



Friday 17 February 2023

MORNING

Time of Issue: 0730 hours IST

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features

Weather Forecast and Warnings:

- ◆ Jet Stream Winds of the order of 130 knots are prevailing between Lat. 30-35°N over the Indian region. Under their influence; light isolated rainfall/snowfall very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Himachal Pradesh on 17th February, 2023.
- ◆ A fresh Western Disturbance likely to affect the Western Himalayan Region from 18th February. Under its influence:
 - (i) Light isolated rainfall/snowfall very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad on 18th and light to moderate scattered/fairly widespread rainfall/snowfall over the region during 19th-21st February.
 - (ii) Light isolated to scattered rainfall/snowfall over Himachal Pradesh and Uttarakhand during 19th-21st February, 2023.
- ◆ Light isolated rainfall likely over Arunachal Pradesh on 20th & 21st and Assam & Meghalaya and Nagaland on 20th February.
- ◆ Light isolated to scattered rainfall very likely over Andaman & Nicobar Islands during next 5 days.
- ◆ No significant weather very likely over rest parts of the country during next 5 days.

Minimum Temperature Forecast:

- ◆ Minimum Temperatures are likely to rise gradually by 3-5°C over many parts of East India and by 2-4°C over many parts of Northwest & Central India and Maharashtra during next 5 days.

Main Weather Observations

- ◆ **Rainfall/snowfall observed** (from 0830 hours IST to 1730 hours IST of yesterday): Nil.
- ◆ **Fog observed**(at 0530 hours IST of today): **Dense to Very Dense Fog** in isolated pockets over Haryana; **Moderate Fog** in isolated pockets over Punjab and **Shallow Fog** in isolated pockets over Bihar and Tripura.
- ◆ **Visibility recorded** (at 0530 hours IST of today)(in metre): **Haryana:** Hissar-25; **Punjab:** Amritsar-200; **Delhi:** Palam & Safdarjung-500 each; **Bihar:** Purnea-500; **Tripura:** Kailashahar-500.
- ◆ **Minimum Temperature Departures (as on 16-02-2023):** Minimum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at a few places over Himachal Pradesh and West Rajasthan; **above normal (1.6°C to 3.0°C)** at most places over Punjab; at many places over Uttarakhand, East Rajasthan and Andaman 7 Nicobar Islands; at a few places over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad and Saurashtra & Kutch and at isolated places over Gujarat Region, Konkan & Goa and West Madhya Pradesh. They were **appreciably below normal (-3.1°C to -5.0°C)** at many places over Rayalaseema; at a few places over Vidarbha and Telangana; at isolated places over Odisha and Tamil Nadu, Puducherry & Karaikal; **below normal (-1.6°C to -3.0°C)** at most places over Coastal & South Interior Karnataka; at many places over Nagaland, Manipur, Mizoram & Tripura and North Interior Karnataka; at a few places over Bihar, East Madhya Pradesh, Marathwada and Kerala & Mahe and **near normal** over rest parts of the country. Yesterday, the **lowest minimum temperature** of 8.0°C was reported at **Jalgaon (Madhya Maharashtra)** over plains of the country.
- ◆ **Maximum Temperature Departures (as on 16-02-2023):** Maximum temperatures were **markedly above normal (5.1°C or more)** at most places over Himachal Pradesh and Rajasthan; at many places over Gujarat Region; at a few places over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Uttarakhand, Konkan & Goa and Coastal Karnataka; **appreciably above normal (3.1°C to 5.0°C)** at a few places over Punjab, Haryana, Chandigarh & Delhi and Madhya Pradesh and at isolated places over Vidarbha, Sub-Himalayan West Bengal & Sikkim and Assam & Meghalaya; **above normal (1.6°C to 3.0°C)** at most places over Marathwada; at many places over Madhya Maharashtra; at a few places over Coastal Andhra Pradesh & Yanam, Odisha and Nagaland, Manipur, Mizoram & Tripura and at isolated places over West Uttar Pradesh and Gangetic West Bengal. They were **below normal (-1.6°C to -3.0°C)** at isolated places over Tamil Nadu, Puducherry & Karaikal and near normal over rest parts of the country. Yesterday, the **highest maximum temperature** of 40.3°C was reported at **Bhuj (Saurashtra & Kutch)**.

* 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 **cyclonic circulation** over East Bangladesh & neighbourhood extending upto 3.1 km above mean sea level persists.
- ◆ **Jet Stream Winds** of the order of 130 knots are prevailing between Latitudes 30-35°N over the Indian Region.
- ◆ A fresh **Western Disturbance** likely to affect the Western Himalayan Region from 18th February, 2023.

Weather Forecast for next 5 days * upto 0830 hours IST of 22nd February, 2023

- ◆ Meteorological sub-division wise detailed 5 days precipitation forecast is given in Table-1.
- ◆ Gradual rise in minimum temperatures by 2-4°C over many parts of Northwest, Central India and Maharashtra during next 5 days.
- ◆ Gradual rise in minimum temperatures by 3-5°C over many parts of East India during next 5 days.
- ◆ No significant change in minimum temperatures very likely over rest parts of the country during next 5 days.
- ◆ **Shallow to Moderate Fog** very likely in isolated pockets over coastal Odisha and Assam & Meghalaya in night/morning hours during next 24 hours.

Weather Outlook for subsequent 2 days during 22nd-24th February, 2023

- ◆ Light/moderate isolated to scattered rainfall/snowfall likely over Western Himalayan Region and light isolated to scattered rainfall over Arunachal Pradesh and Andaman & Nicobar Islands.
- ◆ Dry weather likely over rest parts of the country.



Weather Warning during next 5 days *

17 Feb (Day 1): ♦ No Weather Warning.

18 Feb (Day 2): ♦ No Weather Warning.

19 Feb (Day 3): ♦ No Weather Warning.

20 Feb (Day 4): ♦ No Weather Warning.

21 Feb (Day 5): ♦ No Weather Warning.

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)
17-February-2023

Met-Sub-Division	17-Feb Today	18Feb Sat	19Feb Sun	20Feb Mon	21Feb Tue
1. Andaman & Nicobar Islands	SCT	SCT	ISOL	ISOL	ISOL
2. Arunachal Pradesh	DRY	DRY	ISOL	ISOL	ISOL
3. Assam & Meghalaya	DRY	DRY	DRY	ISOL	DRY
4. N. M. M. & T.	DRY	DRY	DRY	ISOL	DRY
5. S.H. West Bengal & Sikkim	DRY	DRY	ISOL	ISOL	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	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	DRY	DRY	DRY	ISOL	ISOL
13. Haryana, Chd & Delhi	DRY	DRY	DRY	DRY	DRY
14. Punjab	DRY	DRY	DRY	DRY	ISOL
15. Himachal Pradesh	ISOL	DRY	ISOL	SCT	SCT
16. J & K and Ladakh	ISOL	ISOL	SCT	FWS	WS
17. West Rajsthan	DRY	DRY	DRY	DRY	DRY
18. East Rajasthan	DRY	DRY	DRY	DRY	DRY
19. West Madhya Pradesh	DRY	DRY	DRY	DRY	DRY
20. East Madhya Pradesh	DRY	DRY	DRY	DRY	DRY
21. Gujarat Region	DRY	DRY	DRY	DRY	DRY
22. Saurashtra & Kutch	DRY	DRY	DRY	DRY	DRY
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	DRY	DRY	DRY	DRY	DRY
27. Chhattisgarh	DRY	DRY	DRY	DRY	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	DRY	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	DRY	DRY	DRY
36. Lakshadweep	DRY	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		

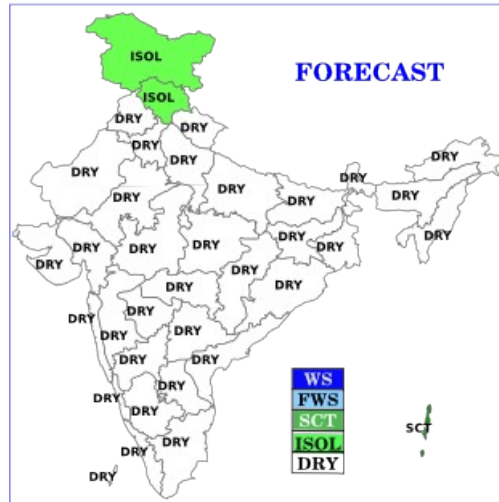
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Friday 17 February 2023



17 Feb (Day 1): ♦ No Weather Warning.



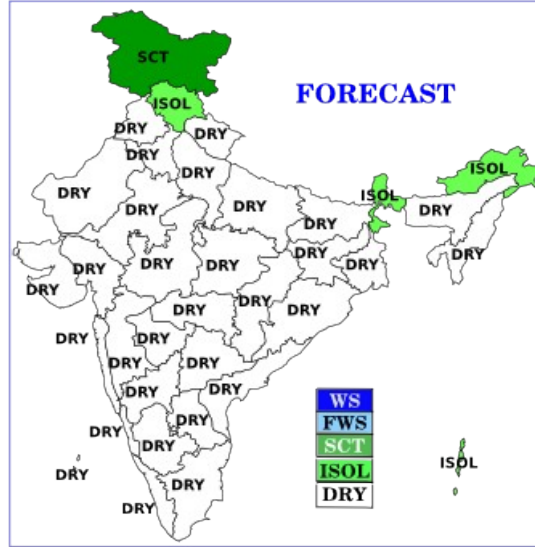
Saturday 18 February 2023



18 Feb (Day 2): ♦ No Weather Warning.



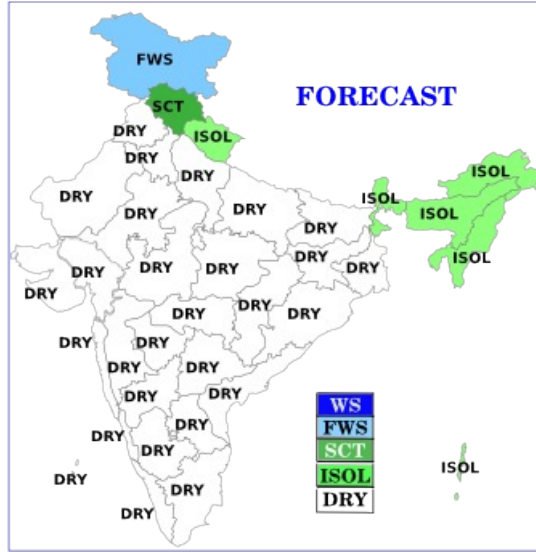
Sunday 19 February 2023



19 Feb (Day 3): ♦ No Weather Warning.



Monday 20 February 2023



20 Feb (Day 4): ♦ No Weather Warning.

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 एंवम् सिक्किम
- 6 पश्चिम गंगोय बंगाल
- 7 ओडिशा
- 8 झारखंड
- 9 बिहार
- 10 पूर्वी उत्तर प्रदेश
- 11 पश्चिम उत्तर प्रदेश
- 12 उत्तराखंड
- 13 हरियाणा चंडिगढ़ एंवम् दिल्ली
- 14 पंजाब
- 15 हिमाचल प्रदेश
- 16 जम्मू एंवम् कश्मीर एंवम् लद्दाख
- 17 पश्चिम राजस्थान
- 18 पूर्वी राजस्थान
- 19 पश्चिम मध्य प्रदेश
- 20 पूर्वी मध्य प्रदेश
- 21 गुजरात क्षेत्र
- 22 सौराष्ट्र एंवम् कच्छ
- 23 कोंकण एंवम् गोवा
- 24 मध्य महाराष्ट्र
- 25 मराठावाडा
- 26 विदर्भ
- 27 छत्तीसगढ़
- 28 तटीय आंध्र प्रदेश एवं यनम
- 29 तेलंगाना
- 30 रायलसीमा
- 31 तमिलनाडु, पुदुचेरी एंवम् कराईकल
- 32 तटिय कर्नाटक
- 33 आंतरिक उत्तरी कर्नाटक
- 34 आंतरिक दक्षिणी कर्नाटक
- 35 केरल एंवम् 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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(Copies to the Media upto 1070)

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)

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