



Government of India
Ministry of Earth Sciences
India Meteorological Department



Press Release

Date: 13th January, 2025

Time of Issue: 1300 hours IST

Subject: (i) In association with a fresh Western disturbance, wet spell likely over Northwest & adjoining central India on 15th & 16th January, 2025.
(ii) Dense fog conditions likely to continue over Northwest India during the week.

i. Realised weather during past 24 hours till 0830 hours IST of today (Annexure I)

- ❖ **Cold day to severe cold day conditions** prevailed in isolated pockets of East Rajasthan; **Cold wave** in isolated pockets of West Rajasthan.
- ❖ **Cold wave conditions** prevailed in isolated pockets of Himachal Pradesh.
- ❖ **Dense to very dense fog (visibility < 50 m)** reported in isolated pockets of Punjab, Haryana, Rajasthan, Uttar Pradesh and **dense fog (visibility 50-199 m)** reported in isolated pockets of Himachal Pradesh and Madhya Maharashtra.
- ❖ **Visibility reported at 0830 hours IST (<200 m)** (in meter): **Punjab:** Amritsar 0; **Haryana:** Hisar, Bhiwani 0 each; **Rajasthan:** Pilani, Ganganagar, Jaisalmer 0 each; **Uttar Pradesh:** Hardoi, Fursatganj, Prayagraj 0 each, Lucknow 200; **Himachal Pradesh:** Sundernagar 50, Bilaspur 100; **Madhya Maharashtra:** Mahabaleshwar 50.

Weather Systems, Forecast and warning (Annexure II & III):

- ❖ A **cyclonic circulation** lies over Comorin area & neighbourhood in lower tropospheric levels. Under its influence,
 - ✓ Light to moderate rainfall accompanied with thunderstorm, lightning very likely at isolated places over Tamil Nadu, Puducherry & Karaikal during 13th-15th and Kerala & Mahe during 13th-16th; Coastal Andhra Pradesh & Yanam & Rayalaseema on 13th & 14th January with Isolated **heavy rainfall** likely over Tamilnadu, Puducherry & Karaikal on 14th and Kerala & Mahe on 15th January.
- ❖ A fresh **western disturbance** is likely to affect northwest India from the night of 14th January, 2025. Under its influence,
 - ✓ Isolated to scattered rainfall/snowfall activity likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad & Himachal Pradesh during 16th-19th; Uttarakhand during 15th-19th and Isolated rainfall activity over Punjab, Haryana, Chandigarh, Uttar Pradesh, East Rajasthan on 15th & 16th and West Rajasthan on 15th January. Isolated hailstorm also likely over Punjab and Haryana on 15th January.
 - ✓ Thunderstorm activity at isolated places likely over Madhya Pradesh on 15th January.
- ❖ Light to moderate rainfall accompanied with thunderstorm, lightning very likely at isolated places over Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura on 13th January.

ii. Temperature, Cold Wave and Fog Forecast:

Temperature Conditions during past 24 hours till 0830 hours IST of today (Annexure IV):

- ❖ Minimum temperatures are **below 0°C** over many parts of Jammu, Kashmir & Ladakh; **2-5°C** over some parts of Himachal Pradesh; **6-12°C** over many parts of Northwest & Central India; **12-18°C** over many parts of East & West India. Today, the lowest minimum temperature of **4.7°C** is reported at **Amritsar (Punjab)** over the plains of the country.

- ❖ During the past 24 hours, there has been **fall in minimum temperatures by 1-5°C** in some parts over Uttarakhand, West Uttar Pradesh, Madhya Pradesh; in isolated pockets of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, East Rajasthan and **rise by 1-3°C** in some parts of Bihar, Saurashtra & Kutch, Odisha West Bengal & Sikkim, Coastal Andhra Pradesh & Yanam, Tamil Nadu; in isolated pockets of Chhattisgarh and Madhya Maharashtra.
- ❖ Minimum temperatures are **below normal (-1°C to -3°C)** at isolated places over East Rajasthan. These are **markedly above normal (5°C or more)** at isolated places over Bihar, Konkan & Goa; **appreciably above normal (3°C to 5°C)** at isolated places over East Uttar Pradesh, East Madhya Pradesh, Chhattisgarh, Jharkhand, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Vidarbha, Madhya Maharashtra, Coastal Andhra Pradesh & Yanam, Rayalaseema, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Andaman & Nicobar Islands; **above normal (1°C to 3°C)** at isolated places over Punjab, West Uttar Pradesh, Haryana-Chandigarh-Delhi, West Rajasthan, Gujarat state, Telangana, Gangetic West Bengal, Coastal Karnataka, Odisha and near normal over rest part of the country.

Forecast of temperature:

- ❖ No significant change in minimum temperatures likely over Northwest India during next 48 hours and gradual rise by 2-4°C thereafter.
- ❖ No significant change in minimum temperatures likely over Central India and Maharashtra during next 24 hours and gradual rise by 2-3°C during subsequent 2-3 days.
- ❖ No significant change in minimum temperatures likely over East India during next 5 days.

Cold Wave Warnings:

Cold wave conditions very likely in isolated pockets over Himachal Pradesh on 13th & 14th January.

Dense Fog Warnings:

Dense to very Dense fog Condition very likely to continue to prevail during night/early morning hours in many parts of Punjab, Haryana-Chandigarh on 13th & in isolated pockets on 14th & 15th; Uttar Pradesh till 15th January.

Dense fog conditions very likely to continue to prevail during night/early morning hours in isolated pockets of West Rajasthan during 13th-15th & on 17th & 18th; East Rajasthan on 13th, 14th, 16th, 17th, 18th; Bihar till 14th; Uttarakhand till 15th; Punjab, Haryana Chandigarh & Uttar Pradesh during 16th- 20th; Sub-Himalayan West Bengal & Sikkim & Odisha till 15th; Himachal Pradesh, Assam & Meghalaya & Nagaland, Manipur, Mizoram & Tripura till 16th January.

Cold Day Warnings:

Cold day conditions very likely in isolated pockets of Haryana, Chandigarh on 13th & 14th; Rajasthan and West Madhya Pradesh on 13th January.

Ground Frost Warnings:

Ground frost conditions very likely in isolated pockets of Himachal Pradesh and Uttarakhand on 13th & 14th January.

Fishermen Warnings (Annexure V):

Fishermen are advised not to venture into South Sri Lanka coasts and southeast & adjoining southwest Bay of Bengal on 13th and Gulf of Mannar and adjoining Comorin area during 13th-16th January.

iii. Weather conditions and forecast over Delhi/NCR during 13th Jan. to 16th Jan. 2025 (Annexure VI)

For more details, kindly refer National Weather Bulletin:

https://mausam.imd.gov.in/responsive/all_india_forecast_bulletin.php

For District wise warnings refer: <https://mausam.imd.gov.in/responsive/districtWiseWarningGIS.php>

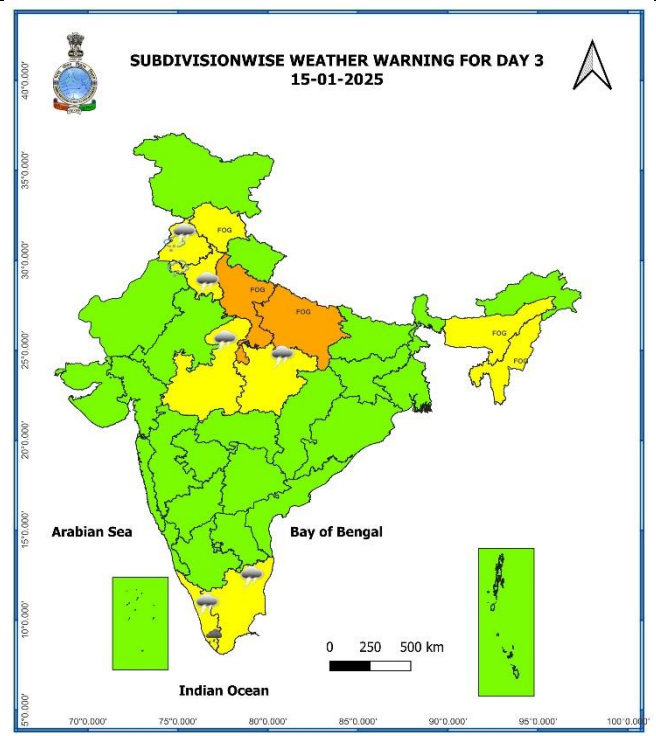
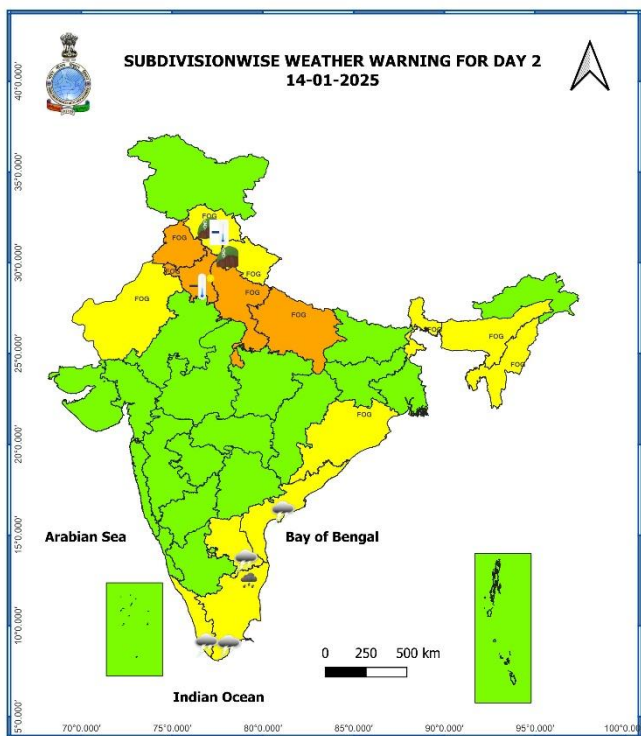
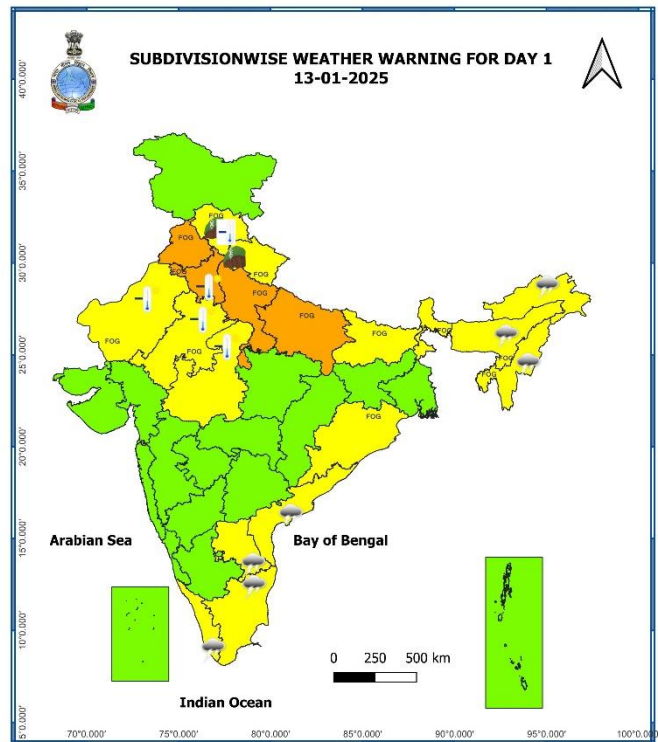
ANNEXURE I

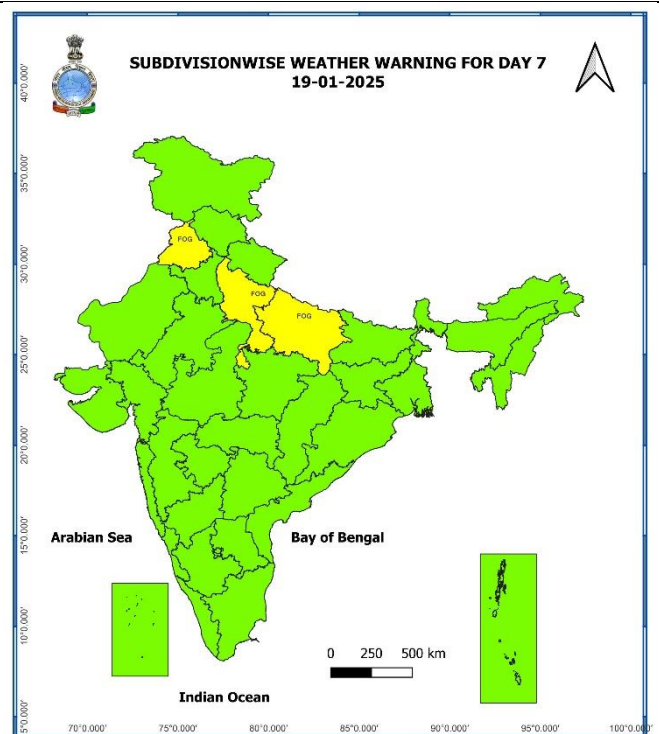
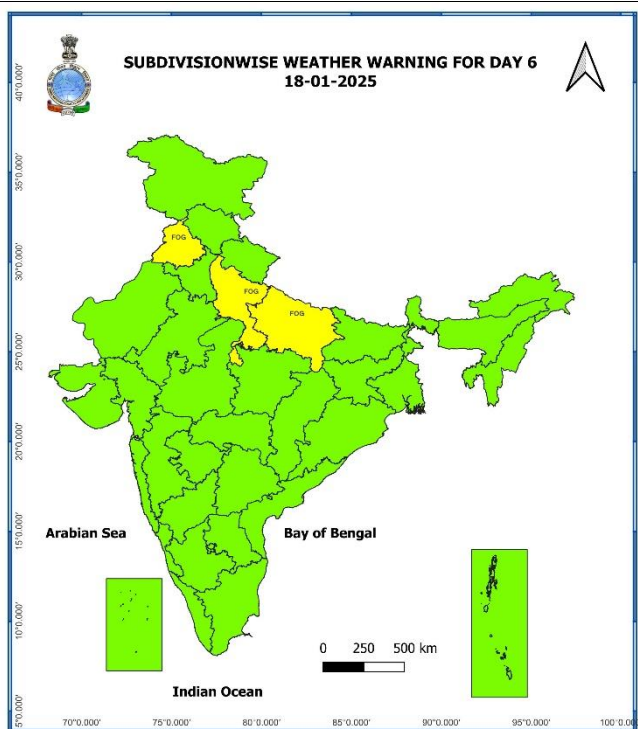
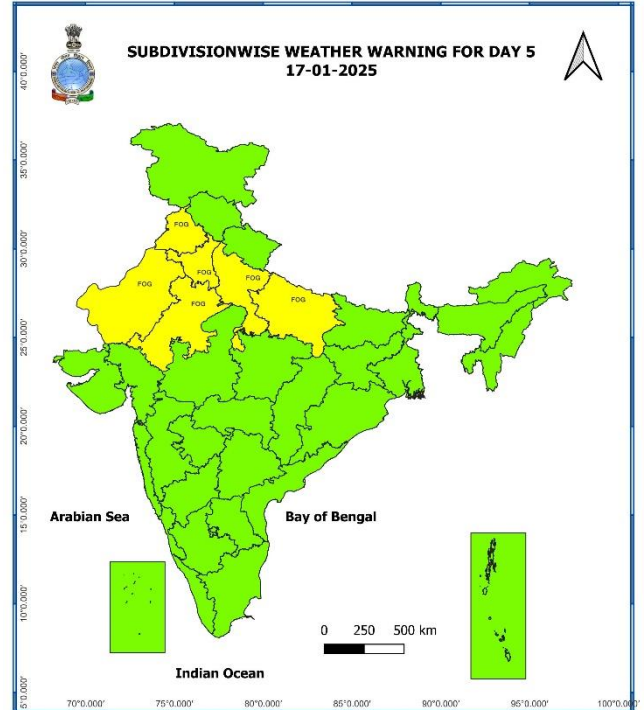
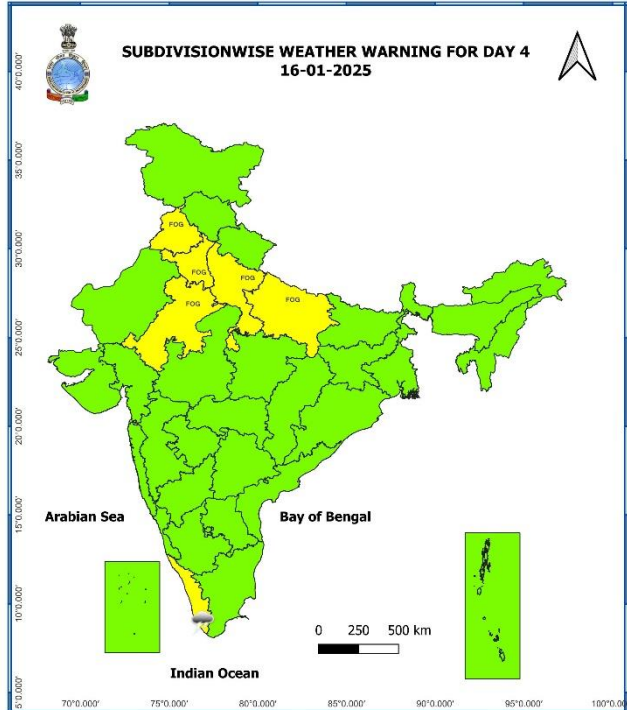
Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 13.01.2025 (in cm):

Tamilnadu Puducherry & Karaikal: Oothu (dist Tirunelveli) 5

7 Days Rainfall Forecast								
S. No.	Subdivision	13-Jan	14-Jan	15-Jan	16-Jan	17-Jan	18-Jan	19-Jan
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	ISOL	ISOL	ISOL	FWS	SCT	ISOL	ISOL
2	ARUNACHAL PRADESH	FWS	ISOL	DRY	DRY	DRY	DRY	DRY
3	ASSAM & MEGHALAYA	SCT	ISOL	DRY	DRY	DRY	DRY	DRY
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
6	GANGETIC WEST BENGAL	DRY	DRY	DRY	DRY	DRY	DRY	DRY
7	ODISHA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
8	JHARKHAND	DRY	DRY	DRY	DRY	DRY	DRY	DRY
9	BIHAR	DRY	DRY	DRY	DRY	DRY	DRY	DRY
10	EAST UTTAR PRADESH	DRY	DRY	ISOL	ISOL	DRY	DRY	DRY
11	WEST UTTAR PRADESH	DRY	DRY	ISOL	ISOL	DRY	DRY	DRY
12	UTTARAKHAND	DRY	DRY	ISOL	SCT	ISOL	ISOL	ISOL
13	HARYANA CHANDIGARH & DELHI	DRY	DRY	SCT	ISOL	DRY	DRY	DRY
14	PUNJAB	DRY	DRY	ISOL	ISOL	DRY	DRY	DRY
15	HIMACHAL PRADESH	DRY	DRY	DRY	SCT	ISOL	ISOL	ISOL
16	JAMMU & KASHMIR AND LADAKH	DRY	DRY	DRY	ISOL	ISOL	SCT	SCT
17	WEST RAJASTHAN	DRY	DRY	ISOL	DRY	DRY	DRY	DRY
18	EAST RAJASTHAN	DRY	DRY	ISOL	ISOL	DRY	DRY	DRY
19	WEST MADHYA PRADESH	DRY	DRY	ISOL	DRY	DRY	DRY	DRY
20	EAST MADHYA PRADESH	DRY	DRY	ISOL	DRY	DRY	DRY	DRY
21	GUJARAT REGION	DRY	DRY	DRY	DRY	DRY	DRY	DRY
22	SAURASHTRA & KUTCH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
23	KONKAN & GOA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
24	MADHYA MAHARASHTRA	DRY	DRY	ISOL	DRY	DRY	DRY	DRY
25	MARATHAWADA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
26	VIDARBHA	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
27	CHHATTISGARH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
28	COASTAL ANDHRA PRADESH & YANAM	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
29	TELANGANA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
30	RAYALASEEMA	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
31	TAMILNADU PUDUCHERRY & KARAIKAL	SCT	SCT	SCT	ISOL	ISOL	ISOL	SCT
32	COASTAL KARNATAKA	DRY	ISOL	DRY	DRY	DRY	DRY	DRY
33	NORTH INTERIOR KARNATAKA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
34	SOUTH INTERIOR KARNATAKA	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
35	KERALA & MAHE	ISOL	SCT	SCT	ISOL	ISOL	ISOL	ISOL
36	LAKSHADWEEP	SCT	SCT	SCT	SCT	DRY	DRY	DRY

- As the lead period increases forecast accuracy decreases





- Action may be taken based on ORANGE AND RED COLOUR warnings.
- Vulnerable regions likely urban and hilly areas action may be initiated for heavy rainfall warning.
- As the lead period increases forecast accuracy decreases.

Fig. 1: Maximum Temperatures

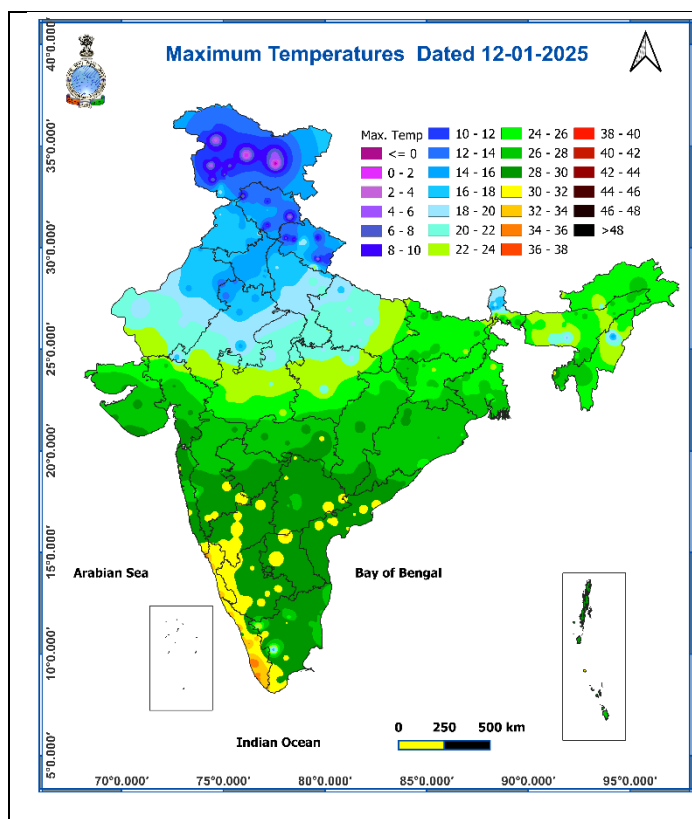


Fig. 2: Departure of Maximum Temperatures

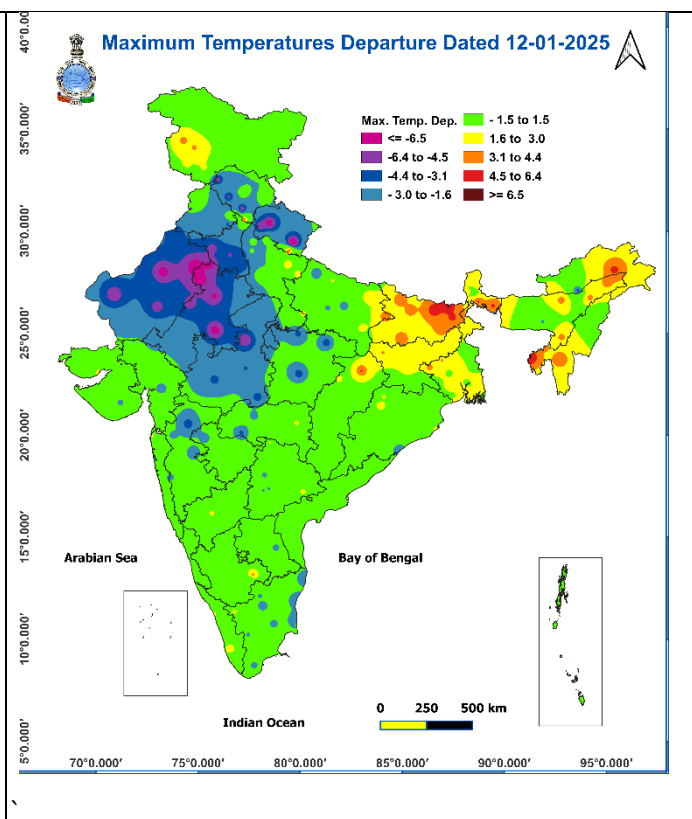


Fig. 3: Minimum Temperatures

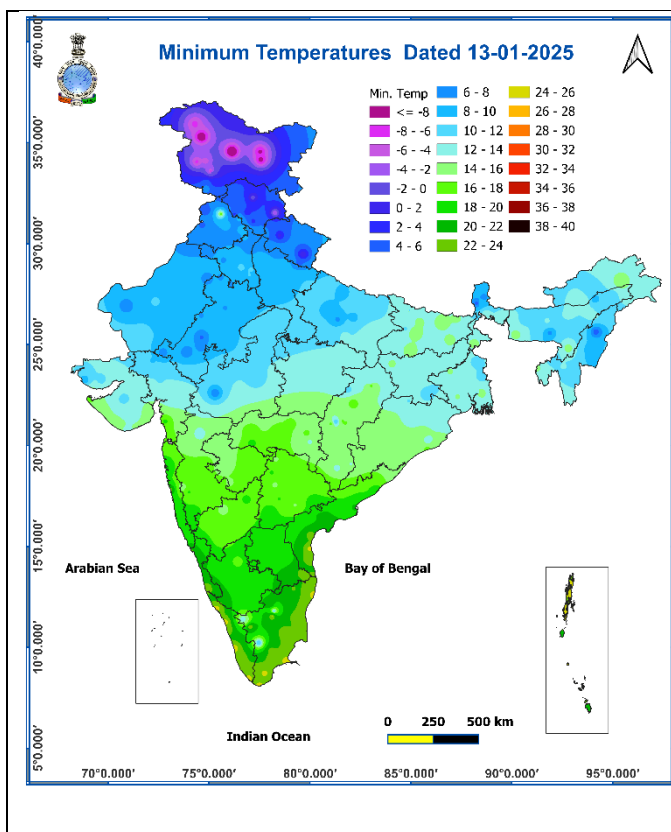
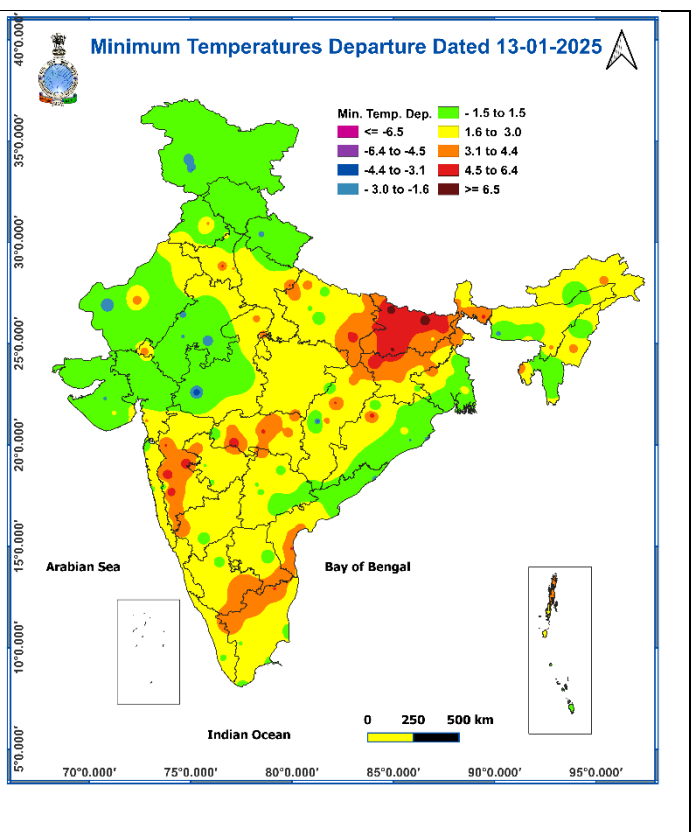


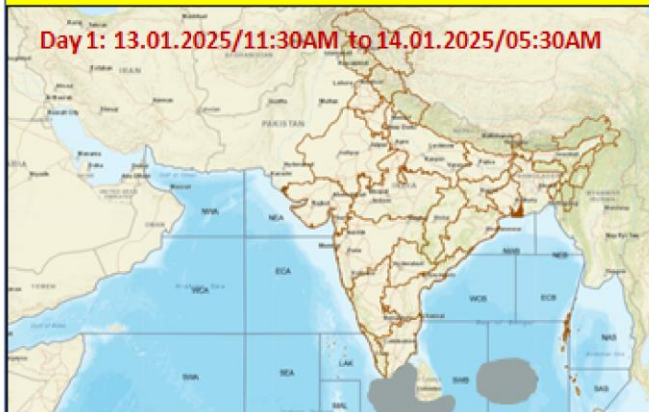
Fig. 4: Departure of Minimum Temperatures



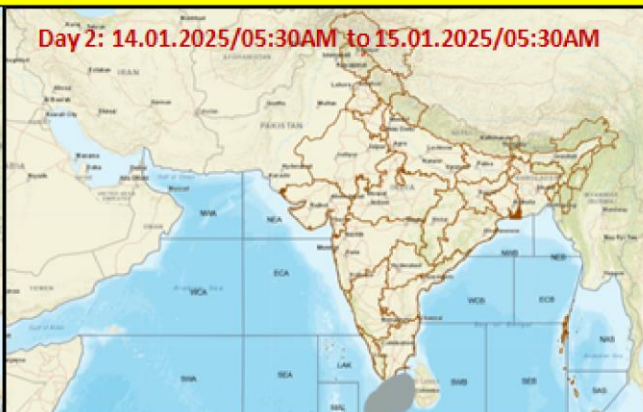


Fishermen Warning Graphics

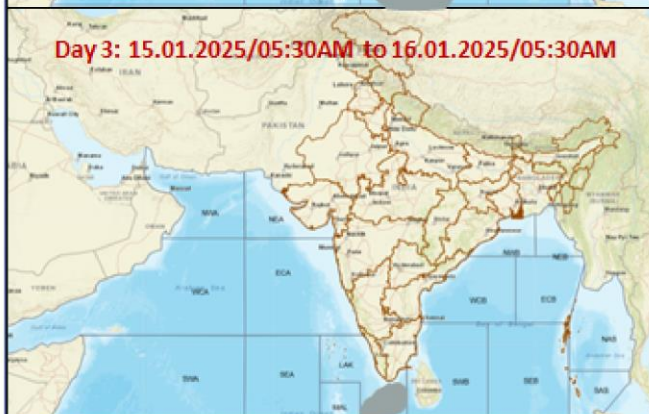
Day 1: 13.01.2025/11:30AM to 14.01.2025/05:30AM



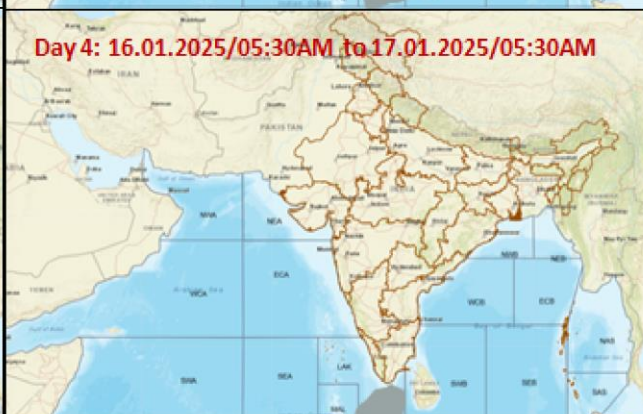
Day 2: 14.01.2025/05:30AM to 15.01.2025/05:30AM



Day 3: 15.01.2025/05:30AM to 16.01.2025/05:30AM



Day 4: 16.01.2025/05:30AM to 17.01.2025/05:30AM



Day 5: 17.01.2025/05:30AM to 18.01.2025/05:30AM



Squally Weather with wind speed 35-45 kmph gusting to 55 kmph

Fishermen are advised not to venture into the marked areas.

Weather forecast over Delhi/NCR during 13th to 16th Jan. 2025**Past Weather:**

There has been a slight rise in minimum temperature over Delhi/NCR during past 24hr. The Maximum and Minimum temperatures over Delhi are in the range of 16 to 17°C and 9 to 10°C respectively. The minimum temperature was above normal upto 04°C and maximum temperature was below normal upto 05°C over most places. Dense fog was reported at Palam airport. Palam airport recorded the lowest visibility 50 m from 0430 hours to 0800 hours IST which improved thereafter becoming 100 m at 0830 hours IST. Safdarjung airport recorded the lowest visibility 150 m from 0530 hours to 0700 hours IST. Mainly smog/mist conditions with predominant surface wind from the northwest direction with wind speed reaching 10 to 12 kmph prevailed during past 24hr. Mainly smog/mist conditions with wind speed less than 10 kmph northwest direction prevailed over the region in the forenoon today.

Weather Forecast:

13.01.2024: Mainly clear sky. The predominant surface wind will likely be in the northwest direction with a wind speed of less than 12 kmph till evening. It would decrease thereafter becoming less than 06 kmph from the northwest direction during the night. Smog/shallow fog is likely in the evening/night.

14.01.2025: Mainly clear sky. The predominant surface wind is likely to be from the northwest direction with a speed of less than 06 kmph during morning hours. Smog/dense fog in most of the places and very dense fog in isolated places is likely in the morning. The wind speed will decrease thereafter becoming 04-06 kmph from the north direction during the afternoon. It will gradually decrease thereafter becoming less than 04 kmph from the northeast direction during evening and night. Smog/shallow fog is likely in the evening/night.

15.01.2025: Generally cloudy sky. Possibility of one or two spell of very light rain during evening/night. The predominant surface wind is likely to be from the southeast direction with a wind speed less than 04 kmph during morning hours. Smog/dense fog in most of the places and very dense fog in isolated places is likely in the morning. The wind speed will gradually increase thereafter becoming 06-08 kmph from south direction during afternoon. It will decrease becoming less than 04 kmph from northeast direction during evening and night. Smog/ shallow to moderate fog is likely in the evening/night.

16.01.2025: Partly cloudy sky. Possibility of a spell of very light rain during morning. The predominant surface wind is likely to be from north direction with wind speed less than 04 kmph during morning hours. Smog/ moderate fog is likely in the morning. The wind speed will gradually increase thereafter becoming 06-08 kmph from northeast direction during afternoon. It will decrease becoming less than 04 kmph from northeast direction during evening and night. Smog/ shallow to moderate fog is likely in the evening/night.

Impact expected due to dense/very dense fog in the night /morning hour:

❖ Transport and Aviation:

- May affect some airports, highways and railway routes in the areas of met- sub-division.
- Difficult driving conditions with slower journey times.
- Unless taken precautionary measures, it may lead to some road traffic collisions.

❖ Power Sector:

- Chances of Tripping of Power lines in the very dense fog routes.

❖ Human Health:

- Lung related health impacts: Dense fog contains particulate matter and other pollutants and in case exposed it gets lodged in the lungs, clogging them and decreasing their functional capacity which increases episodes of wheezing, coughing and shortness of breath.
- Impact on people having asthma bronchitis: Long time exposure to dense fog may cause respiratory problem for people having asthma bronchitis and other lung related health problems.
- Eye Irritation: Dense fog contains pollutions of various types and these Pollutants in the air if exposed may tend to irritate the membranes of the eye causing various infections leading to redness or swelling of the eye.

Action suggested:

❖ Transport and Aviation:

- Be careful while driving or outing through any transport.
- Use fog lights during driving.
- Be in touch with airlines, railways and state transport for schedule of your journey.

❖ Power Sector:

- To keep ready Maintenance Team.
- Human Health: To avoid outing until unless emergency and to cover the face.

Impact expected due to Cold Day/Severe Cold day conditions

- ❖ An increased likelihood of various illnesses like flu, running/ stuffy nose or nosebleed, which usually set in or get aggravated due to prolonged exposure to cold.
- ❖ Do not ignore shivering. It is the first sign that the body is losing heat. Get Indoors.
- ❖ Frostbite can occur due to prolonged exposure to cold. The skin turns pale, hard and numb and eventually black blisters appear on exposed body parts such as fingers, toes, nose and or earlobes. Severe frostbite needs immediate medical attention and treatment.
- ❖ Impact on agriculture, crop, livestock, water supply, transport and power sector at some places.

Action suggested:

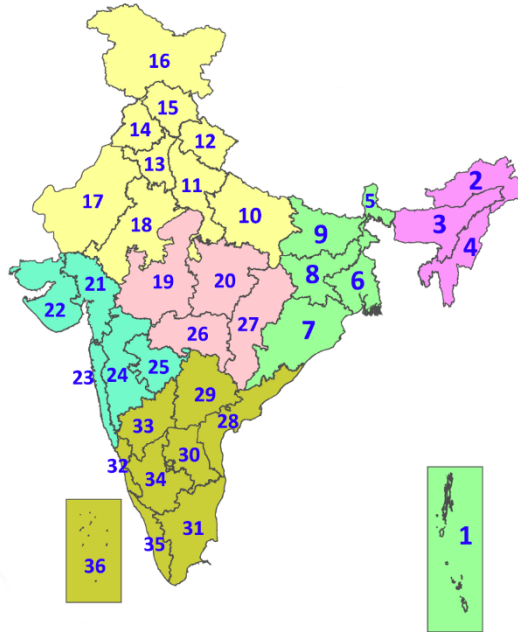
- ❖ Wear several layers of loose fitting, light weight; warm woollen clothing.
- ❖ Cover your head, neck, hands and toes adequately as majority of heat loss occurs through these body parts. Wear several layers of loose fitting, light weight; warm Woollen clothing rather than one layer of heavy cloth.
- ❖ Eat vitamin-C rich fruits & vegetable and drink sufficient fluids preferably warm fluids to maintain adequate immunity.
- ❖ Avoid or limit outdoor activities.
- ❖ Keep dry, if wet, change cloths immediately to prevent loss of body heat. Wear insulated/waterproof shoes.
- ❖ Warm the affected area of the body slowly with lukewarm water; do not rub the skin vigorously.
- ❖ If the affected skin area turns black, immediately consult a doctor.
- ❖ Maintain ventilation while using Heaters to avoid inhaling toxic fumes.
- ❖ Take safety measures while using electrical and gas heating devices.
- ❖ Extreme care needed for vulnerable people.
- ❖ Seek medical attention as soon as possible for someone suffering from frostbite/ Hypothermia.
- ❖ Protect livestock from cold weather.

Legends & abbreviations:

- ❖ **Heavy Rain:**64.5-115.5mm; **Very Heavy Rain:**115.6-204.4mm; **Extremely Heavy Rain:** >204.4mm.
- ❖ **Obsy:** Observatory; **AWS:** Automatic Weather Station; **ARG:** Automatic Rain Gauge; **dist:** District; **NH:** National Highway; **KVK:** Krishi Vigyan Kendra; **DVC:** Damodar Valley Corporation; **PTO:** Part Time Office, **Aero:** Aerodrome, **IAF:** Indian Air Force.
- ❖ **Region wise classification of meteorological Sub-Divisions:**
 - **Northwest India:** Western Himalayan Region (Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand); Punjab, Haryana-Chandigarh-Delhi; West Uttar Pradesh, East Uttar Pradesh, West Rajasthan and East Rajasthan.
 - **Central India:** West Madhya Pradesh, East Madhya Pradesh, Vidarbha and Chhattisgarh.
 - **East India:** Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim; Gangetic West Bengal, Odisha and Andaman & Nicobar Islands.
 - **Northeast India:** Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
 - **West India:** Gujarat Region, Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra and Marathawada.
 - **South India:** Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Coastal Karnataka, North Interior Karnataka, South Interior Karnataka, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal and Lakshadweep.

LEGENDS

1. अंडमान और निकोबार द्वीपसमूह
2. अरुणाचल प्रदेश
3. असम और मेघालय
4. नागालैंड, मणिपुर, मिजोरम और त्रिपुरा
5. उप-हिमालयी पश्चिम बंगाल और सिक्किम
6. गंगीय पश्चिम बंगाल
7. ओडिशा
8. झारखंड
9. बिहार
10. पूर्वी उत्तर प्रदेश
11. पश्चिम उत्तर प्रदेश
12. उत्तराखंड
13. हरियाणा, चंडीगढ़ और दिल्ली
14. पंजाब
15. हिमाचल प्रदेश
16. जम्मू और कश्मीर और लद्दाख
17. पश्चिम राजस्थान
18. पूर्वी राजस्थान
19. पश्चिम मध्य प्रदेश
20. पूर्वी मध्य प्रदेश
21. गुजरात
22. सौराष्ट्र
23. कोंकण और गोवा
24. मध्य महाराष्ट्र
25. मराठवाड़ा
26. विदर्भ
27. छत्तीसगढ़
28. तटीय आंध्र प्रदेश और यनम
29. तेलंगाना
30. रायलसीमा
31. तमिलनाडु, पुडुचेरी और कराईकल
32. तटीय कर्नाटक
33. आंतरिक उत्तरी कर्नाटक
34. आंतरिक दक्षिणी कर्नाटक
35. केरल और 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. Odisha
8. Jharkhand
9. Bihar
10. East Uttar Pradesh
11. West Uttar Pradesh
12. Uttarakhand
13. Haryana, Chandigarh & 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. Marathwada
26. Vidarbha
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)



Fog



Heavy Snow



Cold Wave



Heavy Rain



Dust Storm



Cold Day



Very Heavy Rain



Heat Wave



Ground Frost



Extremely Heavy Rain



Warm Night



Thunder & Lightning



Hot Day



Hailstorm



Hot & Humid



Dust Raising Winds



Strong Surface Winds

COLOUR CODED WARNING

No Warning (No Action)

Watch (Be Aware)

Alert (Be Prepared To Take Action)

Warning (Take Action)

Probabilistic Forecast

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

* Red colour warning does not mean "Red Alert", Red colour 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 <https://mausam.imd.gov.in> or contact: 011-2434-4599
(Service to the Nation since 1875)

DEFINITION/CRITERIA

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 Strom: Wind speed > 220 kmph (> 119 knots)

* Red colour warning does not mean "Red Alert", Red colour 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 <https://mausam.imd.gov.in> or contact: 011-2434-4599
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