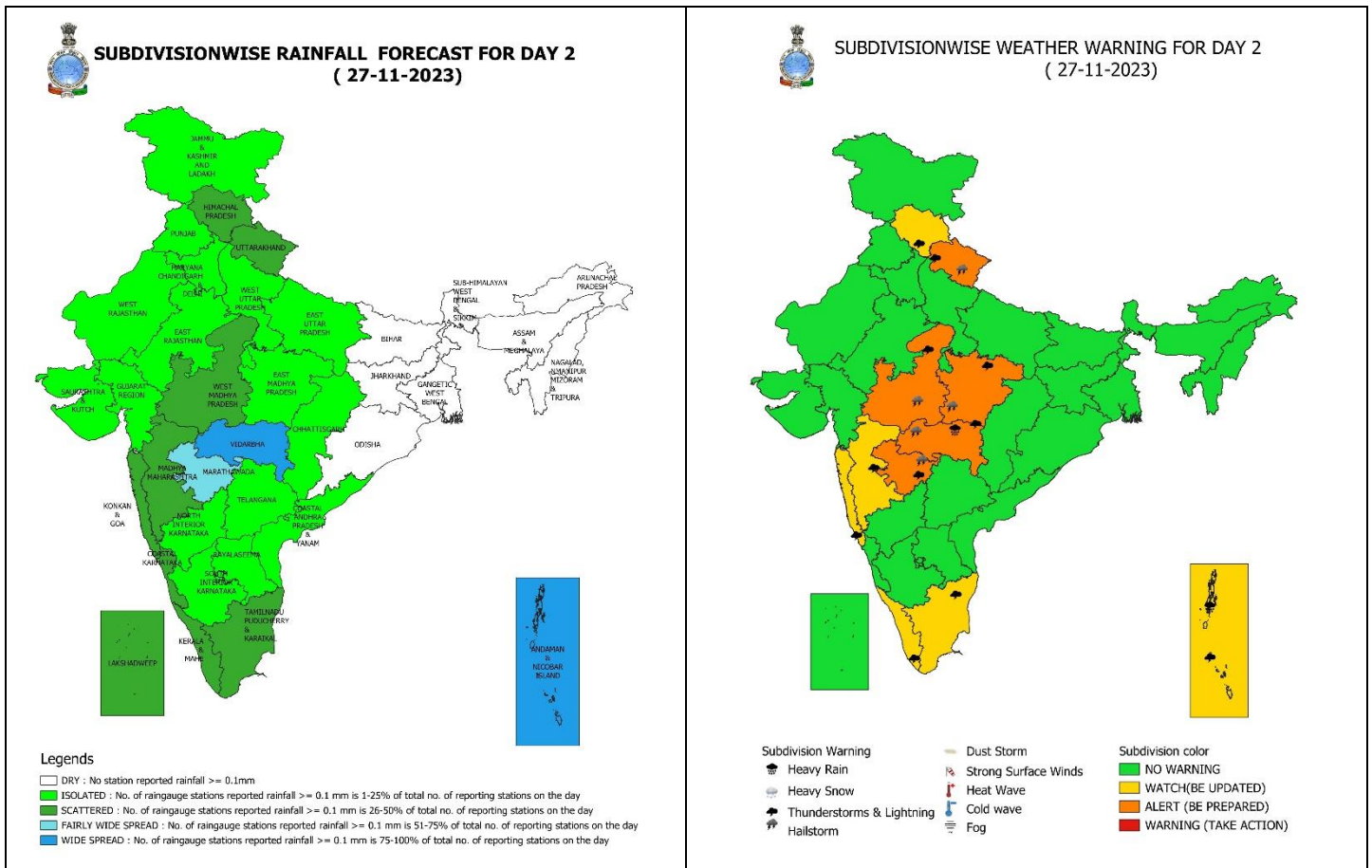
## Legends

- 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)



## 26 November (Day 1):

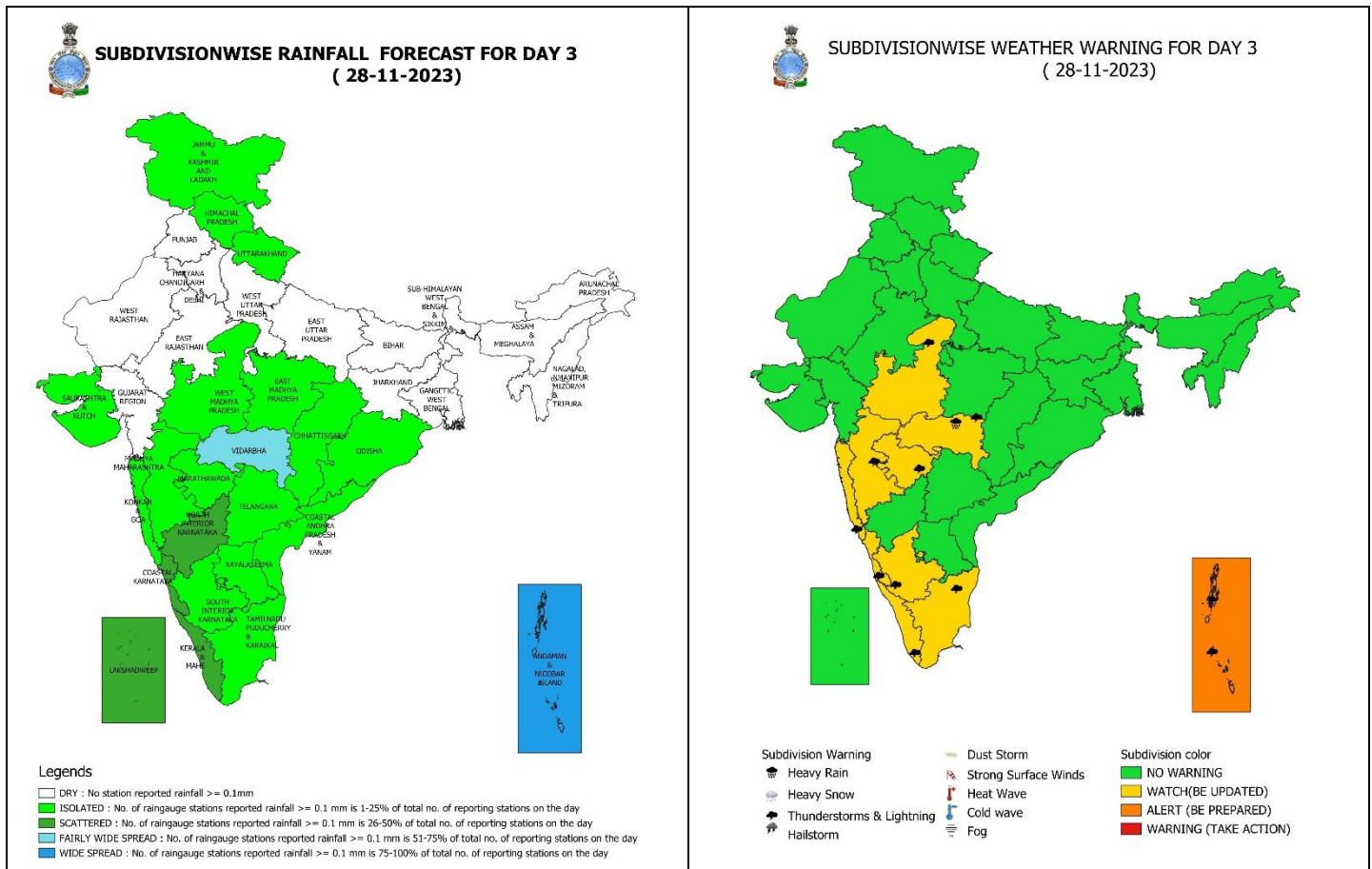
- ❖ **Heavy to very heavy rainfall** very likely at isolated places over Gujarat Region and **heavy rainfall** at isolated places over southeast Rajasthan, southwest Madhya Pradesh, Andaman & Nicobar Islands, Saurashtra & Kutch, Konkan & Goa, north Madhya Maharashtra and Tamil Nadu, Puducherry & Karaikal.
- ❖ **Thunderstorm accompanied with lightning, gusty winds (speed 40-50 kmph) & Hail** very likely at isolated places over southwest Madhya Pradesh; **with lightning, gusty winds (speed 30-40 kmph) & Hail** at isolated places over south Rajasthan; **with lightning & Hail** at isolated places over Gujarat region, north Madhya Maharashtra and Marathwada; **with lightning & gusty winds (speed 30-40 kmph)** at isolated places over Vidarbha and Kerala & Mahe and **with lightning** at isolated places over East Madhya Pradesh, Andaman & Nicobar Islands, Konkan & Goa, Saurashtra & Kutch and Tamil Nadu, Puducherry & Karaikal.
- ❖ **Squally weather (wind speed reaching 40-45 kmph gusting to 55 kmph)** very likely to prevail along & off South Gujarat coast.



## 27 November (Day 2)

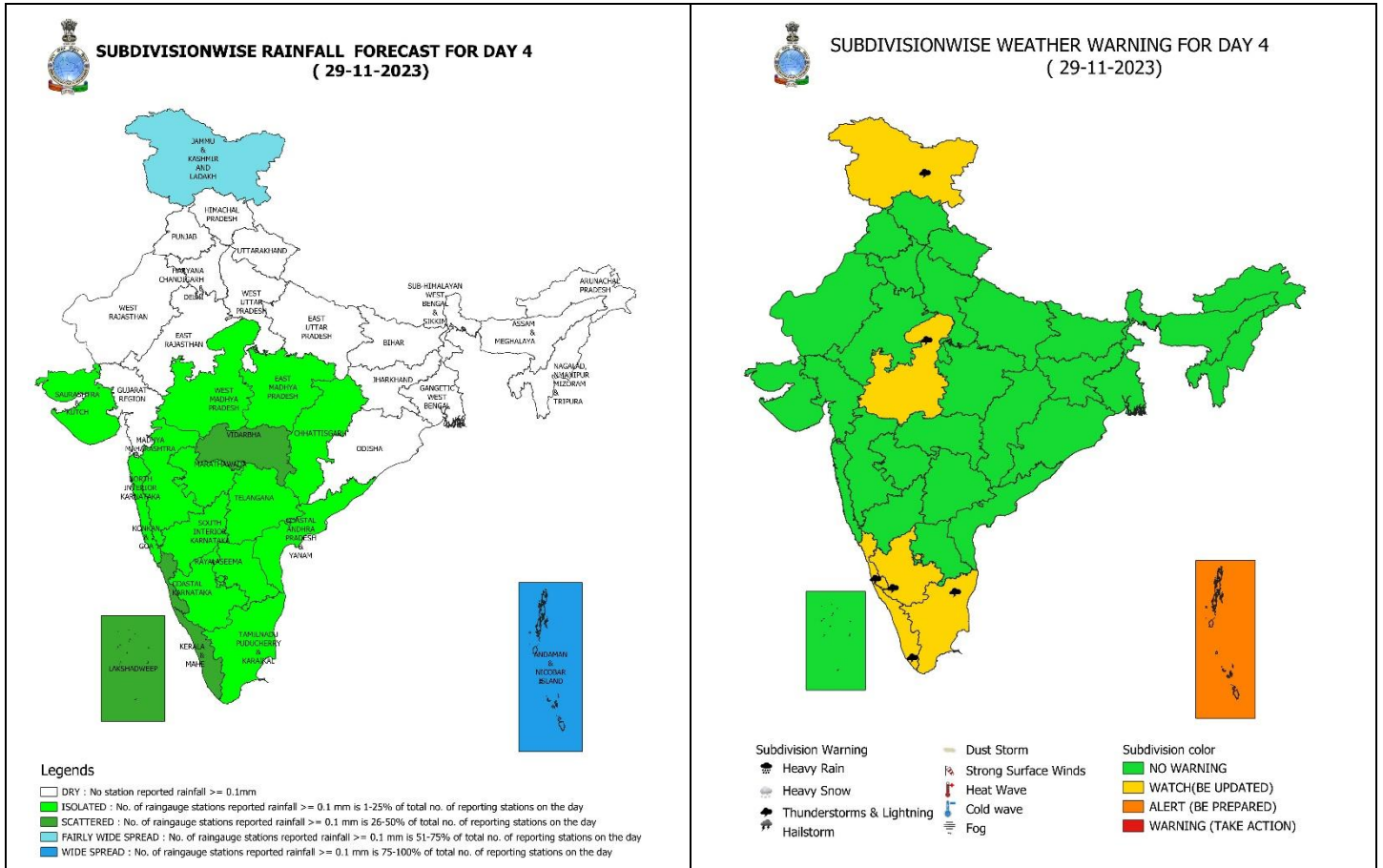
- ❖ **Heavy rainfall** very likely at isolated places over Vidarbha and Andaman & Nicobar Islands.
- ❖ **Thunderstorm accompanied with lightning, gusty winds (speed 40-50 kmph) & Hail** very likely at isolated places over southwest Madhya Pradesh; **with lightning, gusty winds (speed 30-40 kmph) & Hail** at isolated places over southeast Madhya Pradesh and Vidarbha; **with lightning & Hail** at isolated places over Uttarakhand and Marathwada; **with lightning & gusty winds (speed 30-40 kmph)** at isolated places over Kerala & Mahe and **with lightning** at isolated places over Himachal Pradesh, Andaman & Nicobar Islands, Konkan & Goa, Madhya Maharashtra and Tamil Nadu, Puducherry & Karaikal.
- ❖ **Squally weather (wind speed reaching 40-45 kmph gusting to 55 kmph)** very likely to prevail over South and adjoining North Andaman Sea. Fishermen are advised not to venture into these areas.





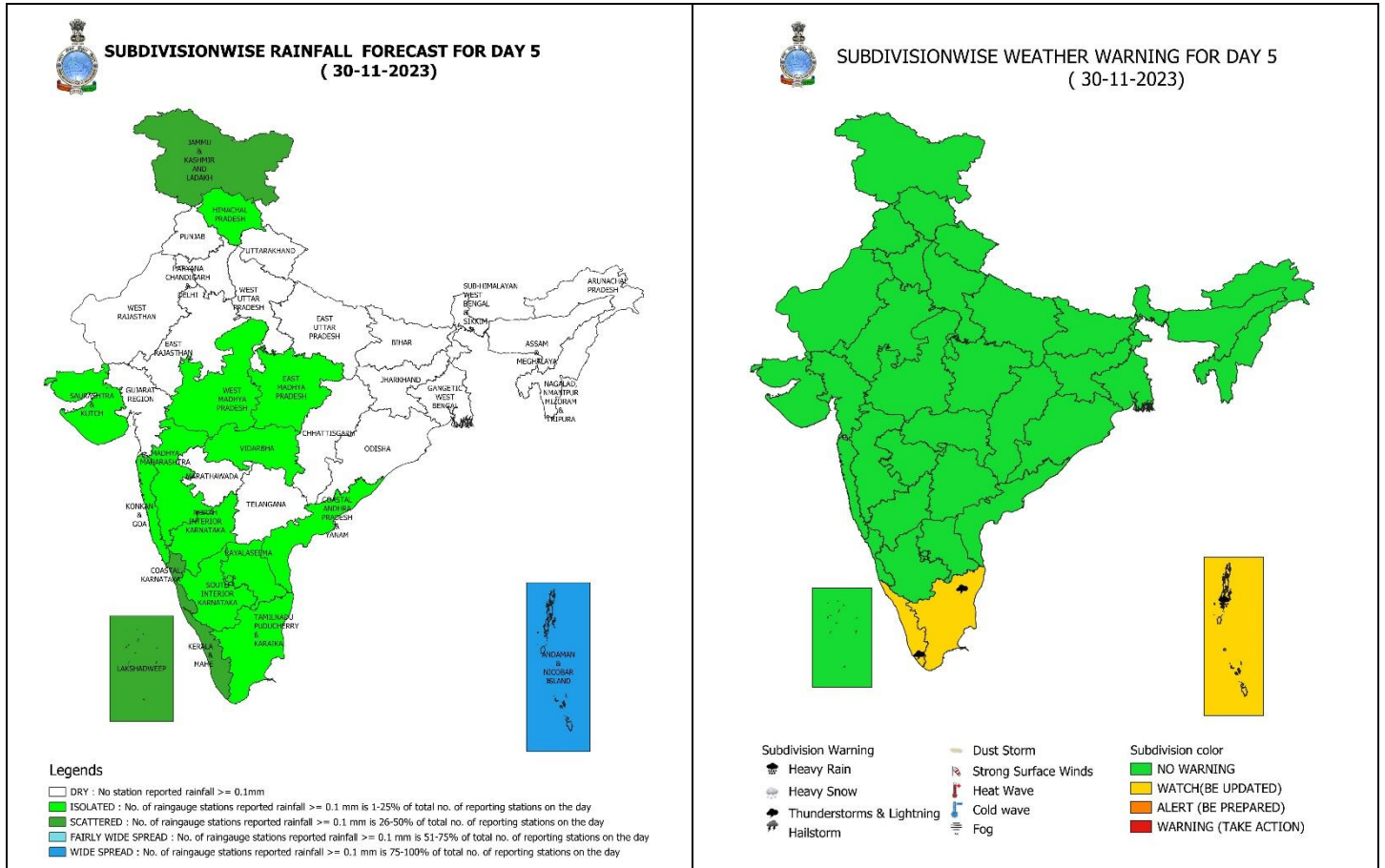
## 28 November (Day 3):

- ❖ **Heavy to very heavy rainfall** very likely at isolated places over Andaman & Nicobar Islands and **heavy rainfall** at isolated places over Vidarbha.
- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed 40-50 kmph)** very likely at isolated places over Andaman & Nicobar Islands; **with lightning & gusty winds (speed 30-40 kmph)** at isolated places over southeast Madhya Pradesh and **with lightning** at isolated places over southwest Madhya Pradesh, Vidarbha, Konkan & Goa, Madhya Maharashtra, Marathwada, Coastal & South Interior Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- ❖ **Squally weather (wind speed reaching 40-45 kmph gusting to 55 kmph)** very likely to prevail over South and adjoining North Andaman Sea and Southeast Bay of Bengal. Fishermen are advised not to venture into these areas.



## 29 November (Day 4):

- ❖ **Heavy to very heavy rainfall** likely at isolated places over Andaman & Nicobar Islands.
- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed 40-50 kmph)** likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, West Madhya Pradesh, Coastal & South Interior Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- ❖ **Squally weather (wind speed reaching 40-45 kmph gusting to 55 kmph)** likely to prevail over South and adjoining North Andaman Sea and Southeast Bay of Bengal. Fishermen are advised not to venture into these areas.



## 30 November (Day 5):

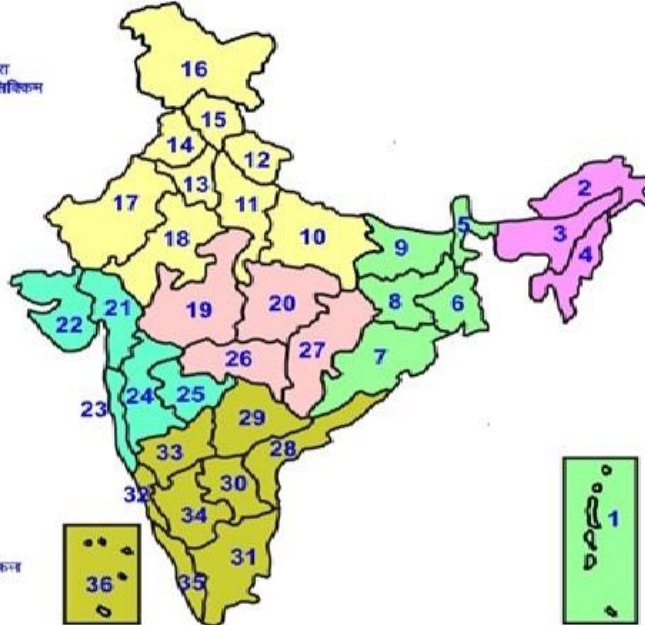
- ❖ **Heavy rainfall** likely at isolated places over Andaman & Nicobar Islands.
- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed 30-40 kmph)** likely at isolated places over Andaman & Nicobar Islands and **with lightning** at isolated places over Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- ❖ **Squally weather (wind speed reaching 45-55 kmph gusting to 65 kmph)** likely to prevail over south and adjoining North Andaman Sea, Southeast Bay of Bengal, adjoining Southwest Bay of Bengal. **Squally Weather (wind speed 45-55 kmph gusting to 65 kmph)** likely to prevail over Southeast Bay of Bengal. **Squally weather (wind speed 50-60 kmph gusting to 70 kmph)** likely to prevail over Southeast Bay of Bengal. Fishermen are advised not to venture into these areas.





## LEGENDS

- 1 अंडमान और निकोबार द्वीप समूह
- 2 अरुणाचल प्रदेश
- 3 असम और मेघालय
- 4 नागालैंड मनीपुर मीजोरम और त्रिपुरा
- 5 उप हिमालय पश्चिम बंगाल एवं सिक्किम
- 6 पश्चिम बंगाल
- 7 ओडिशा
- 8 झारखंड
- 9 बिहार
- 10 पूर्वी उत्तर प्रदेश
- 11 पश्चिम उत्तर प्रदेश
- 12 उत्तराखंड
- 13 हरियाणा चंडीगढ़ 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
- 22 सौराष्ट्र
- 23 कोंकण
- 24 मध्य महाराष्ट्र
- 25 महाराष्ट्र
- 26 विदर्भ
- 27 छत्तीसगढ़
- 28 तटीय आंध्र प्रदेश एवं यनम
- 29 तेलंगाना
- 30 चण्डीगढ़
- 31 तमिलनाडु, पुदुचेरी एवं कराईकल
- 32 उत्तर 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. Odisha
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



## 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)