

Saturday, February 8, 2025
Time of Issue: 1415 hours IST
(MID-DAY)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

Weather Systems, Forecast and warning:

- ❖ A **Western Disturbance** is seen as a cyclonic circulation in middle tropospheric levels over north Iran & neighbourhood. Ahead of this western disturbance, there is a wind speed divergence in middle tropospheric levels over Northwest India. The Subtropical westerly Jet Stream with core winds of the order upto 135 knots at 12.6 km above mean sea level prevail over Northeast India. Under their influence,
 - ✓ Isolated to scattered light rainfall/snowfall activity likely over Western Himalayan Region during 08th-12th February, 2025.
 - ✓ Isolated to scattered light rainfall/snowfall activity likely over Sikkim, northeast Assam and Arunachal Pradesh during 08th-12th increasing to Fairly widespread to widespread rainfall accompanied with thunderstorm & lightning on 11th & 12th February with isolated heavy rainfall on 12th February over Arunachal Pradesh.

Temperature, Cold wave and Fog Forecast:

- ❖ Minimum temperatures are in the range of **6-10°C** over most parts of Punjab, Haryana, Uttar Pradesh, Jharkhand, many parts of Madhya Pradesh, Rajasthan and some parts of South Bihar and north Chhattisgarh. Today, the lowest minimum temperature of **5.0°C** is reported at **Rajgarh (West Madhya Pradesh)** over the plains of the country.
- ❖ During the past 24 hours, **minimum temperatures has fallen by 1-3°C** over many parts of Central & East India; in some parts of Northeast India, Uttar Pradesh, Vidarbha, Tamilnadu Puducherry & Karaikal and **risen by 1-3°C** over many parts of Northwest & West India & Coastal Andhra Pradesh & Yanam.
- ❖ Maximum temperatures are in the range of **34-37°C** over many parts of south Maharashtra, interior Karnataka and some places over Telangana, south Chhattisgarh, interior Odisha, Andhra Pradesh & Kerala & Mahe; at isolated places over Tamilnadu Puducherry & Karaikal. Yesterday, the highest **maximum temperature** of **37.1°C** was reported at **Nandigama (Coastal Andhra Pradesh)** over the plains of the country.

Forecast of temperature:

- ❖ Gradual rise in minimum temperatures by 2-4°C likely over Northwest India during next 5 days.
- ❖ No significant change in minimum temperatures likely over Central & East India for 24 hours and gradual rise thereafter by 2-4°C during subsequent 4 days.
- ❖ No significant change in maximum temperatures likely over Central India for 24 hours and gradual rise thereafter by 2-4°C during subsequent 4 days.
- ❖ No significant change in minimum and maximum temperatures likely over rest parts of the country during next 5 days.

Dense Fog Warnings:

- ❖ **Dense fog conditions** very likely to continue to prevail during early morning hours in isolated pockets of Sub-Himalayan West Bengal & Sikkim and Odisha till 10th February.

Cold day Warnings:

- ❖ **Cold Day conditions** very likely in isolated pockets of West Madhya Pradesh on 08th February.

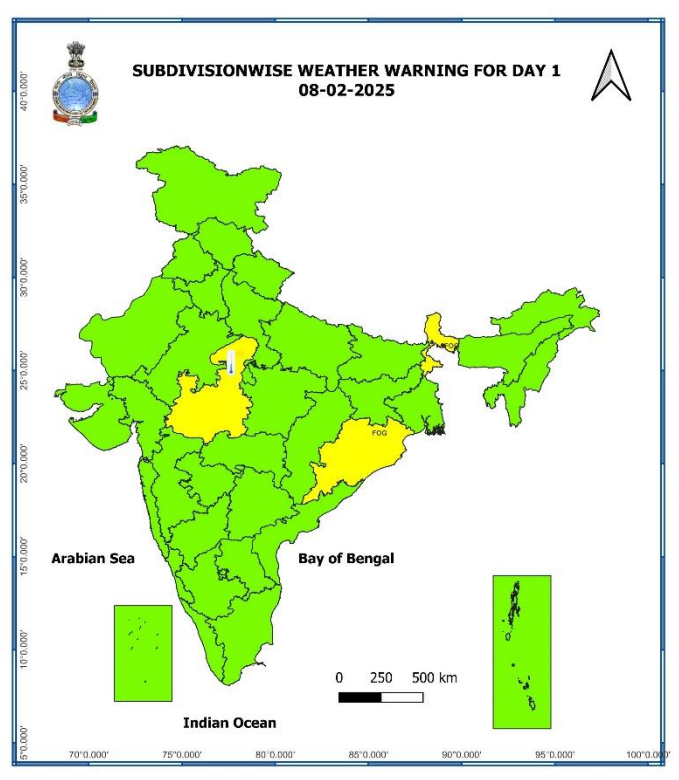
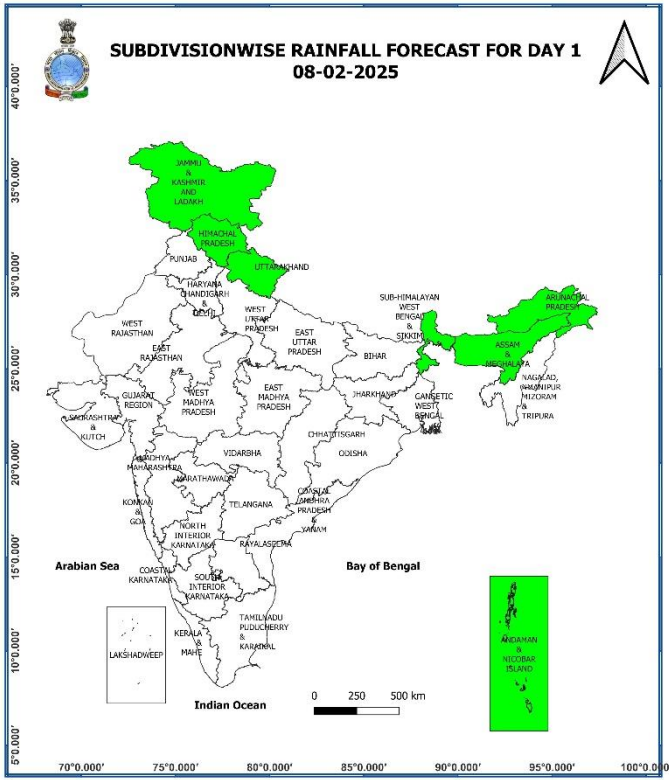
Main Weather Observations:

- ❖ **Rainfall/Snowfall distribution** (from 0830 hours IST of yesterday to 0830 hours IST of today): at few places over Arunachal Pradesh; at isolated places over Assam & Meghalaya, Sub-Himalayan West Bengal & Sikkim.
- ❖ **Rainfall distribution** (from 0830 hours IST of yesterday to 0830 hours IST of today): **NIL**.
- ❖ **Significant amount of rainfall** (from 0830 hours IST of yesterday to 0830 hours IST of today): (in cm): **Arunachal Pradesh:** Anini_aws (dist Dibang Valley) 5.
- ❖ **Cold wave conditions** prevailed in isolated pockets of Himachal Pradesh.
- ❖ **Cold day conditions** prevailed in isolated pockets of West Madhya Pradesh.
- ❖ **Fog reported** (at 0830 hours IST of today) at isolated places over Sub-Himalayan West Bengal & Sikkim and Odisha.
- ❖ **Visibility reported** (at 0830 hours IST of today) (200 m): **Sub-Himalayan West Bengal & Sikkim:** Pakyong 50, Gangtok 50; **Odisha:** Nayagarh 50.
- ❖ **Minimum Temperature Departures (as on 08-02-2025):** Minimum temperatures are **markedly above normal (5.1°C or above)** at isolated places over Madhya Maharashtra, Konkan & Goa; **appreciably above normal (3.1°C to 5.0°C)** at a few places over Marathwada, West Rajasthan; **above normal (1.6°C to 3.0°C)** at a few places over Odisha, Coastal Andhra Pradesh & Yanam, North Interior Karnataka, Vidarbha; at isolated places over Gujarat state, Chhattisgarh, Telangana, West Madhya Pradesh, Himachal Pradesh, Uttarakhand, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Arunachal Pradesh. These are **below normal (-1.6°C to -3.0°C)** at a few places over Gangetic West Bengal, East Madhya Pradesh; at isolated places over Uttar Pradesh, Bihar, Nagaland, Manipur, Mizoram & Tripura, East Rajasthan, Jharkhand, Tamil Nadu, Puducherry & Karaikal and near normal over rest parts of the country (**Fig. 4**). Today, the **lowest minimum temperature of 5.0°C** is reported at **Rajgarh (West Madhya Pradesh)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 07-02-2025):** Maximum temperatures were **markedly above normal (5.1°C or above)** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh; **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Odisha, Coastal Andhra Pradesh & Yanam, Konkan & Goa, Telangana; **above normal (1.6°C to 3.0°C)** at many places over North Interior Karnataka, Madhya Maharashtra; at a few places over Rayalaseema, Saurashtra & Kutch, Marathwada, Gangetic West Bengal; at isolated places over Uttarakhand, Punjab, West Rajasthan, Assam & Meghalaya, Gujarat region, Chhattisgarh, Jharkhand. These were **markedly below normal (-5.1°C or below)** at isolated places over Arunachal Pradesh; **appreciably below normal (-3.1°C to -5.0°C)** at isolated places over Nagaland, Manipur, Mizoram & Tripura, West Madhya Pradesh; **below normal (-1.6°C to -3.0°C)** at isolated places over East Madhya and near normal over rest parts of the country (**Fig. 2**). Yesterday, the highest **maximum temperature of 37.1°C** was reported at **Nandigama (Coastal Andhra Pradesh)** over the plains of the country.

Meteorological Analysis (Based on 0830 hours IST)

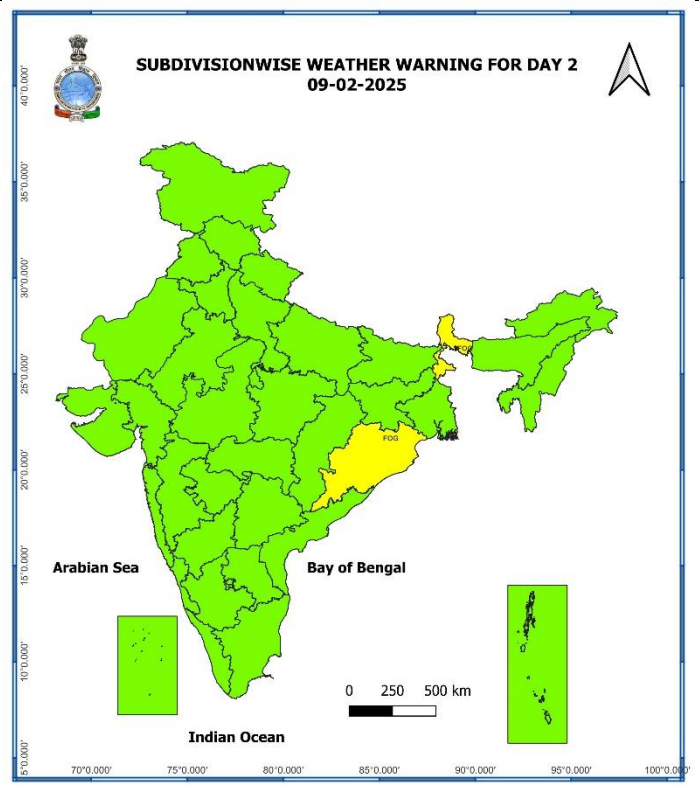
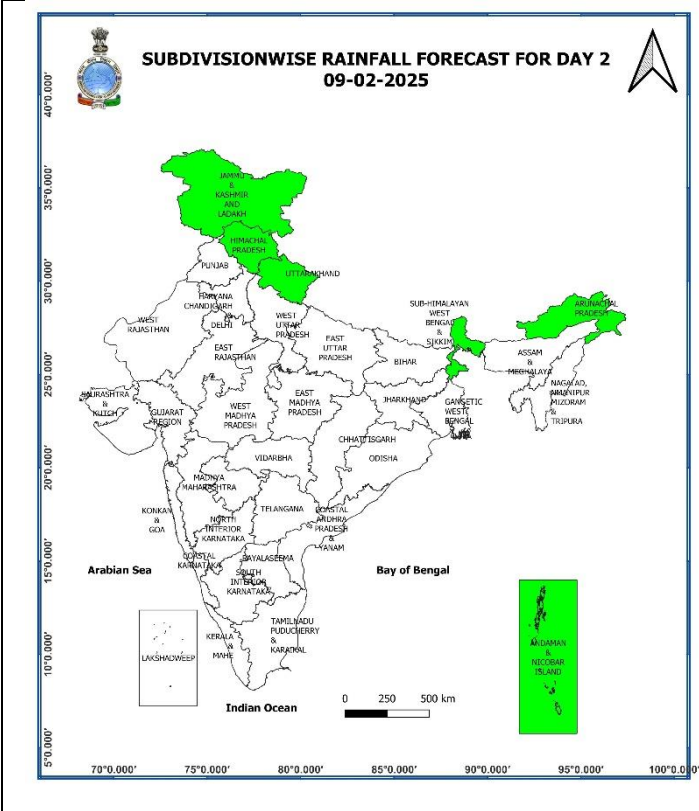
- ❖ The **Western Disturbance** is now seen as a cyclonic **circulation** in middle tropospheric levels over north Iran & neighbourhood.
- ❖ Subtropical **westerly Jet Stream** with core winds of the order upto 135 knots at 12.6 km above mean sea level continues to prevail over Northeast India.
- ❖ The **cyclonic circulation** over northeast Assam & neighbourhood between 1.5 & 3.1 km above mean sea level has become less marked.

Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 15th February, 2025)



08th February (Day 1):

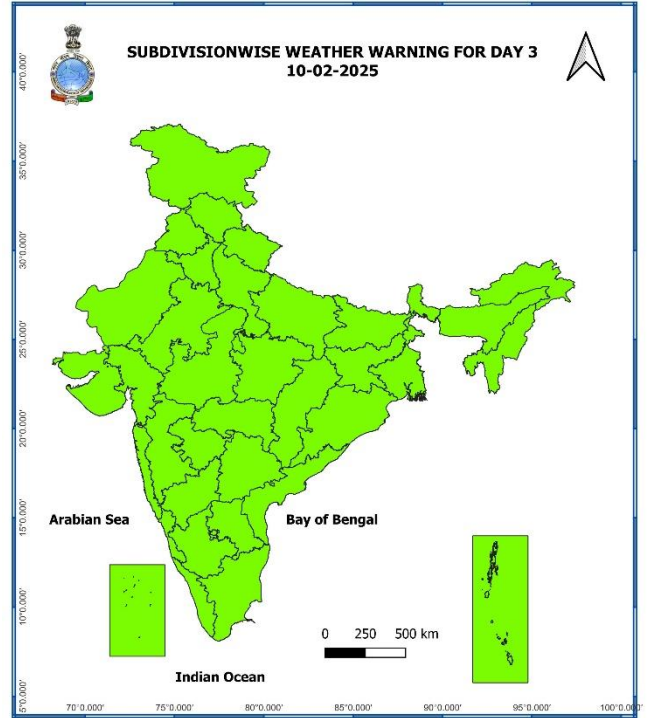
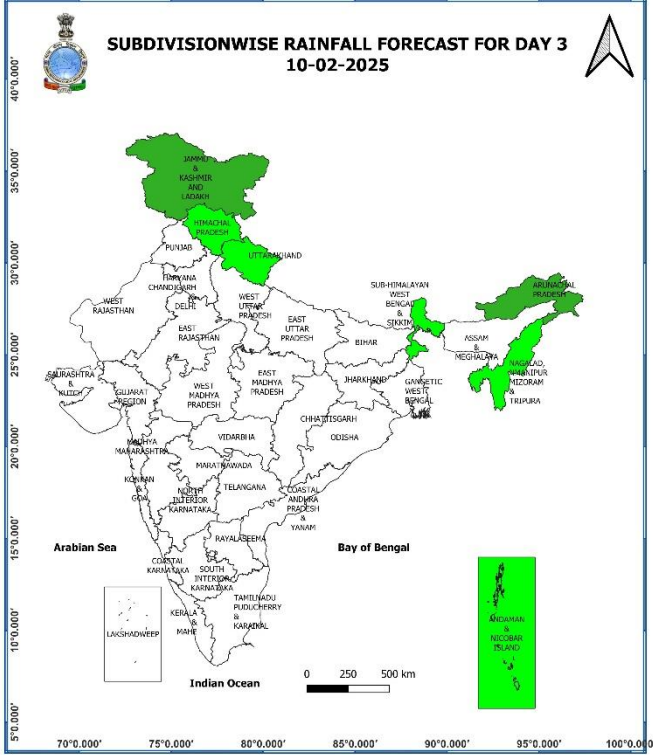
- ❖ **Dense fog conditions** very likely in isolated pockets of Sub-Himalayan West Bengal & Sikkim, Odisha.
- ❖ **Cold day conditions** very likely to prevail over West Madhya Pradesh.



09th February (Day 2):

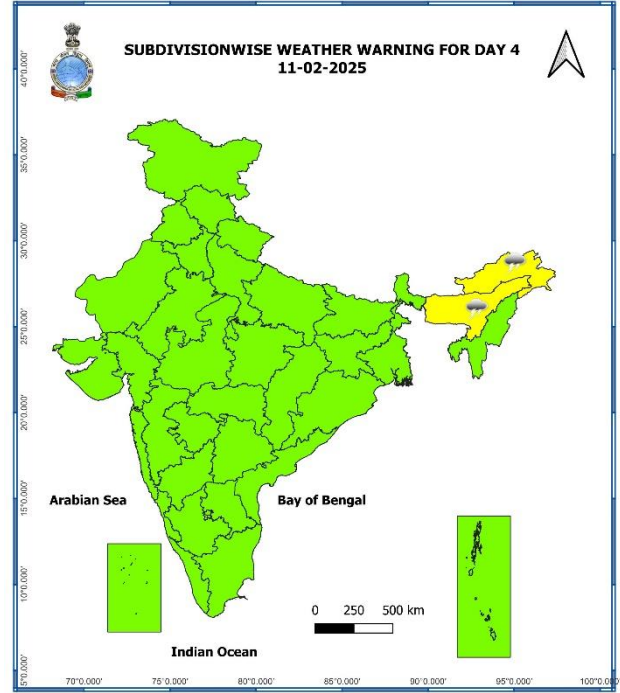
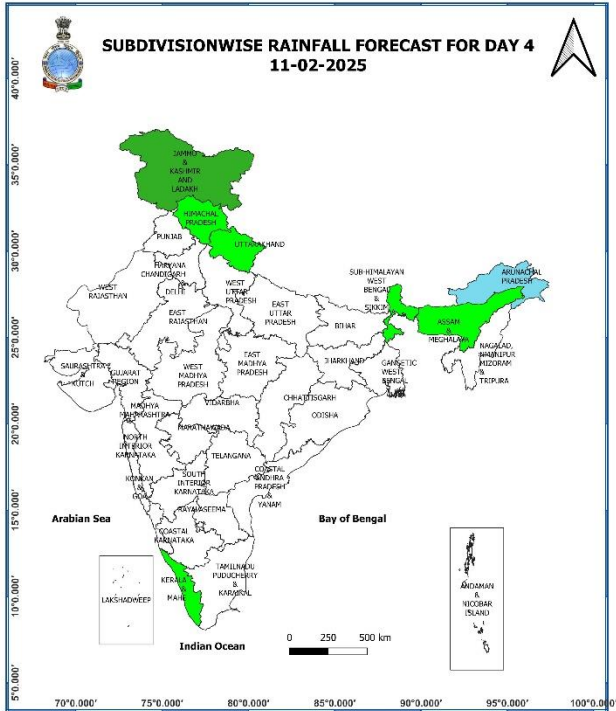
❖ **Dense fog conditions** very likely in isolated pockets of Sub-Himalayan West Bengal & Sikkim, Odisha.

* 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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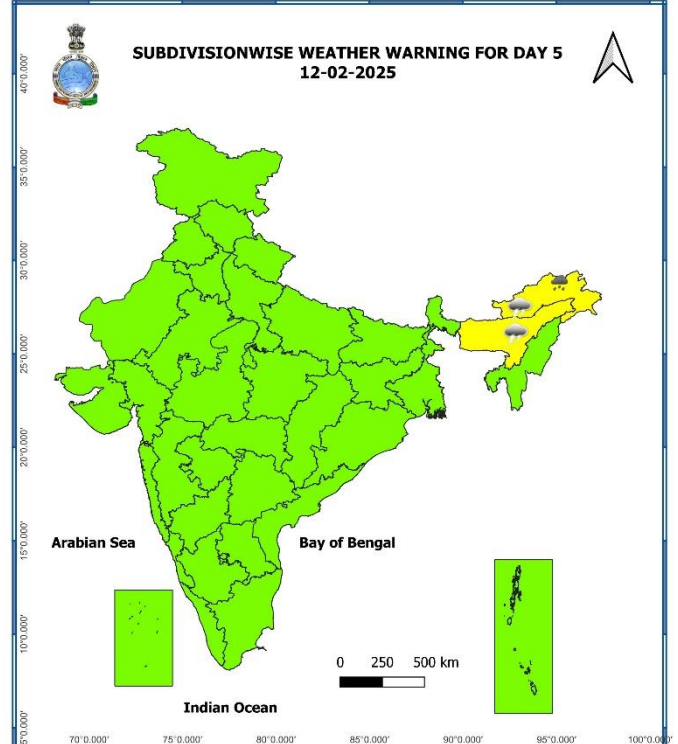
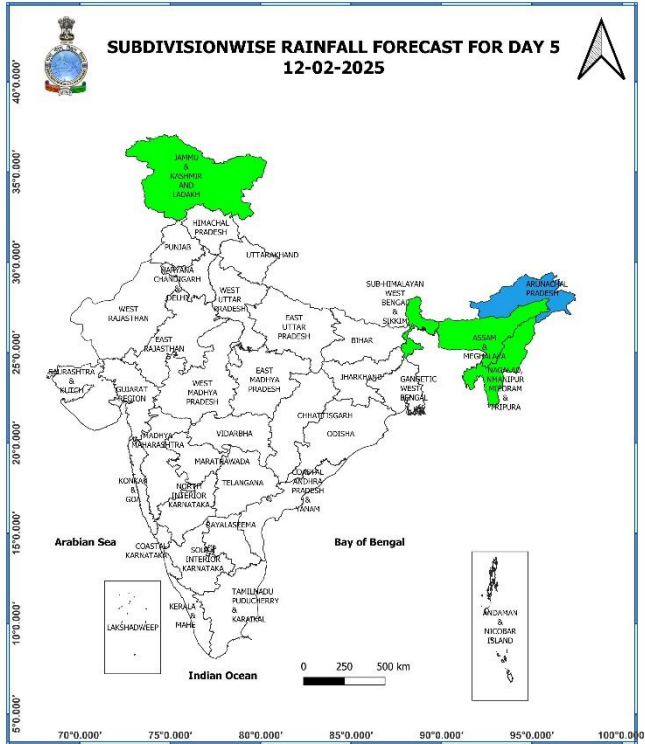
10th February (Day 3):

❖ No Weather Warning.



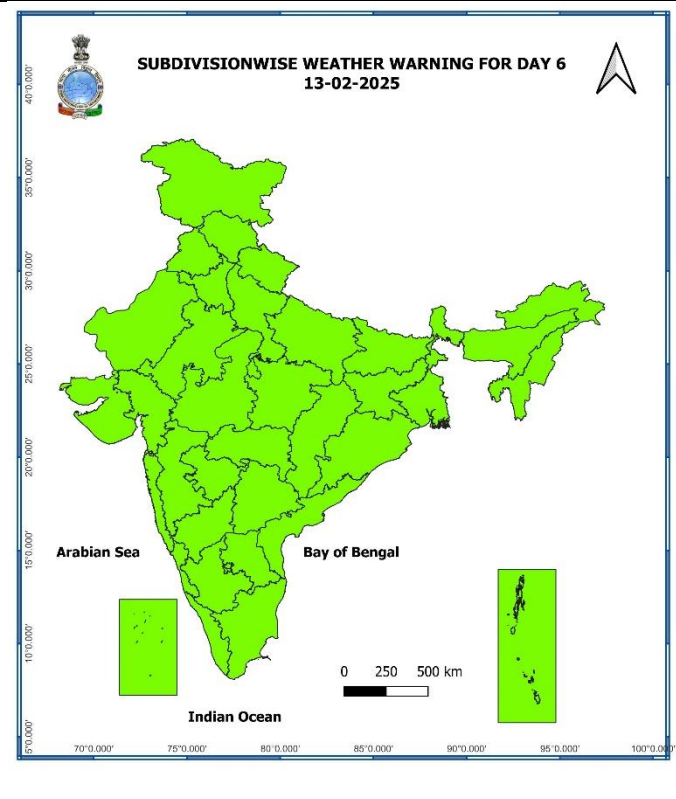
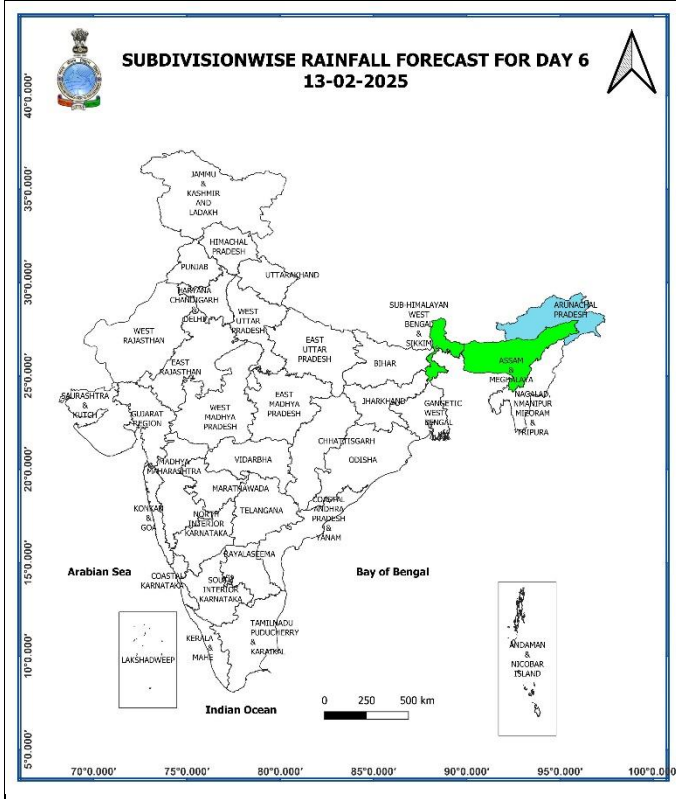
11th February (Day 4):

❖ **Thunderstorm accompanied with lightning** likely at isolated places over Arunachal Pradesh and Assam & Meghalaya.



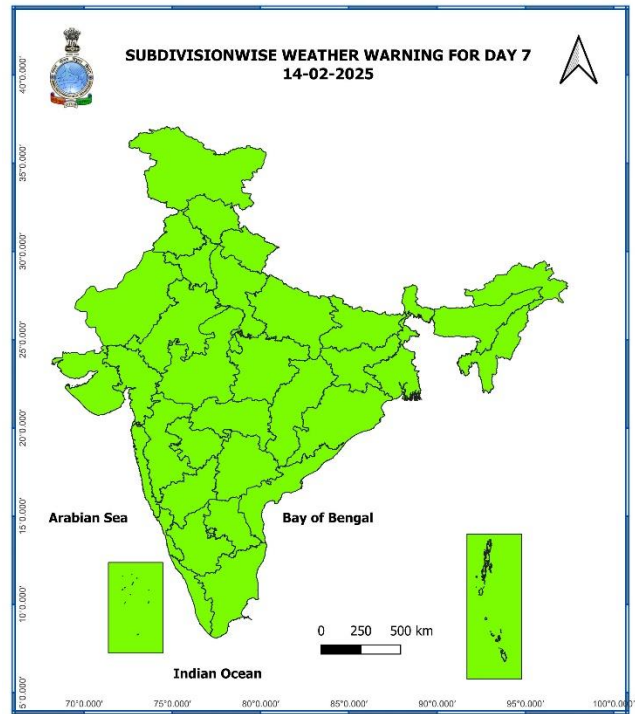
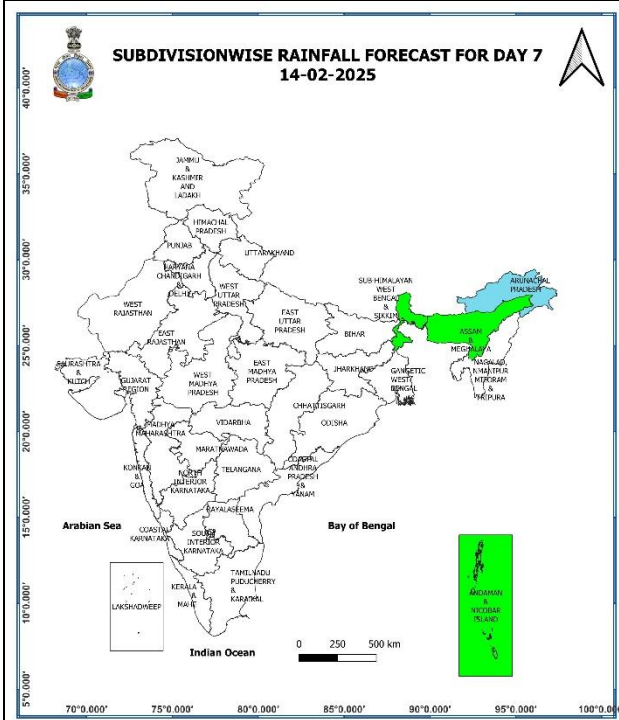
12th February (Day 5):

- ❖ Heavy rainfall ($\geq 7\text{cm}$) very likely at isolated places over Arunachal Pradesh.
- ❖ Thunderstorm accompanied with lightning likely at isolated places over Arunachal Pradesh and Assam & Meghalaya.



13th February (Day 6):

❖ No Weather Warning.



14th February (Day 7):

❖ No Weather Warning.

Weather Outlook for subsequent 3 days (During 15th February- 17th February, 2025)

- ❖ **Isolated to scattered rainfall/snowfall** likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand and Arunachal Pradesh.
- ❖ **Isolated to scattered rainfall** likely over Nicobar Islands.

Action may be taken based on **ORANGE AND RED** COLOUR warnings.

- **Vulnerable regions likely urban and hilly areas** action may be initiated for heavy rainfall warning.
- **As the lead period increases forecast accuracy decreases.**

Fig. 1: Maximum Temperatures

Fig. 2: Departure of Maximum Temperatures

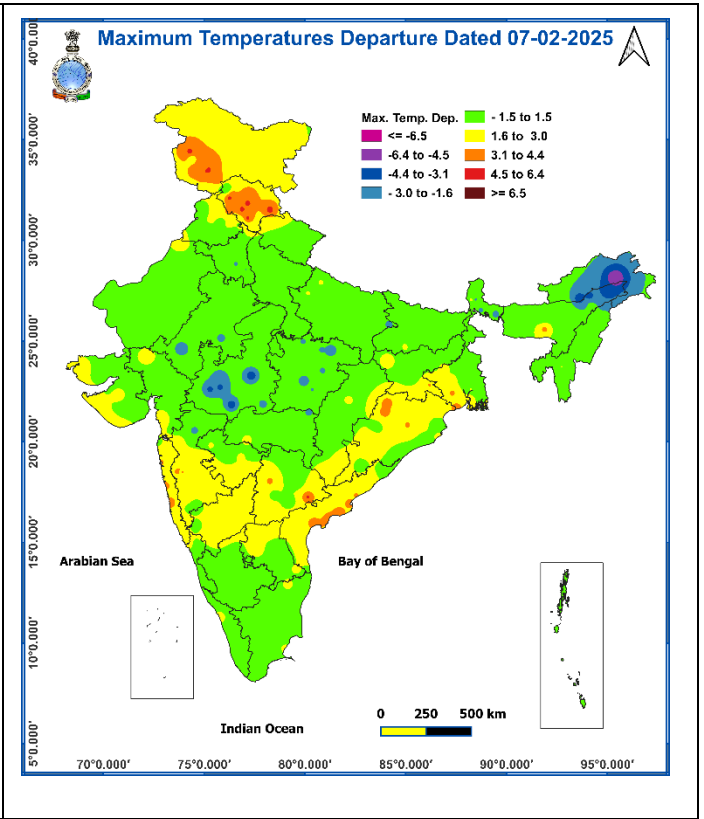
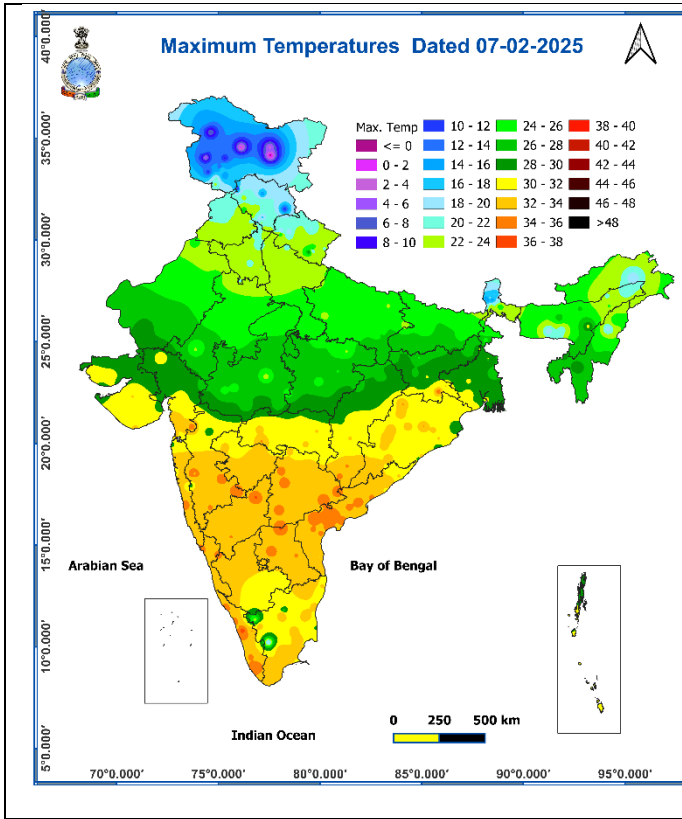
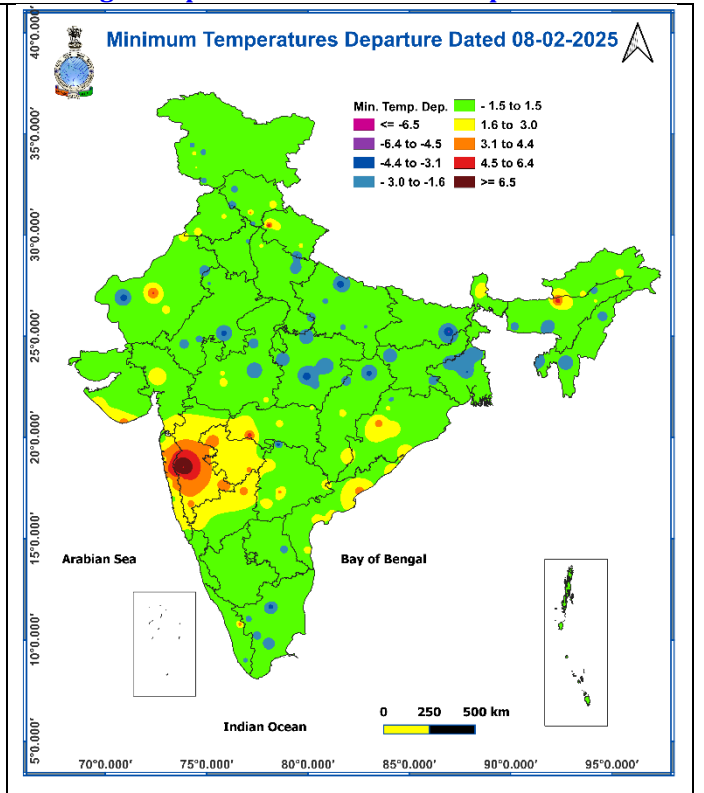
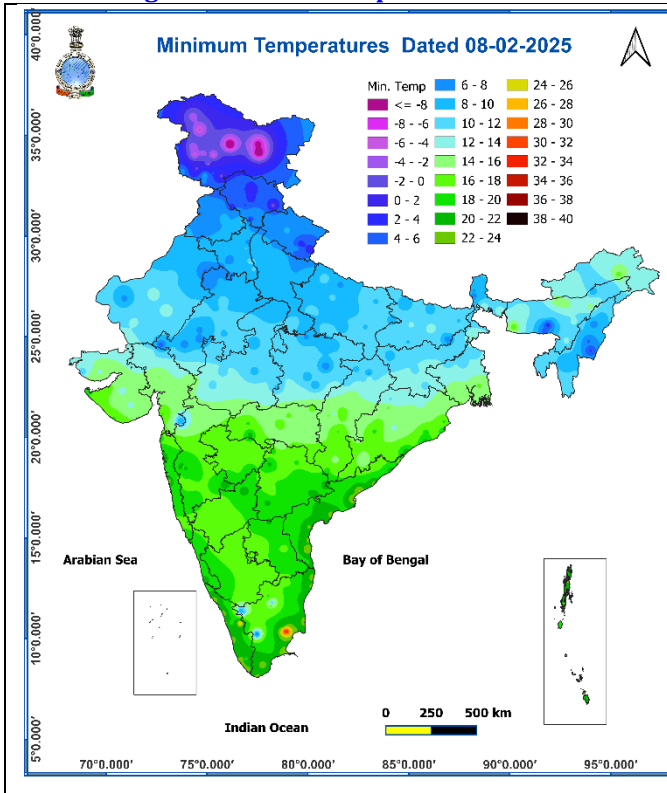


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures



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Impact expected due to dense fog in the night /morning hours over Odisha:

❖ Transport and Aviation:

- May affect some airports, highways and railway routes in the areas of met- sub-division.
 - Difficult driving conditions with slower journey times.
- Unless taken precautionary measures, it may lead to some road traffic collisions.

❖ Power Sector:

- Chances of Tripping of Power lines in the very dense fog routes.

❖ Human Health:

- Lung related health impacts: Dense fog contains particulate matter and other pollutants and in case exposed it gets lodged in the lungs, clogging them and decreasing their functional capacity which increases episodes of wheezing, coughing and shortness of breath.
- Impact on people having asthma bronchitis: Long time exposure to dense fog may cause respiratory problem for people having asthma bronchitis and other lung related health problems.
- Eye Irritation: Dense fog contains pollutions of various types and these Pollutants in the air if exposed may tend to irritate the membranes of the eye causing various infections leading to redness or swelling of the eye.

Action suggested:

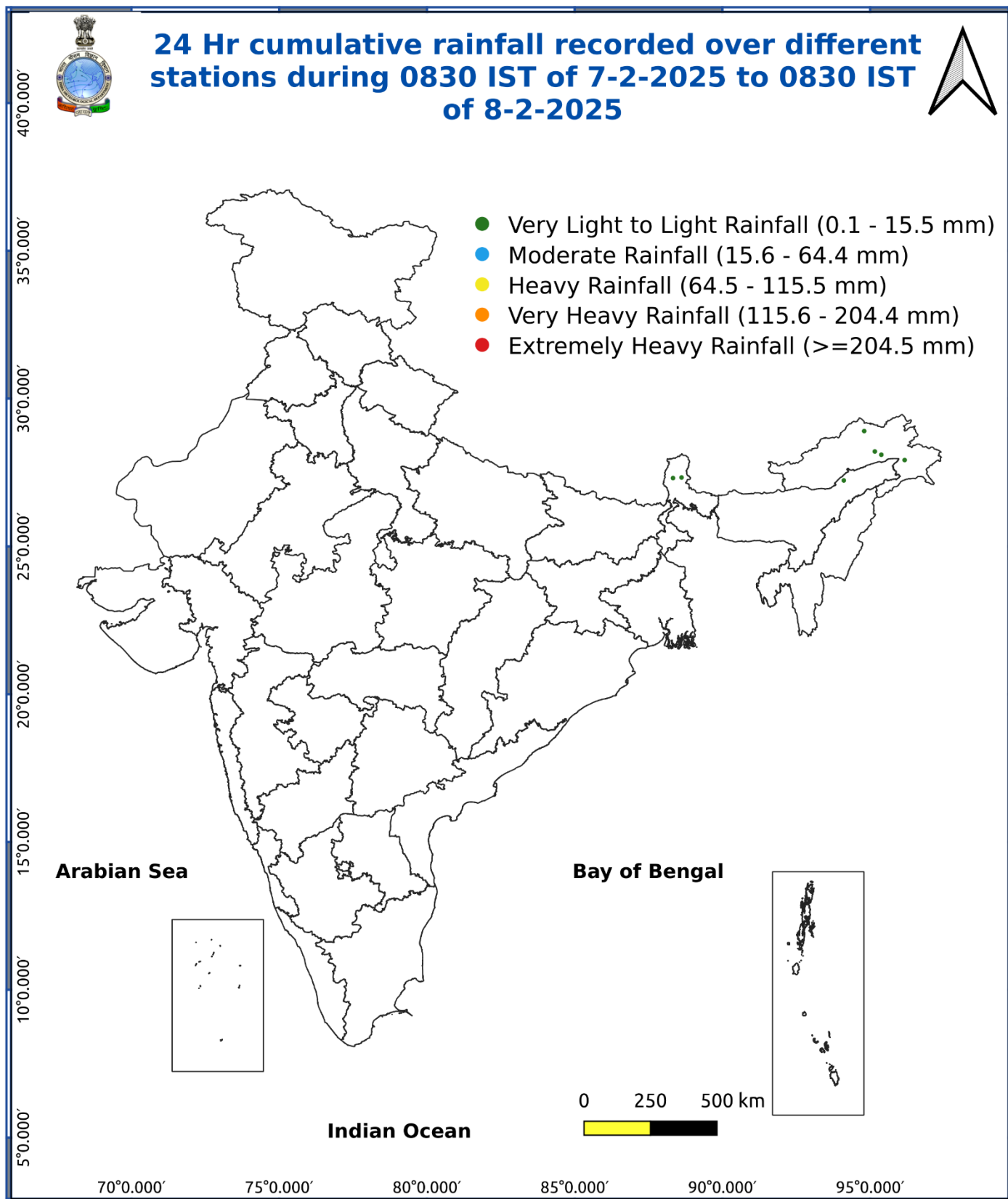
❖ Transport and Aviation:

- Be careful while driving or outing through any transport.
- Use fog lights during driving.
- Be in touch with airlines, railways and state transport for schedule of your journey.

❖ Power Sector:

- To keep ready Maintenance Team.
- Human Health: To avoid outing until unless emergency and to cover the face.

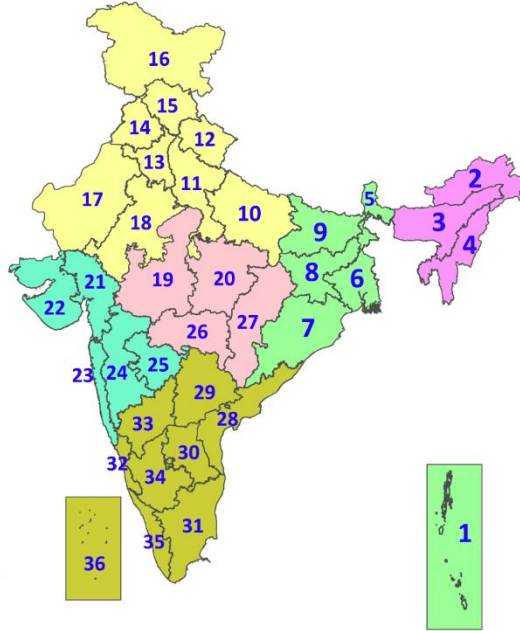
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



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LEGENDS

1. अंडमान और निकोबार द्वीपसमूह
2. अरुणाचल प्रदेश
3. असम और मेघालय
4. नागालैंड, मणिपुर, मिजोरम और त्रिपुरा
5. उप-हिमालयी पश्चिम बंगाल और सिक्किम
6. गंगीय पश्चिम बंगाल
7. ओडिशा
8. झारखंड
9. बिहार
10. पूर्वी उत्तर प्रदेश
11. पश्चिम उत्तर प्रदेश
12. उत्तराखंड
13. हरियाणा, चंडीगढ़ और दिल्ली
14. पंजाब
15. हिमाचल प्रदेश
16. जम्मू और कश्मीर और लद्दाख
17. पश्चिम राजस्थान
18. पूर्वी राजस्थान
19. पश्चिम मध्य प्रदेश
20. पूर्वी मध्य प्रदेश
21. गुजरात
22. सौराष्ट्र
23. कोंकण और गोवा
24. मध्य महाराष्ट्र
25. मराठवाड़ा
26. विदर्भ
27. छत्तीसगढ़
28. तटीय आंध्र प्रदेश और यनम
29. तेलंगाना
30. रायलसीमा
31. तमिलनाडु, पुडुचेरी और कराईकल
32. तटीय कर्नाटक
33. आंतरिक उत्तरी कर्नाटक
34. आंतरिक दक्षिणी कर्नाटक
35. केरल और 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, Chandigarh & Delhi
14. Punjab
15. Himachal Pradesh
16. Jammu & Kashmir and Ladakh
17. West Rajasthan
18. East Rajasthan
19. West Madhya Pradesh
20. East Madhya Pradesh
21. Gujarat
22. Saurashtra
23. Konkan & Goa
24. Madhya Maharashtra
25. Marathwada
26. Vidarbha
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)

- | | | |
|----------------------|----------------------|--------------|
| Fog | Heavy Snow | Cold Wave |
| Heavy Rain | Dust Storm | Cold Day |
| Very Heavy Rain | Heat Wave | Ground Frost |
| Extremely Heavy Rain | Warm Night | |
| Thunder & Lightning | Hot Day | |
| Hailstorm | Hot & Humid | |
| Dust Raising Winds | Strong Surface Winds | |

COLOUR CODED WARNING

No Warning (No Action)
Watch (Be Aware)
Alert (Be Prepared To Take Action)
Warning (Take Action)

Probabilistic Forecast

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

DEFINITION/CRITERIA

Rain/ Snow *

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

Heat Wave

When maximum temperature of a station reaches $\geq 40^\circ\text{C}$ for plains and $\geq 30^\circ\text{C}$ for hilly regions
(a) Based on Departure from normal

Heat Wave: Maximum Temperature Departure from normal 4.5°C to 6.4°C .
Severe Heat Wave: Maximum Temperature Departure from normal $\geq 6.5^\circ\text{C}$

(b). Based on Actual maximum temperature

Heat Wave: When actual maximum temperature $\geq 45^\circ\text{C}$.
Severe Heat Wave: When actual maximum temperature $\geq 47^\circ\text{C}$

(c) Criteria for heat wave for coastal stations

When maximum temperature departure is $> 4.5^\circ\text{C}$ from normal. Heat Wave may be described provided maximum temperature $\geq 37^\circ\text{C}$

Warm Night

When maximum temperature remains 40°C

Warm Night: When minimum temperature departure 4.5°C to 6.4°C .
Severe Warm Night: When minimum temperature departure $> 6.4^\circ\text{C}$.

Cold Wave

When minimum temperature of a station $\leq 10^\circ\text{C}$ for plains and $\leq 0^\circ\text{C}$ for hilly regions.
(a). Based on departure

Cold Wave: Minimum Temperature Departure from normal -4.5°C to -6.4°C .
Severe Cold Wave: Minimum Temperature Departure from normal $\leq -6.5^\circ\text{C}$

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

Cold Wave : When Minimum Temperature is $\leq 4.0^\circ\text{C}$
Severe Cold Wave: When Minimum Temperature is $\leq 2.0^\circ\text{C}$

(c) For Coastal Stations

When Minimum Temperature departure is $\leq -4.5^\circ\text{C}$ & actual Minimum Temperature is $\leq 15^\circ\text{C}$

Cold Day

When minimum temperature of a station $\leq 10^\circ\text{C}$ for plains and $\leq 0^\circ\text{C}$ for hilly regions
Based on departure

Cold Day: Maximum Temperature Departure from normal -4.5°C to -6.4°C .
Severe Cold Day: Maximum Temperature Departure from normal $\leq -6.5^\circ\text{C}$

Fog

Phenomenon of small droplets suspended in air and the horizontal visibility $< 1\text{km}$

Moderate Fog: When the visibility between 500-200 metres
Dense Fog: when the visibility between 50- 200 metres
Very Dense Fog: when the visibility < 50 metres

Thunderstorm

Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)

Dust/Sand Storm

An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.

Frost

Ice deposits on ground

Air temperature $\leq 4^\circ\text{C}$ (over Plains)

Squall

A strong wind that rises suddenly, lasts for atleast 1 minute.

Moderate: Wind speed 52-61 kmph
Severe: Wind speed 62-87 kmph
Very Severe: Wind speed > 87 kmph

Sea State

Effect of various waves in the sea over specific area

Rough to very rough: Wind speed 41-62 kmph (22-33 knots) & Wave height 2.5-6 metre
High to very high: Wind speed 63-117 kmph (34-63 knots) & Wave height 6-14 metre
Phenomenal: Wind speed > 117 kmph (> 63 knots) & Wave height > 14 metre

Cyclone

Cyclonic Storm: Wind speed 62-87 kmph (34-47 knots)
Severe Cyclonic Storm: Wind speed 88-117 kmph (48-63 knots)
Very Severe Cyclonic Storm: Wind speed 118-165 kmph (64 - 89 knots)
Extremely Severe Cyclonic Storm: Wind speed 166-220 kmph (90 -119 knots)
Super Cyclone Strom: Wind speed > 220 kmph (> 119 knots)