



**Government of India**  
**Ministry of Earth Sciences**  
**India Meteorological Department**



**Press Release**

**Date: 13<sup>th</sup> April, 2025**

**Time of Issue: 1345 hours IST**

**Subject: i) A fresh spell of heat wave likely to commence over parts of Northwest India and over Gujarat from 15<sup>th</sup> April.**  
**ii) Rainfall along with thunderstorm & lightning and gusty/squally winds is likely to continue over East & adjoining East Madhya Pradesh & Chhattisgarh during next 4-5 days.**

**i. Realised weather during past 24 hours till 0830 hours IST of today, the 12<sup>th</sup> April 2025 (Annexure I):**

- ❖ **Thunderstorm** accompanied with Squally/Gusty winds prevailed at a few places over Odisha and at isolated locations over Assam & Meghalaya, Tripura, Himachal Pradesh, Uttarakhand, Haryana, Uttar Pradesh, East Rajasthan, West Bengal & Sikkim, Jharkhand, Bihar, Madhya Pradesh, Vidarbha, Chhattisgarh
- ❖ **Hailstorm** occurred at isolated places over Himachal Pradesh, West Uttar Pradesh, Madhya Pradesh, Vidarbha, Madhya Maharashtra and Odisha.
- ❖ **Heavy rainfall** recorded at isolated places over Sub-Himalayan West Bengal & Sikkim.
- ❖ **Duststorm** recorded at isolated places over East Uttar Pradesh.

**For more details of realised weather, kindly refer [Annexure I](#)**

**Temperature:**

- ❖ Temperature observations during past 24 hours till 0830 hours IST of today are provided in [Annexure II](#).

**ii. Weather Systems, Forecast and Warnings (Annexure III & IV):**

- ❖ The **Western Disturbance** as a trough in westerlies in middle tropospheric levels runs roughly along Long. 81°E to the north of Lat. 21°N. An **upper air cyclonic circulation** lies over southeast Madhya Pradesh and a **trough** runs from this cyclonic circulation to central parts of Telangana and a **trough** from central parts of West Rajasthan to cyclonic circulation over Southeast Madhya Pradesh and another **trough** runs from central parts of Bihar to North Coastal Odisha in lower tropospheric levels.
- ❖ An **Upper air cyclonic circulations** also lie over south Assam & another over central parts of Coastal Andhra Pradesh & Yanam in lower tropospheric levels.
- ❖ Under the influence of these systems:
  - ✓ **Scattered to fairly widespread** light/moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (speed 40-50 kmph)** likely over Northeast and adjoining East India during next 5 days.
  - ✓ Isolated to scattered rainfall accompanied with **thunderstorm, lightning & gusty winds (speed 40-50 kmph)** likely over plains of Central India and Maharashtra on 13<sup>th</sup> & 14<sup>th</sup> April.
  - ✓ **Heavy rainfall** likely over Sub-Himalayan West Bengal & Sikkim on 13<sup>th</sup>; Assam & Meghalaya during 14<sup>th</sup>-16<sup>th</sup>; Odisha on 15<sup>th</sup> & 16<sup>th</sup> April.

- ✓ **Isolated Hailstorm** likely over Gangetic West Bengal, Odisha, Coastal Andhra Pradesh & Yanam and Madhya Pradesh on 13<sup>th</sup>; Jharkhand on 14<sup>th</sup> & 15<sup>th</sup> April.
- ✓ **Thundersquall (wind speed reaching 50-60 kmph)** very likely at isolated places over Gangetic **West Bengal**, Odisha, Coastal Andhra Pradesh & Yanam and Madhya Pradesh on 13<sup>th</sup> April.
- ✓ **Scattered to fairly widespread** light/moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (speed 30-40 kmph)** likely over Tamilnadu Puducherry & Karaikal, North interior Karnataka, Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana during next 5 days. **Isolated to Scattered** light/moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (speed 40-50 kmph)** likely over South Interior Karnataka, Kerala & Mahe during next 3 days.

#### Temperature Forecast:

- ❖ Gradual Rise in maximum temperatures by 3-5°C likely over Northwest India during next 5-6 days during 13-18 April.
- ❖ No significant change in maximum temperatures likely over Central India during next 24 hours and gradual rise by 2-4°C during 14<sup>th</sup>-19<sup>th</sup> April.
- ❖ Rise in maximum temperatures by 2-4°C likely over West India during next 5 days and no significant change thereafter during subsequent 2 days.
- ❖ No significant change in maximum temperatures likely over rest parts of the country.

#### Heat wave, warm night and Hot & Humid weather warning:

- ❖ **Heat wave conditions** very likely at isolated/some places over West Rajasthan on 14<sup>th</sup> & 15<sup>th</sup> with severe heat wave conditions at many parts during 16<sup>th</sup>-18<sup>th</sup> and at isolated pockets on 19<sup>th</sup> April.
- ❖ **Heat wave conditions** are very likely at isolated places over north Tamil Nadu on 13<sup>th</sup>; Telangana on 13<sup>th</sup> & 14<sup>th</sup>; West Madhya Pradesh during 15<sup>th</sup>-19<sup>th</sup>; Gujarat state from 15<sup>th</sup>-17<sup>th</sup>; Punjab, Haryana during 16<sup>th</sup>-18<sup>th</sup> April and over East Rajasthan during 16<sup>th</sup>-19<sup>th</sup> April.
- ❖ **Hot & humid** weather is likely to prevail over Coastal Andhra Pradesh & Yanam on 13<sup>th</sup>; Gujarat State during 15<sup>th</sup>-17<sup>th</sup> April.

#### iv. Weather conditions and forecast over Delhi/NCR during 13<sup>th</sup> April to 16<sup>th</sup> April, 2025 (Annexure V)

For more details, kindly refer National Weather Bulletin:

[https://mausam.imd.gov.in/responsive/all\\_india\\_forecast\\_bulletin.php](https://mausam.imd.gov.in/responsive/all_india_forecast_bulletin.php)

For District wise warnings refer: <https://mausam.imd.gov.in/responsive/districtWiseWarningGIS.php>

**Significant weather reported during past 24 hours till 0830 hours IST of today:**

- ❖ **Light/moderate Rainfall with thunderstorm & lightning observed** at most places over Andaman & Nicobar Islands, Sub-Himalayan West Bengal & Sikkim; at many places over Himachal Pradesh, Uttarakhand; at a few places over Bihar, Odisha, Arunachal Pradesh, Assam & Meghalaya, East Madhya Pradesh; at isolated places over Punjab, Haryana Chandigarh & Delhi, up, Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Gangetic West Bengal, Jharkhand, Nagaland, Manipur, Mizoram & Tripura.

**Rainfall recorded (in cm):**

- ❖ **Sub-Himalayan West Bengal & Sikkim:** Falakata-7, Amfu Pundibari (dist Cooch Behar) 6, Kabi (dist Mangan) 5, Cooch Behar (dist Cooch Behar) 4,
- ❖ **Assam & Meghalaya:** Dudhnoi ARG (dist Goalpara) 5, Barpeta/sarbhog\_aws (dist Barpeta) 5, Kajolgaon\_aws (dist Chirang) 4,
- ❖ **Tamil Nadu:** Vellore (dist Vellore), Tirupuvanam (dist Sivagangai), Melur (dist Madurai), Mullanginavillai (dist Kanyakumari), Kelavarapalli Dam (dist Krishnagiri) 3 each,
- ❖ **Kerala & Mahe:** Kunnamkulam (Thrissur district) 4, Kunnamkulam (Thrissur district), Pothundy Dam & Kanjirapuzha (both in Palakkad district) 3 each,
- ❖ **South Interior Karnataka:** N R Pura (dist Chikkamagaluru) 4, Jayapura (dist Chikkamagaluru) 3,
- ❖ **Rayalaseema:** Chittoor (dist Chittoor) 4, Chinnamandem (dist Annamayya District) 3.

**Realised Gusty Winds during past 24hours ending at 0300 UTC of today i.e 13.04.2025 (Received from RMCs/MCs):**

- ❖ **Uttarakhand-** Nainital (23KTS, 1130),
- ❖ **Punjab-** Fatehgarh\_Sahib (30kts, 1200), Moga (23kts, 1315)
- ❖ **Himachal Pradesh -** Bilaspur (27KTS, 1015), Kullu (25KTS, 0915)
- ❖ **Rajasthan-** Jaipur (34KTS,1515), Ajmer (28KTS, 1400), Sikar (27KTS,1430)
- ❖ **West Uttar Pradesh -** Hathras (43KTS, 1545), Etawah(23KTS,1545), Farrukhabad (27KTS,1545),
- ❖ **East Uttar Pradesh -** Hamirpur (24KTS,2130), Fatehpur(38KTS, 2130), Raibareilly (40KTS, 2345), Prayagraj (30KTS, 0045), Pratapgarh (25KTS, 0115), Mirzapur (33KTS, 0215), Chandauli (37KTS, 0215),
- ❖ **Bihar-** Jamui (24KTS, 1830), Katihar (26KTS, 2030), Banka (24KTS,1945)
- ❖ **Jharkhand-** Bokaro (32KTS, 0145), Latehar (24KTS, 1300),
- ❖ **Odisha-** Mayurbhanj (58KTS, 1145), Bhadrak (37KTS, 1215), Balasore (31KTS, 1200), Sonapur (28KTS, 1400)
- ❖ **Gangetic West Bengal -** West Medinipur (33kts, 1700), South\_Twenty\_Four\_Parganas (24kts,1615),
- ❖ **Chhattisgarh-** Koriya (25KTS, 0930)
- ❖ **East MP-** Singrauli (32kts, 0245), Rewa (23kts, 0045), Sagar (28kts, 2200),
- ❖ **West MP-** Guna (27KTS,2000), Sehore (24KTS, 0315)
- ❖ **Vidarbha-** Wardha(24KTS, 1215)
- ❖ **Coastal Andhra Pradesh & Yanam -** East Godawari (37KTS, 1300)
- ❖ **Assam & Meghalaya-** West Garo Hills (30KTS, 0000), KAMRUP\_METROPOLITAN (27KTS, 0300), CHIRANG (23KTS, 2300)

## Temperature observations during past 24 hours till 0830 hours IST of today:

- ❖ Yesterday, the Maximum Temperatures have risen by 4-7°C over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Punjab, Coastal Andhra Pradesh & Yanam, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura; by 2-4°C over Uttar Pradesh, Bihar, West Bengal & Sikkim, Jharkhand, Gujarat Region, Odisha, Konkan & Goa, Telangana and have fallen by 1-4°C over Uttarakhand, Madhya Pradesh, Himachal Pradesh, Rajasthan, Kerala & Mahe and no significant change over rest parts of the country.
- ❖ Yesterday, **Maximum Temperatures** were in the range of 39-42°C at a few places over Gujarat, south Rajasthan, Madhya Pradesh, Interior Maharashtra, central Chhattisgarh, Telangana, Coastal Andhra Pradesh & Yanam, Rayalaseema; at isolated places over Odisha, Tamil Nadu, Puducherry & Karaikal. Yesterday, the highest maximum temperature of 42.3°C was reported at Rajkot (Saurashtra & Kutch) over the country. Yesterday, the **highest maximum temperature of 42.3°C was reported at Rajkot (Saurashtra & Kutch)** over the country. (Fig.1)
- ❖ Yesterday, Maximum Temperatures were **markedly below normal (5.1°C or more)** at isolated places over Coastal Andhra Pradesh & Yanam; **appreciably above normal (3.1°C to 5.0°C)** at a few places over Tamil Nadu, Puducherry & Karaikal; **above normal (1.6°C to 3.0°C)** at a few places over West Rajasthan, Assam and Coastal Karnataka; at isolated places Saurashtra & Kutch, Odisha and Arunachal Pradesh. These were **markedly below normal (-5.1°C or less)** at isolated places over Himachal Pradesh, Punjab; **appreciably below normal (-3.1°C to -5.0°C)** at isolated places over East Uttar Pradesh, Bihar, Gangetic West Bengal and Andaman & Nicobar Islands; **below normal (-3.0°C to -1.6°C)** at many places over North Interior Karnataka; at a few places Haryana-Chandigarh-Delhi, Jharkhand and South Interior Karnataka; at isolated places over West Uttar Pradesh, Madhya Pradesh, Gujarat Region, Madhya Maharashtra, Manipur and Kerala & Mahe and normal over rest parts of the country. (Fig. 2)

Fig. 1: Maximum Temperatures

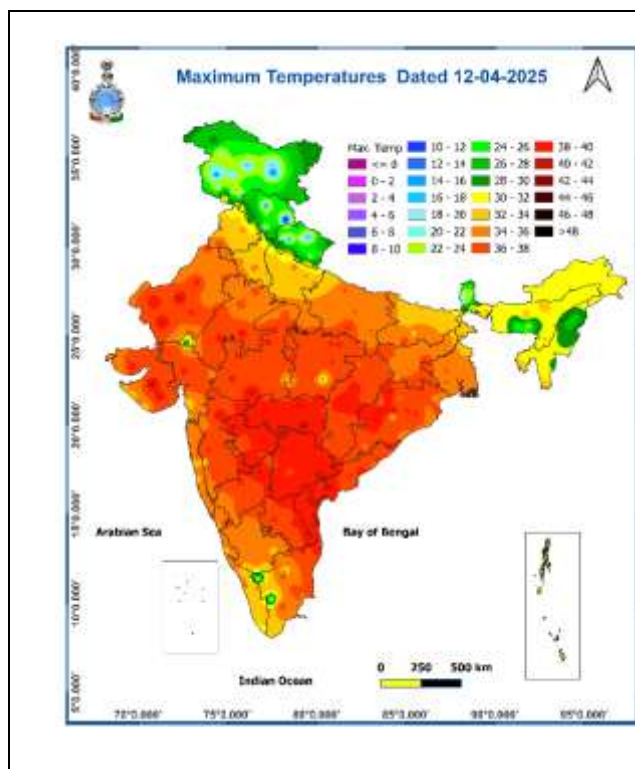
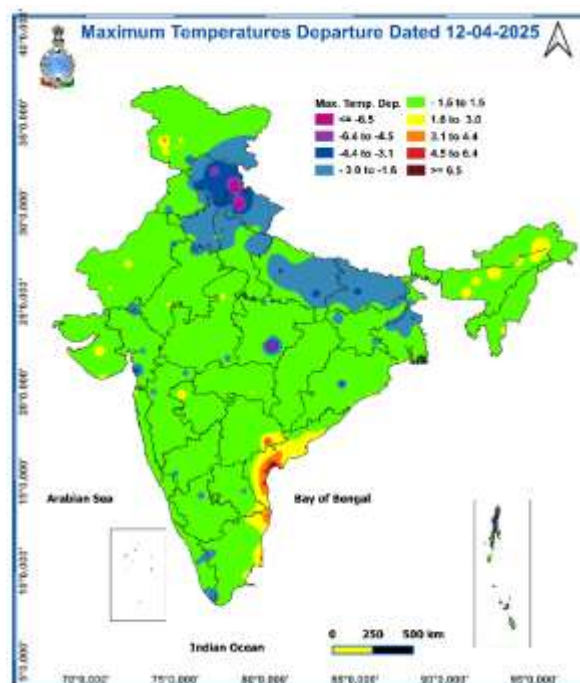


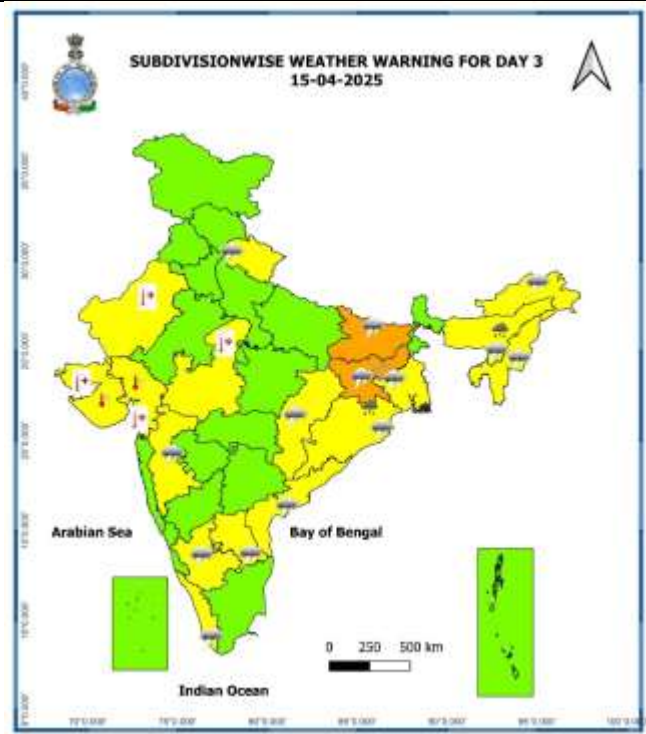
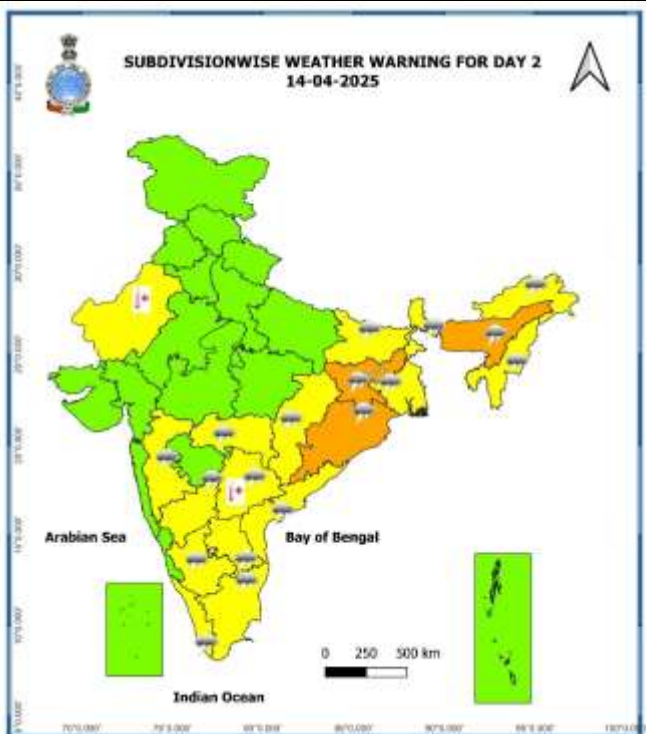
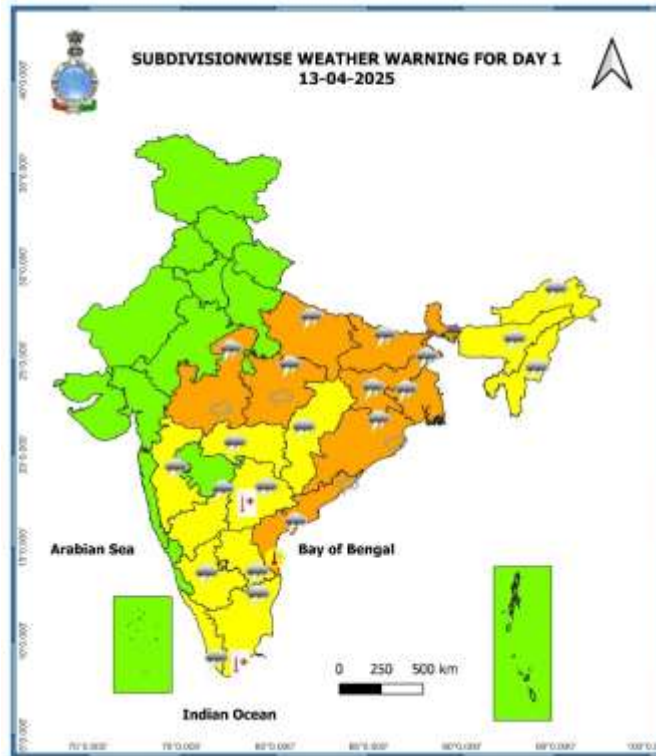
Fig. 2: Departure of Maximum Temperatures

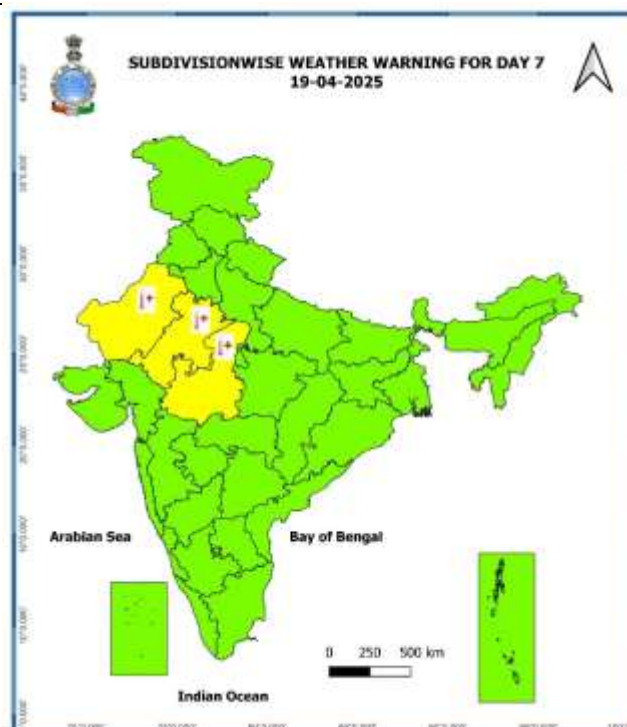
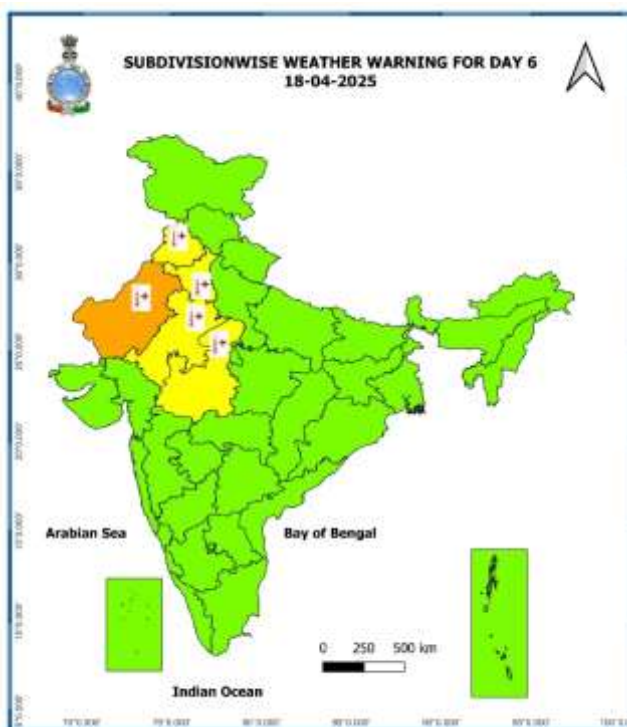
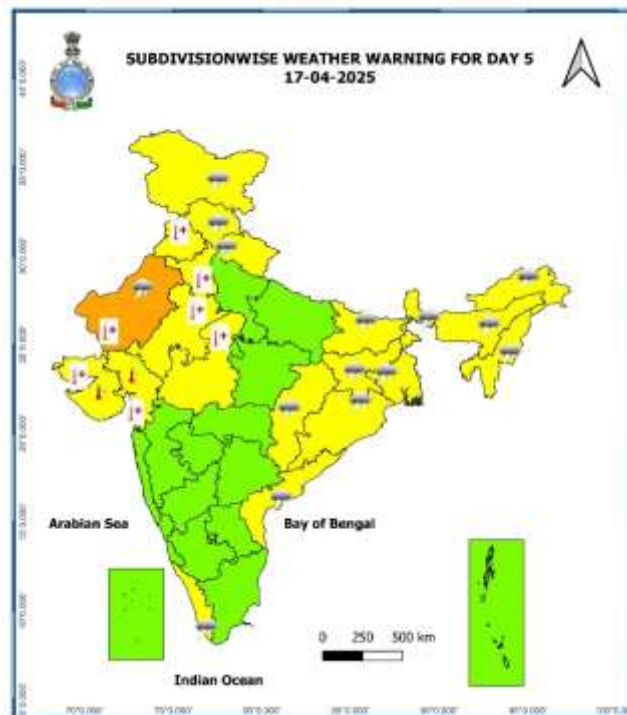
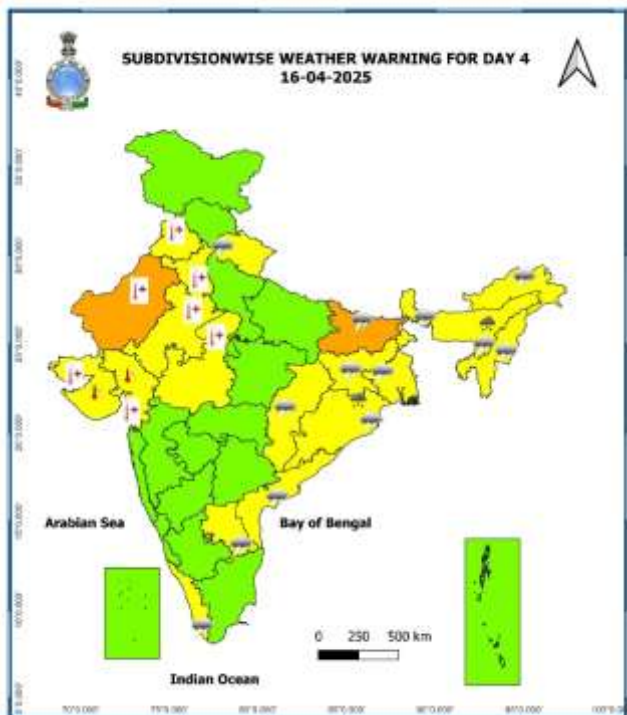


7 Days Rainfall Forecast								
S. No.	Subdivision	13-Apr	14-Apr	15-Apr	16-Apr	17-Apr	18-Apr	19-Apr
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	FWS	SCT	SCT	SCT	FWS	SCT	SCT
2	ARUNACHAL PRADESH	FWS	SCT	SCT	SCT	FWS	FWS	SCT
3	ASSAM & MEGHALAYA	FWS	FWS	FWS	FWS	WS	WS	FWS
4	NAGALAND,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

- As the lead period increases forecast accuracy decreases.







- 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.

Detailed district wise Multi Hazard weather warning for next five days available at  
<https://mausam.imd.gov.in/responsive/districtWiseWarningGIS.php>

## **Weather forecast over Delhi/NCR during 13<sup>th</sup> to 16<sup>th</sup> Apr. 2025**

### **Past Weather:**

There has been rise in minimum temperature upto 02°C and slight fall in maximum temperature over Delhi/NCR during the past 24 hours. The maximum and minimum temperatures over Delhi are in the range of 34 to 35 °C and 19 to 21 °C respectively. The minimum temperature was near normal and maximum temperature was below normal upto 02°C at most places. Mainly clear sky conditions with predominant surface wind from the southeast/east direction with wind speeds less than 10 to 14 kmph prevailed during the past 24 hours. Mainly clear sky conditions with wind speed less than 08 kmph from the southeast direction prevailed over the region in the forenoon today.

### **Weather Forecast:**

**13.04.2025:** Mainly clear sky. The maximum temperature over Delhi is likely to be in the range of 36 to 38°C. The predominant surface wind will likely be from the east direction with a wind speed of less than 12 kmph till evening. It would decrease becoming less than 08 kmph from the southeast direction during the night.

**14.04.2025:** Mainly clear sky. The maximum and minimum temperatures over Delhi are likely to be in the range of 38 to 40°C and 21 to 23°C respectively. The predominant surface wind will likely be from the southeast direction with a wind speed of 08-10 kmph during morning hours. The wind speed will gradually decrease thereafter becoming 06-08 kmph from the southeast direction during the afternoon. It will increase becoming less than 12 kmph from the east direction during evening and night.

**15.04.2025:** Mainly clear sky. The maximum and minimum temperatures over Delhi are likely to be in the range of 39 to 41°C and 22 to 24°C respectively. The predominant surface wind will likely be from the southeast direction with a wind speed of 12-16 kmph during morning hours. The wind speed will gradually decrease becoming 10-14 kmph from the southeast direction in the afternoon. It will increase becoming less than 18 kmph from the southeast direction during evening and night.

**16.04.2025:** Mainly clear sky becoming partly cloudy sky from evening. Heat wave conditions very likely at isolated places over Delhi. The maximum and minimum temperatures over Delhi are likely to be in the range of 40 to 42°C and 23 to 25°C respectively. The predominant surface wind will likely be from the southeast direction with a wind speed of 14-16 kmph during morning hours. The wind speed will gradually decrease becoming 10-12 kmph from the northeast direction in the afternoon. It will increase becoming less than 18 kmph from the southeast direction during evening and night.



**Impact expected and action suggested due to isolated thunderstorm with lightning/gusty winds & Hailstorm over Gangetic West Bengal, Odisha, Coastal Andhra Pradesh & Yanam and Madhya Pradesh on 13<sup>th</sup>; Jharkhand on 14<sup>th</sup> & 15<sup>th</sup> April.**

**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.

**Impact expected and action suggested due to Heat wave to severe heat wave conditions at West Rajasthan during 14<sup>th</sup>-19<sup>th</sup> April.**

**Red alert Areas**

- Very high likelihood of developing heat illness and heat stroke in all ages.
- Extreme care needed for vulnerable people.

**Orange alert Areas**

- 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 Hailstorm / Heavy Rainfall / Gusty Winds / Heatwave

- In **Odisha, Jharkhand, Madhya Pradesh** and **Coastal Andhra Pradesh**, immediately shift the harvested produce in safer places or cover the produce with tarpaulin sheets in the fields to avoid the adverse impact of likely hailstorm. Use hail net and hail caps to prevent mechanical damage in orchards due to hailstorms.
- In **Arunachal Pradesh, Meghalaya, Sub Himalayan West Bengal & Sikkim** and **Odisha**, immediately harvest the mature crops, fruits and vegetables and shift the harvested produce in safer places or cover the produce with tarpaulin sheets in the fields. Also make provision to drain out excess water from standing crop and vegetable fields.
- In **West Rajasthan, Gujarat, Telangana** and **North Tamil Nadu**, apply light and frequent irrigation to standing crops in the evening to protect them from heat waves.
- Provide mechanical support to horticultural crops and staking to vegetables to avoid lodging.

### **Livestock / Poultry / Fishery**

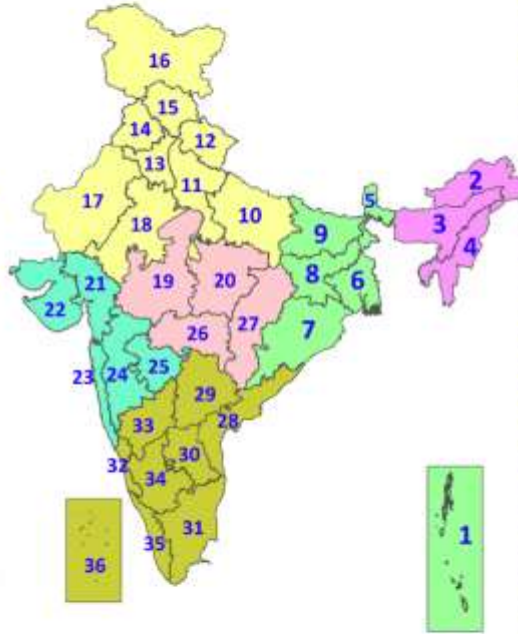
- Keep the animals inside the shed during heavy rainfall / hailstorm and provide them balanced feed.
- Store feed and fodder in a safe place to prevent spoilage.
- To reduce the effect of heat wave/high temperature, cover the roof of poultry sheds with grass. Also provide clean, hygienic and plenty of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

## 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.

## 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  $4.5^{\circ}\text{C}$  to  $6.4^{\circ}\text{C}$ .

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  $40^{\circ}\text{C}$

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

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  $-4.5^{\circ}\text{C}$  to  $-6.4^{\circ}\text{C}$ .

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  $-4.5^{\circ}\text{C}$  to  $-6.4^{\circ}\text{C}$ .

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 Storm: 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  
(Service to the Nation since 1875)

**Hot and Humid:** When maximum temperatures remain  $3^{\circ}\text{C}$  above normal along with the above normal relative humidity.