Annexure-I

राष्ट्रीय मौसम पूर्वानुमान केन्द्र
भारत मौसम विज्ञान विभाग
पृथ्वी विज्ञान मंत्रालय

National Weather Forecasting Centre
India Meteorological Department
Ministry of Earth Sciences

Saturday, March 15, 2025
Time of Issue: 0800 hours IST
(MORNING)

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:

15th March (Day 1):

- **Heavy rainfall (≥7 cm)** very likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Arunachal Pradesh.
- **Thunderstorm accompanied with hailstorm, gusty winds (speed reaching 30-40 kmph) & lightning** very likely at isolated places over Rajasthan, West Uttar Pradesh, Haryana; **Thunderstorm accompanied with gusty winds (speed reaching 30-40 kmph) & lightning** very likely at isolated places over Punjab, Delhi, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura; **with lightning** at isolated places over Arunachal Pradesh, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, East Uttar Pradesh.
- **Heat Wave to severe heat wave Conditions** likely at isolated places over Saurashtra & Kutch, Odisha; **Heat Wave Conditions** likely at isolated places over Gangetic West Bengal, Jharkhand, Chhattisgarh, Vidarbha, Telangana, Coastal Andhra Pradesh & Yanam, Rayalaseema.
- **Warm Night Conditions** likely at isolated places over Odisha.
- **Hot and Humid Conditions** likely at isolated places Coastal Andhra Pradesh & Yanam and Tamil Nadu.

16th March (Day 2):

- **Heavy rainfall (≥7 cm)** likely at isolated places over Himachal Pradesh, Uttarakhand and Arunachal Pradesh.
- **Thunderstorm accompanied with gusty winds (speed reaching 30-40 kmph) & lightning** very likely at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura; **with lightning** at isolated places over Himachal Pradesh, Uttarakhand, Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh, Arunachal Pradesh and north Kerala & Mahe.
- **Heat Wave to severe heat wave Conditions** likely at isolated places over Odisha; **Heat Wave Conditions** likely at isolated places over Gangetic West Bengal, Jharkhand, Vidarbha.
- **Warm Night Conditions** likely at isolated places over Odisha.
- **Hot and Humid Conditions** likely at isolated places over Coastal Karnataka and Tamil Nadu.

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17th March (Day 3):

- **Heavy rainfall (≥7 cm)** at isolated places over Arunachal Pradesh**.**
- **Thunderstorm accompanied with gusty winds (speed reaching 30-40 kmph) & lightning** very likely at isolated places over Nagaland, Manipur, Mizoram & Tripura; **with lightning** at isolated places over East Uttar Pradesh, Arunachal Pradesh, Assam & Meghalaya, south Tamil Nadu, Puducherry & Karaikal and north Kerala & Mahe.
- **Heat Wave to severe heat wave Conditions** likely at isolated places over Odisha; **Heat Wave Conditions** likely at isolated places over Gangetic West Bengal, Jharkhand.
- **Warm Night Conditions** likely at isolated places over Odisha.
- **Hot and Humid Conditions** likely at isolated places over Coastal Karnataka and Tamil Nadu.

18th March (Day 4):

- **Heavy rainfall (≥7 cm)** at isolated places over Arunachal Pradesh**.**
- **Thunderstorm accompanied with lightning** at isolated places over Assam & Meghalaya, south Tamil Nadu, Puducherry & Karaikal and north Kerala & Mahe.
- **Heat Wave Conditions** likely at isolated places over Odisha.
- **Hot and Humid Conditions** likely at isolated places over Coastal Karnataka.

19th March (Day 5):

- **Heat Wave Conditions** likely at isolated places over Odisha.

20th March (Day 6):

- **Heat Wave Conditions** likely at isolated places over Odisha.

21th March (Day 7):

- **Heat Wave Conditions** likely at isolated places over Odisha.

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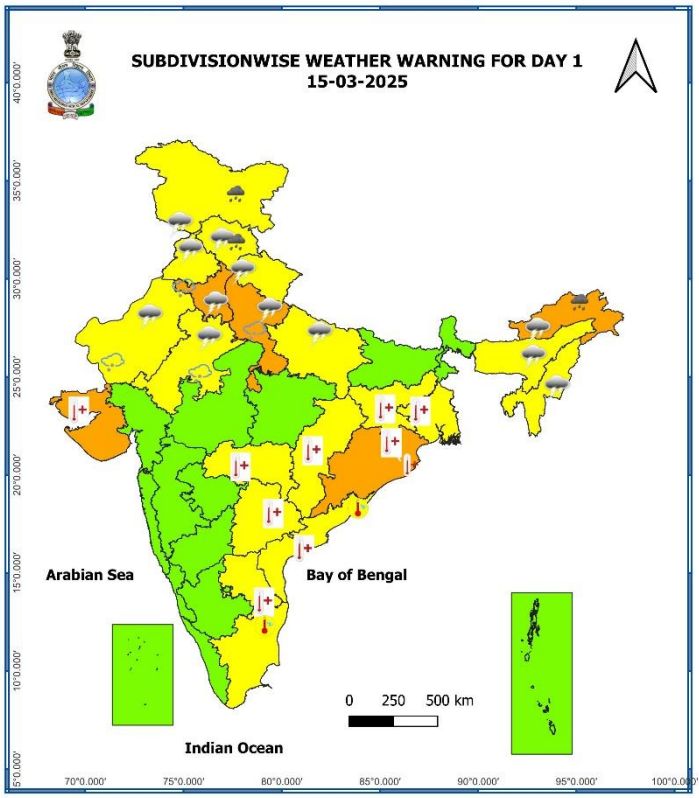

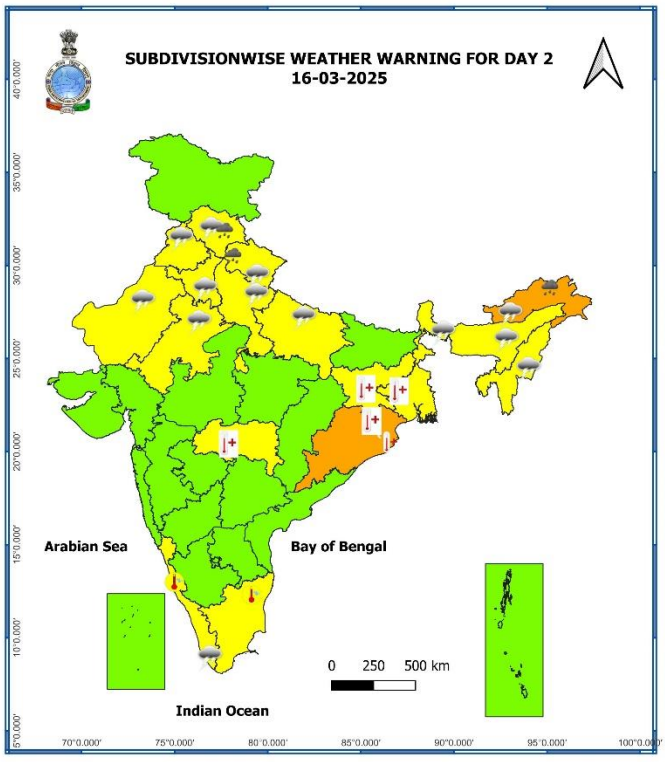

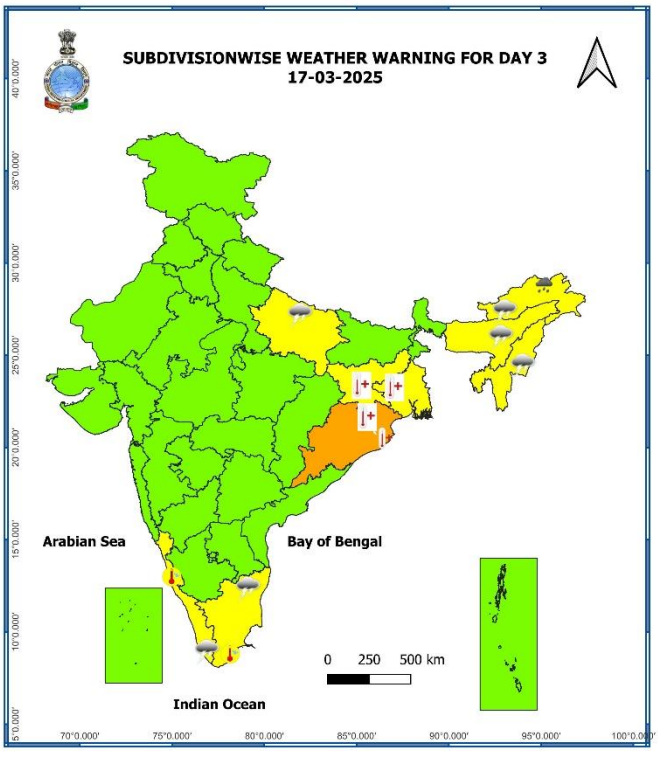

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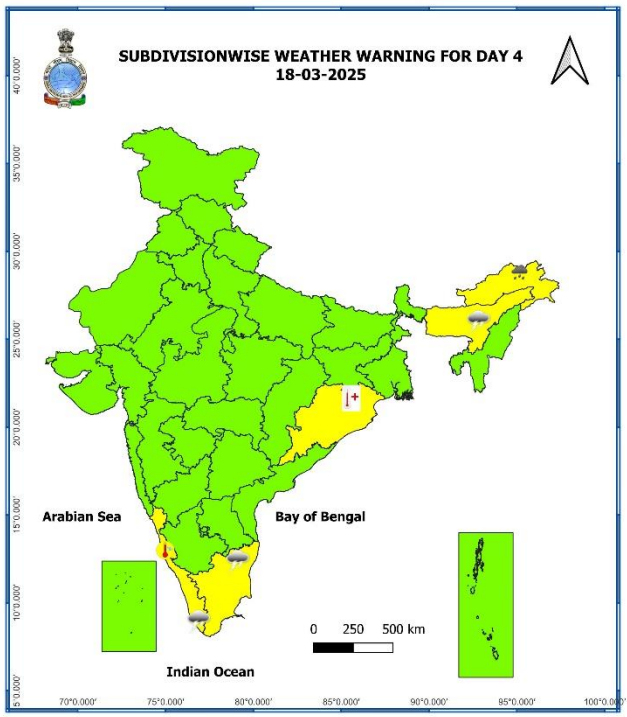

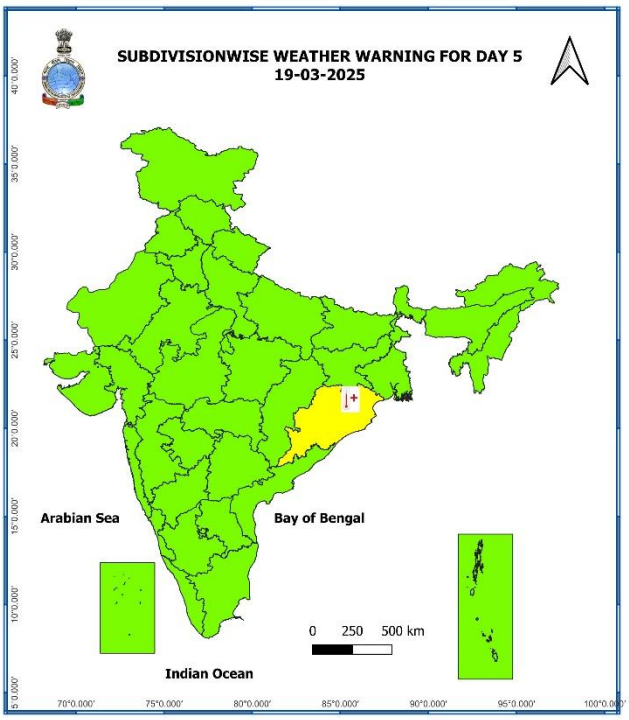

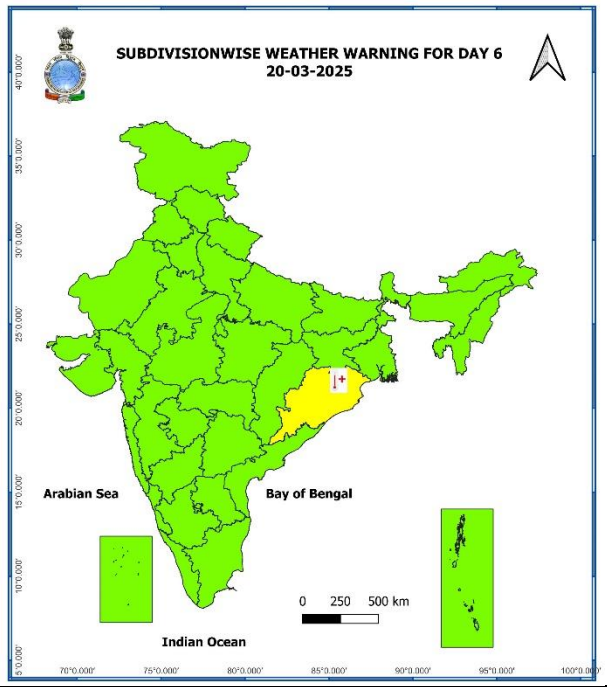

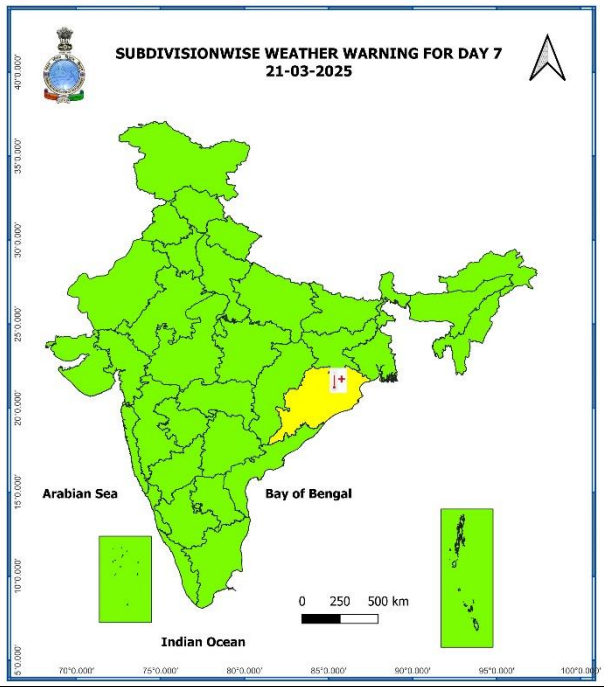

- **Action may be taken based on ORANGE AND RED COLOUR warnings.**
- **Vulnerable regions likely urban and hilly areas action may be initiated for heavy rainfall warning.**
- **As the lead period increases forecast accuracy decreases.**

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Table-1

7 Days Rainfall Forecast

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

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

Annexure-I

Impact expected and action suggested due to thunderstorm accompanied with lightning/gusty winds/Hailstorm over Northeast India and Northwest India during next 5 days

- **Impact expected:**
- Strong wind may damage plantation, horticulture and standing crops.
- 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.

Impact & Action Suggested due to heavy rainfall/ snowfall over;

(i) Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad on 15th; Himachal Pradesh 15th & 16th and Uttarakhand on 16th March

(ii) Arunachal Pradesh during 15th-18th.

A. Impact Expected

- Localized Flooding of roads, water logging in low lying areas and closure of underpasses mainly in urban areas of the above region.
- Occasional reduction in visibility due to heavy rainfall.
- Disruption of traffic in major cities due to water logging in roads leading to increased travel time.
- Minor damage to kutcha roads.
- Possibilities of damage to vulnerable structure.
- Localized Landslides/Mudslides
- Damage to horticulture and standing crops in some areas due to inundation.
- It may lead to riverine flooding in some river catchments (for riverine flooding please visit Web page of CWC).

B. Action Suggested

- Check for traffic congestion on your route before leaving for your destination.
- Follow any traffic advisories that are issued in this regard.
- Avoid going to areas that face the water logging problems often.
- Avoid staying in vulnerable structure.

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Impact expected and action suggested due to Heat wave to severe heat wave conditions likely at isolated places over Odisha during 15th -17th; Heat wave to severe heat wave conditions likely at isolated places over Chhattisgarh on 15th; Jharkhand during 15th-17th; Coastal Andhra Pradesh & Yanam on 15th; Odisha during 18th-20th and Gangetic West Bengal on 15th -17th March, 2025.

Orange alert Areas (Saurashtra & Kutch 15th; Odisha during 15-17th March)

- High temperature & increased likelihood of heat illness symptoms in people who are either exposed to sun for a prolonged period or doing heavy work.
- High health concern for vulnerable people e.g. infants, elderly, people with chronic diseases.
- Avoid heat exposure– keep cool. Avoid dehydration.
- Drink sufficient water- even if not thirsty.
- Use ORS, homemade drinks like lassi, torani (rice water), lemon water, buttermilk, etc. to keep yourself hydrated.

Yellow alert Areas

- Moderate temperature & heat is tolerable for general public but moderate health concern likely for vulnerable people e.g. infants, elderly, people with chronic diseases.
- Avoid heat exposure.
- Wear lightweight, light colour, loose, cotton clothes.
- Cover your head, use a cloth, hat or umbrella.

Agromet advisories for likely impact of Heavy Rainfall / Hailstorm / Heat Wave

- In **Assam, Meghalaya, NMMT, Punjab, Haryana, West Uttar Pradesh** and **East Rajasthan,** use hail net and hail caps to prevent mechanical damage in orchards due to hailstorms.
- In **Arunachal Pradesh, Assam & Meghalaya**, **Jammu & Kashmir** and **Himachal Pradesh,** drain out excess water from standing crop and vegetable fields**.** Postpone land preparation and sowing of *Jhum* rice and maize in **Arunachal Pradesh;** sowing of rice, jute, maize and vegetables in **Assam.**
- In **Odisha, Jharkhand, Gangetic West Bengal**, **Saurashtra & Kutch**, **Vidarbha**, **Andhra Pradesh** and **Telangana**, apply light and frequent irrigation to the standing crops, vegetables and orchards in the evening to protect them from adverse impacts of heat wave.
- 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 to avoid lodging.
- In the regions of heavy snowfall, shake the fruit-bearing trees to remove snow immediately from the branches.

Livestock and Fishery

- Keep the animals inside the shed during heavy rainfall/hailstorm and provide them balanced feed.
- Store feed and fodder in a safe place to prevent spoilage.
- Construct an outlet with proper netting around the ponds to drain out excess water, thereby preventing fish from escaping in case of overflow.
- To reduce the effect of heat wave/high temperature, cover the roof of poultry sheds with grass. Also provide clean, hygienic and plenty of drinking water to animals.

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Legends & abbreviations:

- **Heavy Rain:**64.5-115.5mm; **Very Heavy Rain:**115.6-204.4mm; **Extremely Heavy Rain:** >204.4mm.
- **Obsy.:** Observatory; **AWS:** Automatic Weather Station; **ARG:** Automatic Rain Gauge; **dist.:** District: **NH:** National Highway; **KVK**: Krishi Vigyan Kendra; **DVC:** Damodar Valley Corporation; **PTO**: Part Time Office, **Aero:** Aerodrome, **IAF:** Indian Air Force.

- **Region wise classification of meteorological Sub-Divisions:**
  - **Northwest India:** Western Himalayan Region (Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand); Punjab, Haryana-Chandigarh-Delhi; West Uttar Pradesh, East Uttar Pradesh, West Rajasthan and East Rajasthan.
  - **Central India:** West Madhya Pradesh, East Madhya Pradesh, Vidarbha and Chhattisgarh.
  - **East India:** Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim; Gangetic West Bengal, Odisha and Andaman & Nicobar Islands.
  - **Northeast India:** Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
  - **West India:** Gujarat Region, Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra and Marathawada.
  - **South India:** Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Coastal Karnataka, North Interior Karnataka, South Interior Karnataka, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal and Lakshadweep.

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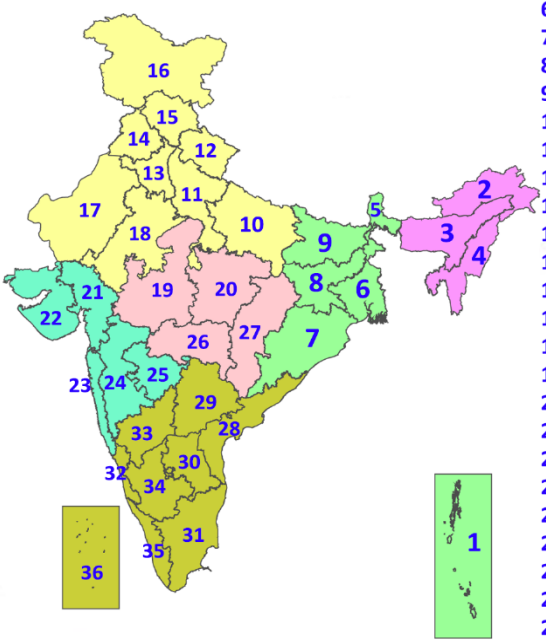
LEGENDS

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.
For more details, kindly visit https://mausam.imd.gov.in or contact: 011-2434-4599
(Service to the Nation since 1875)

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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)

* 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
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