



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



Press Release

Date: 16th May, 2025

Time of Issue: 1430 hours IST

**Subject: i) Heavy to very heavy rainfall accompanied with thunderstorms & lightning likely over Northeast India and over Sub-Himalayan West Bengal & Sikkim during next 5-6 days.
ii) Heavy Rainfall accompanied with thunderstorms, lightning and squally/gusty winds likely to continue over South Peninsular India during next 5 days.
iii) Heat wave conditions likely over West Rajasthan during 16th-22nd; Uttar Pradesh, Jammu & Kashmir on 16th & 17th, North Madhya Pradesh on 18th & 19th May 2025.**

Advance of Southwest Monsoon: (Annexure I):

- ❖ **The Northern Limit of Monsoon continues to pass through 5°N/70°E, 6°N/75°E, 6°N/80°E, 7°N/85°E, 8°N/87°E, 10°N/90°E, Long Island, 15°N/95°E and 17°N/97°E.**
- ❖ Conditions are favorable for further advance of southwest Monsoon over some more parts of south Arabian Sea; over Maldives & Comorin area; South Bay of Bengal, remaining parts of Andaman Islands and Andaman Sea; and some parts of central Bay of Bengal during next 2-3 days.

Realised weather during past 24 hours till 0830 hours IST of today, the 16th May 2025 (Annexure II):

- ❖ **Thunderstorm accompanied with Squally/Gusty winds** with speed 60-80 kmph prevailed at isolated places over Chhattisgarh, Saurashtra & Kutch, Jharkhand, Madhya Pradesh; with speed 40-60 kmph prevailed at isolated places over Madhya Maharashtra, Marathwada, Gangetic West Bengal, Uttarakhand, Odisha, Punjab, Bihar, Himachal Pradesh, Haryana Chandigarh, Konkan & Goa.
- ❖ **Heavy rainfall recorded** at isolated places over Arunachal Pradesh, Meghalaya, Sub-Himalayan West Bengal, West Madhya Pradesh, Konkan, Coastal Andhra Pradesh.
- ❖ **Hailstorm** observed at isolated places over Himachal Pradesh, Gangetic West Bengal, Jharkhand and West Madhya Pradesh.

For more details of realised weather, kindly refer [Annexure II](#), Detailed observations of Maximum Temperature during past 24 hours till 0830 hours IST of today are appended in [Annexure III](#).

i. Weather Systems, Forecast and Warnings (refer to Annexure IV & V):

- ❖ An upper air cyclonic circulation lies over northwest Uttar Pradesh and a trough runs from this cyclonic circulation to north Bangladesh in lower tropospheric levels.
- ❖ An upper air cyclonic circulation lies over Haryana in lower tropospheric levels.
- ❖ An upper air cyclonic circulation lies over southeast Bay of Bengal in lower & middle tropospheric levels tilting southwestwards with height persists.
- ❖ An upper air cyclonic circulation lies over westcentral Bay of Bengal and adjoining north Coastal Andhra Pradesh in lower tropospheric levels.
- ❖ An upper air cyclonic circulation lies over central Assam in lower tropospheric levels.
- ❖ An upper air cyclonic circulation lies over eastcentral & adjoining northeast Arabian Sea off south Gujarat-North Konkan coasts in lower tropospheric levels.
- ❖ Under the influence of these systems, the following weather is likely:

Northeast India:

- ✓ **Fairly widespread to widespread** light/moderate rainfall accompanied with **thunderstorm, lightning & gusty winds speed reaching 30-50 kmph** likely over Northeast India during next 7 days.
- ✓ **Isolated heavy rainfall** over Arunachal Pradesh, Assam & Meghalaya during 16th-21st; Tripura on 17th & 18th with isolated **very heavy rainfall** over Assam & Meghalaya during 16th-18th and Arunachal Pradesh on 17th May.

South peninsular India:

- ✓ **Fairly widespread to widespread** light/moderate rainfall accompanied with **thunderstorm, lightning & gusty winds speed reaching 30-50 kmph** likely over Kerala & Mahe, Lakshadweep, coastal Karnataka, **Scattered to fairly widespread** accompanied with **thunderstorm, lightning & gusty winds speed reaching 30-50 kmph** likely over Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana, interior Karnataka during next 7 days with **Thundersquall wind speed reaching 50-60 kmph gusting to 70 kmph** likely over Telangana, Coastal Andhra Pradesh & Yanam on 16th & 17th; Interior Karnataka on 16th; Rayalaseema on 16th, 19th & 20th May.
- ✓ **Isolated heavy rainfall** likely over coastal Karnataka on 16th, 19th & 30th; Kerala & Mahe during 16th-22nd; Tamil Nadu, Puducherry & Karaikal, Interior Karnataka during 16th-20th; Lakshadweep on 20th; Coastal Andhra Pradesh, Telangana on 16th & 17th and Rayalaseema on 16th, 19th & 20th May with the **Isolated very heavy rainfall also likely over coastal Karnataka on 20th & 21st and over Kerala & Mahe during 19th-21st May.**

West India:

- ✓ **Isolated** light/moderate rainfall accompanied with **thunderstorm, lightning & gusty winds speed reaching 30-50 kmph** likely over Konkan & Goa, Madhya Maharashtra, Marathwada during 16th-20th May with **scattered to fairly widespread** light/moderate rainfall accompanied with **thunderstorm, lightning & gusty winds speed reaching 40-50 kmph** likely over Konkan & Goa, Madhya Maharashtra, Marathwada during 21-22 May.
- ✓ **Thundersquall wind speed reaching 50-60 kmph gusting to 70 kmph** likely over Madhya Maharashtra on 20th & 21st and Konkan & Goa during 19th-21st May.
- ✓ **Isolated heavy rainfall** likely over south Madhya Maharashtra, south Konkan & Goa on 20th May with **very heavy rainfall over Konkan on 21st & 22nd May, 2025.**

East & Central India:

- ✓ **Isolated to Scattered** light/moderate rainfall accompanied with **thunderstorm, lightning & gusty winds speed reaching 30-50 kmph** likely over Madhya Pradesh, Vidarbha, Chhattisgarh, Jharkhand, Odisha, Bihar, West Bengal & Sikkim during next 7 days with **Thundersquall wind speed reaching 50-60 kmph gusting to 70 kmph** likely over Odisha on 16th & 17th; Bihar on 17th & 18th; Jharkhand on 18th & 19th and Chhattisgarh on 17th May.
- ✓ **Isolated heavy rainfall** likely over Sub-Himalayan West Bengal & Sikkim during 16th-20th; Gangetic West Bengal and Bihar on 18th May.

Northwest India:

- ✓ **Isolated to Scattered** light to moderate rainfall with **thunderstorm, lightning & gusty winds speed reaching 30-50 kmph** likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand during 16th-21st May.
- ✓ Isolated light rainfall likely over East Uttar Pradesh, East Rajasthan during 16th-21st; Punjab, Haryana, West Uttar Pradesh on 16th & during 19th-21st May.
- ✓ **Isolated hailstorm** very likely over Uttarakhand on 16th and Himachal Pradesh on 19th May.
- ✓ **Strong dust raising winds (25-35 kmph)** very likely over West Rajasthan during 16th-19th May.
- ✓

Maximum Temperature Forecast:

- ❖ No significant change in maximum temperatures likely over East India during next 24 hours; gradual fall by 2-3°C thereafter for subsequent 3 days and no large change thereafter for subsequent 3 days.
- ❖ No significant change in maximum temperatures likely over West India during next 4 days; gradual fall by 2-4°C thereafter for subsequent 3 days.
- ❖ No significant change in maximum temperatures likely over rest parts of the country.

Heat wave and Hot & Humid weather warning:

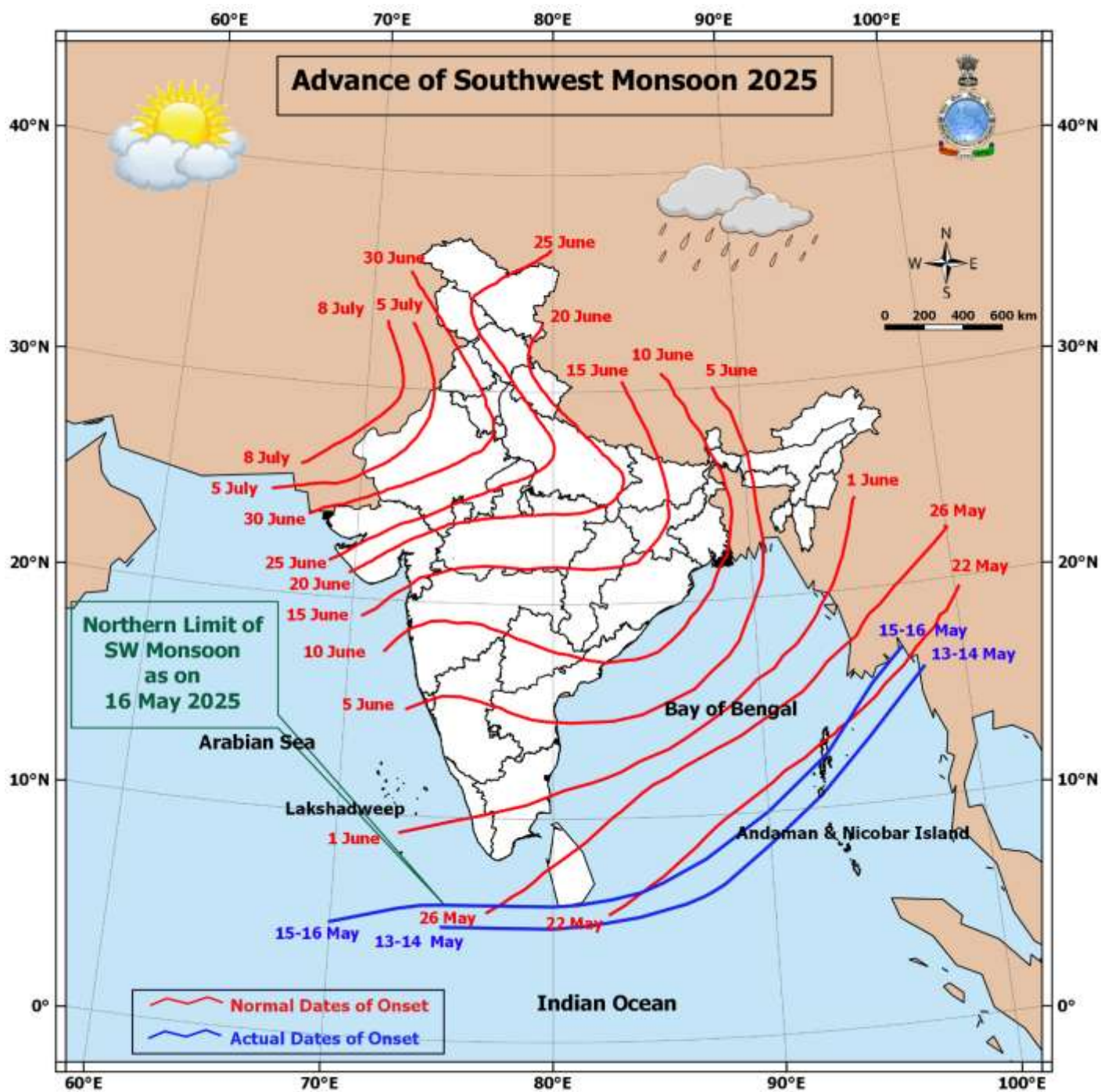
- ❖ **Heat wave conditions** very likely in isolated pockets of Jammu & Kashmir during 16th-18th; southwest Uttar Pradesh on 16th & 17th; West Rajasthan during 16th-22nd; North Madhya Pradesh on 18th & 19th May.
- ❖ **Hot & humid weather** is likely to prevail over Bihar and Odisha on 16th & 17th May.
- ❖ **Warm night conditions** very likely in isolated pockets of East Uttar Pradesh and East Madhya Pradesh on 16th May.

iv. Weather conditions and forecast over Delhi/NCR during 16th May to 19th May, 2025 (Annexure VI)

For more details, kindly refer National Weather Bulletin:

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, Arunachal Pradesh, South Interior Karnataka; **at many places over** Assam & Meghalaya, Gangetic West Bengal, Jharkhand, Kerala & Mahe, Lakshadweep, Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana; **at a few places over** Nagaland, Manipur, Mizoram & Tripura, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Uttarakhand, Tamilnadu Puducherry & Karaikal, Coastal Karnataka, North Interior Karnataka; **at isolated places over** Odisha, Himachal Pradesh, Punjab, Haryana, West Uttar Pradesh, East Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Konkan & Goa, Madhya Maharashtra, Marathwada, Gujarat state.

Rainfall recorded (in cm) reported during past 24 hours till 0830 hours IST of today:

- ❖ **Arunachal Pradesh:** Bhalukpong 7;
- ❖ **Meghalaya:** Tura AWS (dist West Garo Hills) 11; Kokrajhar (dist Kokrajhar), Dhekiajuli (dist Shonitpur) 7 Each;
- ❖ **Coastal Andhra Pradesh & Yanam:** Guntur (dist Guntur) 10; Bapatla (dist Bapatla) 9; Amalapuram (dist B R Ambedkar Konaseema), Gudivada (dist Krishna) 8 Each;
- ❖ **Tamil Nadu, Puducherry & Karaikal:** Sivaganga (dist Sivaganga) 9; Airport Madurai (dist Madurai) 7;
- ❖ **Konkan & Goa:** Rameshwar ARG (dist Sindhudurg) 7;
- ❖ **West Madhya Pradesh:** Sondwa (dist Alirajpur) 7;
- ❖ **Sub Himalayan West Bengal & Sikkim:** Bhatkawa Tea Estate (dist Jalpaiguri) 7; Arunachal Pradesh: Bhalukpong (dist West Kameng) 7.

Realised Gusty Winds (KMPH) during past 24hours ending at 0300 UTC of today i.e. 16.05.2025;

- ❖ **Chhattisgarh:** Balod 74;
- ❖ **Saurashtra & Kutch:** Rajkot 72;
- ❖ **Jharkhand:** Pakur 69, Jagannathpur-Bau 65, Bokaro 48, Bano-Simdega 48, Kvmeghahatuburu 43, Mc_Ranchi 41, Diyakel-Khunti 37, Saraikela 33, Giridih-Bengabad 33, Deoghar_Aws400 31;
- ❖ **West Madhya Pradesh:** Ujjain 64;
- ❖ **East Madhya Pradesh:** Seoni 65;
- ❖ **Madhya Maharashtra:** Solapur 57;
- ❖ **Marathwada:** Beed 50;
- ❖ **Gangetic West Bengal:** Kzi_Airport 57, Barrackpore_Aws400 52, Berhampore 48, Raidighi 48, Assansol 43, Santiniketan-Bolpur 43, Kolkata Airport 39, Kvk_Burdwan_Budbud 37, Diamond Harbour 35, Bijpur 33, Canning 33, Ramsaday_College_Amta 31, Gangasagar 31;
- ❖ **Uttarakhand:** Chamoli 49;
- ❖ **Odisha:** Ranital 48;
- ❖ **Punjab:** Ropar 41, Salern 37, Fatehgarh Sahib 34, Sangrur 33, Hoshiarpur 32, Mohali 31, Patiala 26, Pathankot 24, Jalandhar 23;
- ❖ **Bihar:** East Champaran 41, Rajgir 37, Sukhet 33, Samastipur 30, Iit_Patna 30, Arwal 30;
- ❖ **Himachal Pradesh:** Neri 31, Bajaura 30, Bilaspur 28, Kufri: 27, Bilaspur 26, Hamirpur 21, Dhaulakuan: 21, Seobagh 21;
- ❖ **Arunachal Pradesh:** Pasighat 20, Bomdila 17, Lowertato 17;
- ❖ **Assam & Meghalaya:** Silchar_Jns_College 20, Kokraghar 17;
- ❖ **Nagaland, Manipur, Mizoram & Tripura:** Imphal_Amfu 22, Khoupum 20, Porompat 19;
- ❖ **Haryana & Chandigarh:** Chandigarh 33, Karnal 23, Kaul 23;
- ❖ **Konkan & Goa:** Santacruz_Mumbai & Ratnagiri 31

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

- ❖ Yesterday, Maximum Temperatures were in the range of 40-43°C in many parts of Punjab, East Uttar Pradesh, Delhi, Rajasthan; in a few parts of West Uttar Pradesh, Odisha; in isolated parts of Haryana, Chandigarh, Madhya Pradesh, Bihar, Chhattisgarh, Telangana, Vidarbha; in the range 36-40°C in many parts of Gangetic West Bengal, Gujarat state; in a few parts of Jammu division, Jharkhand, Marathwada, Coastal Andhra Pradesh & Yanam, Rayalaseema, Tamil Nadu, Puducherry & Karaikal; in isolated parts of Madhya Maharashtra, Uttarakhand, Himachal Pradesh, North Interior Karnataka and they were less than 36°C elsewhere over remaining parts of the country. **Yesterday, the highest maximum temperature of 45.8°C was reported at Ganganagar (West Rajasthan) over the country.**
- ❖ Yesterday, Maximum Temperatures were markedly above normal (5.1°C or more) at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; appreciably above normal (3.1°C to 5.0°C) at few places over Himachal Pradesh and East Uttar Pradesh; at isolated places over Haryana, Chandigarh, Uttarakhand and West Rajasthan; above normal (1.6°C to 3.0°C) at isolated places over Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal, Konkan & Goa, East Rajasthan, East Uttar Pradesh, Punjab, Delhi, Bihar, Gangetic West Bengal, Odisha and Coastal Andhra Pradesh & Yanam. These were markedly below normal (-5.1°C or less) at a few places over Marathwada and Rayalaseema; at isolated places over West Madhya Pradesh, Madhya Maharashtra and Vidarbha; appreciably below normal (-3.1°C to -5.0°C) at a few places over Marathwada, Rayalaseema; at isolated places over Telangana; below normal (-1.6°C to -3.0°C) at isolated place over Gujarat Region, East Madhya Pradesh, Assam & Meghalaya, Interior Karnataka and normal over rest parts of the country (Fig. 2).

Fig. 1: Maximum Temperatures

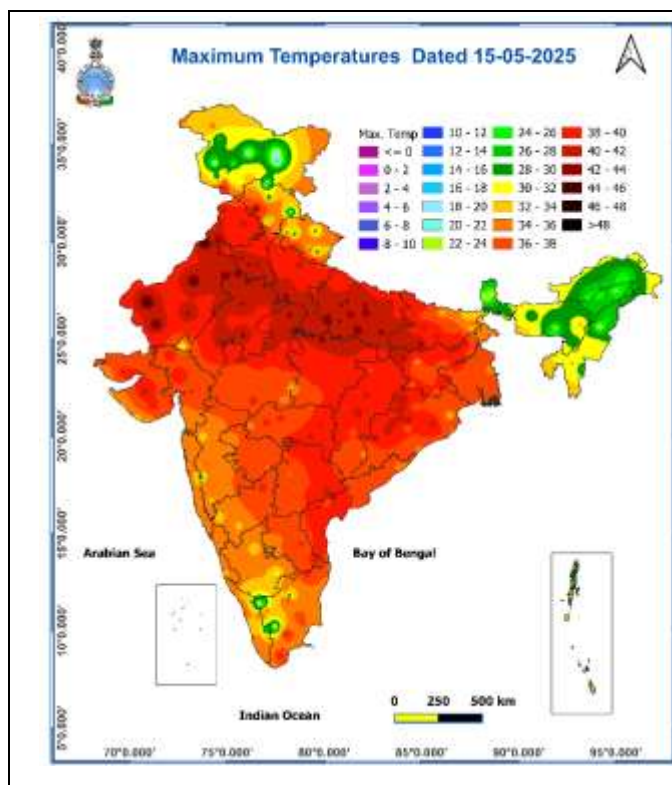
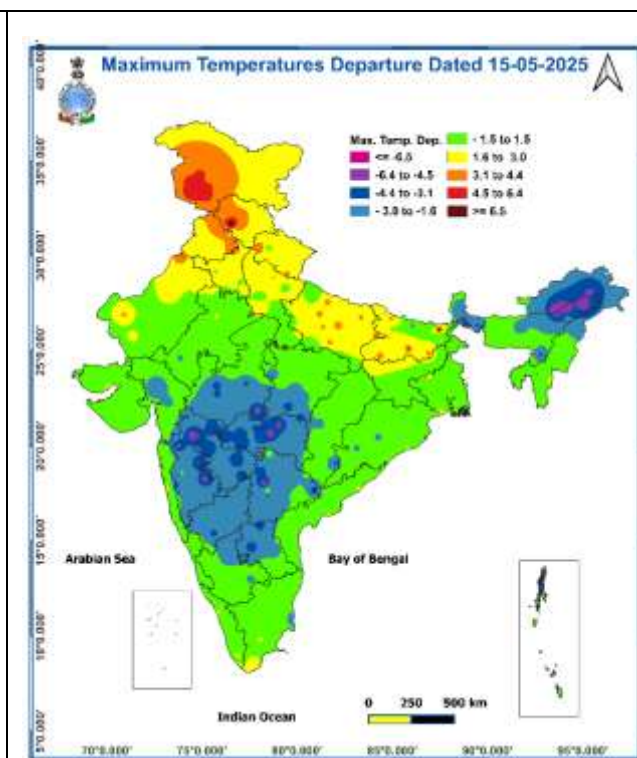
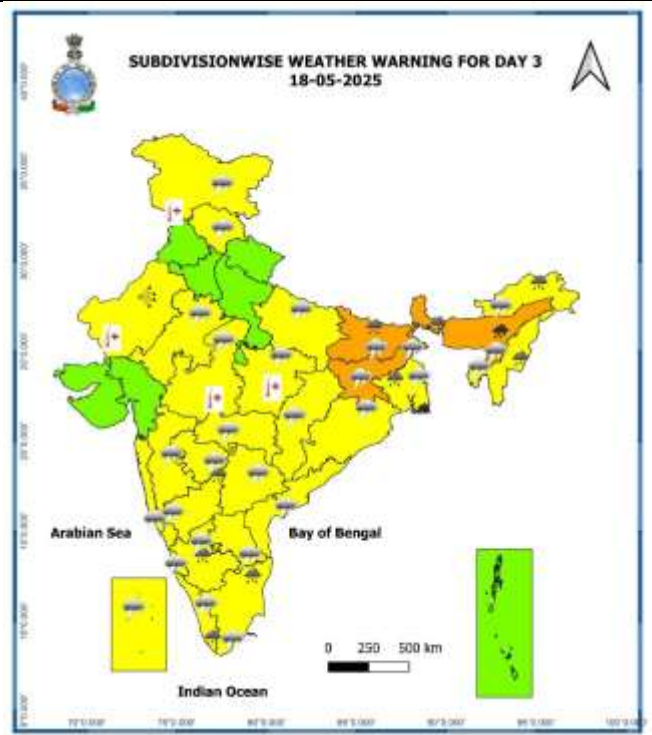
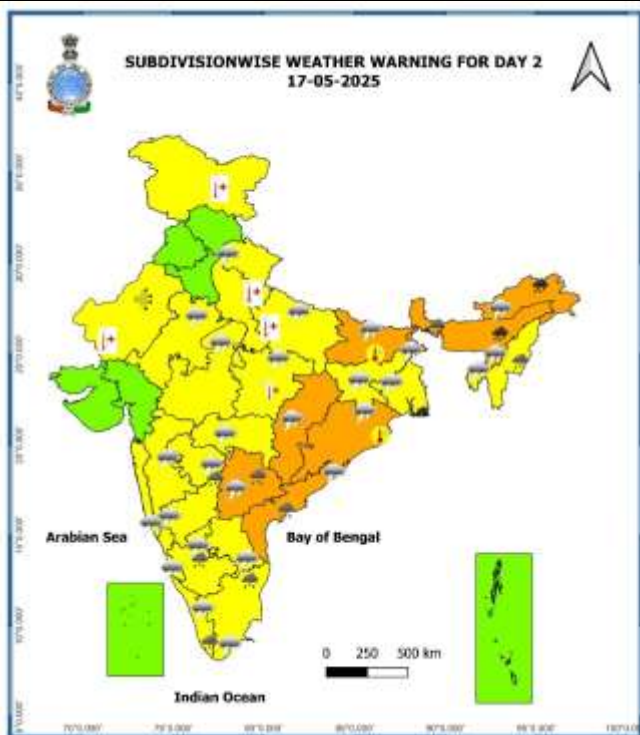
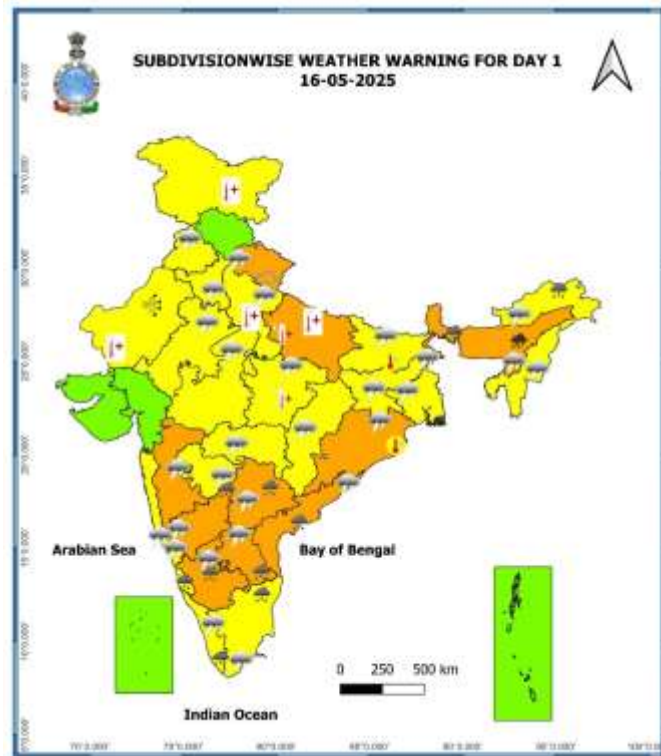


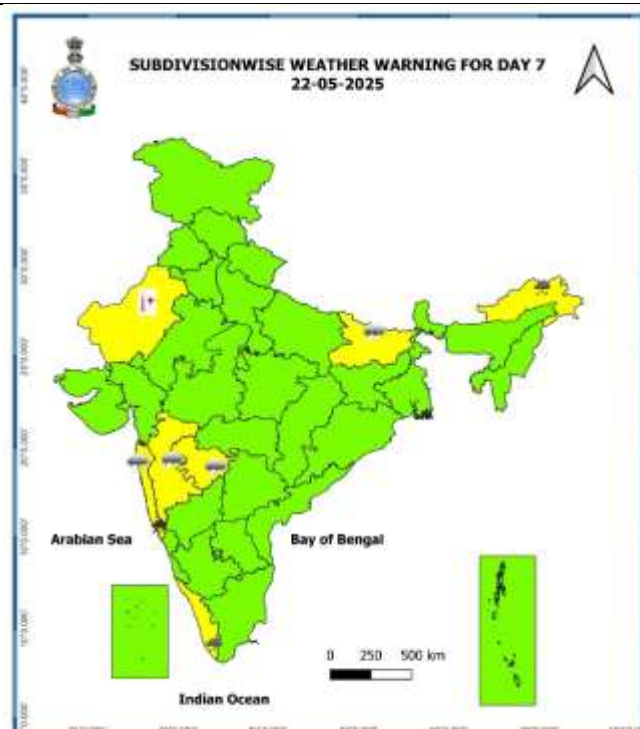
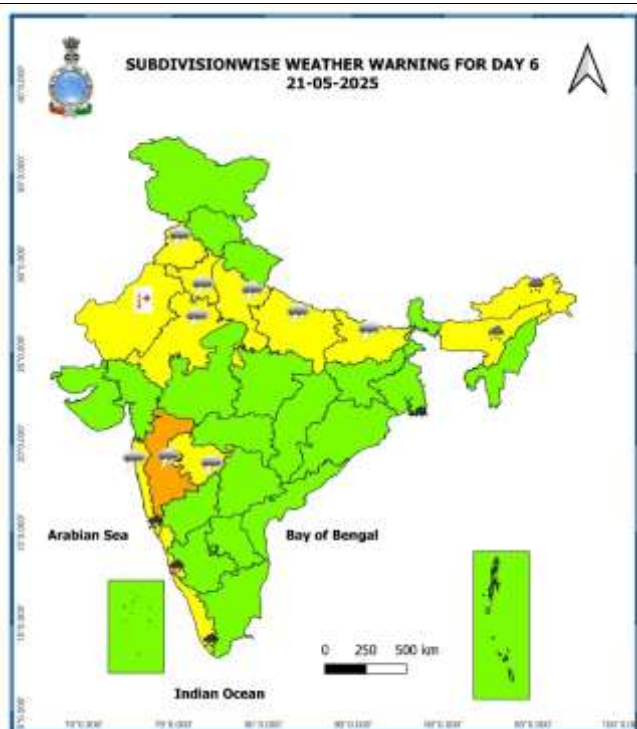
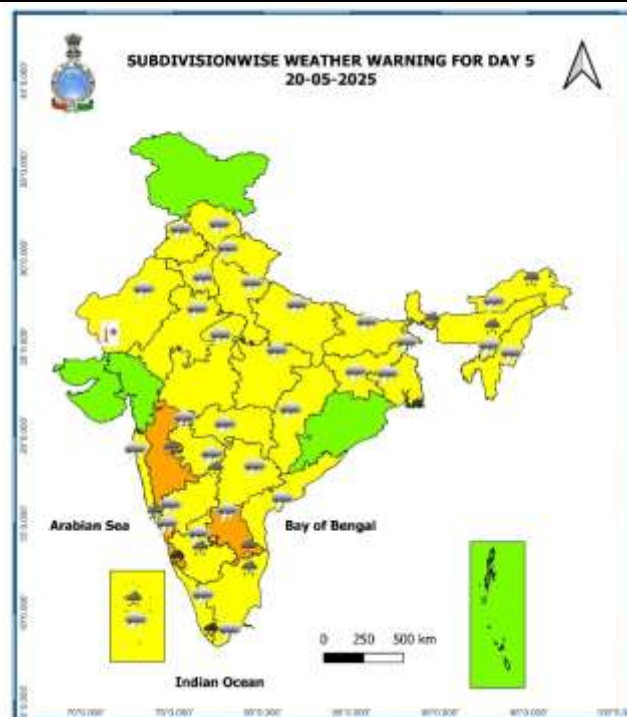
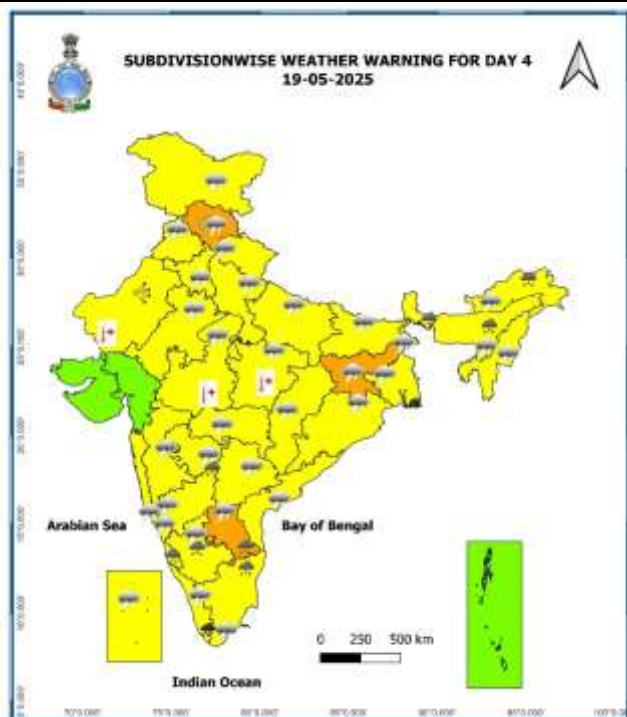
Fig. 2: Departure of Maximum Temperatures



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

- 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 16th to 19th May 2025**Past Weather:**

There has been rise in minimum temperature up to 01°C and rise in maximum temperature up to 01°C over Delhi/NCR during the past 24 hours. The maximum and minimum temperatures over Delhi are in the range of 40 to 42°C and 25 to 28°C respectively. The minimum temperature was near normal and the maximum temperature was above normal up to 02°C over Delhi/NCR. Partly cloudy sky conditions with predominant surface wind from the northwest direction with wind speeds less than 18 kmph prevailed during the past 24 hours. Partly cloudy sky conditions with wind speed less than 20 kmph from the west direction prevailed over the region in the forenoon today.

Weather Forecast:

16.05.2025: Partly cloudy sky. Very light rain to light rain accompanied with thunderstorm/lightning and gusty winds with dust rising surface wind 30 – 40 kmph, temporarily reaching to 50 kmph during thunderstorm towards evening/night. The maximum temperatures over Delhi are likely to be in the range of 41 to 43°C. The maximum temperature will be above normal up to 01 - 03°C. The predominant surface wind will likely be from the northwest direction with a wind speed of less than 25 kmph till evening. It would decrease becoming less than 12 kmph from the northwest direction during the night.

17.05.2025: Partly cloudy sky. Very light rain to light rain accompanied with thunderstorm/lightning and gusty winds with dust rising surface wind 30 – 40 kmph, temporarily reaching to 50 kmph during thunderstorm during morning. The maximum and minimum temperatures over Delhi are likely to be in the range of 41 to 43°C and 27 to 29°C respectively. The minimum temperature will be above normal up to 01 - 03°C and the maximum temperature will be above normal up to 01 - 02°C. The predominant surface wind will likely be from the west direction with a wind speed of 15-20 kmph during morning hours. The wind speed will gradually increase becoming 20-25 kmph from the west direction in the afternoon. It will increase becoming less than 20 kmph from the west direction during evening and night.

18.05.2025: Partly cloudy sky. Sustained surface winds (speed 15 – 25 kmph) occasionally gusting to 35 kmph. The maximum and minimum temperatures over Delhi are likely to be in the range of 40 to 42°C and 27 to 29°C respectively. The minimum temperature will be above normal up to 01 - 03°C and the maximum temperature will be above normal up to 01 - 02°C. The predominant surface wind will likely be from the northwest direction with a wind speed of less than 18 kmph during the morning hours. The wind speed will gradually increase becoming 16-20 kmph from the west direction in the afternoon. It will decrease becoming less than 18 kmph from the west direction during evening and night.

19.05.2025: Partly cloudy sky. Sustained surface winds (speed 15 – 25 kmph) occasionally gusting to 35 kmph. The maximum and minimum temperatures over Delhi are likely to be in the range of 39 to 41°C and 25 to 27°C respectively. The minimum temperature will be above normal up to 01 – 02°C, and the maximum temperature will be near normal. The predominant surface wind will likely be from the northwest direction with a wind speed of less than 20 kmph during the morning hours. The wind speed will gradually decrease becoming 16-18 kmph from the west direction in the afternoon. It will increase becoming less than 20 kmph from the west direction during evening and night.

Impact expected and Action Suggested due to thunderstorm with lightning/gusty winds:

- Be cautious and take precautionary measures, though there is the likelihood of thunderstorm/lightning/dust accompanied by strong surface winds 30 – 40 kmph gusting to 50 kmph.
- Breaking of tree branches, uprooting of large avenue trees, Large dead limbs blown from trees, Damage to standing crops, Minor to major damage to power and communication lines due to breaking of branches, Partial damage to vulnerable structures due to strong winds, Loose objects may fly.
- People are advised to keep a watch on the weather for worsening conditions and be ready to move to safer places accordingly, 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 very heavy rainfall over

Very heavy rainfall over Arunachal Pradesh on 17th; Assam & Meghalaya during 16th-18th; Konkan & Goa on 21st & 22nd; Kerala & Mahe during 19th -21st; Coastal Karnataka on 20th & 21st May.

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 kutchha 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).

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.

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

- ✓ **Thundersquall wind speed reaching 50-60 kmph gusting to 70 kmph** likely over Madhya Maharashtra on 16th; Odisha, Telangana, Coastal Andhra Pradesh & Yanam on 16th & 17th; Bihar on 17th & 18th; Jharkhand on 18th & 19th; Chhattisgarh on 17th; Madhya Maharashtra on 20th & 21st; Konkan & Goa during 19th-21st; Interior Karnataka on 16th; Rayalaseema on 16th, 19th & 20th May.
- ✓ **Isolated hailstorm** very likely over Uttarakhand on 16th and Himachal Pradesh on 19th May.

Impact expected:

- Breaking of tree branches, uprooting of large avenue trees. Large dead limbs blown from trees. Damage to Standing crops.
- Minor to Major damage to banana and papaya trees.
- Minor to major damage to power and communication lines due to breaking of branches.
- 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 kutchha houses/walls and huts.
- Loose objects may fly.

Action suggested:

- People are advised to keep a watch on the weather for worsening conditions and be ready to move to safer places accordingly.
- 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 conditions over Jammu & Kashmir during 16th-18th; southwest Uttar Pradesh on 16th & 17th; West Rajasthan during 16th-22nd; North Madhya Pradesh on 18th & 19th May.

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 / Gusty Winds / Heat Wave

- In **North Eastern States, Sub Himalayan West Bengal & Sikkim, Tamil Nadu, Kerala, North Interior Karnataka, South Interior Karnataka, Andhra Pradesh and Telangana**, make provision to drain out excess water from standing crop and vegetable fields.
- In **Uttarakhand**, use hail nets and hail caps to prevent mechanical damage in vegetables and orchards due to the possibility of hailstorms.
- Shift the harvested produce in safer places or cover the produce with tarpaulin sheets in the fields. Tie the harvested crops properly and cover them to minimise the risk of displacement due to strong surface winds.
- Provide mechanical support to horticultural crops and staking to vegetables to avoid lodging.
- In **Jammu & Kashmir, Uttar Pradesh and West Rajasthan**, apply light and frequent irrigation in the evening to protect standing crops, vegetables and orchards from the adverse effects of heat waves and high temperatures.

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.
- 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.

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

* 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)

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 62-67 kmph

Very Severe: Wind speed > 67 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)

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Hot and Humid: When maximum temperatures remain 3°C above normal along with the above normal relative humidity.