



Thursday 23 March 2023

**MORNING**

Time of Issue: 0800 hours IST

## ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

### Significant Weather Features

#### Weather Forecast & Warning:

- ◆ **Northwest India:** A fresh spell of rainfall & thunderstorm activity is likely to commence over the region from evening of 23rd March with Isolated hailstorm likely over Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh, West Uttar Pradesh and Rajasthan on 23rd & 24th March. Isolated heavy rainfall very likely over Himachal Pradesh, Uttarakhand and Punjab on 24th March.
- ◆ **Central India:** Mainly dry weather likely over the region during next 24 hours. Thereafter, a fresh spell of rainfall & thunderstorm/hailstorm activity is likely to commence over the region (Madhya Pradesh, Vidarbha & Chhattisgarh) during 24th-26th March.
- ◆ **South India:** Isolated light rainfall with thunderstorm & lightning likely over Andhra Pradesh during next 5 days. A fresh spell of rainfall & thunderstorm activity is likely to commence over Telangana, Kerala & Mahe and interior Karnataka from 24th March.
- ◆ **Northeast India:** Scattered to fairly widespread light/moderate rainfall activity with thunderstorm, lightning & gusty winds likely to continue over Northeast India during next 24 hours.
- ◆ **East India:** A fresh spell of rainfall & thunderstorm activity is likely to commence over the region from 26th March.

### Main Weather Observations

- ◆ **Rainfall/thundershowers observed** (from 0830 hours IST to 1730 hours IST of yesterday): **at most places** over Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura; **at many places** over Assam & Meghalaya; **at a few places** over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Odisha and Saurashtra & Kutch and **at isolated places** over Himachal Pradesh, Haryana, West Bengal & Sikkim, Jharkhand, Chhattisgarh, Madhya Pradesh and Coastal Andhra Pradesh & Yanam.
- ◆ **Significant amount of rainfall recorded** (from 0830 hours IST to 1730 hours IST of yesterday)(in cm): **Sikkim:** Gangtok-3; **Saurashtra & Kutch:** Rajkot-2; **Arunachal Pradesh:** Pasighat-1; **Assam:** Golaghat, Guwahati & Silchar-1 each; **East Madhya Pradesh:** Mandla-1.
- ◆ **Thunderstorm observed** (from 0830 hours IST of yesterday to 0530 hours IST of today): at isolated places over Himachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, West Bengal & Sikkim, Chhattisgarh, Saurashtra & Kutch and Coastal Andhra Pradesh & Yanam.
- ◆ **Minimum Temperature Departures (as on 22-03-2023):** Minimum temperatures were **above normal (1.6°C to 3.0°C)** at isolated places over Gujarat state, Coastal Andhra Pradesh & Yanam and Tamilnadu, Puducherry & Karaikal. They were **appreciably below normal (-3.1°C to -5.0°C)** at many places over Gangetic West Bengal, Chhattisgarh, Uttarakhand; at a few places over Odisha, West Uttar Pradesh; at isolated places over Madhya Pradesh; **below normal (-1.6°C to -3.0°C)** at many places over Nagaland, Manipur, Mizoram & Tripura, Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, East Uttar Pradesh, Jharkhand, Madhya Maharashtra, Coastal & North Interior Karnataka, Kerala & Mahe; at a few places over Bihar, Punjab, Haryana, Chandigarh & Delhi, East Rajasthan, Vidarbha, Telangana; at isolated places over West Rajasthan, Rayalaseema and **near normal** over rest parts of the country. Yesterday, the **lowest minimum temperature of 11.7°C** was reported at **Delhi-Ridge (Delhi)** over plains of the country.
- ◆ **Maximum Temperature Departures (as on 22-03-2023):** Maximum temperatures were **markedly below normal (-5.1°C or less)** at many places over East Uttar Pradesh; at a few places over West Uttar Pradesh, Chhattisgarh, Nagaland, Manipur, Mizoram & Tripura, East Madhya Pradesh, Vidarbha and Marathwada; at isolated places over Haryana, Chandigarh & Delhi, East Rajasthan, Arunachal Pradesh, West Madhya Pradesh, Saurashtra & Kutch and Madhya Maharashtra; **appreciably below normal (-3.1°C to -5.0°C)** at most places over Gujarat Region; at many places over West Rajasthan, Bihar, Jharkhand and Telangana; at a few places over Uttarakhand, Assam & Meghalaya, Gangetic West Bengal and Odisha; **below normal (-1.6°C to -3.0°C)** at most places over Sub-Himalayan West Bengal & Sikkim, North Interior Karnataka and Rayalaseema; at many places over Punjab; at a few places over Coastal Andhra Pradesh & Yanam; at isolated places over Tamil Nadu, Puducherry & Karaikal and **near normal** over rest parts of the country. Yesterday, the **highest maximum temperature of 39.0°C** was reported at **K. Paramathy (Tamilnadu)**.

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### Meteorological Analysis (Based on 0530 hours IST)

- ◆ The **Western Disturbance** as a cyclonic circulation over Iran & neighbourhood between 3.1 km & 5.8 km above mean sea level persists.
- ◆ The **cyclonic circulation** over southwest Rajasthan & neighbourhood at 0.9 km above mean sea level persists.
- ◆ The **trough in westerlies** with its axis at 5.8 km above mean sea level now runs roughly along Long. 92°E to the north of Lat. 25°N.
- ◆ The **trough/wind discontinuity** from interior Tamilnadu to south Chhattisgarh across interior Karnataka, Telangana and Vidarbha at 0.9 km above mean sea level persists.

### Weather Forecast for next 5 days \* upto 0830 hours IST of 28th March, 2023

- ◆ Meteorological sub-division wise detailed 5 days temperature forecast is given in Table-1.
- ◆ **Central & West India:** Gradual rise in maximum temperatures by 2-3°C during next 24 hours and no significant change thereafter.
- ◆ **East India:** Gradual rise in maximum temperatures by 3-4°C during next 2 days and no significant change thereafter.
- ◆ **Rest parts of the Country:** No significant change in Maximum Temperatures very likely during next 4-5 days.

### Weather Outlook for subsequent 2 days during 28th-30th March, 2023

- ◆ Scattered to fairly widespread light/moderate rainfall/thundershowers likely over Northeast India. Isolated to scattered light rainfall/thundershowers likely over Western Himalayan Region, East Uttar Pradesh, East & adjoining central India and south Peninsular India.



## Weather Warning during next 5 days \*

**23 March (Day 1):** ♦ **Thunderstorm accompanied with lightning, hail & gusty wind (40-50 kmph)** very likely at isolated places over Punjab, Haryana, West Rajasthan; **with lightning** over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, East Rajasthan, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gujarat State and Coastal Andhra Pradesh & Yanam.

**24 March (Day 2):** ♦ **Heavy rainfall** very likely at isolated places over Himachal Pradesh, Uttarakhand and Punjab.

♦ **Thunderstorm accompanied with lightning, hail & gusty wind (40-50 kmph)** very likely at isolated places over Punjab, Haryana; **with lightning, hail & gusty wind (30-40 kmph)** over East Rajasthan, West Madhya Pradesh, Chhattisgarh, West Uttar Pradesh; **with lightning & hail** over Himachal Pradesh, Uttarakhand; **with lightning** over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Vidarbha, Madhya Maharashtra, Marathwada, Telangana, Coastal Andhra Pradesh & Yanam and Kerala & Mahe.

**25 March (Day 3):** ♦ **Thunderstorm accompanied with lightning, hail & gusty wind (30-40 kmph)** likely at isolated places over Madhya Pradesh, Vidharbha, Chhattisgarh; **with lightning & hail** over Uttarakhand; **with lightning** over Himachal Pradesh, Madhya Maharashtra, Marathwada, Telangana, Coastal Andhra Pradesh & Yanam and Kerala & Mahe.

**26 March (Day 4):** ♦ **Thunderstorm accompanied with lightning, hail & gusty wind (30-40 kmph)** likely at isolated places over East Madhya Pradesh, Chhattisgarh; **with lightning & gusty wind (30-40 kmph)** over Jharkhand, Vidharbha; **with lightning** over Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Telangana, Coastal Andhra Pradesh & Yanam and Kerala & Mahe.

**27 March (Day 5):** ♦ **Thunderstorm accompanied with lightning & gusty wind (30-40 kmph)** over Jharkhand, Bihar; **with lightning** over Gangetic West Bengal, Odisha, Vidharbha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Telangana, Coastal Andhra Pradesh & Yanam and Kerala & Mahe.

**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.**

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**Table-1**  
**5 Day Rainfall Forecast (MORNING)**  
**23-March-2023**

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

**% Station Reporting Rainfall**

% 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)
No Rain	Dry		

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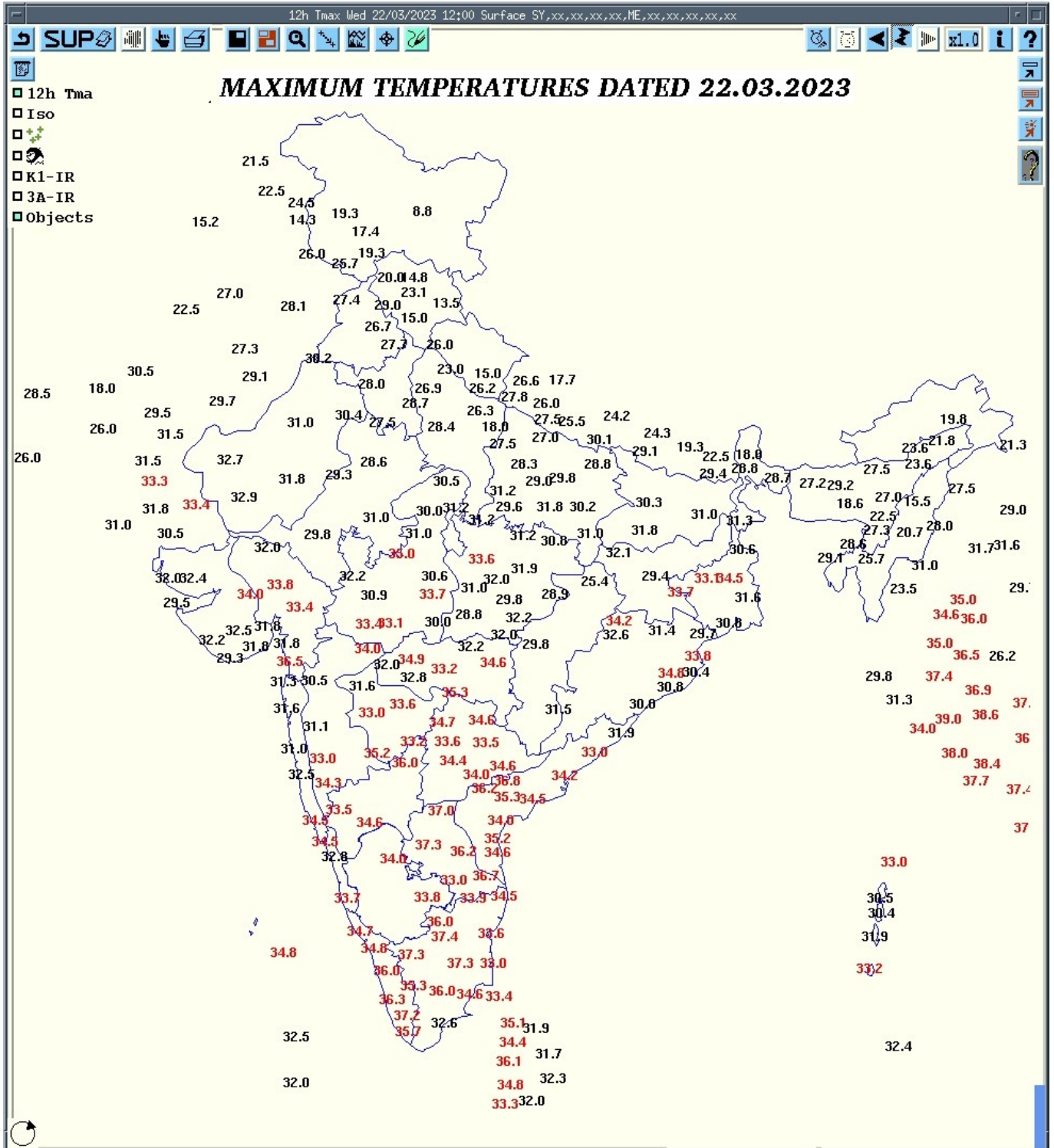
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Fig. 2: Maximum Temperature during past 24 hours



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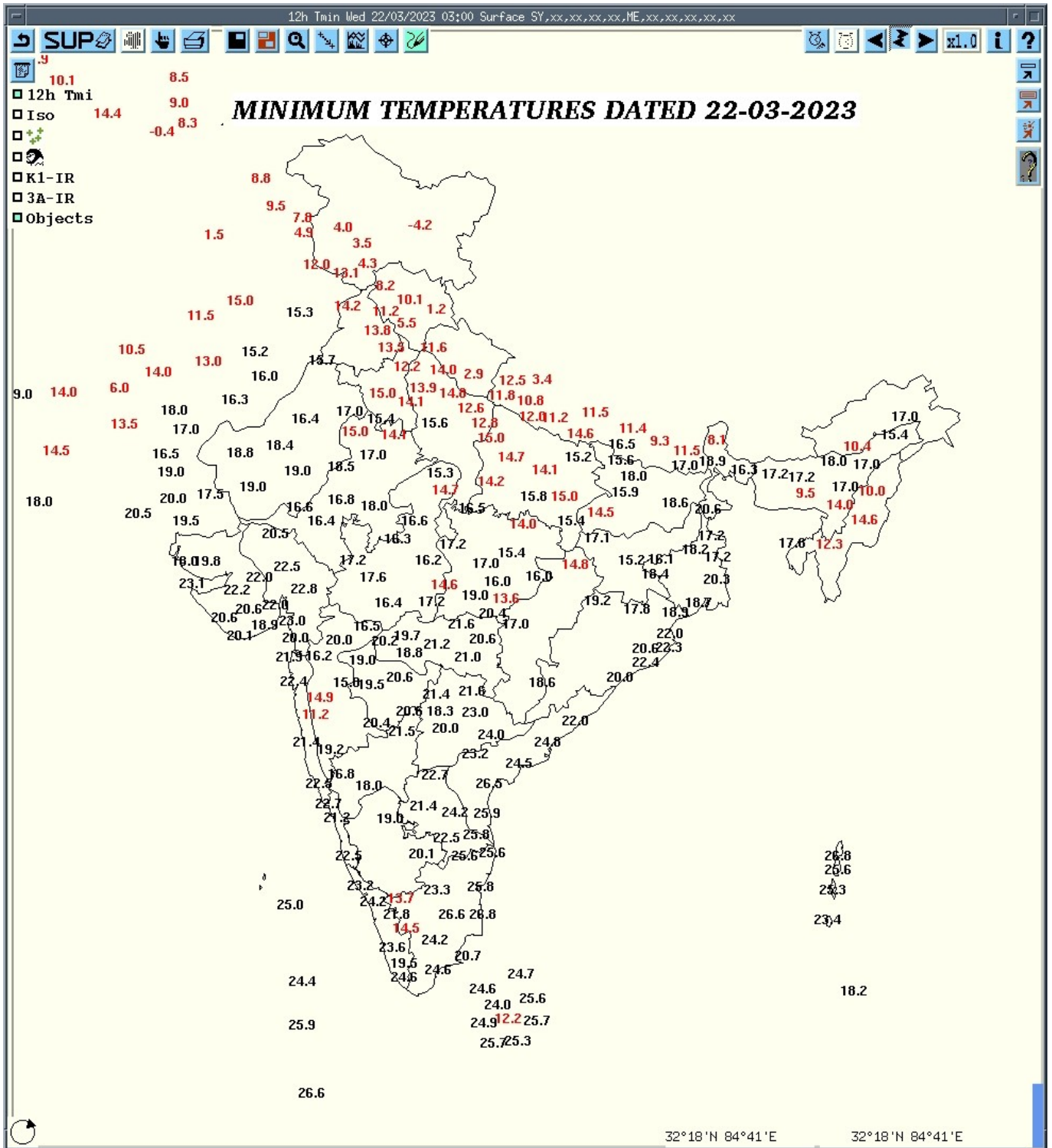
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Fig. 3: Minimum Temperature during past 24 hours

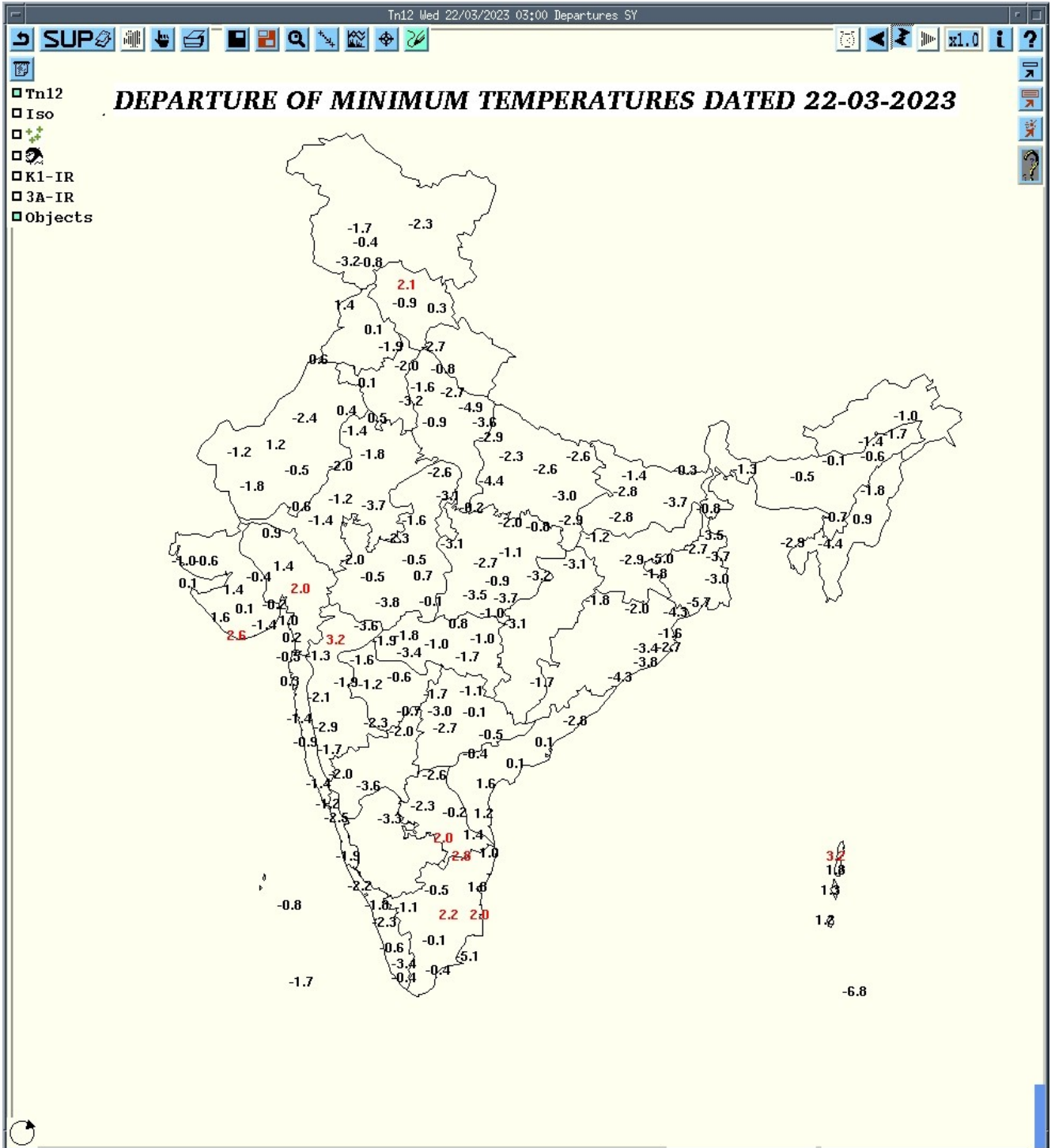


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Fig. 5: Departure from Normal of Minimum Temperatures



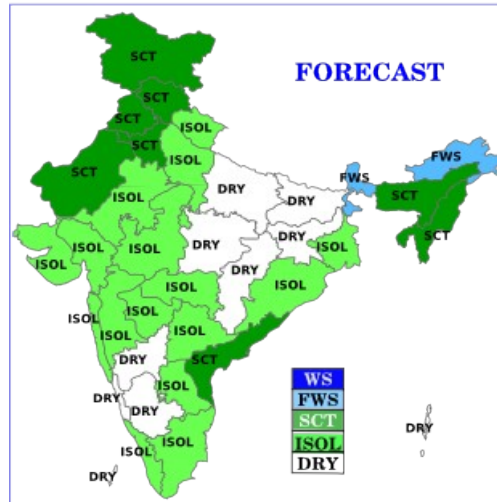
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## Thursday 23 March 2023



**23 March (Day 1):** ♦ **Thunderstorm accompanied with lightning, hail & gusty wind (40-50 kmph)** very likely at isolated places over Punjab, Haryana, West Rajasthan; **with lightning** over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, East Rajasthan, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gujarat State and Coastal Andhra Pradesh & Yanam.

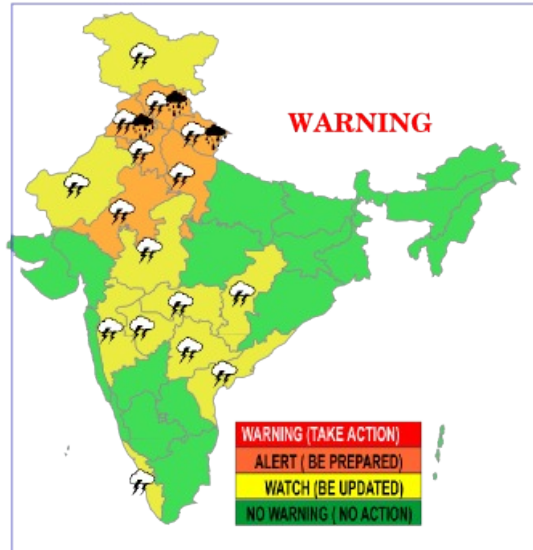
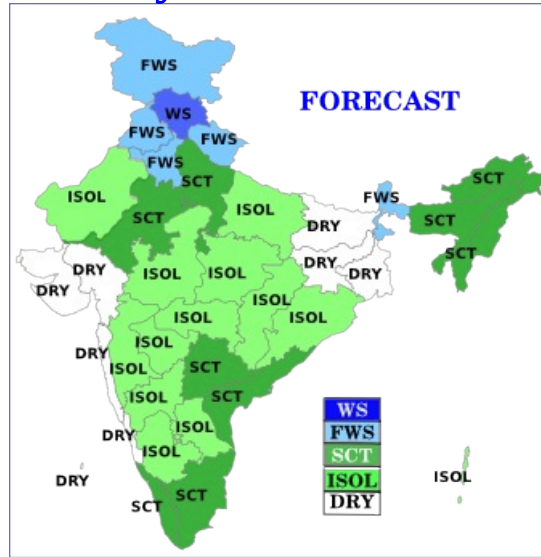
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## Friday 24 March 2023



**24 March (Day 2):** ♦ **Heavy rainfall** very likely at isolated places over Himachal Pradesh, Uttarakhand and Punjab.

♦ **Thunderstorm accompanied with lightning, hail & gusty wind (40-50 kmph)** very likely at isolated places over Punjab, Haryana; **with lightning, hail & gusty wind (30-40 kmph)** over East Rajasthan, West Madhya Pradesh, Chhattisgarh, West Uttar Pradesh; **with lightning & hail** over Himachal Pradesh, Uttarakhand; **with lightning** over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Vidarbha, Madhya Maharashtra, Marathwada, Telangana, Coastal Andhra Pradesh & Yanam and Kerala & Mahe.

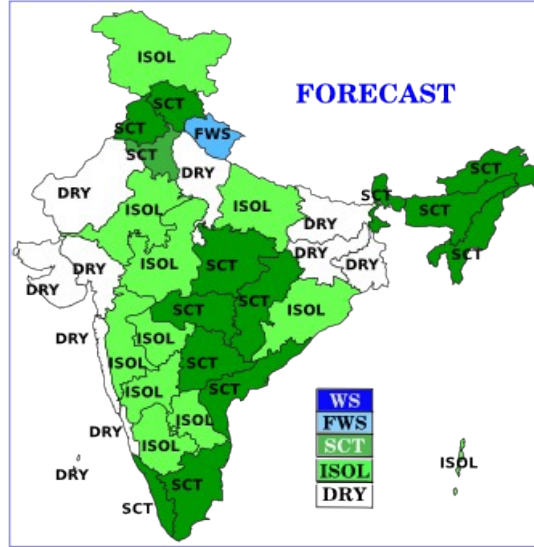
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## Saturday 25 March 2023



**25 March (Day 3):** ♦ Thunderstorm accompanied with lightning, hail & gusty wind (30-40 kmph) likely at isolated places over Madhya Pradesh, Vidharbha, Chhattisgarh; with lightning & hail over Uttarakhand; with lightning over Himachal Pradesh, Madhya Maharashtra, Marathwada, Telangana, Coastal Andhra Pradesh & Yanam and Kerala & Mahe.

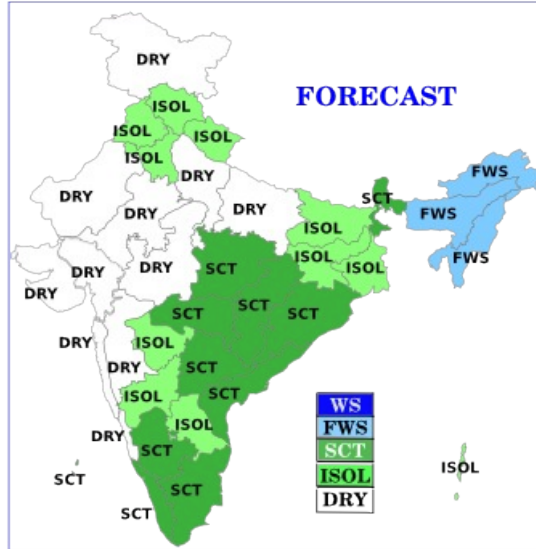
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## Sunday 26 March 2023



**26 March (Day 4):** ♦ **Thunderstorm** accompanied with **lightning, hail & gusty wind (30-40 kmph)** likely at isolated places over East Madhya Pradesh, Chhattisgarh; **with lightning & gusty wind (30-40 kmph)** over Jharkhand, Vidharbha; **with lightning** over Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Telangana, Coastal Andhra Pradesh & Yanam and Kerala & Mahe.

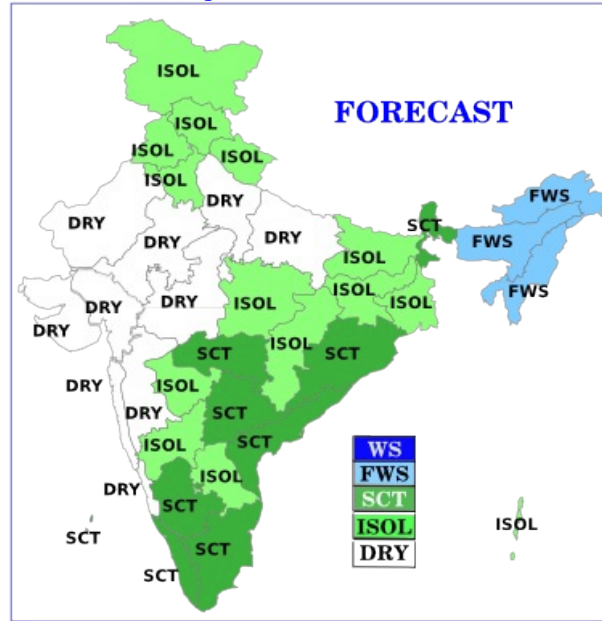
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## Monday 27 March 2023



**27 March (Day 5):** ♦ Thunderstorm accompanied with lightning & gusty wind (30-40 kmph) over Jharkhand, Bihar; with lightning over Gangetic West Bengal, Odisha, Vidharbha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Telangana, Coastal Andhra Pradesh & Yanam and Kerala & Mahe.

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## LEGENDS

- 1 अंडमान और निकोबार द्वीप समूह
- 2 अरुणाचल प्रदेश
- 3 असम और मेघालय
- 4 नागालैंड मनीपुर मीजोरम और त्रिपुरा
- 5 उप हिमालय पश्चिम बंगाल एवं सिक्किम
- 6 पश्चिम गंगोय बंगाल
- 7 ओडिशा
- 8 झारखंड
- 9 बिहार
- 10 पूर्वी उत्तर प्रदेश
- 11 पश्चिम उत्तर प्रदेश
- 12 उत्तराखंड
- 13 हरियाणा चंडिगढ़ एवं दिल्ली
- 14 पंजाब
- 15 हिमाचल प्रदेश
- 16 जम्मू एवं कश्मीर एवं लद्दाख
- 17 पश्चिम राजस्थान
- 18 पूर्वी राजस्थान
- 19 पश्चिम मध्य प्रदेश
- 20 पूर्वी मध्य प्रदेश
- 21 गुजरात क्षेत्र
- 22 सौराष्ट्र एवं कच्छ
- 23 कोंकण एवं गोवा
- 24 मध्य महाराष्ट्र
- 25 मराठावाडा
- 26 विदर्भ
- 27 छत्तीसगढ़
- 28 तटीय आंध्र प्रदेश एवं यनम
- 29 तेलंगाना
- 30 रायलसीमा
- 31 तमिलनाडु, पुदुचेरी एवं कराईकल
- 32 तटिय कर्नाटक
- 33 आंतरिक उत्तरी कर्नाटक
- 34 आंतरिक दक्षिणी कर्नाटक
- 35 केरल एवं 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. Orissa
8. Jharkhand
9. Bihar
10. East Uttar Pradesh
11. West Uttar Pradesh
12. Uttarakhand
13. Haryana, Chd & 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. Marathawada
26. Vidharbha
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)

## WARNING

<b>WARNING (TAKE ACTION)</b>
<b>ALERT ( BE PREPARED)</b>
<b>WATCH (BE UPDATED)</b>
<b>NO WARNING ( NO ACTION)</b>

## Probabilistic Forecast

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



Heavy Rain



Heavy Snow



Thunderstorm



Dust Storm



Strong Winds



Visibility



Cyclone



Squall/ Hail



Frost



Cold Wave



Heat Wave



Sea State

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## LEGENDS

### 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



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 color warning does not mean "Red Alert" Red color 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 [www.imd.gov.in](http://www.imd.gov.in) or contact : +91 11 24631913, 24643965, 24629798

(Created by the Meteorology Dept.)