Annexure-I

राष्ट्रीय मौसम पूर्वानुमान केन्द्र
भारत मौसम विज्ञान विभाग
पृथ्वी विज्ञान मंत्रालय

National Weather Forecasting Centre
India Meteorological Department
Ministry of Earth Sciences

Thursday, February 20, 2025
Time of Issue: 2010 hours IST
(NIGHT)

All India Impact Based Weather Warning Bulletin

Weather Warnings for next 7 days is given below:
(Graphics for warnings & rainfall distribution (Table 1) are given below the text:

20th February (Day 1):

- **Heavy rainfall/snowfall with hail (≥7 cm)** very likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh.
- **Hailstorm conditions** very likely at isolated places over Uttarakhand, Punjab, Haryana-Chandigarh, Himachal Pradesh, West Uttar Pradesh, Gangetic West Bengal, Jharkhand and Odisha.
- **Thunderstorm accompanied with gusty winds (50-60 kmph) & lightning** very likely at isolated places over Gangetic West Bengal, Odisha; **with gusty winds (40-50 kmph) & lightning** at isolated places over Jharkhand; **with gusty winds (30-40 kmph) & lightning** at isolated places over Punjab, Haryana-Chandigarh-Delhi, Himachal Pradesh, West Uttar Pradesh **and lightning** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Uttarakhand, East Uttar Pradesh, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim, Bihar, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Assam & Meghalaya**.**
- **Dense fog conditions** very likely in isolated pockets of Sub-Himalayan West Bengal & Sikkim.

21st February (Day 2):

- **Heavy Rainfall (≥ 7 cm)** very likely at isolated places of Arunachal Pradesh**.**
- **Thunderstorm accompanied with lightning** likely at isolated places over Gangetic West Bengal, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura**.**
- **Dense fog conditions** very likely in isolated pockets of Sub-Himalayan West Bengal & Sikkim.

22nd February (Day 3):

- **Hailstorm conditions** very likely at isolated places over Gangetic West Bengal, Jharkhand, Odisha.
- **Thunderstorm accompanied with gusty winds (40-50 kmph) & lightning** likely at isolated places over Gangetic West Bengal, Jharkhand, Odisha; **with gusty winds (30-40 kmph) & lightning** at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura; **with lightning** at isolated places over Sub-Himalayan West Bengal & Sikkim, Bihar.

23rd February (Day 4):

- **Thunderstorm accompanied with gusty winds (30-40 kmph) & lightning** likely at isolated places over Gangetic West Bengal; with **lightning** at isolated places over Jharkhand, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura.

24th February (Day 5):

- **No Weather Warning.**

25th February (Day 6):

- **No Weather Warning.**

26th February (Day 7):

- **No Weather Warning.**

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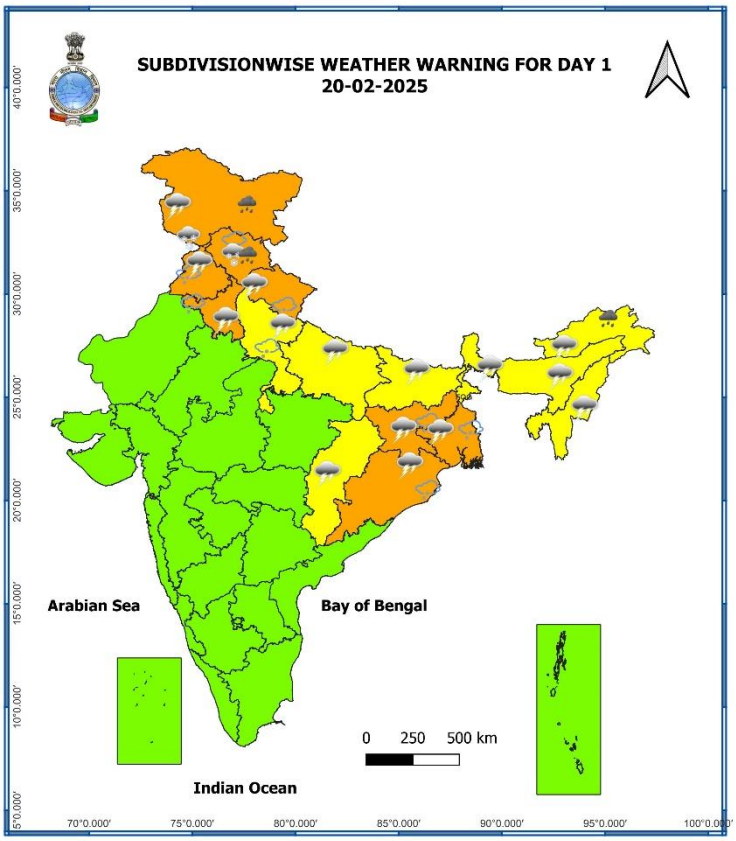

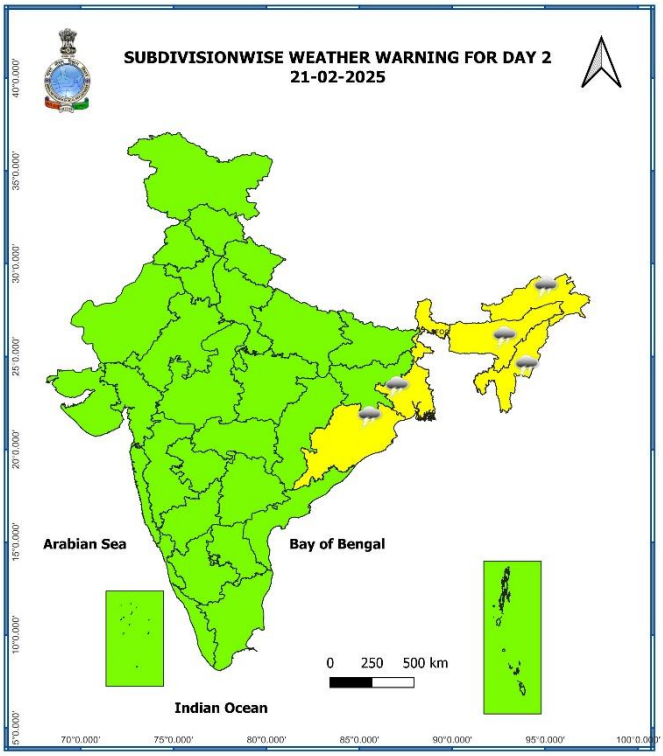

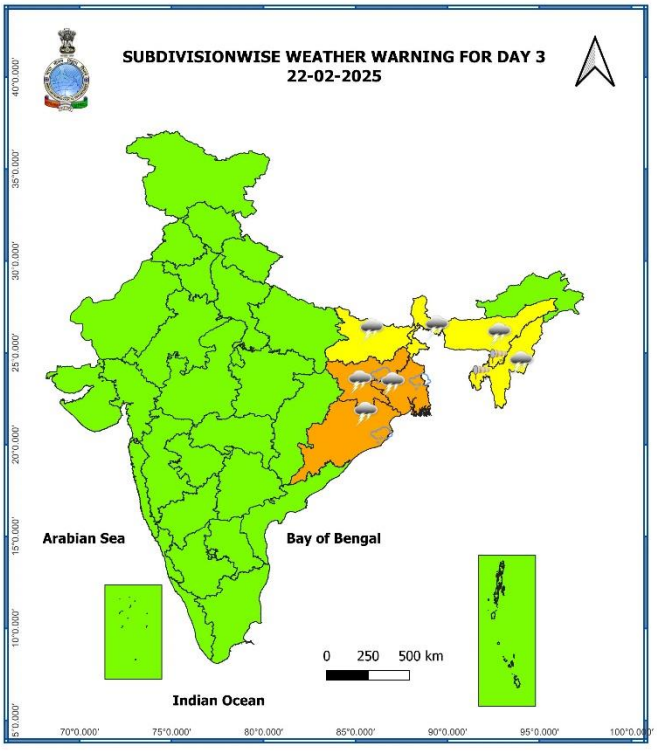

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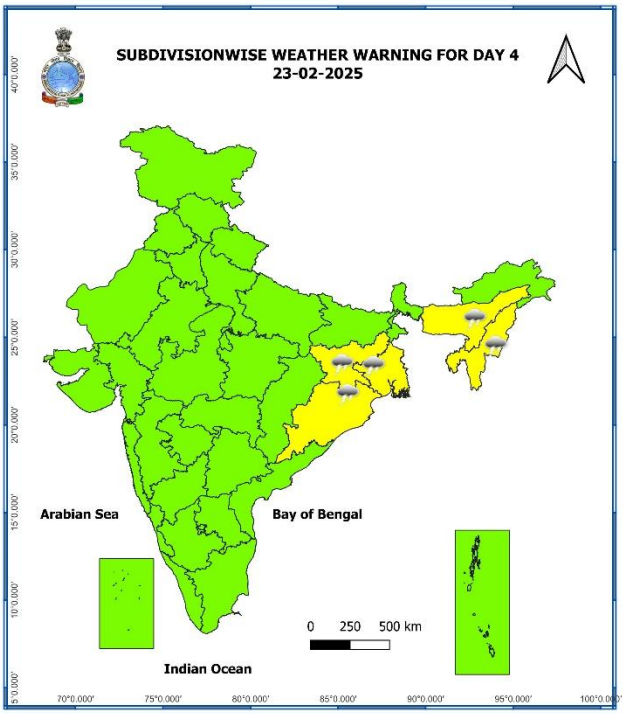

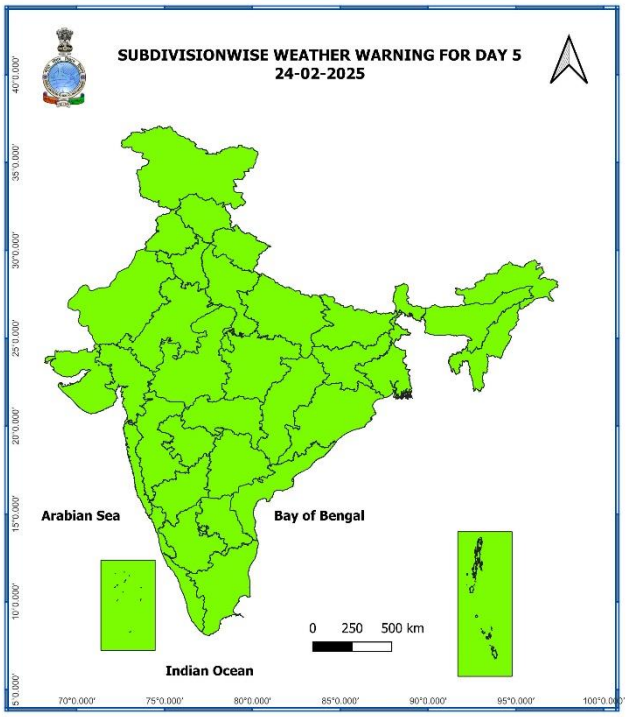

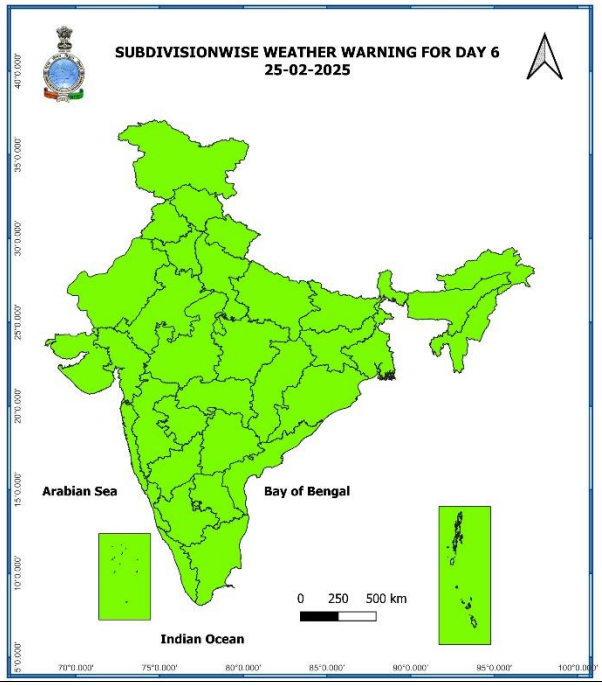

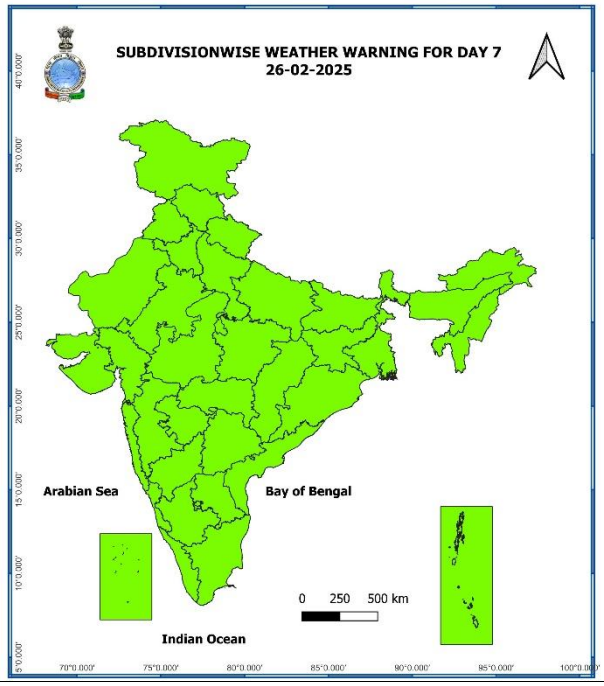

- **Action may be taken based on ORANGE AND RED COLOUR warnings.**
- **Vulnerable regions likely urban and hilly areas action may be initiated for heavy rainfall warning.**
- **As the lead period increases forecast accuracy decreases.**

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Table-1

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

- **As the lead period increases forecast accuracy decreases.**

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Agromet advisories for likely impact of Heavy Rainfall / Hailstorms

- Use hail nets or hail caps in fruit orchards and vegetable plants to protect them from mechanical damage in **Gangetic West Bengal, Odisha, Jharkhand, West Uttar Pradesh** and **Uttarakhand**.
- Make provision for draining out excess water from the fields of wheat, mustard, pulses, other standing crops, vegetables and horticultural crops in **Jammu & Kashmir** and Himachal **Pradesh;** rice, mustard, field pea, other standing crops, vegetables and horticultural crops in **Arunachal Pradesh** to avoid water stagnation.
- Keep the harvested produce in safer places or cover the produce with tarpaulin sheets in the fields.
- Provide mechanical support to horticultural crops and staking to vegetables.

Livestock

- Keep the animals inside the shed during heavy rainfall/ hailstorms and provide them with balanced feed.
- Store feed and fodder in a safe place to prevent spoilage.

Impact expected and action suggested due to isolated thunderstorm with lightning/gusty winds & Hailstorm

Impact expected:

- Strong wind/hail may damage plantation, horticulture and standing crops.
- Hail may injure people and cattle at open places.
- Partial damage to vulnerable structures due to strong winds.
- Minor damage to kutcha houses/walls and huts.
- Loose objects may fly.

Action suggested:

- Stay indoors, close windows & doors and avoid travel if possible.
- Take safe shelters; do not take shelter under trees.
- Do not lie on concrete floors and do not lean against concrete walls.
- Unplug electrical/ electronic appliances.
- Immediately get out of water bodies.
- Keep away from all the objects that conduct electricity.

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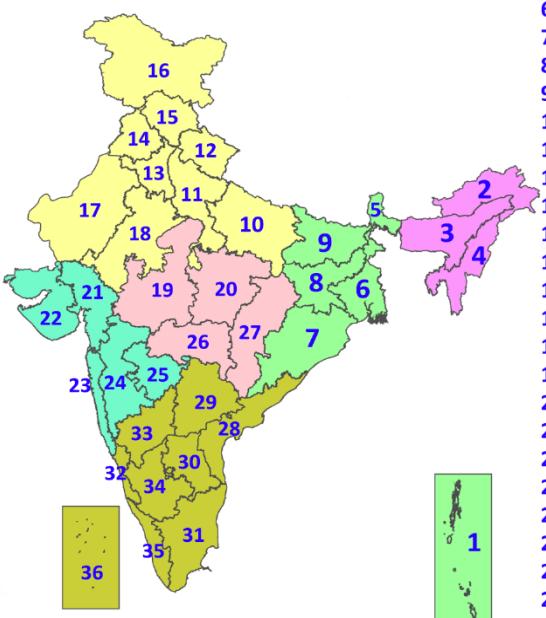
LEGENDS

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 Rain
Very Heavy Rain
Extremely Heavy Rain
Thunder & Lightning
Hailstorm
Dust Raising Winds

Heavy Snow
Dust Storm
Heat Wave
Warm Night
Hot Day
Hot & Humid
Strong Surface Winds

Cold Wave
Cold Day
Ground Frost

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

* 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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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 ≥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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