



Thursday 02 March 2023

**MORNING**

Time of Issue: 0745 hours IST

**ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN**

**Significant Weather Features**

**Weather Forecast and Warnings:**

◆ The **Western Disturbance** as a trough in middle tropospheric westerlies runs roughly along Long. 68°E to the north of Lat. 35°N. The associated induced cyclonic circulation lies over southeast Rajasthan & adjoining West Madhya Pradesh in the lower levels. Under their influence:

⇒ Light to moderate scattered to fairly widespread rainfall/snowfall very likely over Western Himalayan Region & adjoining plains on 2nd March, 2023.

**Main Weather Observations**

◆ **Rainfall/thundershowers observed** (from 0830 hours IST to 1730 hours IST of yesterday): at most places over Himachal Pradesh; at isolated places over Jammu & Kashmir and Uttarakhand.

◆ **Significant amount of rainfall recorded** (from 0830 hours IST to 1730 hours IST of yesterday)(in cm): Nil.

◆ **Thunderstorm observed** (from 0830 hours IST to 1730 hours IST of yesterday): at isolated places over East Madhya Pradesh.

◆ **Minimum Temperature Departures (as on 01-03-2023):** Minimum temperatures were **markedly above normal (5.1°C or more)** at a few places over West Rajasthan and at isolated places over West Madhya Pradesh; **appreciably above normal (3.1°C to 5.0°C)** at many places over Punjab, Haryana, Chandigarh & Delhi and East Madhya Pradesh; at a few places over East Rajasthan and Bihar and at isolated places Gujarat Region; **above normal (1.6°C to 3.0°C)** at many places over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Sub-Himalayan West Bengal & Sikkim, Uttarakhand, Uttar Pradesh, Chhattisgarh, Vidarbha and Saurashtra & Kutch; at a few places over Gangetic West Bengal and Tamil Nadu, Puducherry & Karaikal and at isolated places over Madhya Maharashtra and Kerala & Mahe. They were **appreciably below normal (-3.1°C to -5.0°C)** at isolated places over Coastal Andhra Pradesh & Yanam; **below normal (-1.6°C to -3.0°C)** at isolated places over Assam & Meghalaya and Rayalaseema and **near normal** over rest parts of the country. Yesterday, the **lowest minimum temperature of 12.2°C** was reported at **Gaya (Bihar)** over plains of the country.

◆ **Maximum Temperature Departures (as on 01-03-2023):** Maximum temperatures were **markedly above normal (5.1°C or more)** at many places over Punjab, Uttarakhand; at a few places over West Uttar Pradesh; at isolated places over Bihar; **appreciably above normal (3.1°C to 5.1°C )** at many places over East Uttar Pradesh, Rajasthan, Jharkhand, Coastal Karnataka; at a few places over Madhya Pradesh, Gujarat State, Gangetic West Bengal; at isolated places over Vidharbha; at many places over Chhattisgarh, Odisha, Nagaland, Manipur, Mizoram & Tripura; at a few places over Konkan & Goa, Coastal Andhra Pradesh & Yanam, Assam & Meghalaya, Kerala & Mahe. They were **below normal (-1.6°C to -3.0°C)** at isolated places over Himachal Pradesh, Tamilnadu, Puducherry & Karaikal and Andaman & Nicobar Islands and near normal over rest parts of the country. Yesterday, the **highest maximum** temperature of **37.8°C** was reported at **Bramhapuri (Vidharbha)**.

\* Red color warning does not mean "Red Alert" Red color warning means "Take Action".

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(Circle as the National office 4870)



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

- ◆ The **Western Disturbance** as a trough in middle & upper tropospheric westerlies with its axis at 5.8 km above mean sea level now runs roughly along Long. 68°E to the north of Lat. 35°N.
- ◆ The induced cyclonic circulation over Southeast Rajasthan & adjoining West Madhya Pradesh extending upto 1.5 km above mean sea level persists.
- ◆ The cyclonic circulation over south Assam & neighbourhood at 0.9 km above mean sea level persists.
- ◆ A fresh **Western Disturbance** is likely to affect western Himalayan region from 4th March, 2023.

### Weather Forecast for next 5 days \* upto 0830 hours IST of 07th March, 2023

- ◆ Meteorological sub-division wise detailed 5 days precipitation forecast is given in Table-1.
- ⇒ **Northwest India:** Maximum temperatures are likely to rise gradually by 2-4°C during next 4-5 days.
- ⇒ **East India:** Maximum temperatures are likely to rise gradually by 2-4°C during next 4-5 days.
- ⇒ **Central India:** Maximum temperatures are likely to rise by 2-3°C during next 02 days and no significant change thereafter.
- ⇒ **West India:** Maximum Temperatures are likely to rise by 2-4°C during next 02 days and no significant change thereafter.
- ◆ No significant change in maximum Temperatures very likely over rest parts of the country during next 5 days.

### Weather Outlook for subsequent 2 days during 07th-09th March, 2023

- ◆ Light to moderate isolated rainfall likely over Arunachal Pradesh and Nicobar Islands.
- ◆ Dry weather likely over rest parts of the country.



**Weather Warning during next 5 days \***

**02 March (Day 1):** ♦ **Thunderstorm accompanied with lightning** very likely at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad and Sub-Himalayan West Bengal & Sikkim.

**03 March (Day 2):** ♦ No weather warning.

**04 March (Day 3):** ♦ **Squally weather** (wind speed 40-45 kmph gusting to 55 kmph) likely over Comorin area. Fishermen are advised not to venture into these area.

**05 March (Day 4):** ♦ **Squally weather** (wind speed 40-45 kmph gusting to 55 kmph) likely over Comorin area. Fishermen are advised not to venture into these area.

**06 March (Day 5):** ♦ **Squally weather** (wind speed 40-45 kmph gusting to 55 kmph) likely over Comorin area. Fishermen are advised not to venture into these area.

**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 (MORNING)**  
**02-March-2023**

Met-Sub-Division	02-Mar Today	03Mar Fri	04Mar Sat	05Mar Sun	06Mar Mon
1. Andaman & Nicobar Islands	ISOL	ISOL	ISOL	ISOL	ISOL
2. Arunachal Pradesh	ISOL	ISOL	ISOL	ISOL	ISOL
3. Assam & Meghalaya	DRY	DRY	DRY	DRY	DRY
4. N. M. M. & T.	DRY	DRY	DRY	DRY	DRY
5. S.H. West Bengal & Sikkim	SCT	ISOL	ISOL	ISOL	ISOL
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	DRY	DRY	DRY	DRY	DRY
10. East Uttar Pradesh	DRY	DRY	DRY	DRY	DRY
11. West Uttar Pradesh	DRY	DRY	DRY	DRY	DRY
12. Uttarakhand	ISOL	DRY	ISOL	ISOL	ISOL
13. Haryana, Chd & Delhi	DRY	DRY	ISOL	DRY	DRY
14. Punjab	ISOL	DRY	ISOL	DRY	DRY
15. Himachal Pradesh	SCT	ISOL	SCT	ISOL	ISOL
16. J & K and Ladakh	FWS	ISOL	SCT	ISOL	ISOL
17. West Rajsthan	DRY	DRY	ISOL	DRY	DRY
18. East Rajasthan	DRY	DRY	ISOL	DRY	DRY
19. West Madhya Pradesh	DRY	DRY	ISOL	ISOL	ISOL
20. East Madhya Pradesh	DRY	DRY	DRY	ISOL	ISOL
21. Gujarat Region	DRY	DRY	ISOL	ISOL	ISOL
22. Saurashtra & Kutch	DRY	DRY	ISOL	ISOL	ISOL
23. Konkan & Goa	DRY	DRY	DRY	ISOL	ISOL
24. Madhya Maharashtra	DRY	DRY	ISOL	ISOL	ISOL
25. Marathawada	DRY	DRY	DRY	ISOL	ISOL
26. Vidharbha	DRY	DRY	DRY	ISOL	ISOL
27. Chhattisgarh	DRY	DRY	DRY	ISOL	DRY
28. Coastal A. P. & Yanam	DRY	DRY	DRY	DRY	DRY
29. Telangana	DRY	DRY	DRY	DRY	DRY
30. Rayalaseema	DRY	DRY	DRY	DRY	DRY
31. T.N.,Puducherry & Karaikal	DRY	DRY	ISOL	DRY	DRY
32. Coastal Karnataka	DRY	DRY	DRY	DRY	DRY
33. North Interior Karnataka	DRY	DRY	DRY	DRY	DRY
34. South Interior Karnataka	DRY	DRY	DRY	DRY	DRY
35. Kerala & Mahe	DRY	DRY	ISOL	DRY	DRY
36. Lakshadweep	SCT	DRY	DRY	DRY	DRY

**% 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		

\* Red color warning does not mean "Red Alert" Red color warning means "Take Action".

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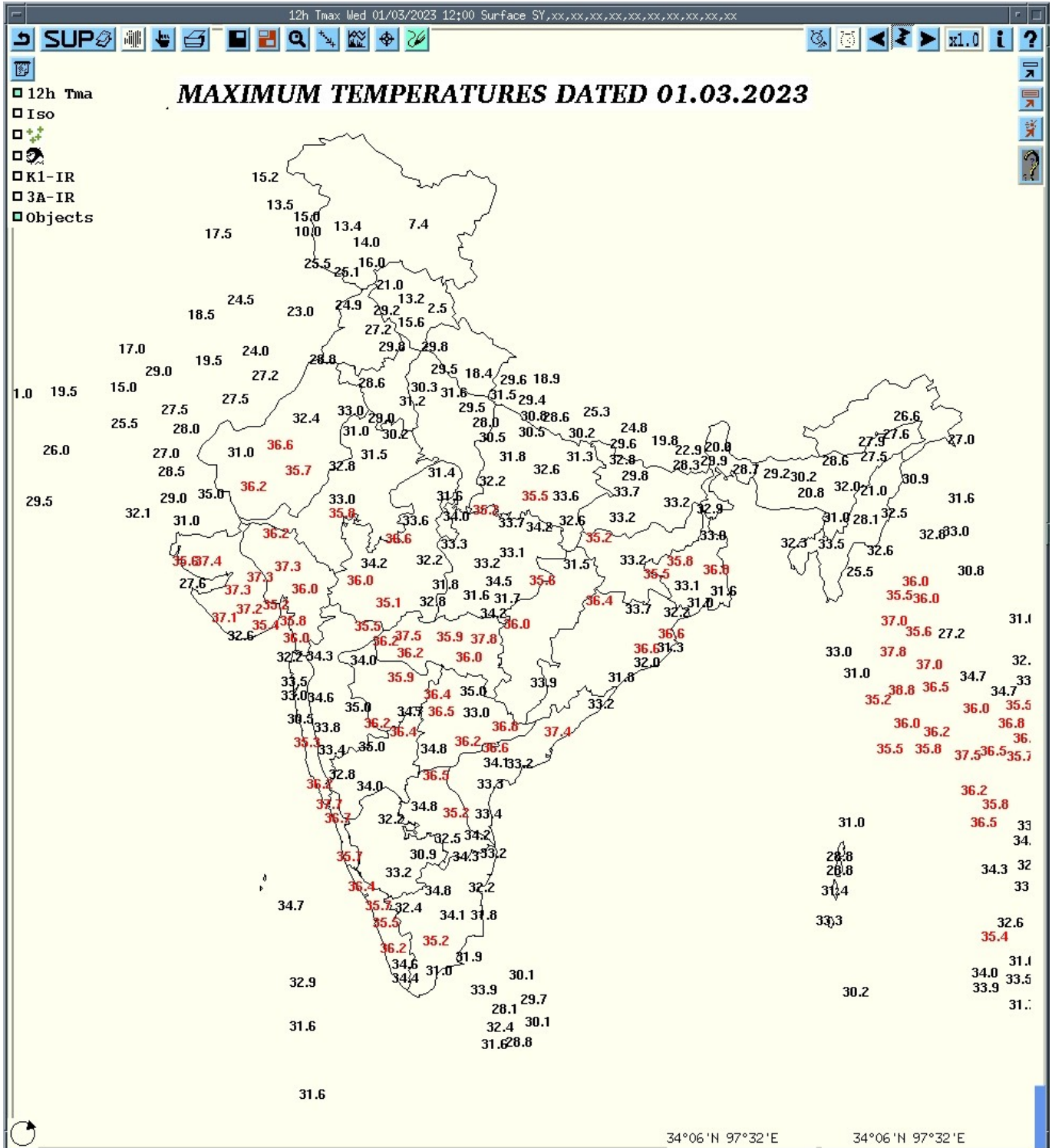
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Fig. 2: Maximum Temperature during past 24 hours



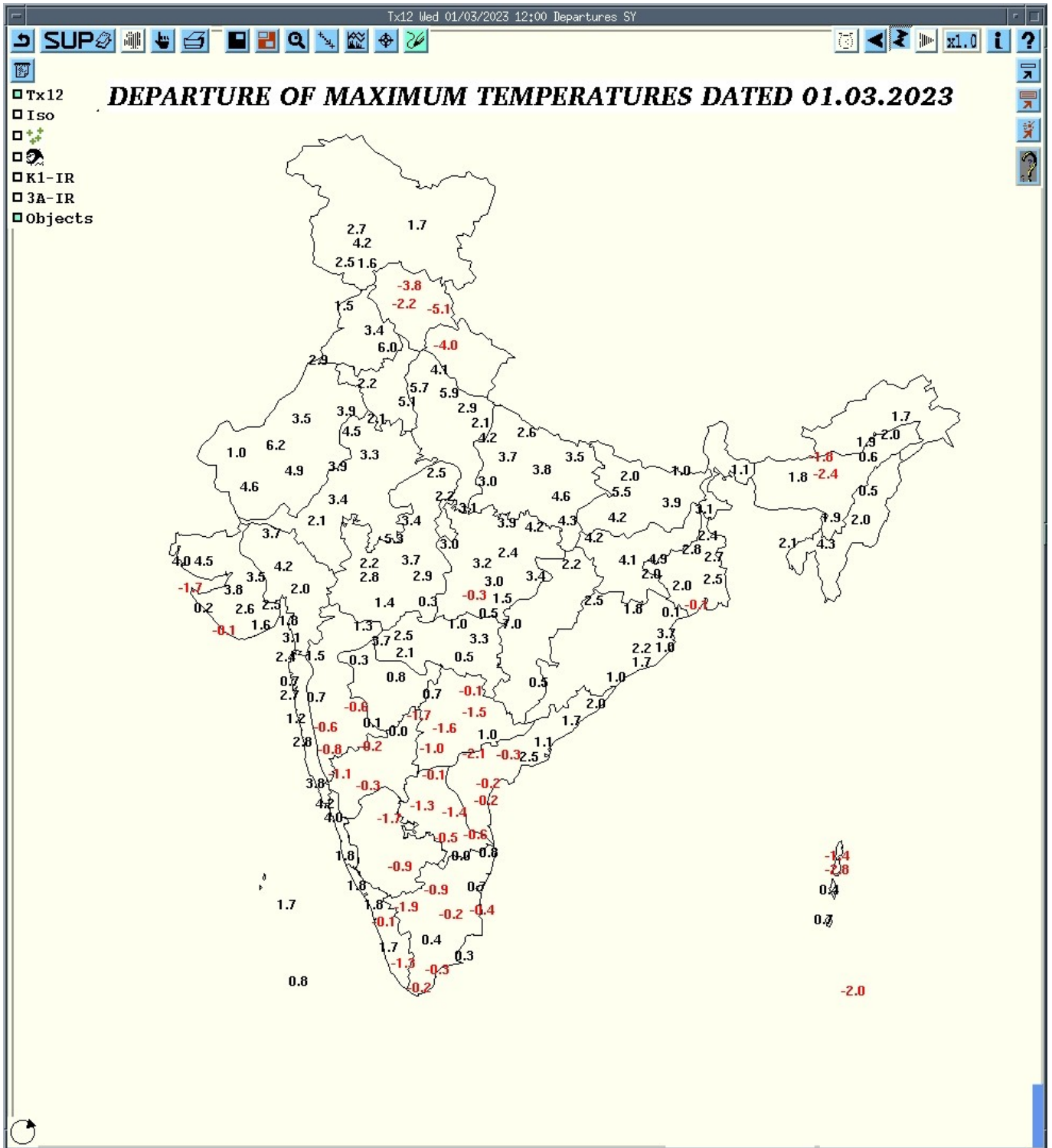
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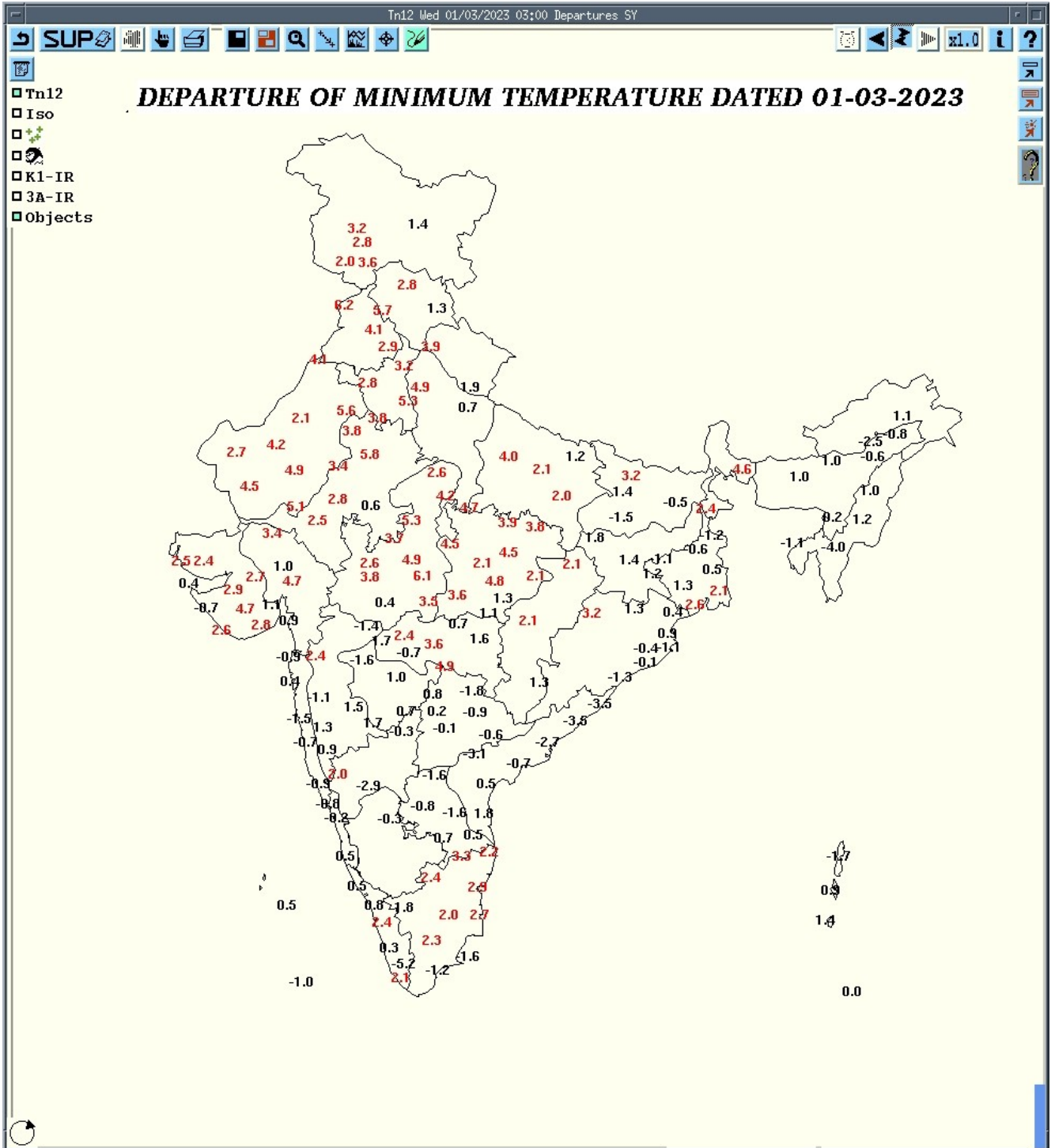
Fig. 4: Departure from Normal of Maximum Temperatures



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Fig. 5: Departure from Normal of Minimum Temperatures



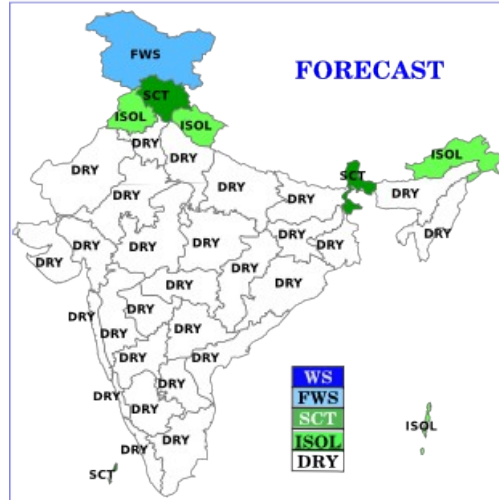
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## Thursday 02 March 2023



**02 March (Day 1):** ♦ **Thunderstorm accompanied with lightning** very likely at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad and Sub-Himalayan West Bengal & Sikkim.

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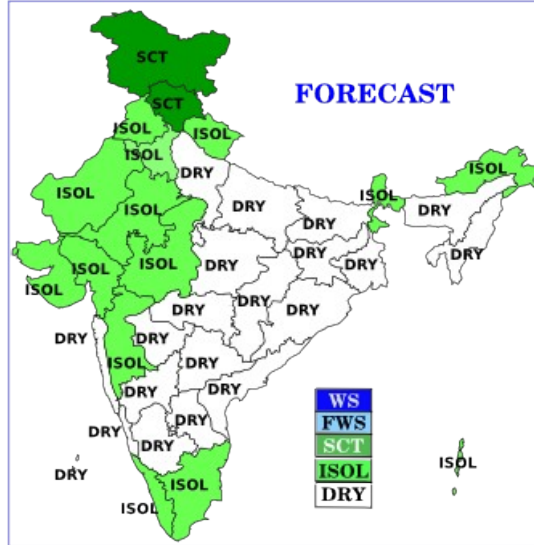
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## Friday 03 March 2023



**03 March (Day 2):** ♦ No weather warning.

## Saturday 04 March 2023



**04 March (Day 3):** ♦ **Squally weather** (wind speed 40-45 kmph gusting to 55 kmph) likely over Comorin area. Fishermen are advised not to venture into these area.

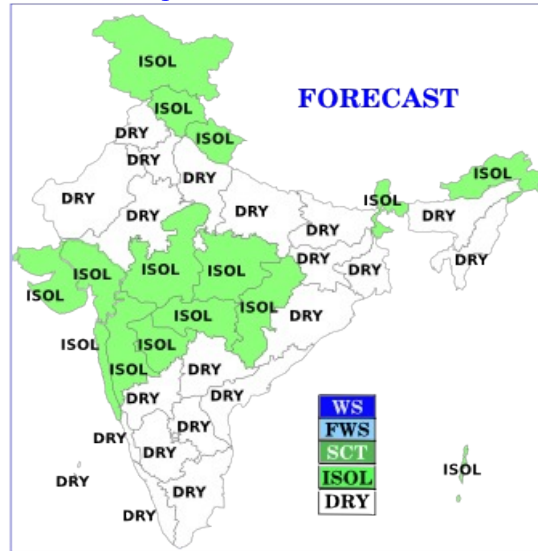
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## Sunday 05 March 2023



**05 March (Day 4):** ♦ Squally weather (wind speed 40-45 kmph gusting to 55 kmph) likely over Comorin area. Fishermen are advised not to venture into these area.

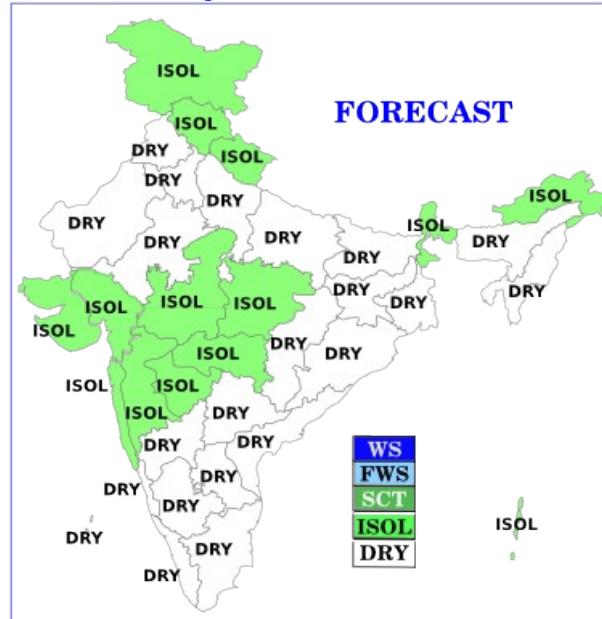
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## Monday 06 March 2023



**06 March (Day 5):** ♦ **Squally weather** (wind speed 40-45 kmph gusting to 55 kmph) likely over Comorin area. Fishermen are advised not to venture into these area.

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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

<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



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)

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