

Monday 20 March 2023

MORNING

Time of Issue: 0800 hours IST

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features

Weather Forecast and Warnings:

- ◆ **Northwest India:** Scattered to fairly widespread light/moderate rainfall with thunderstorm, lightning/gusty winds likely over Western Himalayan Region and Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh & Rajasthan on 20th March. **Isolated hailstorm** also likely over Uttarakhand during 20th-21st March and over Uttar Pradesh & East Rajasthan on 20th March.
- ◆ **West & Central India:** Isolated to scattered light/moderate rainfall with thunderstorm, lightning & gusty winds likely over Gujarat, Maharashtra, Madhya Pradesh, Vidarbha, Chhattisgarh on 20th March, 2023.
- ◆ **East & Northeast India:** Fairly widespread to widespread light/moderate rainfall activity with thunderstorm, lightning & gusty winds likely over Sub-Himalayan West Bengal and Northeast India during 20th-23rd March and scattered to fairly widespread light/moderate rainfall/thundershowers over East India during 20th-21st March. **Isolated heavy rainfall** very likely over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Sub-Himalayan West Bengal & Sikkim during 20th-21st March; over Bihar on 20th March. **Isolated very heavy rainfall** also likely over Assam & Meghalaya on 20th March.
- ◆ Yesterday, **Maximum Temperatures** were in the range of 24-28°C over Punjab, Haryana, Chandigarh, Delhi, West Uttar Pradesh, Jharkhand, Chhattisgarh, Odisha, North-Coastal Andhra Pradesh, West Bengal and Northeast India and 29-33°C over rest parts of the country outside Tamil Nadu, Kerala, and Rayalaseema where Temperatures are 34-38°C. **Maximum Temperatures** are below normal by 4-8°C over most parts of the country except over west coast, interior Tamil Nadu where it is below normal by 1-3°C and over Kutch and coastal Tamil Nadu where it is above normal by 1-3°C.

Main Weather Observations

- ◆ **Rainfall/thundershowers observed** (from 0830 hours IST to 1730 hours IST of yesterday): **at most places over** Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura; **at many places over** Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Sub-Himalayan West Bengal & Sikkim; **at a few places over** Haryana, Chandigarh & Delhi, East Madhya Pradesh, Jharkhand, Gangetic West Bengal, Odisha, Arunachal Pradesh, Tamil Nadu, Puducherry & Karaikal and **at isolated places over** Himachal Pradesh, Uttarakhand, West Uttar Pradesh, East Uttar Pradesh, West Rajasthan, East Rajasthan, West Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Saurashtra & Kutch, Coastal Andhra Pradesh & Yanam and Rayalaseema.
- ◆ **Significant amount of rainfall recorded** (from 0830 hours IST to 1730 hours IST of yesterday):(in cm): **Delhi:** Ayanagar-4 and Palam-3; **East Madhya Pradesh:** Mandla-4 and Khajuraho-1; **Saurashtra & Kutch:** Kandla-2; **Gangetic West Bengal:** Diamond Harbour-2; **Sub-Himalayan West Bengal & Sikkim:** Jalpaiguri-2 and Kalimpong-1; **Assam & Meghalaya:** Shillong & Halflong-2 each and Lumbding-1; **Tamil Nadu, Puducherry & Karaikal:** Cuddalore-2; **Vidarbha:** Amraoti-1.
- ◆ **Heavy rainfall observed** (from 0830 hours IST to 1730 hours IST of yesterday):Nil.
- ◆ **Thunderstorm observed** (from 0830 hrs IST of yesterday to 0530 hours IST of today): at isolated places over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Uttarakhand, Haryana, Chandigarh & Delhi, Uttar Pradesh, Rajasthan, Bihar, Odisha, Chhattisgarh, Saurashtra & Kutch, Vidarbha, Jharkhand, West Bengal & Sikkim, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam and Tamil Nadu, Puducherry & Karaikal.
- ◆ **Hailstorm observed** (from 0830 hours IST to 1730 hours IST of yesterday): at isolated places over Vidarbha, Chhattisgarh and Madhya Pradesh.
- ◆ **Thundersquall observed** (from 0830 hours IST to 1730 hours IST of yesterday): at isolated places over Madhya Pradesh.
- ◆ **Minimum Temperature Departures (as on 19-03-2023):** Minimum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Saurashtra & Kutch; **above normal (1.6°C to 3.0°C)** at many places over Bihar, Jharkhand and Andaman & Nicobar Islands; at isolated places over Sub-Himalayan West Bengal & Sikkim and Tamilnadu, Puducherry & Karaikal. They were **markedly below normal (-5.1°C or less)** at isolated places over Odisha and Vidarbha; **appreciably below normal (-3.1°C to -5.0°C)** at many places over Marathwada and Telangana; at isolated places over Madhya Pradesh, Gangetic West Bengal, Coastal Andhra Pradesh & Yanam and North Interior Karnataka; **below normal (-1.6°C to -3.0°C)** at many places over Rayalaseema; at a few places over Chhattisgarh and Madhya Maharashtra; at isolated places over Haryana, Chandigarh & Delhi, Rajasthan and Kerala & Mahe and **near normal** over rest parts of the country. **Yesterday, the lowest minimum temperature of 12.5°C** was reported at **Ridge (Delhi)** over plains of the country.
- ◆ **Maximum Temperature Departures (as on 19-03-2023):** Maximum temperatures were **above normal (1.6°C to 3.0°C)** at many places over Coastal Karnataka. They were **markedly below normal (-5.1°C or less)** at most places over East Madhya Pradesh, Chhattisgarh, Bihar, Sub-Himalayan West Bengal & Sikkim, Odisha, Nagaland, Manipur, Mizoram & Tripura, Telangana; at many places over West Madhya Pradesh, Vidarbha, Jharkhand, Gangetic West Bengal, Assam & Meghalaya, Madhya Maharashtra, Marathwada; at a few places over East Rajasthan, Coastal Andhra Pradesh & Yanam; at isolated places over Uttarakhand, West Rajasthan, Gujarat Region; **appreciably below normal (-3.1°C to -5.1°C)** at most places over Uttar Pradesh, Rayalaseema; at many places over Haryana, Chandigarh & Delhi, North Interior Karnataka; at a few places over Himachal Pradesh, Saurashtra & Kutch, South Interior Karnataka; at isolated places over Tamil Nadu, Puducherry & Karaikal; **below normal (-1.6°C to -3.0°C)** at a few places over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Arunachal Pradesh; at isolated places over Andaman & Nicobar Islands and **near normal** over rest parts of the country. **Yesterday, the highest maximum temperature of 37.9°C** was reported at **Madurai (Tamil Nadu)**.

* 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

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Meteorological Analysis (Based on 0530 hours IST)

- ◆ The **Western Disturbance** as a cyclonic circulation over Afghanistan & neighbourhood at 5.8 km above mean sea level persists.
- ◆ The trough in middle & upper tropospheric westerlies with its axis 5.8 km above mean sea level roughly along Long. 78°E to the north of Lat. 22°N persists.
- ◆ The **cyclonic circulation** over East Rajasthan & adjoining West Madhya Pradesh extending upto 1.5 km above mean sea level persists.
- ◆ The **trough** from the above cyclonic circulation over East Rajasthan & adjoining West Madhya Pradesh to Northwest Bay of Bengal across north Chhattisgarh, Jharkhand & Gangetic West Bengal at 0.9 km above mean sea level persists.
- ◆ The **cyclonic circulation** over West Rajasthan & neighbourhood at 1.5 km above mean sea level persists.
- ◆ The **trough** from north Punjab to the above cyclonic circulation over West Rajasthan & neighbourhood at 1.5 km above mean sea level persists.
- ◆ The **trough/wind discontinuity** from South Interior Karnataka to Jharkhand from South Interior Karnataka to west Vidarbha across North Interior Karnataka & Marathwada at 0.9 km above mean sea level persists.

Weather Forecast for next 5 days * upto 0830 hours IST of 25th March, 2023

- ◆ **Meteorological sub-division wise detailed 5 days temperature forecast is given in Table-1.**
- ◆ **Central & East India:** No significant change in maximum temperatures very likely during next 24 hours and rise by 3-5°C thereafter.
- ◆ **Maharashtra:** Rise in maximum temperatures by 3-5°C very likely 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 25th-27th March, 2023

- ◆ Scattered to fairly widespread light/moderate rainfall/thundershowers likely over Northeast India, Western Himalayan Region & adjoining plains of Northwest India. Isolated to scattered light rainfall/thundershowers likely over south Peninsular India.

Weather Warning during next 5 days *

20 March (Day 1): ♦ **Heavy to very heavy rainfall** very likely at isolated places over south Assam & Meghalaya; **Heavy rainfall** at isolated places over Bihar, Arunachal Pradesh and Nagaland, Manipur, Mizoram & Tripura.

♦ **Thunderstorm accompanied with lightning, hail & gusty wind (30-40 kmph)** very likely at isolated places over West Uttar Pradesh; **with lightning & hail** over Uttarakhand, East Uttar Pradesh, East Rajasthan; **with lightning & gusty wind (30-40 kmph)** over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Punjab, Haryana, Chandigarh & Delhi, West Rajasthan, Odisha, Jharkhand, Sub-Himalayan West Bengal & Sikkim, Coastal Andhra Pradesh & Yanam, Rayalaseema, Kerala & Mahe; **with lightning** over Bihar, Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Madhya Pradesh, Vidarbha, Chhattisgarh, Gangetic West Bengal, Gujarat state.

21 March (Day 2): ♦ **Heavy rainfall** very likely at isolated places over Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.

♦ **Thunderstorm accompanied with lightning & hail** very likely at isolated places over Uttarakhand; **with lightning & gusty wind (30-40 kmph)** over Jharkhand; **with lightning** over Bihar, Arunachal Pradesh, Assam & Meghalaya, Arunachal Pradesh and Nagaland, Manipur, Mizoram & Tripura, Gujarat state, East Uttar Pradesh, East Madhya Pradesh, Vidarbha, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim.

22 March (Day 3): ♦ **Thunderstorm accompanied with lightning** likely at isolated places over Gujarat state, Telangana, Jharkhand.

23 March (Day 4): ♦ **Thunderstorm accompanied with lightning** likely at isolated places over Gujarat state, Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, West Rajasthan.

24 March (Day 5): ♦ **Thunderstorm accompanied with lightning** likely at isolated places over Gujarat state, Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, West 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.

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

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

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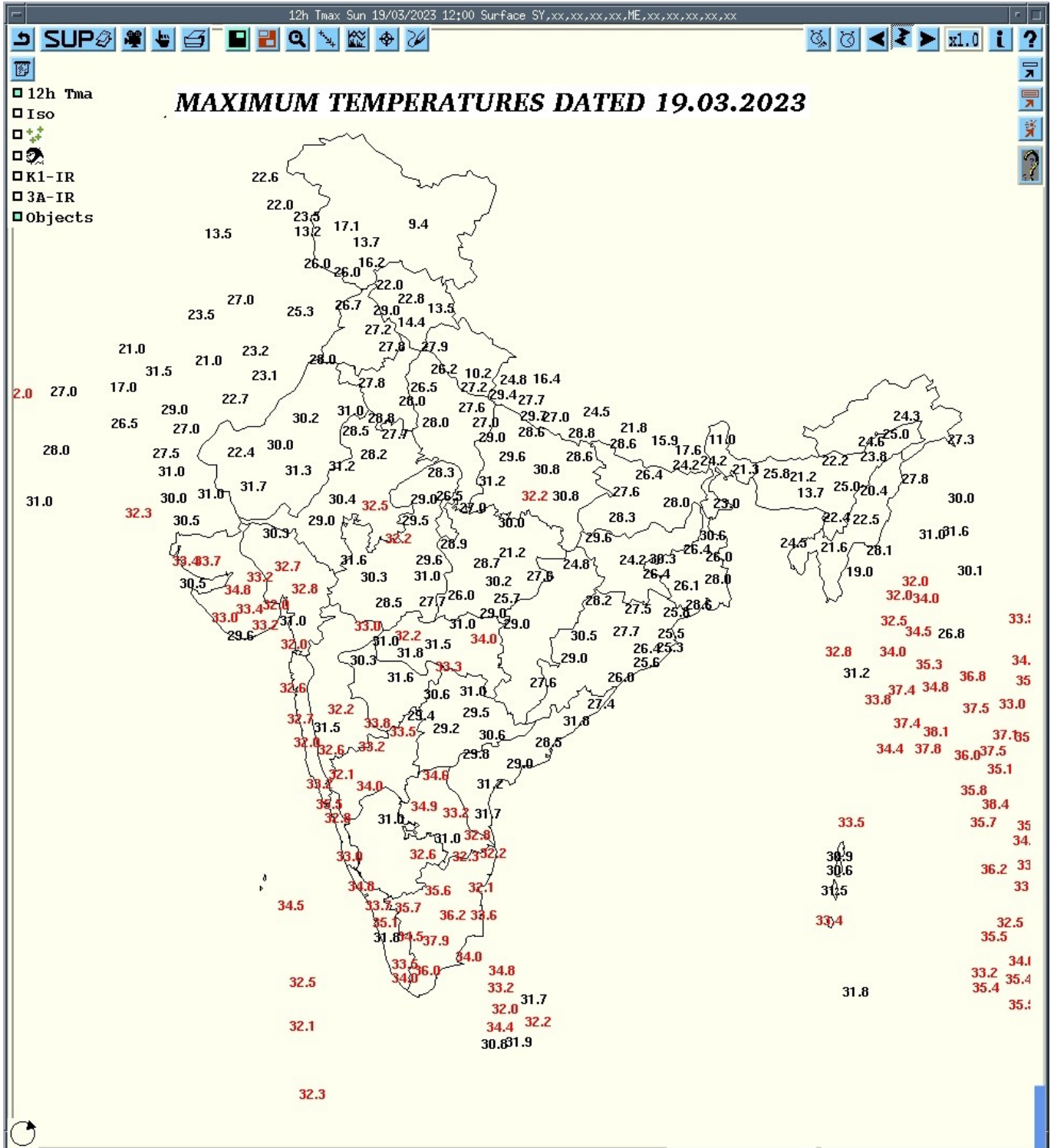
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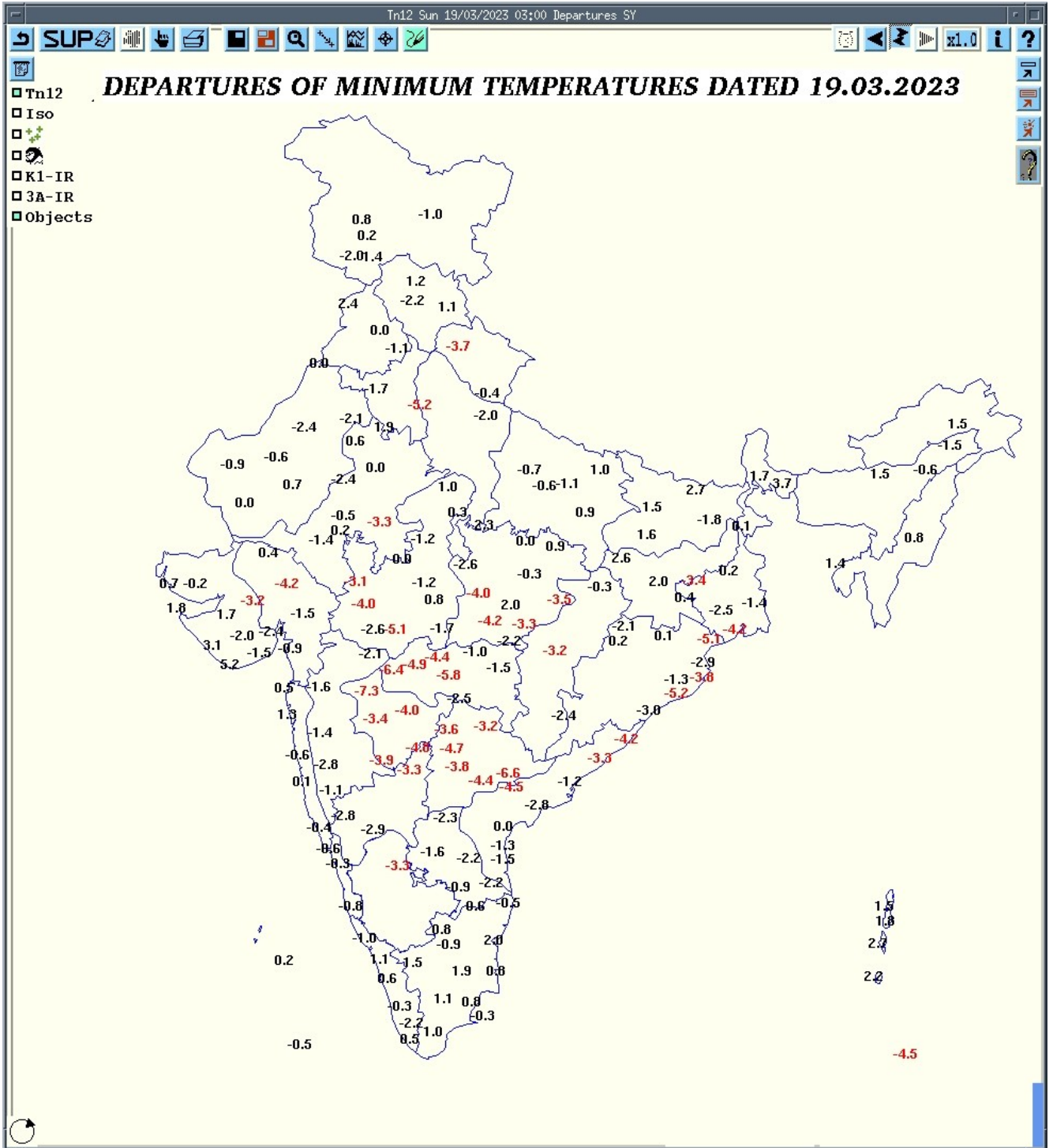
Fig. 2: Maximum Temperature during past 24 hours



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Fig. 5: Departure from Normal of Minimum Temperatures



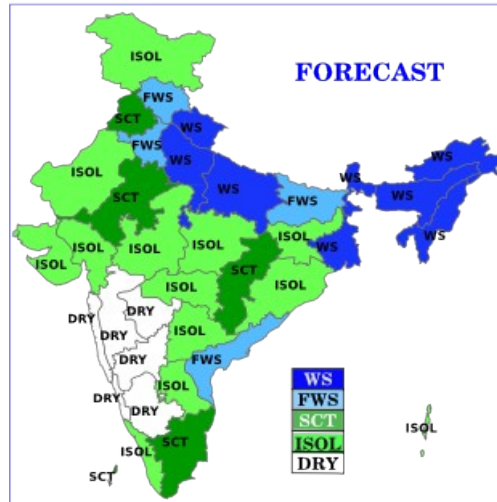
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(Created by the MeteoApp 1.0.0)

Monday 20 March 2023



20 March (Day 1): ♦ **Heavy to very heavy rainfall** very likely at isolated places over south Assam & Meghalaya; **Heavy rainfall** at isolated places over Bihar, Arunachal Pradesh and Nagaland, Manipur, Mizoram & Tripura.

♦ **Thunderstorm accompanied with lightning, hail & gusty wind (30-40 kmph)** very likely at isolated places over West Uttar Pradesh; **with lightning & hail** over Uttarakhand, East Uttar Pradesh, East Rajasthan; **with lightning & gusty wind (30-40 kmph)** over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Punjab, Haryana, Chandigarh & Delhi, West Rajasthan, Odisha, Jharkhand, Sub-Himalayan West Bengal & Sikkim, Coastal Andhra Pradesh & Yanam, Rayalaseema, Kerala & Mahe; **with lightning** over Bihar, Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Madhya Pradesh, Vidarbha, Chhattisgarh, Gangetic West Bengal, Gujarat state.

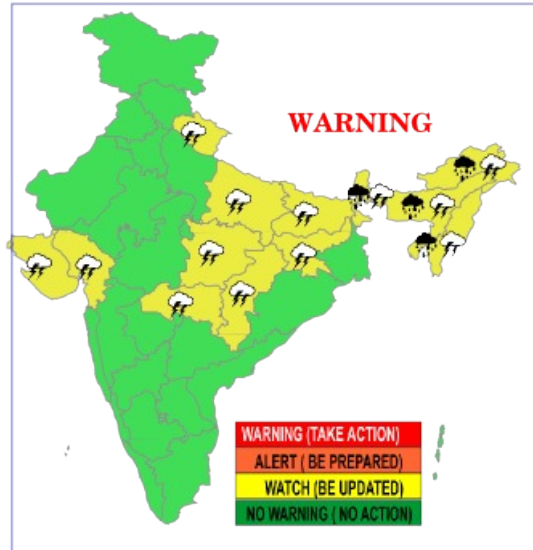
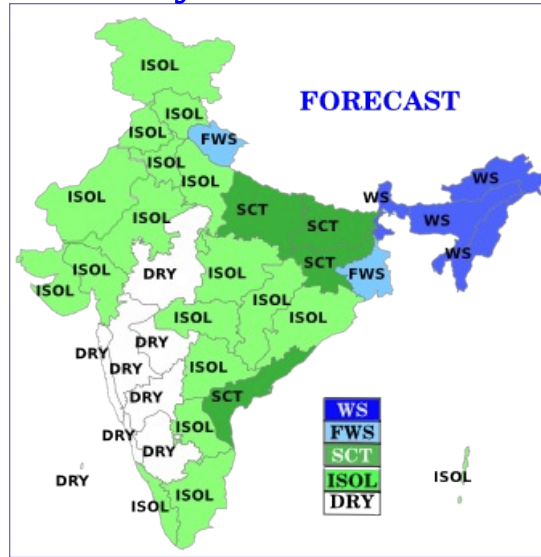
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(Circle as the National flag (2020))

Tuesday 21 March 2023



21 March (Day 2): ♦ **Heavy rainfall** very likely at isolated places over Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.

♦ **Thunderstorm accompanied with lightning & hail** very likely at isolated places over Uttarakhand; **with lightning & gusty wind (30-40 kmph)** over Jharkhand; **with lightning** over Bihar, Arunachal Pradesh, Assam & Meghalaya, Arunachal Pradesh and Nagaland, Manipur, Mizoram & Tripura, Gujarat state, East Uttar Pradesh, East Madhya Pradesh, Vidarbha, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim.

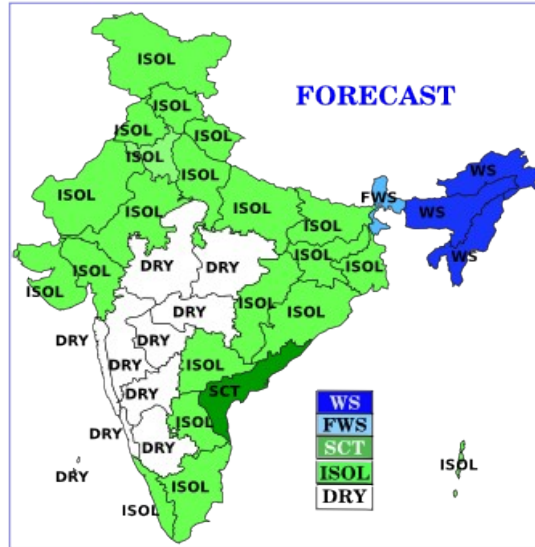
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Wednesday 22 March 2023



22 March (Day 3): ♦ **Thunderstorm accompanied with lightning** likely at isolated places over Gujarat state, Telangana, Jharkhand.

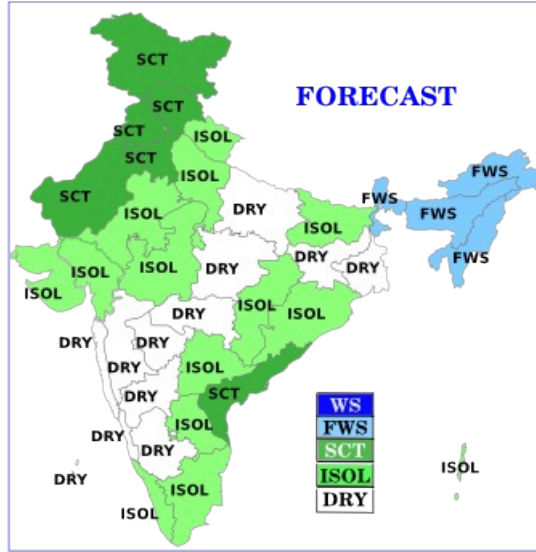
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Thursday 23 March 2023



23 March (Day 4): ⚡**Thunderstorm accompanied with lightning** likely at isolated places over Gujarat state, Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, West Rajasthan.

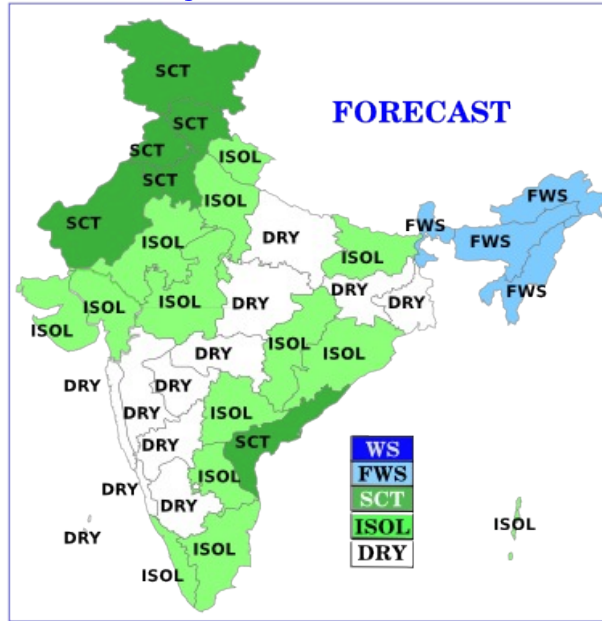
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Friday 24 March 2023



24 March (Day 5): ♦Thunderstorm accompanied with lightning likely at isolated places over Gujarat state, Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, West Rajasthan.

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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

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



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°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 62-87 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 or contact : +91 11 24631913, 24643965, 24629798

(Created by the Meteorology Dept.)