राष्ट्रीय मौसम पूर्वानुमान केन्द्र
भारत मौसम विज्ञान विभाग
पृथ्वी विज्ञान मंत्रालय

National Weather Forecasting Centre
India Meteorological Department
Ministry of Earth Sciences

Wednesday, November 29, 2023
Time of Issue: 0800 hours IST
(MORNING)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features

Weather Systems and Forecast & Warnings during next 5 days:

- The Western Disturbance as a trough in mid & upper tropospheric westerlies with its axis at 5.8 km above mean sea level runs roughly along Long. 79°E to north of Lat. 23°N.
- A Cyclonic Circulation lay over south Sri Lanka & neighbourhood in lower tropospheric levels.
- A fresh Western Disturbance is likely to affect the Western Himalayan region from night of 29th November, 2023.
- A trough in easterlies is likely to run from Southeast Arabian Sea to North Maharashtra across Kerala, Coastal Karnataka during 29th November – 01st December, 2023. Thus, there will be interaction between middle level westerlies and lower level easterlies over the Central parts of the country during that period.

Under the influence of the above systems:

- Scattered to fairly widespread Light to moderate rainfall accompanied with isolated thunderstorm activity very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad during 29th-30th November, over Himachal Pradesh and Uttarakhand on 30th November with significant reduction thereafter. Light rainfall very likely at isolated places over the plains of Northwest India during next 2 days.
- Light to moderate scattered to fairly widespread rainfall with thunderstorm & lightning at isolated places very likely over West Madhya Pradesh during next 2 days, over East Madhya Pradesh during next 3 days and over Vidarbha during next 24 hours.
- Light to moderate isolated to scattered rainfall with thunderstorm activity isolated places very likely over Madhya Maharashtra, Marathwada during next 2 days.
- Light to moderate scattered to fairly widespread rainfall with thunderstorm activity at isolated places very likely over Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe during next 5 days. **Heavy rainfall** at isolated places likely over Tamil Nadu, Puducherry & Karaikal during 29th Novmeber-01st December; over Kerala & Mahe on 30th November & 01st December.

Low Pressure Area over South Andaman Sea

The **Low Pressure Area** over south Andaman Sea & adjoining Southeast Bay of Bengal now lies as a **Well Marked Low Pressure Area** over Southeast Bay of Bengal & adjoining South Andaman Sea at 0530 hours IST of today, the 29th November. It is likely to move west-northwestwards and intensify into a Depression over southeast Bay of Bengal around 30th November, 2023. Thereafter, it is likely to move northwestwards and intensify further into a Cyclonic Storm over Southwest & adjoining Southeast Bay of Bengal during subsequent 48 hours.

Warnings in association with the above Low Pressure Area:

(i) Rainfall Warning:

- Light to moderate rainfall at most places with **isolated heavy rainfall** is likely over Nicobar Islands during 29th to 1st December with **isolated heavy to very heavy rainfall** on 29th November.
- Light to moderate rainfall at most places with **isolated very heavy rainfall** is likely over Andaman Islands on 30th November.

(ii) Wind warning:

- **Andaman Sea and Andaman & Nicobar Islands: Strong wind** speed reaching **25-35 kmph gusting to 45 kmph** is likely to prevail over South Andaman Sea and adjoining Andaman & Nicobar Islands on 29th November.
- **Southeast Bay of Bengal: Squally weather** with wind speed reaching **40-50 kmph gusting to 60 kmph** is likely to prevail over Southeast Bay of Bengal on 30th November. It is likely to increase becoming **50-60 kmph gusting to 70 kmph** on 01st December and **Gale Wind** speed reaching **60-70 kmph gusting to 80 kmph** on 02nd December**.**
- **Southwest Bay of Bengal: Squally wind** speed reaching **40-50 kmph gusting to 60 kmph** is likely over adjoining Southwest Bay of Bengal from 01st December morning. It would increase becoming **Gale Wind** speed reaching **60-70 kmph gusting to 80 kmph** on 02nd December morning**.**
- **Central Bay of Bengal: Squally wind** speed reaching **40-50 kmph gusting to 60 kmph** is likely over adjoining central Bay of Bengal on 01st December and is likely to become **50-60 kmph gusting to 70 kmph** on 02nd December.

(iii) Fishermen Warning: Fishermen are advised not to venture into:

- South Andaman Sea on 29th & 30th November.
- Southeast Bay of Bengal during 30th November & 02nd December.
- Southwest Bay of Bengal on 30th November and 02nd December.
- Central Bay of Bengal from 01st December morning onwards.

The Fishermen out at sea off east coast of India (from North Tamil Nadu to Odisha) are advised to return to coast by 1st December.

Main Weather Observations:

- **Rainfall distribution** (from 0830 hours IST to 1730 hours IST of yesterday): **at a few places** over East Madhya Pradesh and Chhattisgarh and **at isolated places** over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Uttarakhand, East Rajasthan, Gujarat Region, West Uttar Pradesh, Haryana-Chandigarh-Delhi, West Madhya Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gangetic West Bengal, Maharashtra, Telangana, Coastal Andhra Pradesh & Yanam, Interior Karnataka, Kerala & Mahe and Tamil Nadu, Puducherry & Karaikal.

- **Significant Rainfall recorded** (from 0830 hours IST to 1730 hours IST of yesterday) (in cm): **Kerala**: Thiruvananthapuram-4; **Maharashtra:** Wardha, Bhandara & Tiroda-3 each, Tulga & Nagpur-2 each, Nanded, Osmanabad, Tondapur & Sakoli-1 each; **South Interior Karnataka**: Hardanhally-1; **East Madhya Pradesh**: Seoni, Balaghat & Mandla-1 each; **Tamil Nadu:** Virinjipuram-1.

- **Minimum Temperature Departures (as on 28-11-2023):** Minimum temperatures were **markedly above normal (5.1°C or more)** at isolated places over Punjab, Madhya Maharashtra and East Madhya Pradesh; **appreciably above normal (3.1°C to 5.0°C)** at most places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Haryana-Chandigarh-Delhi, Bihar, Telangana, Rayalaseema and North Interior Karnataka; at many places over Uttarakhand, West Uttar Pradesh, Rajasthan and West Madhya Pradesh; at a few places over Himachal Pradesh; **above normal (1.6°C to 3.0°C)** at most places over Coastal Andhra Pradesh & Yanam and Coastal & South Interior Karnataka; at many places over Gangetic West Bengal, Jharkhand, Odisha, Chhattisgarh, Vidarbha and Kerala & Mahe; at a few places over Gujarat state, Sub-Himalayan West Bengal & Sikkim, Nagaland, Manipur, Mizoram & Tripura, Assam & Meghalaya and Tamil Nadu, Puducherry & Karaikal; at isolated places over Arunachal Pradesh and **near normal** over rest parts of the country. Yesterday, **the lowest minimum temperature** of **10.0°C** was reported at **Kanpur (West Uttar Pradesh)** over the plains of the country.

- **Maximum Temperature Departures (as on 28-11-2023):** Maximum temperatures were **markedly above normal (5.1°C or more)** at a few places over Sub-Himalayan West Bengal & Sikkim; **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Assam & Meghalaya; **above normal (1.6°C to 3.0°C)** at many places over Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura; at isolated places over Gangetic West Bengal, Bihar, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe. They were **markedly below normal (-5.1°C or less)** at a few places over Madhya Pradesh and Vidarbha; at isolated places over Rajasthan; **appreciably below normal (-3.1°C to -5.0°C)** at a few places over Haryana-Chandigarh-Delhi; **below normal (-1.6°C to -3.0°C)** at many places over Gujarat state and West Uttar Pradesh; at a few places over Madhya Maharashtra, Konkan & Goa, Chhattisgarh and Jharkhand; at isolated places over Uttarakhand, Punjab and East Uttar Pradesh and **near normal** over rest parts of the country. Yesterday, the highest **maximum temperature of 35.6°C** was reported at **Kottayam (Kerala).**

Meteorological Analysis (Based on 0530 hours IST)

- The **Western Disturbance** as a trough in mid & upper tropospheric westerlies with its axis at 5.8 km above mean sea level now runs roughly along Long. 79°E to north of Lat. 23°N at 0530 IST of today.

- The **Low Pressure Area** over south Andaman Sea & adjoining Southeast Bay of Bengal now lies as a **Well Marked Low Pressure Area** over Southeast Bay of Bengal & adjoining South Andaman Sea at 0530 hours IST of today, the 29th November. It is likely to move west-northwestwards and intensify into a **Depression** over southeast Bay of Bengal around 30th November, 2023. Thereafter, it is likely to move northwestwards and intensify further into a **Cyclonic Storm** over Southwest & adjoining Southeast Bay of Bengal during subsequent 48 hours.

- The **Cyclonic Circulation** over Southwest Arabian Sea persists and now extends upto 1.5 km above mean sea level at 0530 IST of today.

- The **Cyclonic Circulation** over south Sri Lanka & neighbourhood extending upto 1.5 km above mean sea level persists at 0530 IST of today.

- A fresh **Western Disturbance** is likely to affect Western Himalayan Region from night of 29th November, 2023.

- The **Induced Cyclonic Circulation** over southeast Rajasthan & adjoining West Madhya Pradesh extending upto 1.5 km above mean sea level has become less marked at 0530 IST of today.

Weather Forecast for next 7 days (Upto 0830 hours IST of 06th December, 2023)

- Meteorological sub-division wise detailed 7 days rainfall forecast is given in Table-1.
- Minimum Temperatures very likely to fall gradually by 2-3°C over most parts of Northwest & Central India during next 24 hours.
- Shallow to moderate fog very likely in isolated pockets over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during next 2 days.

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	29-Nov	30-Nov	01-Dec	02-Dec	03-Dec	04-Dec	05-Dec
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	WS	WS	WS	WS	FWS	FWS	FWS
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	DRY	DRY
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	DRY	DRY	DRY	DRY	DRY	DRY	DRY
6	GANGETIC WEST BENGAL	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
7	ODISHA	ISOL	DRY	DRY	DRY	ISOL	ISOL	ISOL
8	JHARKHAND	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
9	BIHAR	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
10	EAST UTTAR PRADESH	ISOL	ISOL	ISOL	ISOL	DRY	DRY	DRY
11	WEST UTTAR PRADESH	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
12	UTTARAKHAND	ISOL	SCT	DRY	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	DRY	DRY	DRY
16	JAMMU & KASHMIR AND LADAKH	WS	WS	SCT	DRY	DRY	DRY	DRY
17	WEST RAJASTHAN	DRY	DRY	DRY	DRY	DRY	DRY	DRY
18	EAST RAJASTHAN	ISOL	ISOL	ISOL	DRY	DRY	DRY	DRY
19	WEST MADHYA PRADESH	SCT	SCT	ISOL	ISOL	DRY	DRY	DRY
20	EAST MADHYA PRADESH	SCT	SCT	SCT	ISOL	DRY	DRY	DRY
21	GUJARAT REGION	DRY	DRY	DRY	DRY	DRY	DRY	DRY
22	SAURASHTRA & KUTCH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
23	KONKAN & GOA	ISOL	ISOL	ISOL	DRY	DRY	DRY	DRY
24	MADHYA MAHARASHTRA	ISOL	ISOL	ISOL	DRY	DRY	DRY	DRY
25	MARATHAWADA	ISOL	ISOL	ISOL	DRY	DRY	DRY	DRY
26	VIDARBHA	SCT	ISOL	ISOL	DRY	DRY	ISOL	ISOL
27	CHHATTISGARH	ISOL	ISOL	ISOL	DRY	DRY	ISOL	ISOL
28	COASTAL ANDHRA PRADESH & YANAM	ISOL	SCT	ISOL	ISOL	SCT	FWS	FWS
29	TELANGANA	ISOL	ISOL	ISOL	DRY	DRY	DRY	DRY
30	RAYALASEEMA	SCT	SCT	SCT	ISOL	SCT	SCT	SCT
31	TAMILNADU PUDUCHERRY & KARAIKAL	FWS	FWS	FWS	FWS	SCT	SCT	SCT
32	COASTAL KARNATAKA	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
33	NORTH INTERIOR KARNATAKA	ISOL	ISOL	ISOL	DRY	DRY	DRY	DRY
34	SOUTH INTERIOR KARNATAKA	SCT	SCT	ISOL	ISOL	ISOL	ISOL	ISOL
35	KERALA & MAHE	SCT	FWS	FWS	FWS	SCT	ISOL	ISOL
36	LAKSHADWEEP	SCT	FWS	FWS	FWS	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
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Fig. 1: Maximum Temperatures

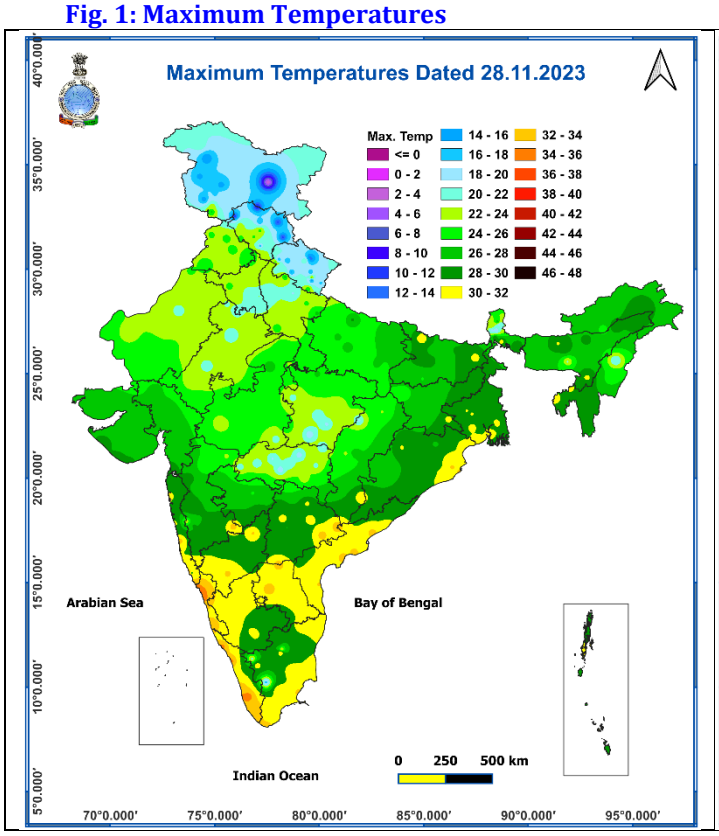

Fig. 2: Departure of Maximum Temperatures

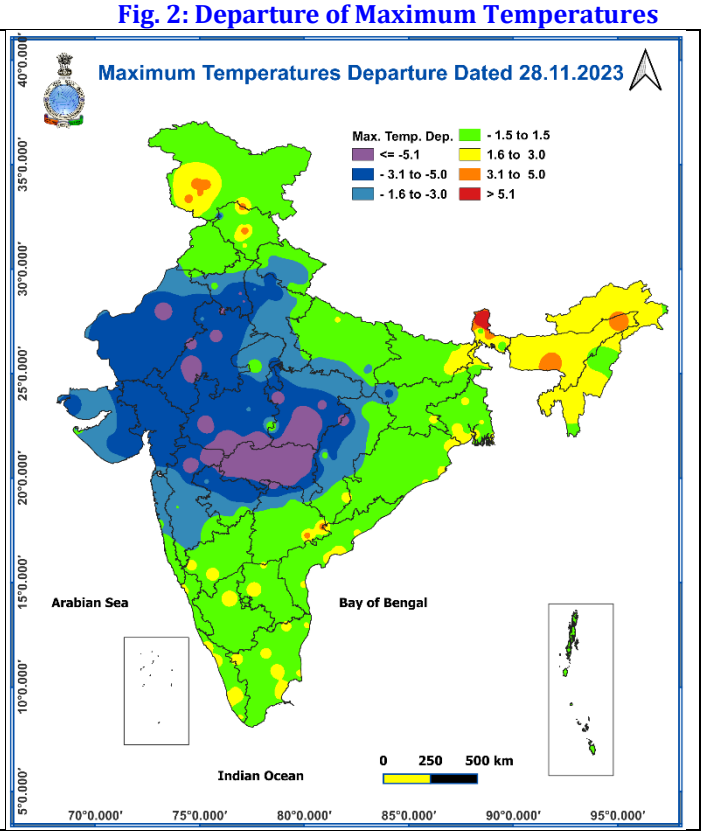

Fig. 3: Minimum Temperatures

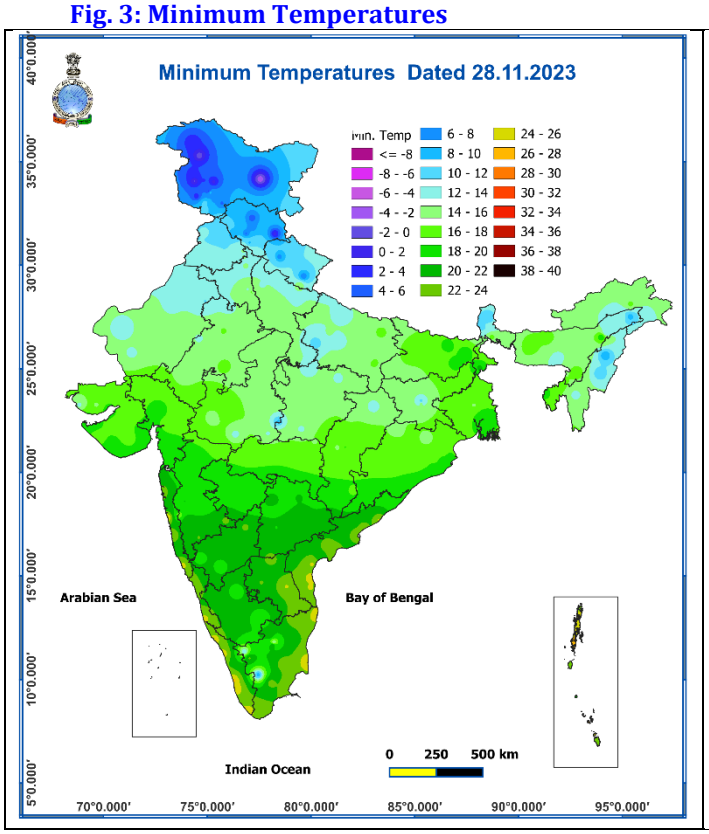

Fig. 4: Departure of Minimum Temperatures

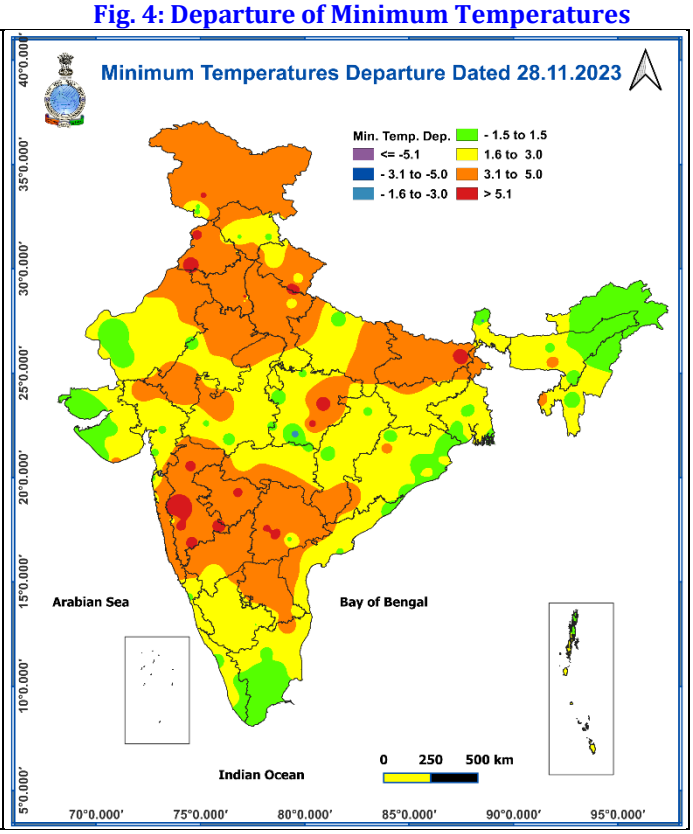

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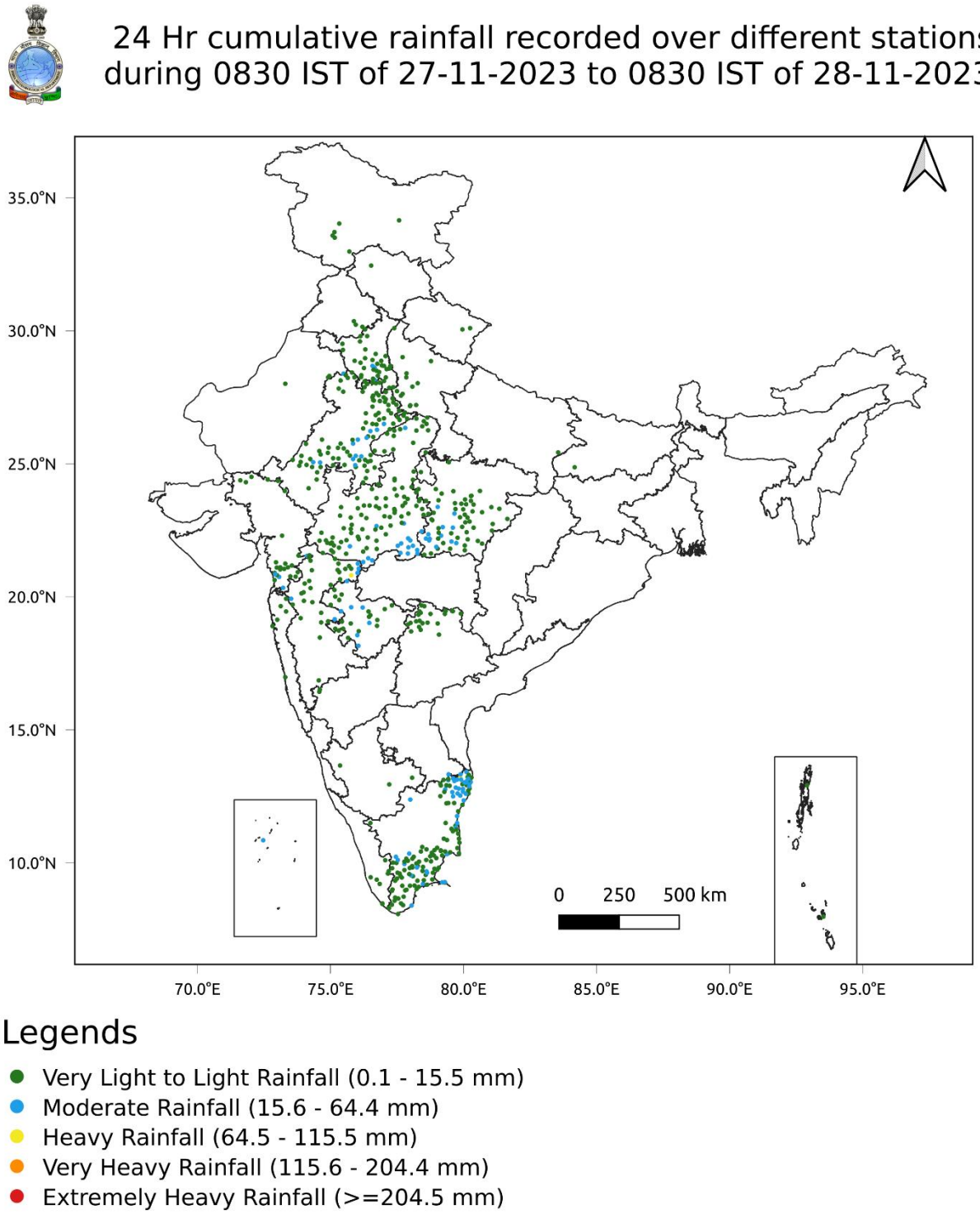
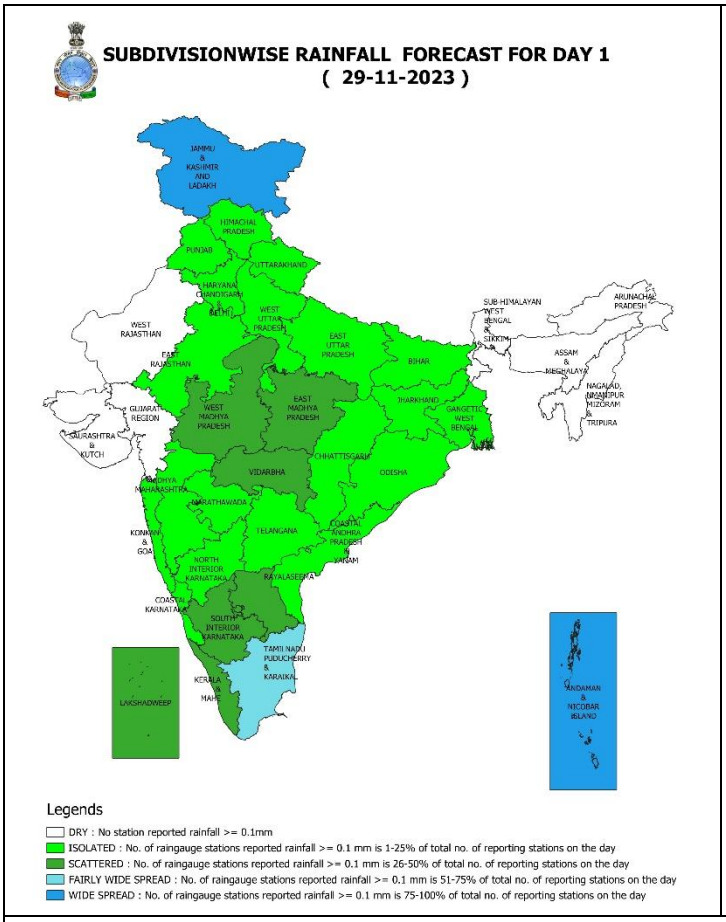
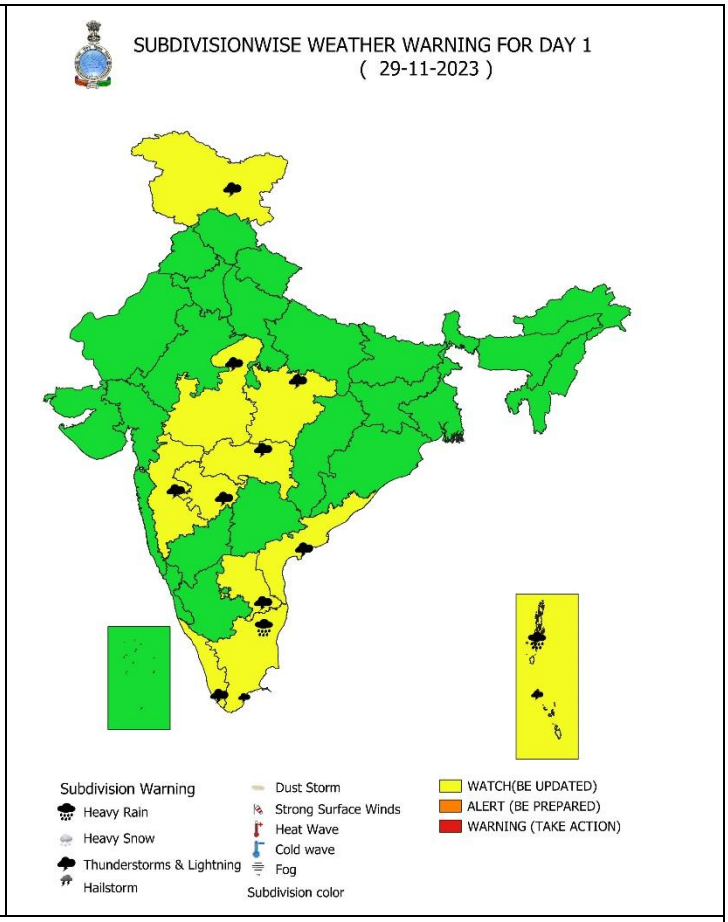
Fig. 5: Accumulated Rainfall (mm) during past 24 hours

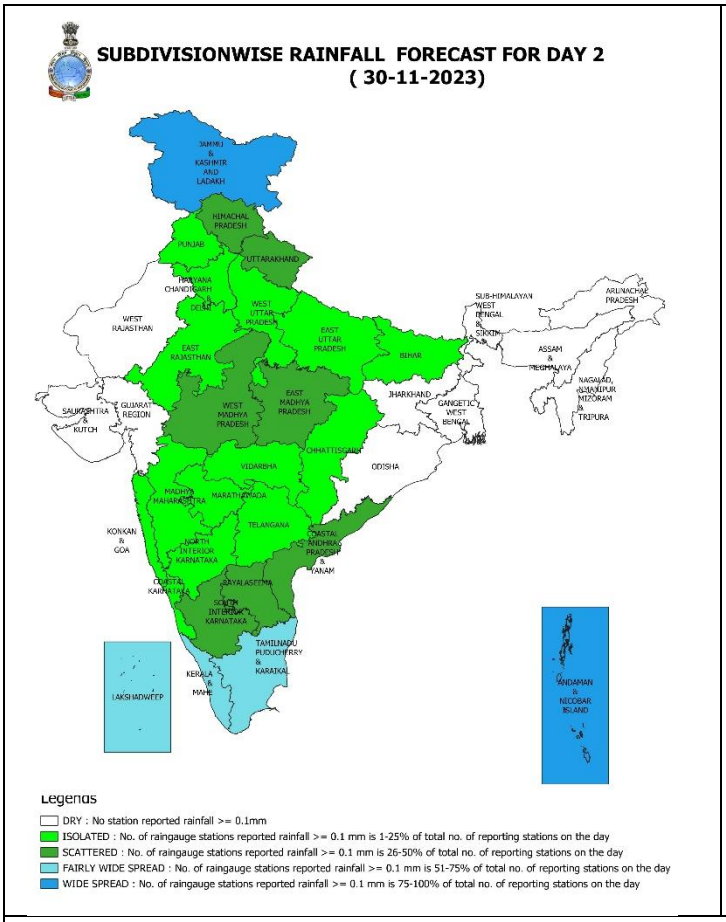


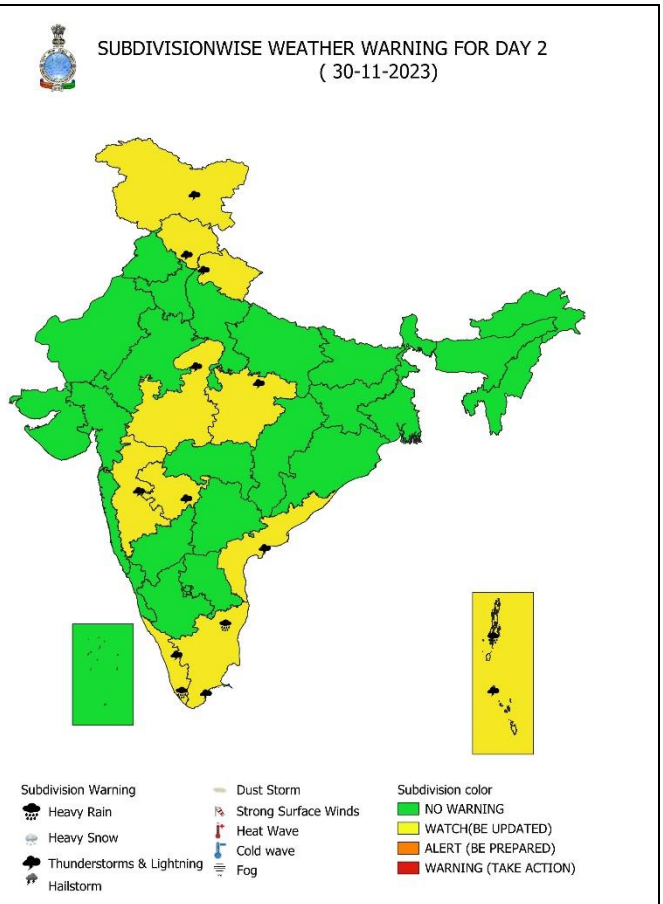




29 November (Day 1):

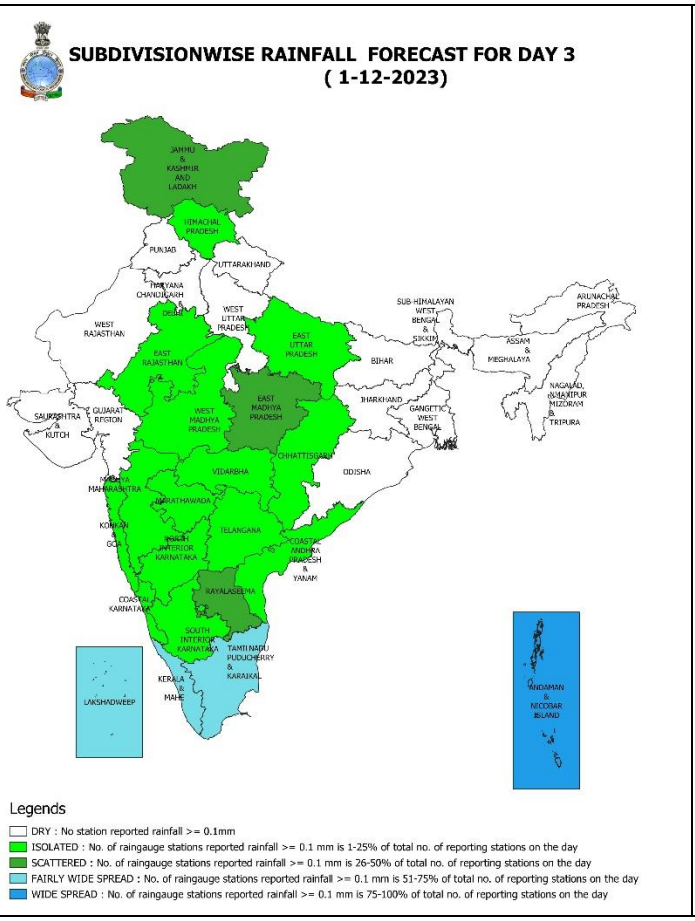
- ❖**Heavy to very heavy rainfall** very likely at isolated places over Nicobar Islands and **heavy rainfall** at isolated places over Tamil Nadu, Puducherry & Karaikal.
- ❖**Thunderstorm accompanied with lightning** very likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Madhya Pradesh, Vidarbha, Andaman & Nicobar Islands, Madhya Maharashtra, Marathwada, Coastal Andhra Pradesh & Yanam, Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- ❖**Squally weather (wind speed reaching 20-30 kmph gusting to 40 kmph)** very likely to prevail over South Andaman Sea and adjoining Andaman & Nicobar Islands. Fishermen are advised not to venture into these areas.

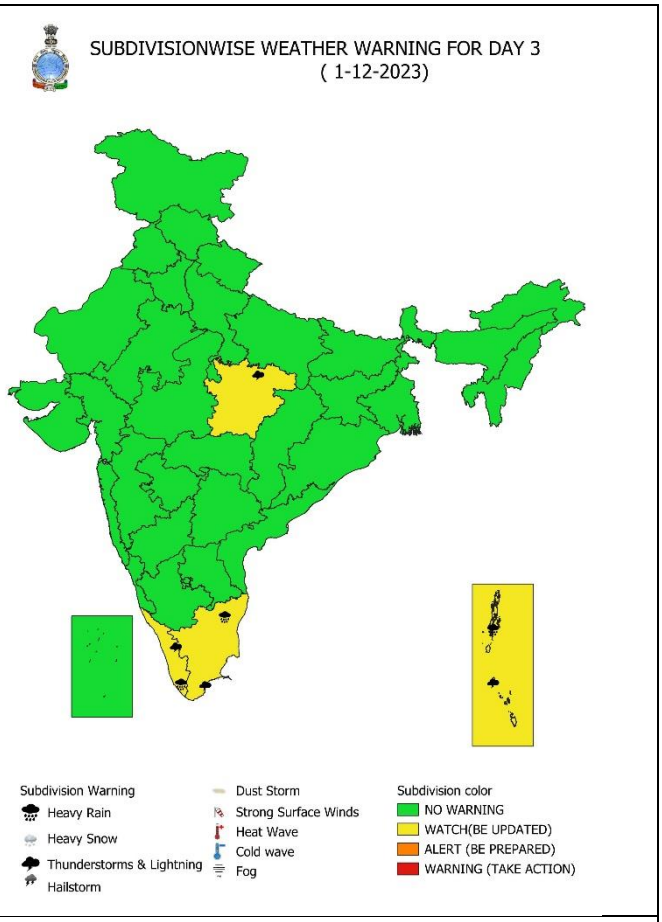




30 November (Day 2):

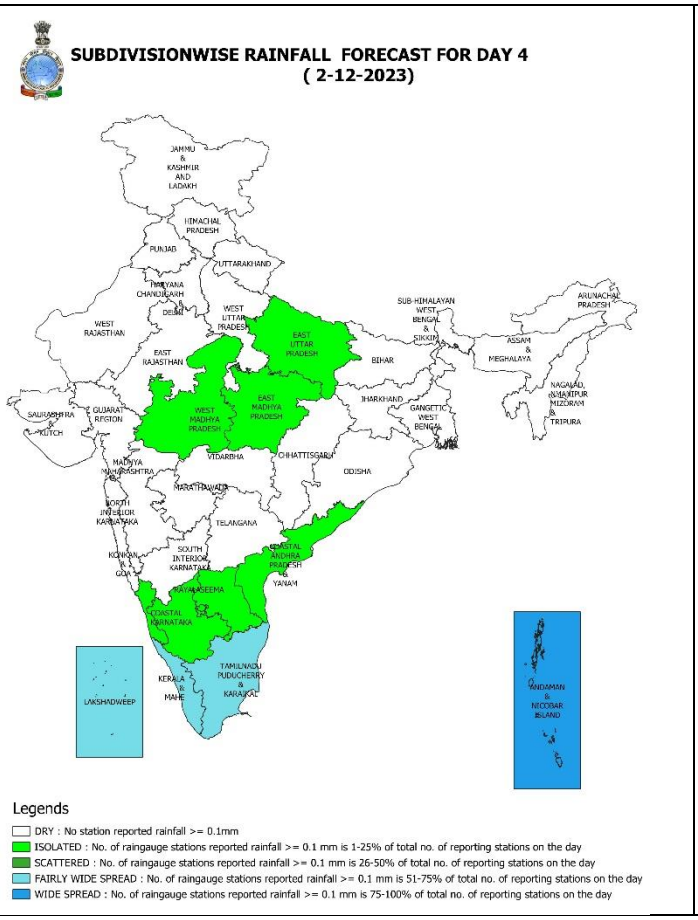
- **Heavy to very heavy rainfall** very likely at isolated places over Andaman & Nicobar Islands and **heavy rainfall** at isolated places over Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- **Thunderstorm accompanied with lightning** very likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Madhya Pradesh, Andaman & Nicobar Islands, Madhya Maharashtra, Marathwada, Coastal Andhra Pradesh & Yanam, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- **Squally weather** with wind speed reaching **40-50 kmph gusting to 60 kmph** is likely to prevail over Southeast Bay of Bengal. Fishermen are advised not to venture into these areas.

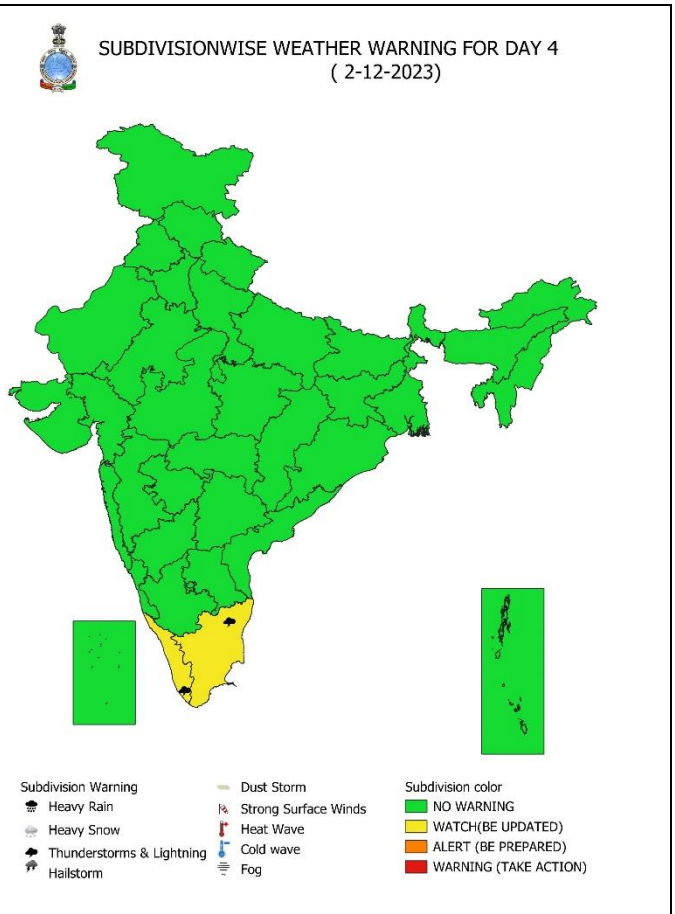




01 December (Day 3):

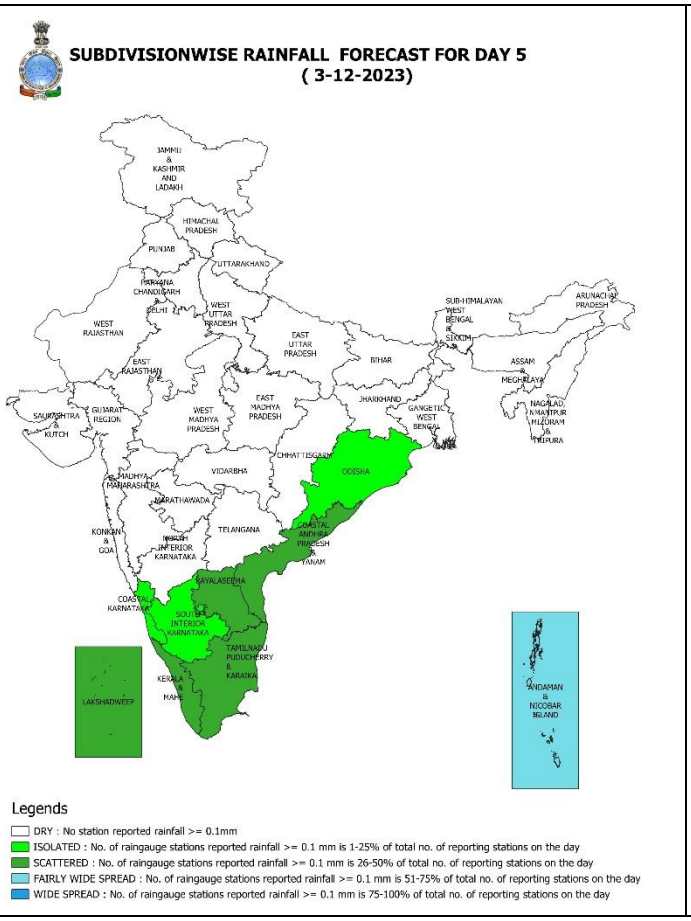
- **Heavy rainfall** very likely at isolated places over Andaman & Nicobar Islands, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- **Thunderstorm accompanied with lightning** very likely at isolated places over East Madhya Pradesh, Andaman & Nicobar Islands, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- **Squally weather** with wind speed reaching **50-60 kmph gusting to 70 kmph** is very likely to prevail over Southeast Bay of Bengal. **Squally wind** speed reaching **40-50 kmph gusting to 60 kmph** is likely over adjoining Southwest Bay of Bengal and adjoining central Bay of Bengal. Fishermen are advised not to venture into these areas.

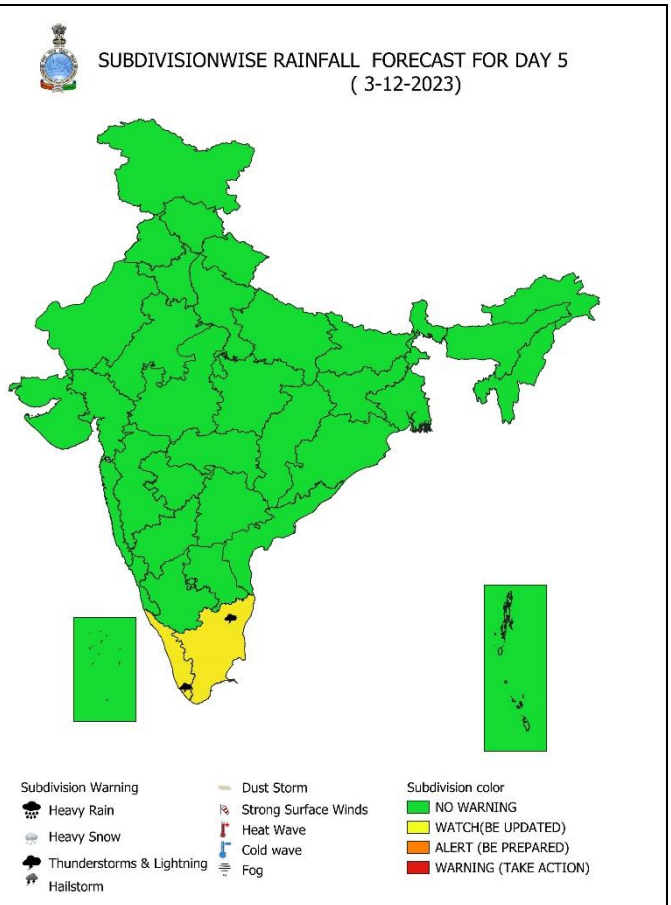




02 December (Day 4):

- ❖**Thunderstorm accompanied with lightning** likely at isolated places over Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- ❖**Squally weather** with wind speed reaching **50-60 kmph gusting to 70 kmph** is likely to prevail over Southeast Bay of Bengal. **Squally wind** speed reaching **40-50 kmph gusting to 60 kmph** is likely over adjoining central Bay of Bengal. **Squally wind** speed reaching **50-60 kmph gusting to 70 kmph** is likely over adjoining Southwest Bay of Bengal. Fishermen are advised not to venture into these areas.



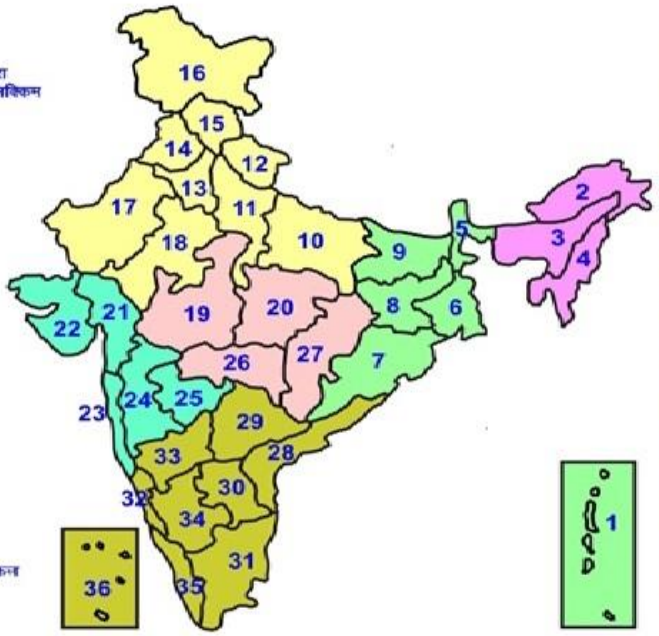


03 December (Day 5):

- **Thunderstorm accompanied with lightning** likely at isolated places over Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- **Squally weather** with wind speed reaching **50-60 kmph gusting to 70 kmph** is likely to prevail over Southeast Bay of Bengal. **Squally wind** speed reaching **40-50 kmph gusting to 60 kmph** is likely over adjoining central Bay of Bengal. **Squally wind** speed reaching **50-60 kmph gusting to 70 kmph** is likely over adjoining Southwest 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 एंवम् सिक्किम
6 पश्चिम गांगेय बंगाल
7 ओडिसा
8 झारखंड
9 बिहार
10 पूर्वी उत्तर प्रदेश
11 पश्चिम उत्तर प्रदेश
12 उत्तराखंड
13 हरियाणा चंडिगढ़ एंवम् दिल्ली
14 पंजाब
15 हिमाचल प्रदेश
16 जम्मू एंवम् कश्मीर एंवम् लद्दाख
17 पश्चिम राजस्थान
18 पूर्वी राजस्थान
19 पश्चिम मध्य प्रदेश
20 पूर्वी मध्य प्रदेश
21 गुजरात क्षेत्र
22 सौराष्ट्र एंवम् कच्छ
23 कोंकण एंवम् गोवा
24 मध्य महाराष्ट्र
25 मराठावाडा
26 विदर्भ
27 छत्तीसगढ़
28 तटीय आंध्र प्रदेश एवं यनम
29 तेलंगाना
30 रायलसीमा
31 तमिलनाडु ,पुदुचेरी एवंम कराईकल
32 तटिय कर्नाटक
33 आंतरिक उत्तरी कर्नाटक
34 आंतरिक दक्षिणी कर्नाटक
35 केरल एवंम 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 Rajsthan
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 Widespred (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 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)

राष्ट्रीय मौसम पूर्वानुमान केन्द्र
भारत मौसम विज्ञान विभाग
पृथ्वी विज्ञान मंत्रालय

National Weather Forecasting Centre
India Meteorological Department
Ministry of Earth Sciences

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 ≥40° C for plains and ≥30° 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 ≥6.5° C

(b). Based on Actual maximum temperature

Heat Wave: When actual maximum temperature ≥45°C.
Severe Heat Wave: When actual maximum temperature ≥47°C

(c). Criteria for heat wave for coastal stations

When maximum temperature departure is >4.5°C from normal. Heat Wave may be described provided maximum temperature ≥37°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 °C.

Cold Wave

When minimum temperature of a station ≤10°C for plains and ≤0°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 ≤ -6.5 °C

(b) Based on actual Minimum Temperature (for Plains only)

Cold Wave : When Minimum Temperature is ≤ 4.0 °C
Severe Cold Wave: When Minimum Temperature is ≤ 2.0 °C

(c) For Coastal Stations

When Minimum Temperature departure is ≤-4.5 °C & actual Minimum Temperature is ≤ 15 °C

Cold Day

When minimum temperature of a station ≤10°C for plains and ≤0°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 ≤ -6.5 °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 ≤4°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 Strom: Wind speed >220 kmph (>119 knots)

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