

National Weather Forecasting Centre India Meteorological Department Ministry of Earth Sciences

Sunday 03 January 2021 EVENING

Time of Issue: 1645 hours IST

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features

- An active Western Disturbance lies as a middle and upper level cyclonic circulation over Central Pakistan & neighbourhood with its induced cyclonic circulation over southwest Rajasthan & neighbourhood at lower levels. A north-south zone of wind confluence also observed today from North Punjab to Northeast Arabian Sea, with strong interaction between south westerly in association with the above Western Disturbance and lower level moist southeasterlies.
- ♦ All these favorable meteorological features likely to persist till 05th January, 2021 and continue to cause moderate to intense wet spell with fairly widespread to widespread precipitation accompanied with thunderstorm, lightning and hailstorm at isolated over northwest India till night of 5th January with peak activities on 3rd and 4th over the Plains (Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh and north Rajasthan) and on 4th and 5th Jan 2021 over western Himalayan region(Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh and Uttarakhand).
- ♦ After cessation of wet spell, fresh northerly-northwesterly winds likely to set in over Plains of northwest India causing cold wave to sever cold wave conditions at isolated places over Punjab, Haryana and north Rajasthan from 7th January 2021 onwards.

Main Weather Observations

- Rain/Thundershowers observed (from 0830 hours IST of yesterday to 0830 hours IST of today): at many places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh and Punjab; at a few places over Uttarakhand, Haryana, Chandigarh & Delhi, West Uttar Pradesh and Tamilnadu, Puducherry & Karaikal at isolated places over East Rajasthan, Andaman & Nicobar Islands, East Uttar Pradesh and West Madhya Pradesh.
- ♦ Rainfall recorded (from 0830 hours IST of yesterday to 0830 hours IST of today) (2cm or more): Kokarnag-3; Qazigund, Baderwah, Delhi (Palam), Delhi (Safdarjung), Gurgaon, Karaikal, Tondi and Nagapattinam-2 each.
- ◆ Thunderstorm recorded (from 0830 hours IST to 1430 hours IST of today): at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Uttarakhand, Haryana, Chandigarh & Delhi, West Uttar Pradesh and East Rajasthan.
- ♦ Today, **Cold Wave conditions** are observed in isolated pockets over Punjab and West Uttar Pradesh.
- ◆ Yesterday, Cold Day conditions were observed at a few places over Punjab and at isolated places over Haryana, Chandigarh and Himachal Pradesh.
- Fog observed (during 0830-1430 hrs IST of today): Dense to very dense fog in isolated pockets over Uttarakhand, West Rajasthan and Tamilnadu and dense fog in isolated pockets over East Rajasthan, Haryana and Assam & Meghalaya.
- ♦ Visibility recorded (during 0830-1430 hrs IST of today) (200 metre or less): Bikaner, Ganganagar and Phalodi -25 m each; Mukteshwar Kumaon, Ajmer and Kodaikanal-50 m; Hissar, Kota, Batote and Gulmarg- 200 each.
- ♦ Maximum Temperature Departures as on 02-01-2020: Maximum temperatures were appreciably above normal (3.1°C to 5.0°C) at many Places over East Madhya Pradesh and at a few places over West Madhya Pradesh; above normal (1.6°C to 3.0°C) at most places over Jharkhand and Nagaland, Manipur, Mizoram & Tripura; at many places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Uttarakhand Assam & Meghalaya, Sub-Himalayan West Bengal & Sikkim; at a few places over Arunachal Pradesh, East Rajasthan, Bihar, Odisha, Chhattisgarh, Coastal & South Interior Karnataka, Vidarbha and Andaman & Nicobar Islands and at isolated places over East Uttar Pradesh and Gangetic West Bengal. They were markedly below normal (-5.1°C or less) at a few places over Himachal Pradesh and at isolated places over Punjab; appreciably below normal (-3.1°C to -5.0°C) at a few places over Haryana, Chandigarh & Delhi, Saurashtra & Kutch , Rayalaseema and West Rajasthan and at isolated places over Tamilnadu, Puducherry & Karaikal; below normal (-1.6°C to -3.0°C) at a few places over North Interior Karnataka and at isolated places over West Uttar Pradesh, Gujarat Region, Coastal Andhra Pradesh & Yanam and Kerala & Mahe and near normal over rest parts of the country. The highest maximum temperature of 35.0°C was reported at Mangalore (Coastal Karnataka) over the country.
- ♦ Minimum Temperature Departures as on 03-01-2021: Minimum temperatures are markedly above normal (5.1°C or more) at a few places over East Rajasthan, Madhya Pradesh and at isolated places over Himachal Pradesh, Punjab, West Rajasthan and Madhya Maharashtra; appreciably above normal (3.1°C to 5.0°C) at most places over Uttarkhand; at many places over West Uttar Pradesh, Vidarbha and Coastal Karnataka; at a few places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, East Uttar Pradesh, Jharkhand, Rayalaseema, Tamilnadu, Puducherry & Karaikal and Andaman & Nicobar Islands; above normal (1.6°C to 3.0°C) at a few places over Chhattisgarh, Coastal Andhra Pradesh & Yanam, Kerala & Maha and at isolated places over South Interior Karnataka. They are appreciably below normal (-3.1°C to -5.0°C) at a few places over Saurashtra & Kutch; at isolated places over Gangetic West Bengal; below normal (-1.6°C to -3.0°C) at a few places over Sub- Himalayan West Bengal & Sikkim and at isolated places over Assam & Meghalaya, Odisha and Gujarat Region and near normal over rest parts of the country. The lowest minimum temperature of 5.4°C reported at Banda (West Uttar Pradesh) over the plains of the country.



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Meteorological Analysis (Based on 1430 hours IST)

- ♦ The Western Disturbance as a cyclonic circulation over central Pakistan & neighbourhood between 2.1 km & 7.6 km above mean sea level persists.
- ♦ The induced cyclonic circulation over southwest Rajasthan & neighbourhood extending upto 1.5 km above mean sea level persists.
- ♦ The trough extending upto 1.5 km above mean sea level from North Punjab to Northeast Arabian Sea along & off Gujarat coast across induced cyclonic circulation over Southwest Rajasthan and Saurashtra & Kutch persists.
- ♦ The cyclonic circulation over East Bangladesh & neighbourhood extending upto 1.5 km above mean sea level persists.

Weather Forecast for next 5 days * upto 0830 hours IST of 08th January, 2021

- ♦ Meteorological sub-division wise detailed 5 days precipitation forecast is given in Table-1.
- ♦ No significant change in minimum temperatures over plains of northwest, central & west India during 3-4 days and gradual fall by 3-5 °C over parts of northwest India thereafter.
- ♦ No significant change in minimum temperatures over most parts of East India during next 24 hours and rise by 2-3°C during subsequent 3 days.
- ♦ Shallow to moderate fog in isolated pockets over Bihar, West Bengal & Sikkim, Jharkhand, Assam & Meghalaya and Mizoram & Tripura during next 2 days.

Weather Outlook for subsequent 2 days from 08th January, 2021 to 10th January, 2021

- ♦ Isolated to scattered rainfall/snowfall likely over Western Himalayan Region.
- ♦ Scattered to Fairly widespread rainfall/thundershowers likely over Kerala & Mahe and Tamilnadu, Puducherry & Karaikal. Isolated rainfall/thundershowers likely over Coastal & South Interior Karnataka, Andaman & Nicobar Islands and Lakshadweep area.
- ♦ Weather likely to be dry over remaining parts of the country.



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Weather Warning during next 5 days *

03 January **(Day 1):** ★ Heavy rainfall very likely at isolated places over Punjab, West Uttar Pradesh and Haryana, Chandigarh & Delhi.

- ♦ Thunderstorm accompanied with lightning and hail at isolated places very likely over Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh, Rajasthan and West Madhya Pradesh; with lightning over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad and Himachal Pradesh.
- ◆ **Cold Wave conditions** very likely in isolated pockets over Saurashtra & Kutch.
- ♦ Cold Day Conditions very likely in isolated pockets over Punjab and Haryana, Chandigarh & Delhi.
- ♦ **Dense fog** very likely at isolated places over West Rajasthan and Odisha.
- **04 January (Day 2): ♦ Heavy rain/Snow** very likely at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad and Himachal Pradesh.
- ♦ Heavy rainfall very likely at isolated places over Punjab and Haryana & Chandigarh.
- ♦ Thunderstorm accompanied with lightning and hail at isolated places very likely over Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh, Rajasthan and West Madhya Pradesh; with lightning over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad, Kerala & Mahe and Lakshadweep.
- ◆ **Cold Wave conditions** very likely in isolated pockets over Saurashtra & Kutch.
- ◆ Cold Day Conditions very likely in isolated pockets over Punjab and Haryana, Chandigarh & Delhi.
- ♦ Dense fog very likely at isolated places over West Rajasthan and Odisha.
- **05 January (Day 3): ♦ Heavy rain/Snow** very likely at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad, Uttarakhand and Himachal Pradesh.
- ♦ **Heavy rainfall** very likely at isolated places over Tamilnadu, Puducherry & Karaikal.
- ♦ Thunderstorm accompanied with lightning and hail at isolated places very likely over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad, Himachal Pradesh, Uttarakhand and West Uttar Pradesh; with lightning over Tamilnadu, Puducherry & Karaikal, Kerala & Mahe and Lakshadweep.
- ◆ **Cold Wave conditions** very likely in isolated pockets over Saurashtra & Kutch.
- ♦ Dense fog very likely at isolated places over West Rajasthan and Odisha.
- **06** January (Day 4): ♦ Dense Fog likely in isolated pockets over Punjab and Haryana, Chandigarh & Delhi, West Uttar Pradesh and Rajasthan.
- ♦ Heavy rainfall likely at isolated places over Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- ♦ Thunderstorm accompanied with lightning at isolated places over Coastal & South Interior Karnataka, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe and Lakshadweep.
- ♦ Cold Wave to severe cold wave conditions likely in isolated pockets over Saurashtra & Kutch; Cold Wave conditions likely over Punjab, Harvana and Rajasthan.
- **07 January (Day 5): ♦ Dense Fog** likely in isolated pockets over Punjab and Haryana, Chandigarh & Delhi, Uttar Pradesh and Rajasthan.
- ♦ Thunderstorm accompanied with lightning at isolated places over Coastal & South Interior Karnataka, Tamil Nadu, Puducherry & Karaikal, and Kerala & Mahe.
- ◆ Cold Wave to severe cold wave conditions likely in isolated pockets over Saurashtra & Kutch; Cold Wave conditions likely over Punjab, Haryana and Rajasthan.

Kindly download MAUSAM APP for location specific forecast & warning, MEGHDOOT APP for Agromet advisory and DAMINI APP for Lightning Warning & visit state MC/RMC websites for district wise warning.



Table-1 5 Day Rainfall Forecast (EVENING)

03-January-2021

Met-Sub-Division	03-Jan Today	04Jan Mon	05Jan Tue	06Jan Wed	07Jan Thu
1. Andaman & Nicobar Islands	ISOL	SCT	ISOL	ISOL	SCT
2. Arunachal Pradesh	DRY	DRY	DRY	DRY	DRY
3. Assam & Meghalaya	DRY	DRY	DRY	DRY	DRY
4. N. M. M. & T.	DRY	DRY	DRY	DRY	DRY
5. S.H. West Bengal & Sikkim	DRY	DRY	DRY	DRY	DRY
6. Gangetic West Bengal	DRY	DRY	DRY	DRY	DRY
7. Odisha	DRY	DRY	DRY	DRY	DRY
8. Jharkhand	DRY	DRY	DRY	DRY	DRY
9. Bihar	ISOL	DRY	DRY	DRY	DRY
10. East Uttar Pradesh	ISOL	ISOL	ISOL	DRY	DRY
11. West Uttar Pradesh	FWS	SCT	SCT	ISOL	DRY
12. Uttarakhand	FWS	FWS	WS	ISOL	DRY
13. Haryana, Chd & Delhi	WS	WS	FWS	ISOL	DRY
14. Punjab	WS	WS	WS	ISOL	DRY
15. Himachal Pradesh	FWS	FWS	WS	ISOL	DRY
16. J & K and Ladakh	WS	WS	WS	SCT	ISOL
17. West Rajsthan	ISOL	ISOL	ISOL	DRY	DRY
18. East Rajasthan	SCT	SCT	ISOL	ISOL	ISOL
19. West Madhya Pradesh	ISOL	ISOL	DRY	DRY	DRY
20. East Madhya Pradesh	DRY	DRY	DRY	DRY	DRY
21. Gujarat Region	ISOL	DRY	DRY	DRY	DRY
22. Saurashtra & Kutch	DRY	DRY	DRY	DRY	DRY
23. Konkan & Goa	DRY	DRY	DRY	ISOL	ISOL
24. Madhya Maharashtra	ISOL	DRY	DRY	ISOL	ISOL
25. Marathawada	DRY	DRY	DRY	DRY	DRY
26. Vidharbha	DRY	DRY	DRY	DRY	DRY
27. Chhattisgarh	DRY	DRY	DRY	DRY	DRY
28. Coastal A. P. & Yanam	DRY	ISOL	ISOL	ISOL	ISOL
29. Telangana	DRY	DRY	DRY	DRY	DRY
30. Rayalaseema	DRY	DRY	ISOL	ISOL	ISOL
31. T.N., Puducherry & Karaikal	FWS	ISOL	FWS	WS	SCT
32. Coastal Karnataka	DRY	ISOL	ISOL	SCT	SCT
33. North Interior Karnataka	DRY	DRY	DRY	ISOL	ISOL
34. South Interior Karnataka	ISOL	ISOL	ISOL	SCT	SCT
35. Kerala & Mahe	ISOL	ISOL	SCT	FWS	SCT
36. Lakshadweep	DRY	SCT	SCT	SCT	DRY

% Station Reporting Rainfall

% Stations	Category	% Stations	Category
76-100		26-50	Scattered (SCT/ A Few Places)
51-75	Fairly Widespred (FWS/ Many Places)	1-25	Isolated (ISOL)
No Rain	Dry		



Fig. 1: Accumulated Rainfall (mm) during past 24 hours

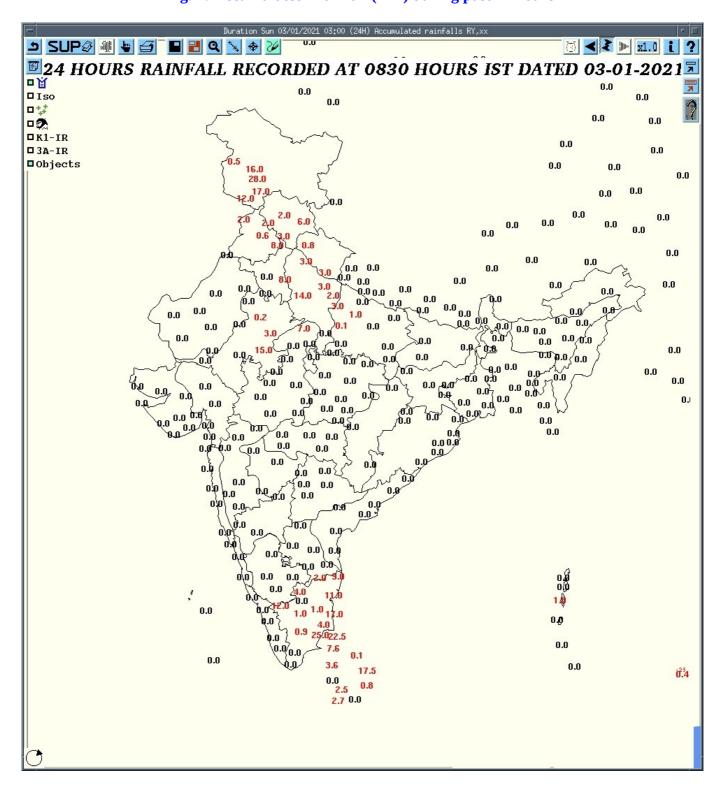




Fig. 2: Maximum Temperature during past 24 hours

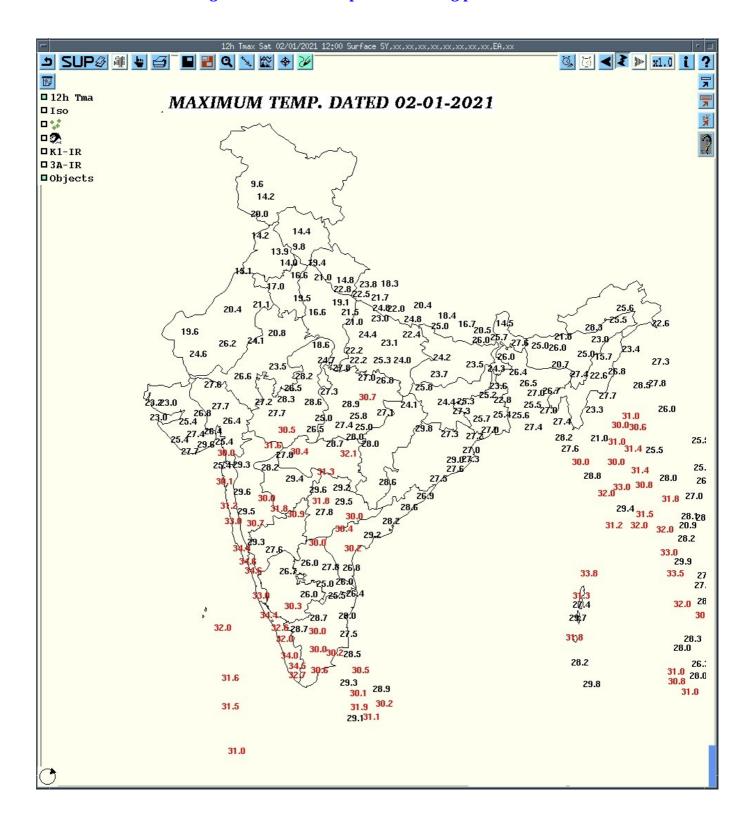




Fig. 3: Minimum Temperature during past 24 hours

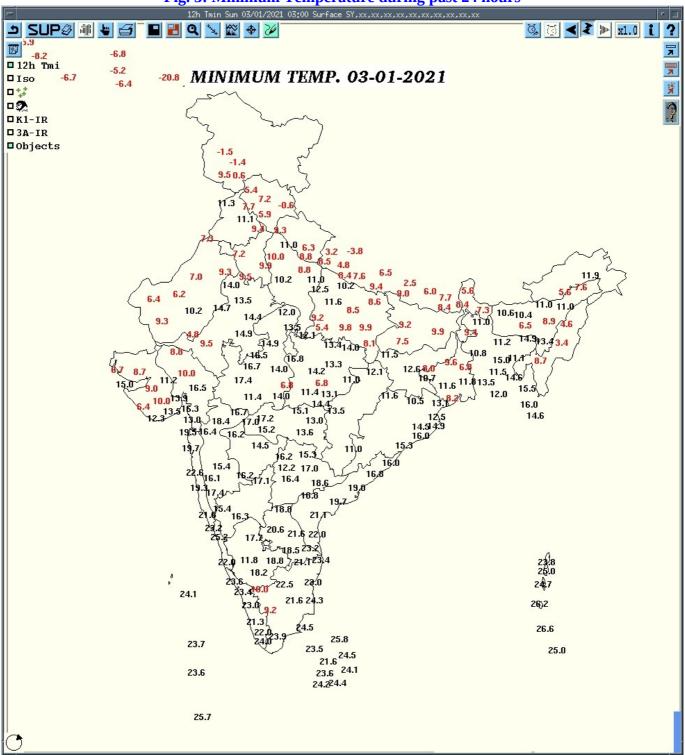




Fig. 4: Departure from Normal of Maximum Temperatures

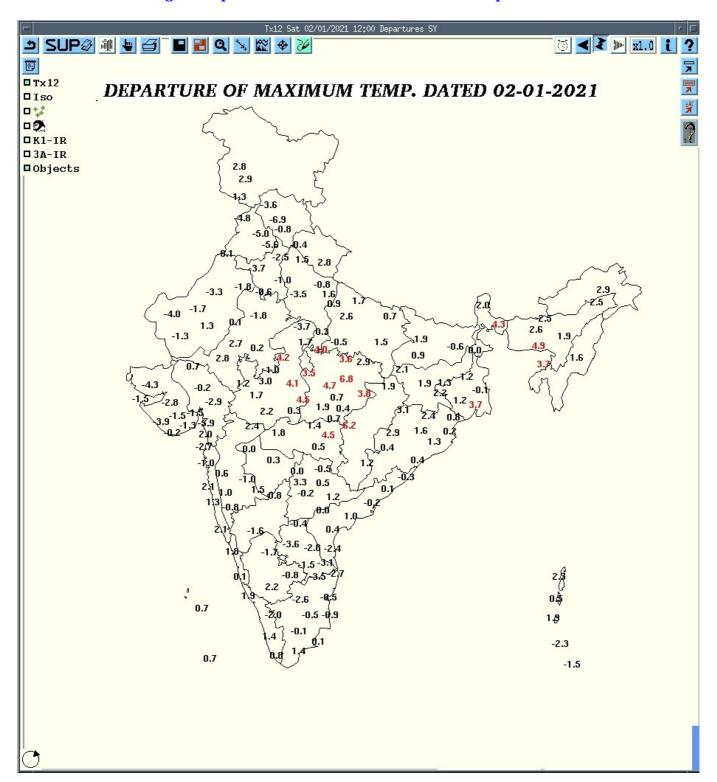
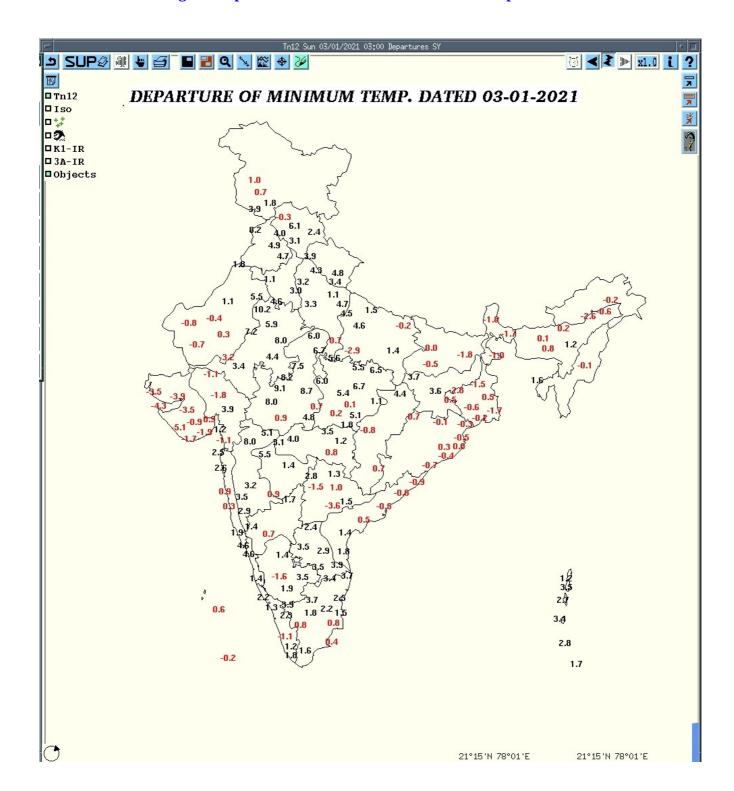


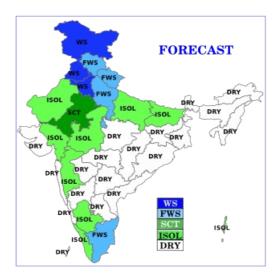


Fig. 5: Departure from Normal of Minimum Temperatures





Sunday 03 January 2021



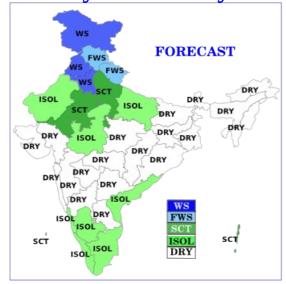


03 January (Day 1):♦ Heavy rainfall very likely at isolated places over Punjab, West Uttar Pradesh and Haryana, Chandigarh & Delhi.

- ♦ Thunderstorm accompanied with lightning and hail at isolated places very likely over Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh, Rajasthan and West Madhya Pradesh; with lightning over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad and Himachal Pradesh.
- ◆ Cold Wave conditions very likely in isolated pockets over Saurashtra & Kutch.
- ◆ Cold Day Conditions very likely in isolated pockets over Punjab and Haryana, Chandigarh & Delhi.
- ♦ Dense fog very likely at isolated places over West Rajasthan and Odisha.



Monday 04 January 2021



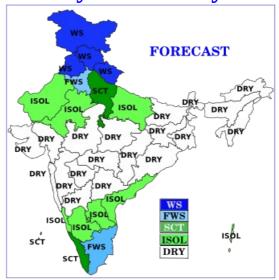


04 January (Day 2): ♦ Heavy rain/Snow very likely at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad and Himachal Pradesh.

- ♦ Heavy rainfall very likely at isolated places over Punjab and Haryana & Chandigarh.
- ♦ Thunderstorm accompanied with lightning and hail at isolated places very likely over Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh, Rajasthan and West Madhya Pradesh; with lightning over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad, Kerala & Mahe and Lakshadweep.
- ♦ Cold Wave conditions very likely in isolated pockets over Saurashtra & Kutch.
- ♦ Cold Day Conditions very likely in isolated pockets over Punjab and Haryana, Chandigarh & Delhi.
- ♦ Dense fog very likely at isolated places over West Rajasthan and Odisha.



Tuesday 05 January 2021



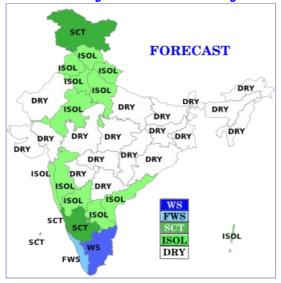


05 January (Day 3): ♦ Heavy rain/Snow very likely at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad, Uttarakhand and Himachal Pradesh.

- ♦ **Heavy rainfall** very likely at isolated places over Tamilnadu, Puducherry & Karaikal.
- ♦ Thunderstorm accompanied with lightning and hail at isolated places very likely over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad, Himachal Pradesh, Uttarakhand and West Uttar Pradesh; with lightning over Tamilnadu, Puducherry & Karaikal, Kerala & Mahe and Lakshadweep.
- ◆ Cold Wave conditions very likely in isolated pockets over Saurashtra & Kutch.
- ♦ Dense fog very likely at isolated places over West Rajasthan and Odisha.



Wednesday 06 January 2021



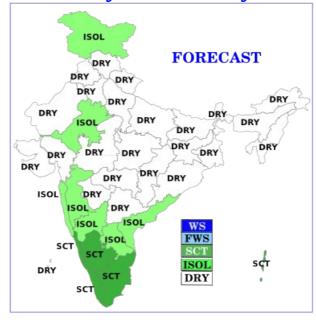


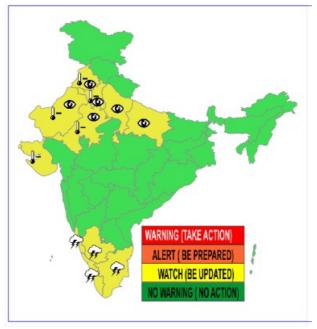
06 January (Day 4): ♦ Dense Fog likely in isolated pockets over Punjab and Haryana, Chandigarh & Delhi, West Uttar Pradesh and Rajasthan.

- ♦ Heavy rainfall likely at isolated places over Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- ♦ Thunderstorm accompanied with lightning at isolated places over Coastal & South Interior Karnataka, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe and Lakshadweep.
- ◆ Cold Wave to severe cold wave conditions likely in isolated pockets over Saurashtra & Kutch; Cold Wave conditions likely over Punjab, Haryana and Rajasthan.



Thursday 07 January 2021



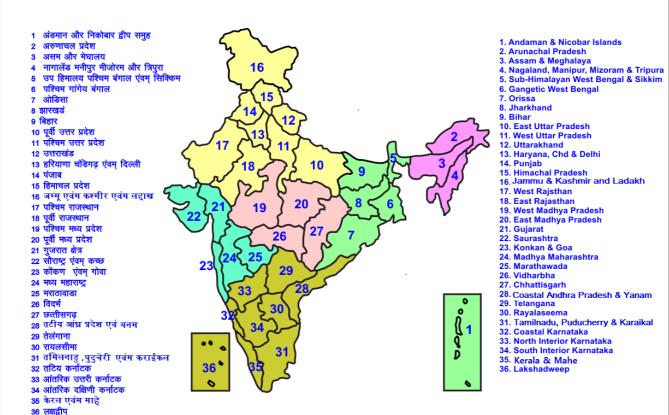


07 January (Day 5): ♦ Dense Fog likely in isolated pockets over Punjab and Haryana, Chandigarh & Delhi, Uttar Pradesh and Rajasthan.

- ♦ Thunderstorm accompanied with lightning at isolated places over Coastal & South Interior Karnataka, Tamil Nadu, Puducherry & Karaikal, and Kerala & Mahe.
- ♦ Cold Wave to severe cold wave conditions likely in isolated pockets over Saurashtra & Kutch; Cold Wave conditions likely over Punjab, Haryana and Rajasthan.



LEGENDS



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 Widespred (FWS/ Many Places)	1-25	Isolated (ISOL)

WARNING

WARNING (TAKE ACTION) ALERT (BE PREPARED) WATCH (BE UPDATED)

NO WARNING (NO ACTION)

Probabilistic Forecast

Terms	Probability of Occurrence (%)
Unlikely	< 25
Likely	25 - 50
Very Likely	50 - 75
Most Likely	> 75



Heavy Rain



Heavy Snow



77 Thunderstorm



Dust Storm



Strong Winds



Visibility



Cyclone





Squall/ Hail



Sea State





LEGENDS Probabilistic Forecast WARNING **WARNING (TAKE ACTION)** Probability of Occurrence (%) ALERT (BE PREPARED) WATCH (BE UPDATED) Very Likely Most Likely NO WARNING (NO ACTION > 75 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 J+ Warm Night Warm Night: When minimum temperature departure 4.5 °C to 6.4 °C. 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 ≥ -6.5 °C (b) Based on actual Minimum Temperature (for Plains only) **Cold Wave** 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 or 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: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C. **Cold Day** 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 0 Dense Fog: when the visibility between 50- 200 metres Fog Very Dense Fog: when the visibility < 50 metres 44 Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder) Thunderstorm An ensemble of particles of dust or sand energetically lifted to great heights by a strong and Dust/Sand Storm turbulent wind. Ice deposits on ground 55 Air temperature ≤4°C (over Plains) **Frost** A strong wind that rises suddenly, lasts for atleast 1 minute. Moderate: Wind speed 52-61 kmph 4 Severe: Wind speed 62-87 kmph Squall 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 High to very high: Wind speed 63-117 kmph (34-63 knots) & Wave height 6-14 metre **Sea State** 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) 9 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)