

# Government of India Ministry of Earth Sciences India Meteorological Department



Press Release
Date: 12th March, 2025

Time of Issue: 1330 hours IST

Subject: i) Heat wave to severe heat wave spell likely over Gujarat State on 12th; heat wave over Southwest Rajasthan & Konkan on 12th; Vidarbha on 13th & 14th; Odisha during 13th-16th; Jharkhand during 14th-16th and Gangetic West Bengal on 16th March, 2025.

ii) Wet spell likely to continue over Western Himalayan region and Northeast India during next 6-7 days and over plains of Northwest India till 16th March, 2025.

#### i. Realised weather during past 24 hours till 0830 hours IST of today, the 12th March 2025:

- Light Rainfall/Snowfall occurred at most places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; at a few places over Arunachal Pradesh; at isolated places over Himachal Pradesh, Uttarakhand & Sub-Himalayan West Bengal & Sikkim; Light/moderate rainfall at most places over Tamilnadu Puducherry & Karaikal; at a few places over Assam & Meghalaya, Lakshadweep; at isolated places over Punjab, Nagaland, Manipur, Mizoram & Tripura, Andaman & Nicobar Islands, Rayalaseema, South Interior Karnataka and Kerala & Mahe.
- ❖ Thunderstorm with lightning reported at isolated places over Uttarakhand (Mussoorie), Tamil Nadu Puducherry & Karaikal and Lakshadweep.
- \* Heavy to very heavy rainfall has been recorded at isolated places over Tamilnadu Puducherry & Karaikal.
- **Gusty winds** observed at isolated places over Jammu (Chata).
- Heat wave to Severe heat wave has been recorded at many places over Gujarat State.
- ❖ For more details of realised weather, kindly refer Annexure I

#### **Temperature:**

- ❖ For temperature observations during past 24 hours till 0830 hours IST of today are provided in Annexure II
- ii. Forecast for Holi: Generally cloudy sky with possibility of isolated light rain over plains of Northwest India on 14<sup>th</sup> March. Fairly widespread to widespread light to moderate rainfall/snowfall over Jammu-Kashmir-Ladakh & Himachal Pradesh; states of Northeast India; at a few places over Uttarakhand & Sub-Himalayan West Bengal & Sikkim on 14<sup>th</sup> March and dry weather mainly over remaining parts of the country.

## iii. Weather Systems, Forecast and Warnings (Annexure III & IV):

- ❖ A Western Disturbance seen as a cyclonic circulation over West Afghanistan in lower tropospheric levels.

  Another cyclonic circulation lies over southwest Rajasthan & neighbourhood at lower tropospheric levels.

  Under the influence of these systems;
  - ✓ Fairly widespread to widespread light/moderate rainfall/snowfall accompanied with thunderstorm & lightning likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Himachal Pradesh during 12<sup>th</sup>-16<sup>th</sup>; Scattered to fairly widespread light/moderate rainfall/snowfall accompanied with thunderstorm & lightning likely over Uttarakhand during 13<sup>th</sup>-16<sup>th</sup> March and decrease in intensity thereafter.
  - ✓ **Isolated light/moderate rainfall** likely over Punjab during 12<sup>th</sup>-16<sup>th</sup>; Haryana, West Uttar Pradesh and Rajasthan during 13<sup>th</sup>-16<sup>th</sup>; East Uttar Pradesh on 15<sup>th</sup> & 16<sup>th</sup> March.
  - ✓ **Thunderstorm activity** likely over Punjab, Haryana & Chandigarh and West Uttar Pradesh during 13<sup>th</sup>-16<sup>th</sup> and Rajasthan on 14<sup>th</sup> & 15<sup>th</sup> March.

- A Cyclonic Circulation lies over East Bangladesh & neighbourhood in lower tropospheric levels and another Cyclonic Circulation over East Assam & neighbourhood with a trough aloft roughly along Long. 93°E to the north of Lat. 25°N in middle tropospheric levels. Under the influence of these systems;
  - ✓ Fairly widespread to widespread light/moderate rainfall/snowfall accompanied with thunderstorm & lightning likely over Arunachal Pradesh during 12<sup>th</sup>-15<sup>th</sup>; Scattered to fairly widespread light/moderate rainfall/snowfall accompanied with thunderstorm, lightning & gusty winds (speed 40-50 kmph) likely over Sub-Himalayan West Bengal & Sikkim on 12<sup>th</sup>; Assam & Meghalaya on 12<sup>th</sup> & 13<sup>th</sup>; with thunderstorm, lightning & gusty winds (speed 30-40 kmph) over Sub-Himalayan West Bengal & Sikkim on 13<sup>th</sup>; Assam & Meghalaya during 14<sup>th</sup>-16<sup>th</sup>; Nagaland, Manipur, Mizoram & Tripura on 12<sup>th</sup>, 14<sup>th</sup> & 15<sup>th</sup> March; with thunderstorm & lightning over Sub-Himalayan West Bengal & Sikkim on 14<sup>th</sup> March. Squally winds (speed 50-60 Kmph) likely at isolated places over Tripura on 13<sup>th</sup> March.
  - ✓ Isolated heavy rainfall/snowfall very likely over Arunachal Pradesh during 12<sup>th</sup>-14<sup>th</sup>, 16<sup>th</sup> & 17<sup>th</sup> March with possibility of very heavy falls on 13<sup>th</sup> March.
  - ✓ Isolated heavy rainfall over Assam & Meghalaya on 13th March.
- ❖ A Cyclonic Circulation lies over West Equatorial Indian Ocean & adjoining Maldives area in lower tropospheric levels and a trough in easterlies runs from this cyclonic circulation to Southwest Bay of Bengal off Tamil Nadu Coast in lower tropospheric levels. Under the influence of these systems;
  - ✓ **Isolated to scattered** light/moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (speed 30-40 kmph)** likely over Kerala & Mahe and South Interior Karnataka on 12<sup>th</sup>; with **thunderstorm & lightning** over Tamilnadu, Puducherry & Karaikal, Coastal Karnataka and Lakshadweep on 12<sup>th</sup> March.
  - ✓ Isolated **Heavy rainfall** likely over south Tamil Nadu, south Kerala and Lakshadweep on 12<sup>th</sup> March.
  - ✓ Isolated to scattered light to moderate rainfall likely over Andaman & Nicobar Islands during next 7 days.

#### **Temperature Forecast:**

#### **Forecast of temperature:**

#### **Maximum temperature:**

- ❖ No significant change in maximum temperatures likely over plains of Northwest India during next 48 hours and fall by 2-3°C thereafter.
- ❖ Gradual fall in maximum temperatures by 2-3°C likely over many parts of West India during next 4-5 days.
- Gradual rise in maximum temperatures by about 2°C likely over Central India during next 3 days and no significant change thereafter.
- Gradual rise in maximum temperatures by 3-5°C likely over East India during next 5 days.

# Heat wave, Warm Night and Hot & Humid weather warning:

- ❖ Heat Wave to severe heat wave conditions very likely to prevail in isolated pockets over Gujarat State on 12<sup>th</sup> & 13<sup>th</sup> March; Heat wave conditions in isolated pockets over Konkan on 12<sup>th</sup>; Southwest Rajasthan on 12<sup>th</sup>; Vidarbha on 13<sup>th</sup> & 14<sup>th</sup>; Odisha during 13<sup>th</sup>-16<sup>th</sup>; Jharkhand during 14<sup>th</sup>-16<sup>th</sup> and Gangetic West Bengal on 16<sup>th</sup> March.
- **❖ Warm night conditions** very likely to prevail in isolated pockets over on Saurashtra & Kutch on 12<sup>th</sup> and Odisha on 15<sup>th</sup> & 16<sup>th</sup> March.
- Hot and humid weather very likely to prevail over Coastal Karnataka on 12th March.

#### **Fishermen Warnings:**

- ❖ Day 1 (12<sup>th</sup> March to 13<sup>th</sup> March): Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph likely to prevail over along and off south Kerala coast and adjoining Lakshadweep, Maldives; Comorin areas. Fishermen are advised not to venture into these areas.
- ❖ Day 2 (13<sup>th</sup> March to 14<sup>th</sup> March): Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph likely to prevail over Lakshadweep, Maldives areas and adjoining southeast Arabian sea. Fishermen are advised not to venture into these areas.

## iv. Weather conditions and forecast over Delhi/NCR during 12th March to 15th March. 2025 (Annexure V)

## For more details, kindly refer National Weather Bulletin:

https://mausam.imd.gov.in/responsive/all india forcast bulletin.php

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

**ANNEXURE I** 

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

# Rainfall recorded (in cm):

- ❖ Tamilnadu Puducherry & Karaikal: DSCL Thiyagadurgam (dist Kallakurichi) 16, Kallakurichi (dist Kallakurichi) 15, Kallakurichi ARG (dist Kallakurichi), Gomugi Dam PWD (dist Kallakurichi) 12 each, Ramnadu KVK AWS (dist Ramanathapuram), DSCL Kalayanallur (dist Kallakurichi) 11 each, DSCL Sulangurichi (dist Kallakurichi) 10, DSCL Virugavoor (dist Kallakurichi), Tiruvarur (dist Thiruvarur), Oothu (dist Tirunelveli) 9 each, Manimutharu Dam PWD (dist Kallakurichi), Ramanathapuram (dist Ramanathapuram), DSCL Eraiyur (dist Kallakurichi), Muthupet (dist Thiruvarur) 8 each, Needamangalam (dist Thiruvarur), DSCL Keelpadi (dist Kallakurichi), Tiruvarur AWS (dist Thiruvarur), Kothavacherry (dist Cuddalore), Nalumukku (dist Tirunelveli), Kattumayilur (dist Cuddalore), annargudi (dist Thiruvarur), Avudayarkoil (dist Pudukkottai), Kuppanatham (dist Cuddalore), Thalaivasal (dist Salem), Karaikal (dist Karaikal), Kakkachi (dist Tirunelveli), Coonoor PTO (dist The Nilgiris), Vepur (dist Cuddalore), Virudachalam (dist Cuddalore), Nagapattinam (dist Nagapattinam) 7 each;
- Lakshadweep: Minicoy (dist Lakshadweep) 2;
- \* Rayalaseema: Sullurpeta (dist Tirupati) 2;
- Kerala & Mahe: Aryankavu (dist Kollam) 1, Myladumpara (dist Idukki) 1, Pampadumpara (dist Idukki) 1

- During the past 24 hours, maximum temperatures had fallen by 1-4°C at isolated places over Assam & Meghalaya, Sub-Himalayan West Bengal & Sikkim, Kerala & Mahe and Tamil Nadu. It had risen by 1-4°C at many places over Jammu-Kashmir, Gujarat State, Madhya Pradesh, Gangetic West Bengal, Odisha & Telangana; at a few places over Uttar Pradesh, East Rajasthan, Chhattisgarh, Vidarbha, Maharashtra; at isolated places over Himachal Pradesh, Uttarakhand, Bihar, Rayalaseema and Coastal Andhra Pradesh & Yanam.
- Maximum temperatures were in the range of 40-45°C at many places over Gujarat State; 35-40°C at many places over Rajasthan, Central India, Maharashtra, Odisha; at a few places over Gangetic West Bengal, Rayalaseema, Telangana, North Interior Karnataka and Kerala & Mahe; 30-35°C at many places over Uttar Pradesh, Bihar, Tamilnadu Puducherry & Karaikal; at a few places over Haryana, Chandigarh & Delhi; at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Sub-Himalayan West Bengal & Sikkim. Yesterday, the highest maximum temperature of 42.4°C was reported at Bhuj-Rudramata (Saurashtra & Kutch) over the country.
- Maximum temperatures were markedly above normal (5°C or more) at most places over Gujarat state; at many places over Delhi, East Rajasthan and Konkan & Goa; at a few places over Punjab, West Rajasthan and West Madhya Pradesh; at isolated places over East Madhya Pradesh; appreciably above normal (3°C to 5°C) at a few places over Uttarakhand, Vidarbha and Chhattisgarh; at isolated places over Uttar Pradesh, Bihar, Odisha and Gangetic West Bengal; above normal (1°C to 3°C) at a few places over Himachal Pradesh, Haryana-Chandigarh, Jharkhand, Coastal Karnataka and Telangana; at isolated places over Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Coastal Andhra Pradesh & Yanam, Kerala & Mahe and Lakshadweep. These were appreciably below normal (-3°C to -5°C) at a few places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; below normal (-3°C to -1°C) at a few places over Rayalaseema; at isolated places over North Interior Karnataka and near normal over rest parts of the country.

Fig. 1: Maximum Temperatures

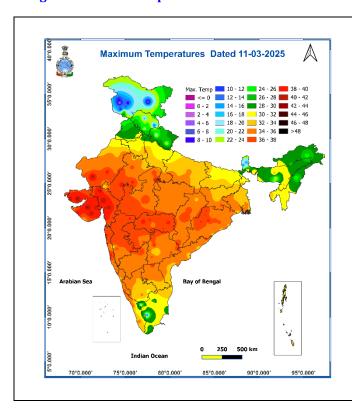
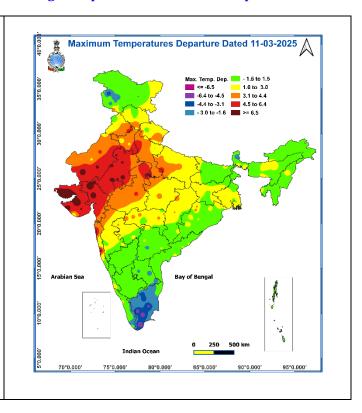
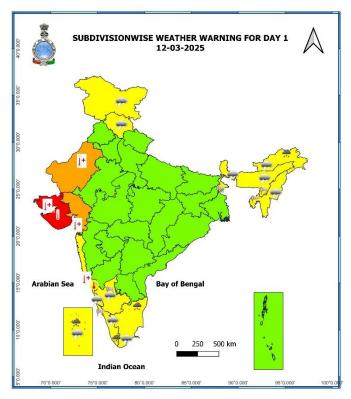


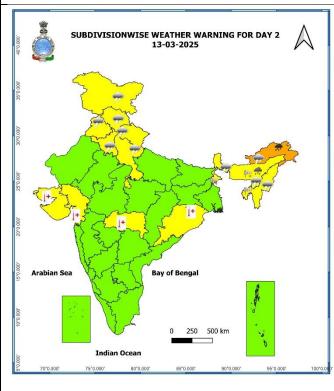
Fig. 2: Departure of Maximum Temperatures

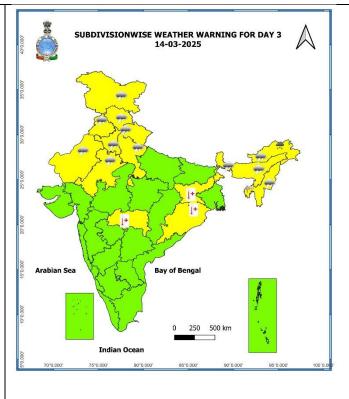


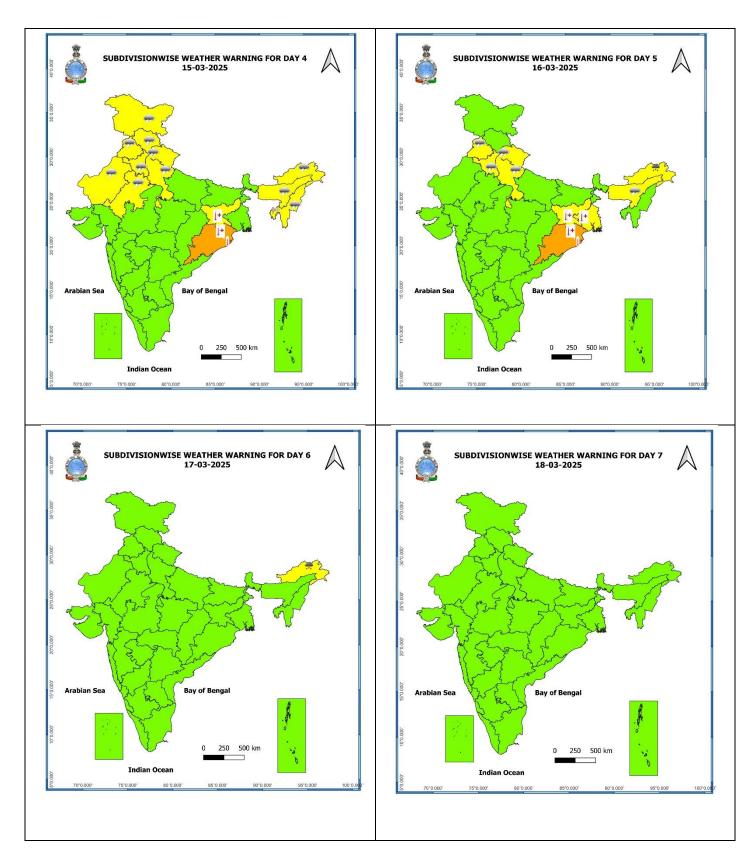
7 Days Rainfall Forecast										
S. No.	Subdivision	12-Mar	13-Mar	14-Mar	15-Mar	16-Mar	17-Mar	18-Mar		
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7		
1	ANDAMAN & NICOBAR ISLANDS	ISOL	ISOL	SCT	ISOL	ISOL	ISOL	ISOL		
2	ARUNACHAL PRADESH	WS	WS	FWS	SCT	FWS	WS	WS		
3	ASSAM & MEGHALAYA	SCT	FWS	FWS	SCT	SCT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

• 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 <a href="https://mausam.imd.gov.in/responsive/districtWiseWarningGIS.php">https://mausam.imd.gov.in/responsive/districtWiseWarningGIS.php</a>

#### Weather forecast over Delhi/NCR during 12th Mar. to 15th Mar. 2025

#### Past Weather:

There has been a rise in minimum and maximum temperatures upto  $02 - 03^{\circ}\text{C}$  over Delhi/NCR during the past 24 hours. The maximum and minimum temperatures over Delhi are in the range of 33 to  $35^{\circ}\text{C}$  and 16 to  $17^{\circ}\text{C}$  respectively. The minimum temperature was above normal upto  $06^{\circ}\text{C}$  at most places. Mainly clear sky conditions with predominant surface wind from the northwest direction with wind speeds less than 08 to 12 kmph prevailed during the past 24 hours. Mainly clear sky conditions with wind speed less than 10 kmph from the northwest direction prevailed over the region in the forenoon today.

#### Weather Forecast:

**12.03.2025:** Partly cloudy sky. Strong surface winds (speed 20-30 kmph). The maximum temperature over Delhi is likely to be in the range of 33 to 35°C. The predominant surface wind will likely be from the northwest direction with a wind speed of less than 20 kmph till evening. It would decrease thereafter becoming less than 08 kmph from the northwest direction during the night.

**13.03.2025:** Partly cloudy sky. Mist likely in the morning. Possibility of drizzle towards evening/night. The maximum and minimum temperatures over Delhi are likely to be in the range of 33 to 35°C and 17 to 19°C respectively. The predominant surface wind will likely be from the northwest direction with a wind speed of 06-08 kmph during morning hours. The wind speed will gradually increase thereafter becoming, 12-14 kmph from the northwest direction during the afternoon. It will decrease becoming less than 10 kmph from the north direction during evening and night.

**14.03.2025**: Generally cloudy sky. Mist likely in the morning. Possibility of very light rain/drizzle. The maximum and minimum temperatures over Delhi are likely to be in the range of 32 to 34°C and 16 to 18°C respectively. The predominant surface wind will likely be from the northeast direction with a wind speed of 06-08 kmph during morning hours. The wind speed will gradually increase becoming 10-12 kmph from the north direction in the afternoon. It will decrease becoming less than 06 kmph from the east direction during evening and night.

**15.03.2025:** Generally cloudy sky. Mist likely in the morning. Possibility of very light rain/drizzle. The maximum and minimum temperatures over Delhi are likely to be in the range of 30 to 32°C and 15 to 17°C respectively. The predominant surface wind will likely be from the northeast direction with a wind speed of 06-08 kmph during morning hours. The wind speed will gradually increase becoming 16-18 kmph from the northeast direction in the afternoon. It will decrease becoming less than 10 kmph from the northeast direction during evening and night.

Impact expected and action suggested due to thunderstorm accompanied with lightning/gusty winds over Tamilnadu Puducherry & Karaikal, Kerala & Mahe, Lakshadweep, South Interior Karnataka on 12<sup>th</sup>; Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura during 12<sup>th</sup> -15<sup>th</sup>; Assam & Meghalaya during 12<sup>th</sup>-16<sup>th</sup>; Sub-Himalayan West Bengal & Sikkim during 12<sup>th</sup>-14<sup>th</sup>; Punjab, Haryana & Chandigarh and West Uttar Pradesh during 13<sup>th</sup>-16<sup>th</sup> and Rajasthan on 14<sup>th</sup> & 15<sup>th</sup> March.

#### 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 very heavy rainfall/ snowfall over Arunachal Pradesh during 12<sup>th</sup>-14<sup>th</sup>, 16<sup>th</sup> & 17<sup>th</sup> March with possibility of very heavy falls on 13<sup>th</sup> March; heavy rainfall over south Tamil Nadu, south Kerala and Lakshadweep on 12<sup>th</sup> March and Assam & Meghalaya on 13<sup>th</sup> March.

#### 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.

## Impact expected and action suggested due to Heat Wave conditions

#### Red alert Areas (Gujarat State)

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

#### Orange alert Areas (southwest Rajasthan)

- ❖ 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 (Vidarbha, Odisha, Jharkhand, Gangetic West Bengal and Konkan)

- ❖ 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 / Heat Wave

- Make provision for draining out excess water from standing crops and vegetables fields in **Arunachal Pradesh, Assam, South Tamil Nadu**, **South Kerala** and **Lakshadweep**.
- ➤ In **Gujarat, Konkan, Vidarbha**, **South West Rajasthan, Odisha** and **Jharkhand**, apply light and frequent irrigation to the standing crops, vegetables and orchards in the evening to protect them from 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.

# Livestock and Fishery

- Keep the animals inside the shed during heavy rainfall 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.



#### राष्ट्रीय मौसम पूर्वानुमान केन्द्र भारत मौसम विज्ञान विभाग पृथ्वी विज्ञान मंत्रालय

#### **National Weather Forecasting Centre** India Meteorological Department **Ministry of Earth Sciences**

# **LEGENDS**

16



4. नागालैंड, मणिपुर, मिजोरम और त्रिपुरा 5. उप-हिमालयी पश्चिम बंगाल और सिक्किम

6. गंगीय पश्चिम बंगाल



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. आतंरिक उत्तरी कर्नाटक

Sust Raising Winds

34. आतंरिक दक्षिणी कर्नाटक

35. केरल और माहे

36. लक्षद्वीप



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. Puniab

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

50 - 75

> 75

32. Coastal Karnataka

33. North Interior Karnataka

34. South Interior Karnataka

35. Kerala & Mahe

36. Lakshadweep

Very Likely

Most Likely

# 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)



**Hot & Humid** 

Strong Surface Winds





#### **DEFINITION/CRITERIA** Heavy: 64.5 to 115.5 mm/cm \* Very Heavy: 115.6 to 204.4 mm/cm Rain/ Snow \* Extremely Heavy: > 204.4 mm/cm 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** 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 When maximum temperature remains 40°C Warm Night: When minimum temperature departure 4.5 °C to 6.4 °C. **Warm Night** Severe Warm Night: When minimum temperature departure >6.4 °C. 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 $\leq$ -6.5 °C **Cold Wave** (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 When minimum temperature of a station ≤10°C for plains and ≤0°C for hilly regions Based on departure **Cold Day** 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 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 Fog Very Dense Fog: when the visibility < 50 metres Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder) Thunderstorm **Dust/Sand** An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind. Ice deposits on ground Frost Air temperature ≤4°C ( over Plains) A strong wind that rises suddenly, lasts for atleast 1 minute. Moderate: Wind speed 52-61 kmph Squall Severe: Wind speed 62-87 kmph Very Severe: Wind speed >87 kmph 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 Sea State 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 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) Cyclone 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 (Service to the Nation since 1875)

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