



Saturday, November 25, 2023
Time of Issue: 0815 hours IST
(MORNING)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features

Weather Systems and Forecast & Warnings during next 5 days:

- ❖ A trough in easterlies runs from Maldives to north Maharashtra coast in lower tropospheric levels. It is very likely to cause:
 - Light to moderate rainfall at most places accompanied with thunderstorm & lightning at isolated places and **isolated heavy rainfall** over Tamil Nadu, Puducherry & Karaikal on 25th November, 2023.
- ❖ A fresh **Western Disturbance** seen as a trough in middle tropospheric westerlies at 5.8 km above mean sea level runs roughly along Long. 55°E to north of Lat 25°N. It is likely to approach northwest India as an upper level trough extending upto Eastcentral Arabian Sea off Gujarat-Maharashtra-Goa coasts during next 2-3 days. As a result, the above trough in mid-latitude westerlies in middle & upper tropospheric levels will interact with lower level trough in easterlies. Due to this interaction:
 - Light to moderate rainfall at many places accompanied with isolated thunderstorm & lightning is likely over Madhya Maharashtra, Konkan & Goa, Marathwada, Madhya Pradesh during 25th-27th; over Gujarat State on 25th & 26th November with maximum activity on 26th November, 2023.
 - **Thunderstorm & lightning accompanied with Hail** at isolated places over south Rajasthan, southwest Madhya Pradesh, north Madhya Maharashtra and north Marathwada during 26th - 27th November.
 - **Isolated heavy rainfall likely over East Rajasthan, Vidarbha, north Madhya Maharashtra & Gujarat Region on 26th; over southwest Madhya Pradesh on 26th & 27th November, 2023.**
 - Light rainfall at isolated places also likely over Western Himalayan Region and plains of Northwest India during 26th-28th November. **Thunderstorm & lightning accompanied with Hail** at isolated places over Uttarakhand on 27th November, 2023.
- A Cyclonic Circulation is likely to emerge over South Andaman Sea & neighbourhood around 26th November. Under its influence, a **Low Pressure Area** is likely to form over South Andaman Sea & adjoining Southeast Bay of Bengal around 27th November. It is likely to move west-northwestwards and intensify into a Depression over Southeast Bay of Bengal around 29th November, 2023. Under its influence:
 - Light to moderate rainfall at many places accompanied with isolated thunderstorm & lightning is likely over Andaman & Nicobar Islands during 26th-27th November, 2023. Isolated heavy rainfall also likely over Andaman & Nicobar Islands during 26th - 28th November.
 - **Squally weather (wind speed reaching 30-40 kmph gusting to 50 kmph)** likely over south Andaman Sea on 26th November; **Squally weather (wind speed reaching 40-50 kmph gusting to 60 kmph)** over south Andaman Sea & adjoining Southeast Bay of Bengal during 27th-28th and **wind speed reaching 45-55 kmph gusting to 65 kmph** over south Andaman Sea & adjoining Southeast Bay of Bengal during 29th-30th November.
- **Fishermen are advised not to venture into South Andaman Sea on 26th & 27th and over Southeast Bay of Bengal during 27th-30th November.**
- ❖ **No significant weather likely over rest parts of the country.**



Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST to 1730 hours IST of yesterday): **at many places over** Tamil Nadu, Puducherry & Karaikal and Lakshadweep; at a few places over Rayalaseema and Kerala & Mahe; at isolated places over Coastal Karnataka.
- ❖ **Significant Rainfall recorded** (from 0830 hours IST to 1730 hours IST of yesterday) (in cm): Lakshadweep: Minicoy-5; **Tamil Nadu, Puducherry & Karaikal: Vellore-2.**
- ❖ **Minimum Temperature Departures (as on 24-11-2023):** Minimum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at most places over Marathwada, Madhya Maharashtra; at many places over Vidarbha; at a few places over Telangana, North Interior Karnataka, Rayalaseema, Coastal Andhra Pradesh & Yanam and Chhattisgarh; **above normal (1.6°C to 3.0°C)** at most places over Konkan & Goa, Coastal & South Interior Karnataka and Arunachal Pradesh; at many places over Assam & Meghalaya; at a few places over Madhya Pradesh, Tamil Nadu, Puducherry & Karaikal, Odisha and Nagaland, Manipur, Mizoram & Tripura and at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Punjab, Rajasthan, Gujarat state, Kerala & Mahe, Jharkhand, West Bengal & Sikkim and Bihar. They were **below normal (-1.6°C to -3.0°C)** at isolated places over West Uttar Pradesh and **near normal** over rest parts of the country. Yesterday, **the lowest minimum temperature of 9.1°C** was reported at **Hissar (Haryana)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 24-11-2023):** Maximum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Chhattisgarh, Madhya Pradesh, Konkan & Goa **above normal (1.6°C to 3.0°C)** at most places over Arunachal Pradesh, Assam & Meghalaya, Himachal Pradesh; at many places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; at a few places over Tamil Nadu, Puducherry & Karaikal, Sub-Himalayan West Bengal & Sikkim; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Odisha, Coastal Andhra Pradesh & Yanam, Saurashtra & Kutch, North Interior Karnataka, Nagaland, Manipur, Mizoram & Tripura. They were **below normal (-1.6°C to -3.0°C)** at isolated places over Telangana, South Interior Karnataka, Kerala & Mahe, Haryana-Chandigarh-Delhi and **near normal** over rest parts of the country. Yesterday, the highest **maximum temperature of 36.8°C** was reported at **Harnai (Konkan & Goa).**



Meteorological Analysis (Based on 0530 hours IST)

- ❖ The **Cyclonic Circulation** over Southeast & adjoining Southwest Arabian Sea extending upto 1.5 km above mean sea level persists.
- ❖ The **Trough** in easterlies from the above cyclonic circulation over Southeast & adjoining Southwest Arabian Sea to North Maharashtra coast extending upto 1.5 km above mean sea level persists.
- ❖ A fresh **Western Disturbance** seen as a trough in middle tropospheric westerlies at 5.8 km above mean sea level runs roughly along Long. 55°E to north of Lat 25°N.
- ❖ A **Cyclonic Circulation** is likely to emerge over South Andaman Sea & neighbourhood around 26th November. Under its influence, a Low Pressure Area is likely to form over South Andaman Sea & adjoining Southeast Bay of Bengal around 27th November. It is likely to move west-northwestwards and intensify into a Depression over Southeast Bay of Bengal around 29th November, 2023.
- ❖ Another fresh feeble **Western Disturbance** is likely to affect Western Himalayan Region from 30th November, 2023.

Weather Forecast for next 7 days (Upto 0830 hours IST of 02nd December, 2023)

- ❖ Meteorological sub-division wise detailed 7 days rainfall forecast is given in Table-1.
- ❖ Minimum temperatures are likely to fall by 2-4°C over many parts of Northwest, West & Central India from 28th November, 2023.
- ❖ Shallow to moderate fog likely over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during next 2-3 days.

Weather Outlook for subsequent 2 days

- ❖ Scattered to fairly widespread light to moderate rainfall likely over parts of south peninsular India, along the west coast, Maharashtra and Islands.
- ❖ Mainly dry weather likely to prevail over rest parts of the country.



Table-1

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

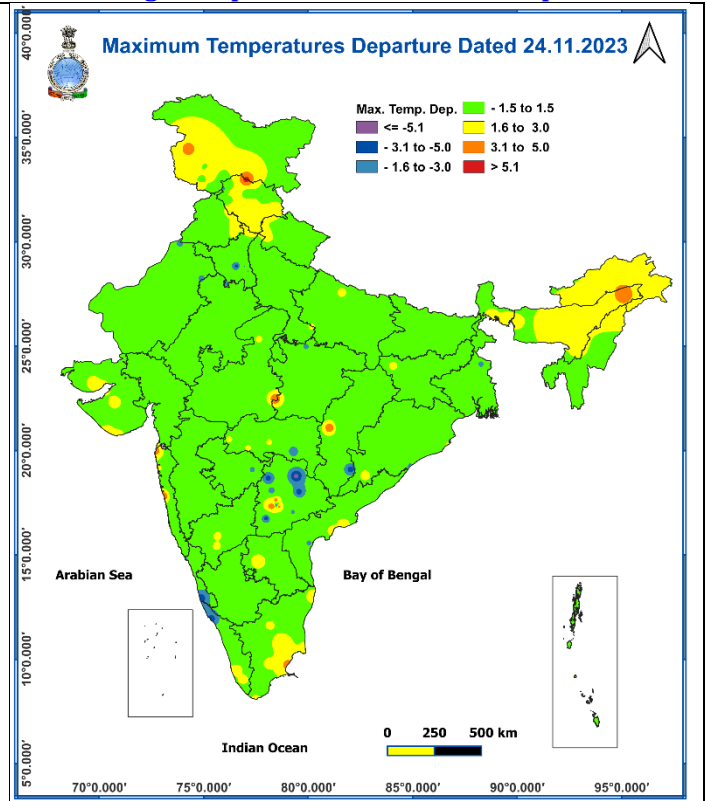
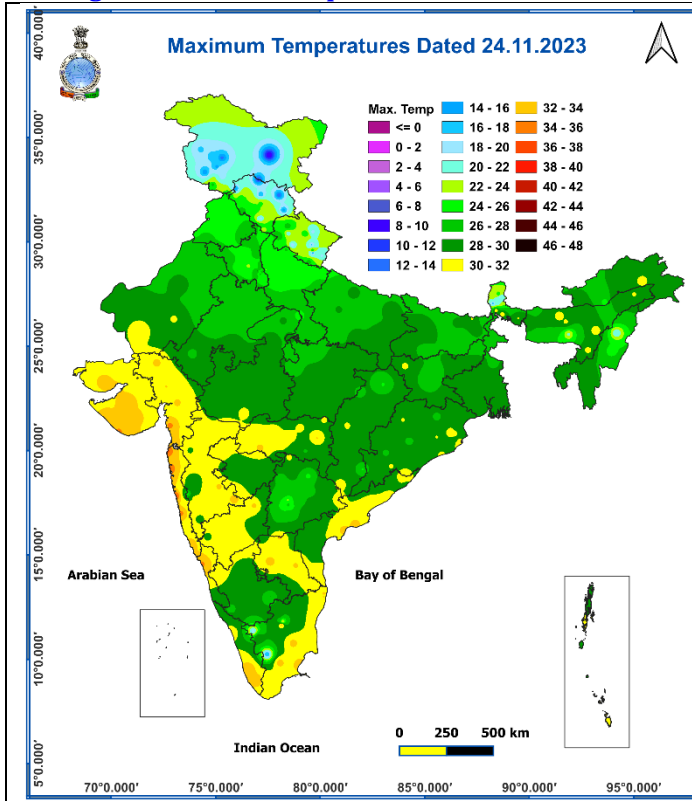


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures

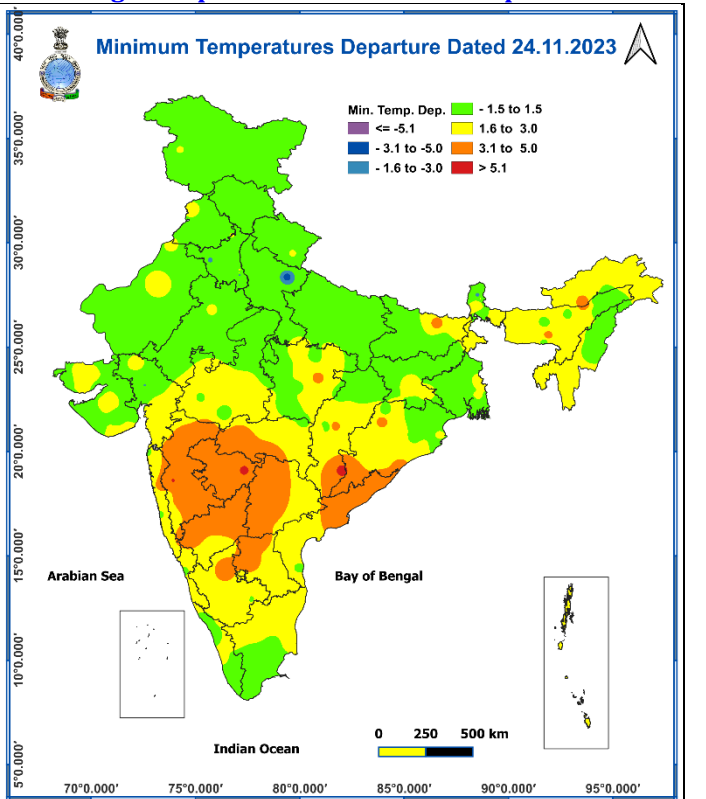
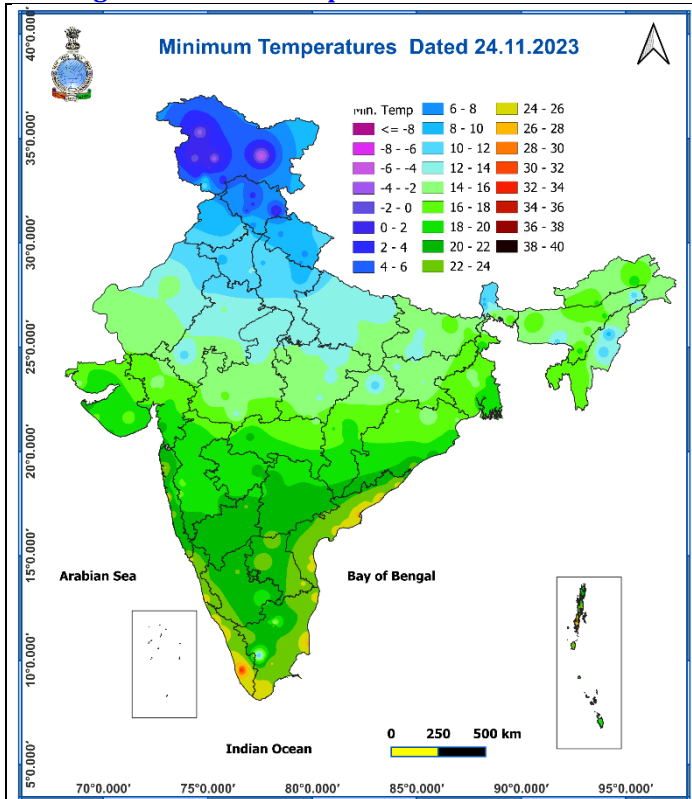
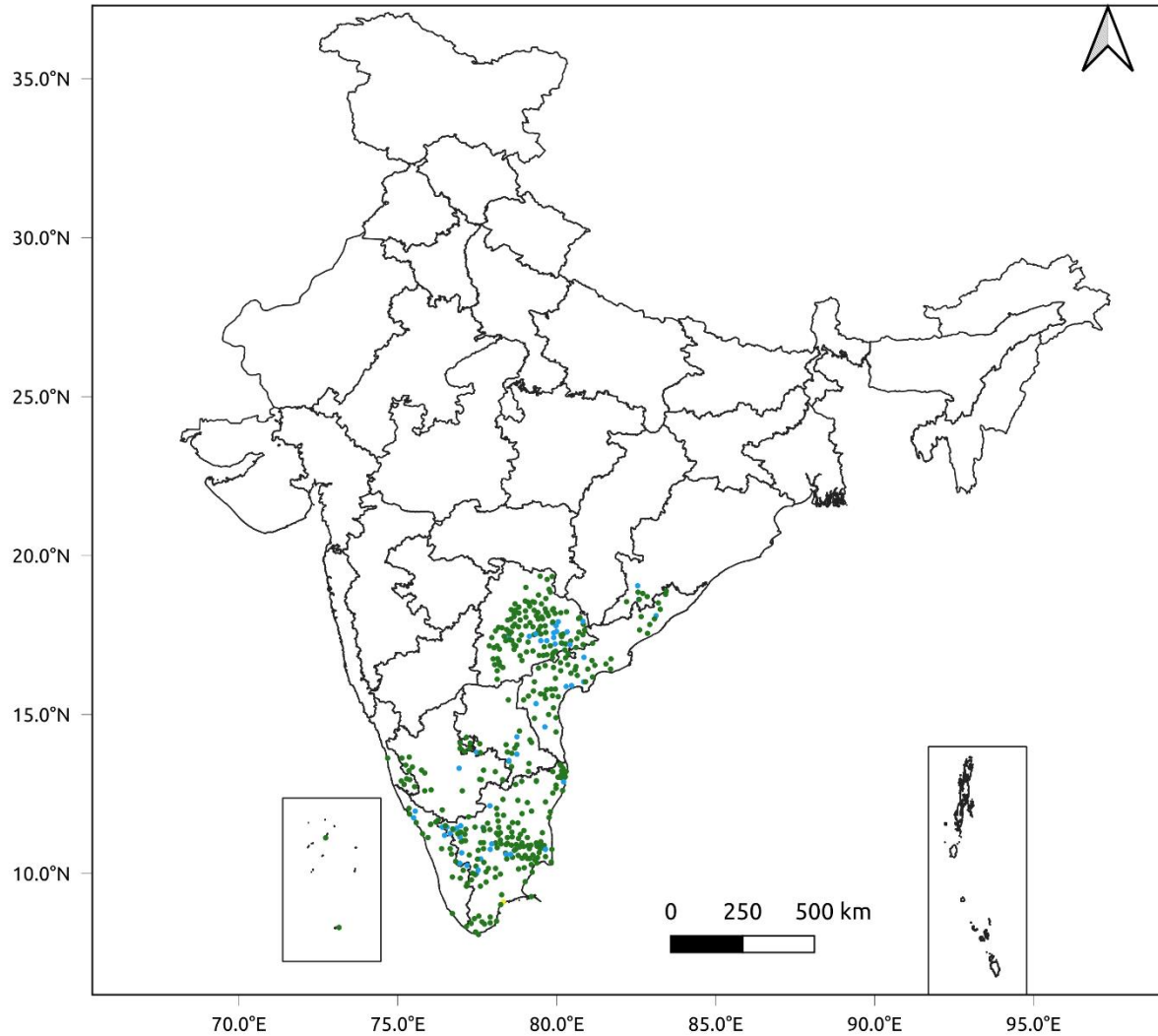


Fig. 5: Accumulated Rainfall (mm) during past 24 hours

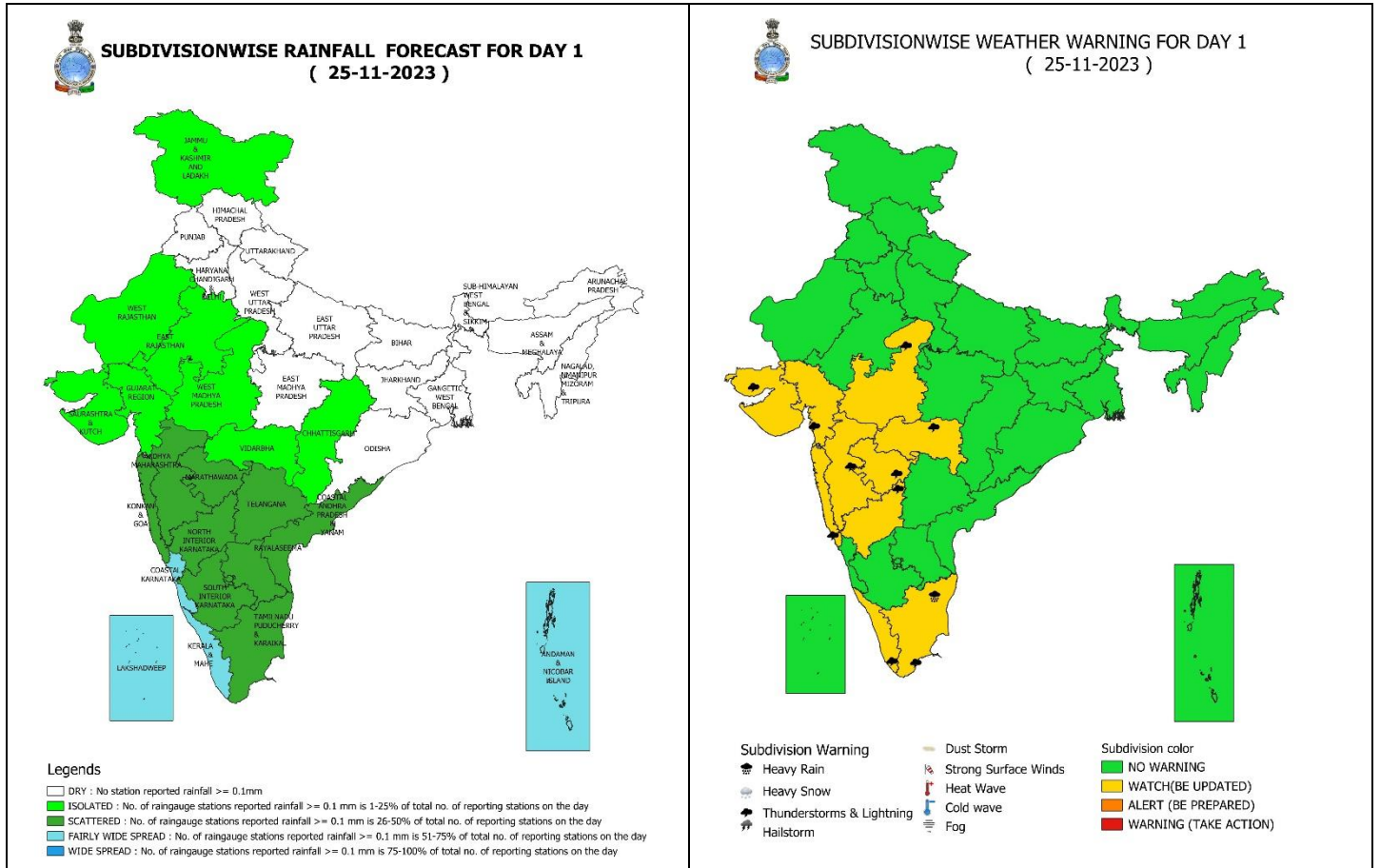


24 Hr cumulative rainfall recorded over different stations during 0830 IST of 23-11-2023 to 0830 IST of 24-11-2023



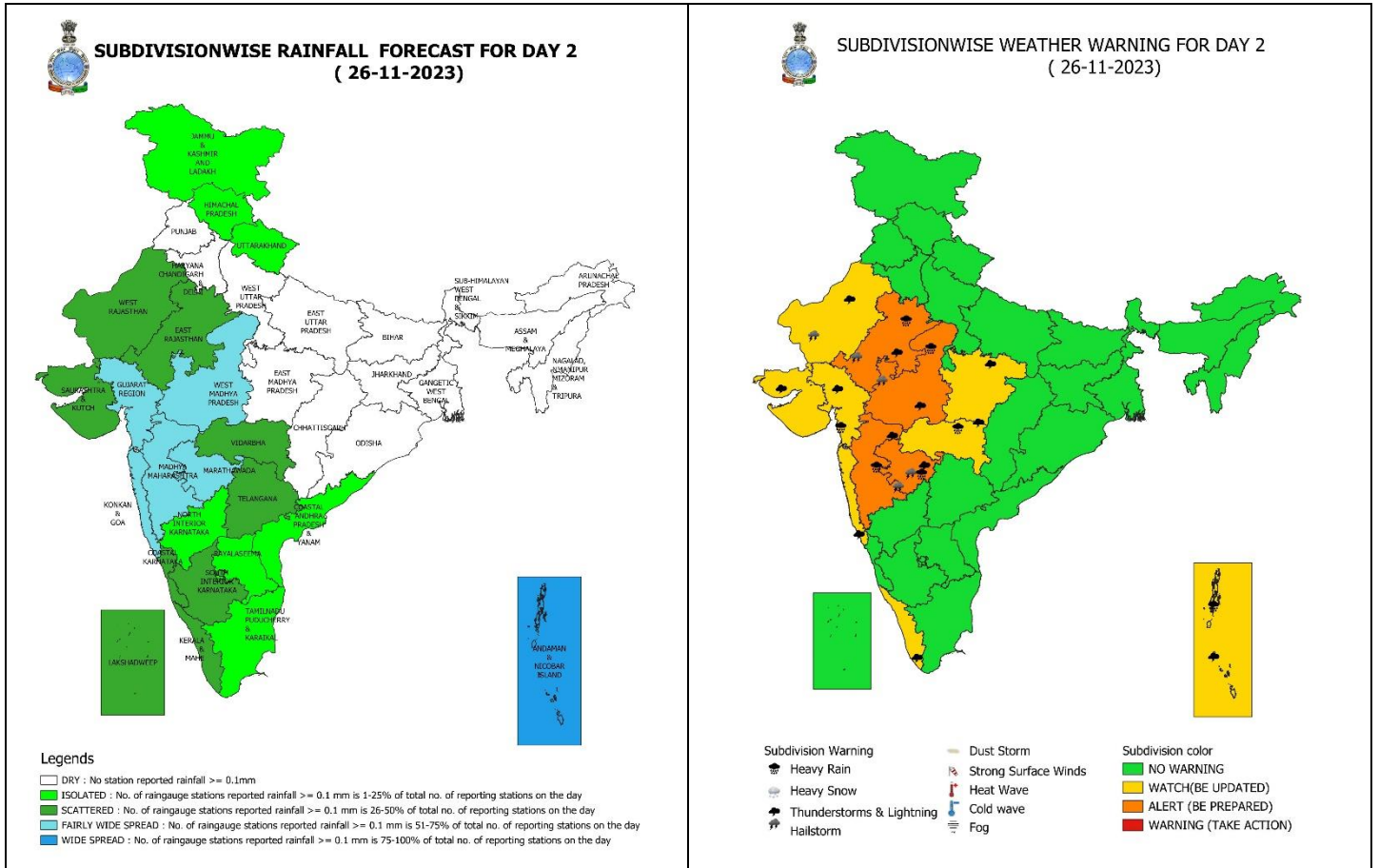
Legends

- 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 (≥ 204.5 mm)



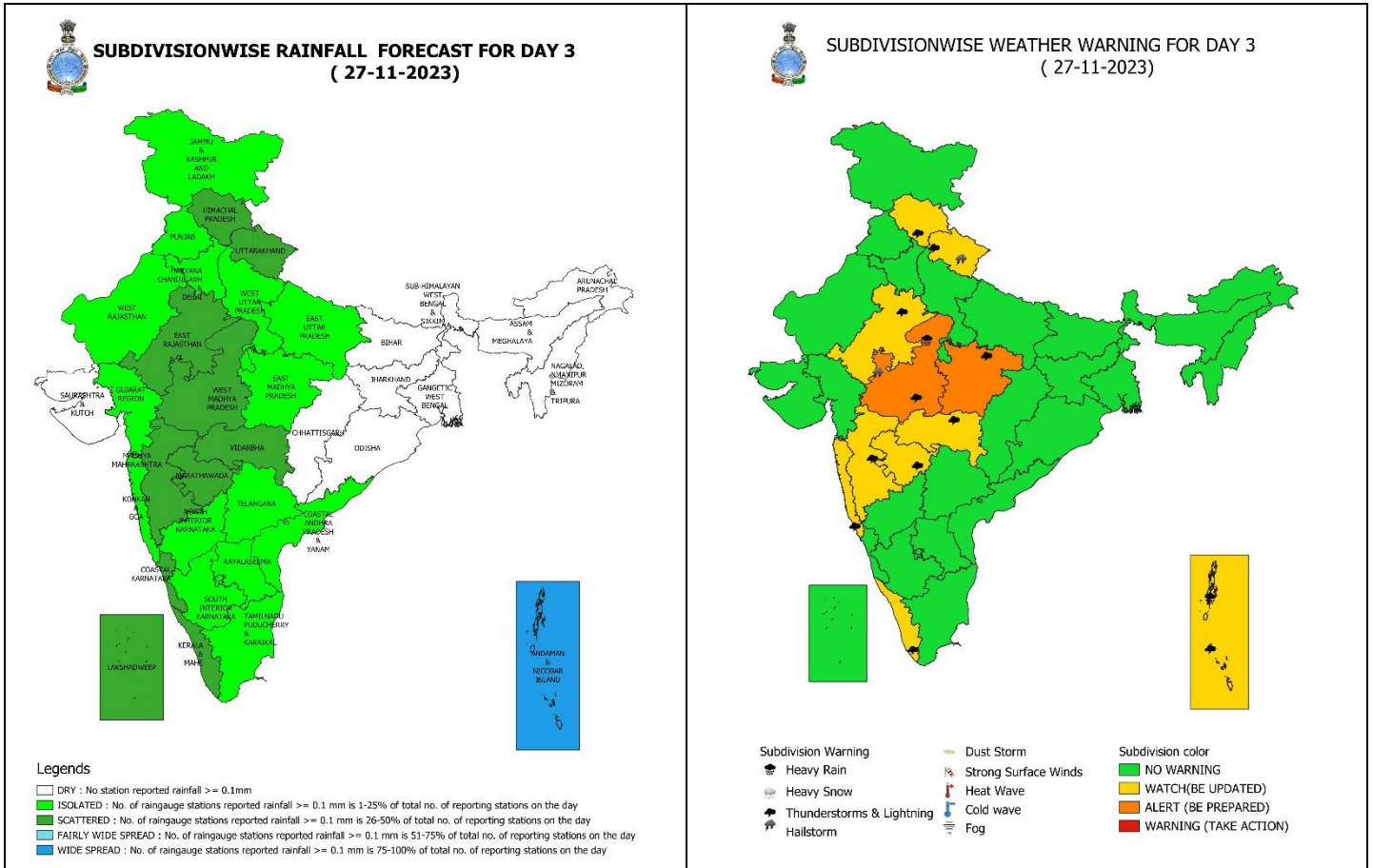
25 November (Day 1):

- ❖ **Heavy rainfall** very likely at isolated places over Tamil Nadu, Puducherry & Karaikal.
- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed 30-40 kmph)** very likely at isolated places over Kerala & Mahe and **with lightning** at isolated places over West Madhya Pradesh, Vidarbha, Konkan & Goa, Madhya Maharashtra, Marathwada, Gujarat state, North Interior Karnataka and Tamil Nadu, Puducherry & Karaikal.



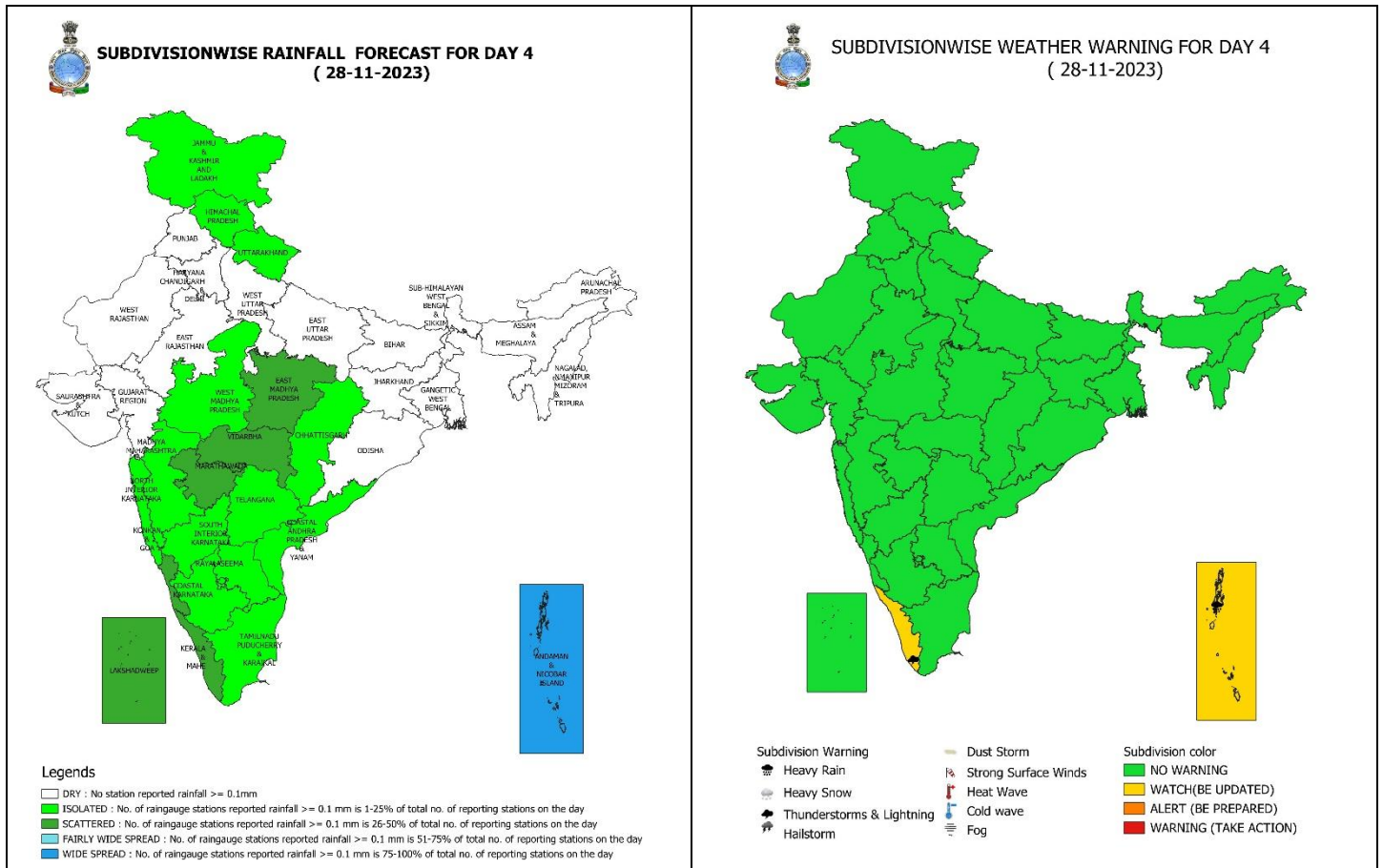
26 November (Day 2):

- ❖ **Heavy rainfall** very likely at isolated places over East Rajasthan, West Madhya Pradesh, Vidarbha, Andaman & Nicobar Islands, Gujarat Region, Madhya Maharashtra and Marathwada.
- ❖ **Hailstorm accompanied with thunderstorm, lightning** very likely at isolated places over south Rajasthan, southwest Madhya Pradesh, north Madhya Maharashtra, Marathwada; **with thunderstorm, lightning & gusty winds (speed 30-40 kmph)** very likely at isolated places over Madhya Pradesh, Vidarbha and **with thunderstorm, lightning** at isolated places over Rajasthan, Gujarat State, Madhya Maharashtra, Marathwada, Konkan & Goa and Kerala & Mahe.



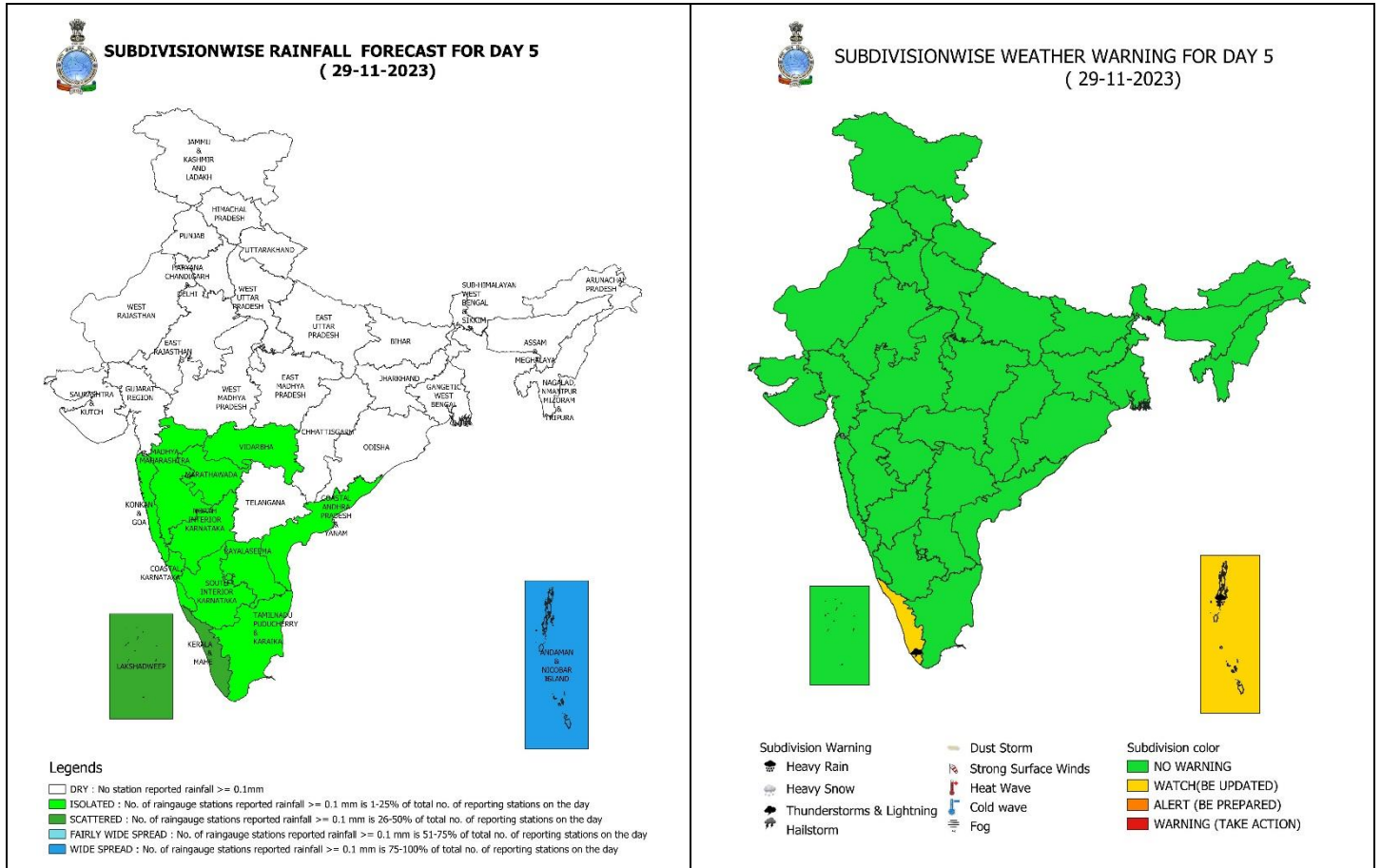
27 November (Day 3)

- ❖ **(speed 30-40 kmph)** at isolated places Madhya Pradesh and **with thunderstorm, lightning** at isolated places over Himachal Pradesh, East Rajasthan, Vidarbha, Andaman & Nicobar Islands, Konkan & Goa, Madhya Maharashtra, Marathwada and Kerala & Mahe.
- ❖ **Squally weather (wind speed reaching 40-45 kmph gusting to 55 kmph)** likely to prevailing over South and adjoining North Andaman Sea. Fishermen are advised not to venture into these areas.



28 November (Day 4):

- ❖ **Heavy rainfall** likely at isolated places over Andaman & Nicobar Islands.
- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Kerala & Mahe.
- ❖ **Squally weather (wind speed reaching 40-45 kmph gusting to 55 kmph)** likely to prevailing over southeast Bay of Bengal and adjoining Andaman Sea and **Squally weather (wind speed reaching 45-55 kmph gusting to 65 kmph)** likely to prevailing over southeast Bay of Bengal and adjoining Andaman Sea. Fishermen are advised not to venture into these areas.

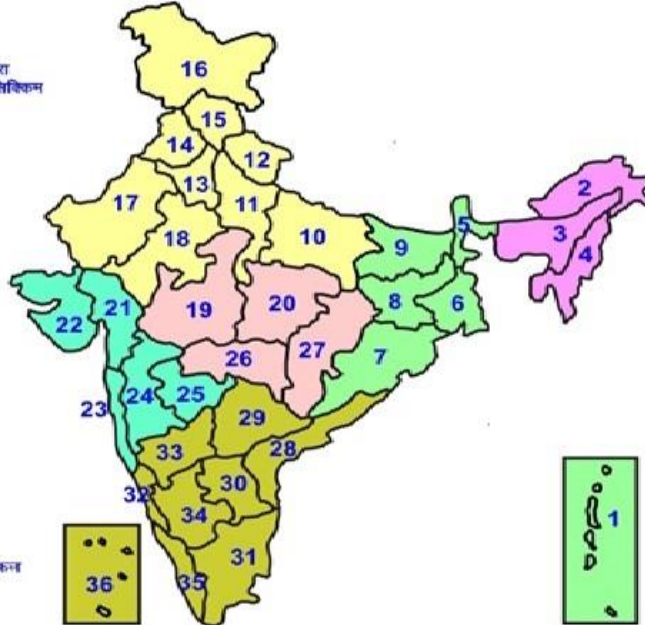


29 November (Day 5):

- ❖ **Heavy rainfall** likely at isolated places over Andaman & Nicobar Islands.
- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Kerala & Mahe.
- ❖ **Squally weather (wind speed reaching 40-45 kmph gusting to 55 kmph)** likely to prevailing over southeast Bay of Bengal and adjoining Andaman Sea and **Squally weather (wind speed reaching 45-55 kmph gusting to 65 kmph)** likely to prevailing over southeast Bay of Bengal and adjoining Andaman Sea. 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 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. 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°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 < 1km

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)