Government of India
Ministry of Earth Sciences
India Meteorological Department

Press Release
Date: 09th November, 2024
Time of Issue: 1300 hours IST

Subject: (i) A fresh low pressure area is likely to form over south west Bay of Bengal during next 36 hours.
(ii) A fresh spell of Heavy to very heavy rainfall activity likely over Andhra Pradesh, Tamil Nadu and Kerala during 12th -15th November 2024.

i) Rainfall Forecast and warning over the country:
Realised rainfall during past 24 hours till 0830 hours IST of today (Annexure I)

- **Heavy rainfall** occurred at isolated places over extreme south Tamil Nadu and Kerala.
- **Dense to very dense fog** at a few places in Punjab and Himachal Pradesh. Following stations reported visibility (< 50 metre) **Punjab:** Amritsar, **Himachal Pradesh:** Bilaspur.

Weather Systems:

- The cyclonic circulation over southwest Bay of Bengal in lower tropospheric levels persisted over the same region at 0830 hours IST of today, the 09th November. Under its influence a low pressure area is likely to form over the same area during the next 36 hours. It is likely to move slowly nearly westwards towards Tamil Nadu/Sri Lanka coasts during subsequent two days.
- A trough runs from the above cyclonic circulation over southwest Bay of Bengal to eastcentral Bay of Bengal and extending upto middle tropospheric levels.

Forecast & Warnings (upto 7 days) (Annexure II & III):

- ✓ Light to moderate rainfall at a few places accompanied with isolated thunderstorm and lightning very likely over Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe during 09th-15th November.
- ✓ **Isolated heavy rainfall** very likely over coastal Tamil Nadu during 09th-15th; Kerala & Mahe during 13th - 15th; Coastal Andhra Pradesh & Yanam and Rayalaseema on 12th & 13th November.
- ✓ **Dense fog** conditions very likely to prevail in night/morning hours in isolated pockets of Himachal Pradesh during 10th -12th and over northwest Punjab on 10th & 11th November.

i. Temperature conditions and Forecast:

Temperature Conditions during past 24 hours till 0830 hours IST of today

There is no significant change in Minimum temperature over the country. Minimum temperatures continue to be above normal by 3-5°C over many places of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Punjab, Haryana, Uttarakhand, Uttar Pradesh, Bihar, Jharkhand, Rajasthan, northern parts of Gujarat and by 2-3°C over Coastal Andhra Pradesh & Yanam, Kerala & Mahe, south Gujarat, interior Odisha and near normal over remaining parts of the country.Today, **the lowest minimum temperature** of **13.8°C** is reported at Hindon_IAF **(West Uttar Pradesh)** over the plains of the country.

Forecast of temperature: Minimum temperature is likely to gradually fall by 2-3°C over Western Himalayan Region during next 4-5 days. No large change in Minimum temperature over remaining parts of the country during the week.

ii. Weather forecast over Delhi/NCR during 09th November to 12th November 2024

Past Weather:

There has been no significance change in maximum/minimum temperature over Delhi/NCR during past 24hr. The Maximum and Minimum temperature over Delhi is in the range of 30-32°C and 15 -20°C respectively. The maximum temperature was above normal by 1 – 2°C and minimum temperature was above normal by 4 -5°C over some places in the region. Mainly clear sky condition with predominant surface wind from variable directions with wind speed reaching 04–08 kmph prevailed during daytime and 02 – 06 kmph wind speed from east during night. Mist/Shallow fog reported at Safdarjung airport. Safdarjung airport recorded lowest visibility 600m at 0700 hours IST which improved thereafter becoming 0900m at 0830 hours IST. Palam airport recorded lowest visibility 1100m at 0730 hours IST. The mainly smog condition with wind speed upto 04 -10 kmph from east/southeast directions prevailed over the region in the forenoon today.

Weather Forecast:

09.11.2024: Mainly clear sky. The predominant surface wind is likely to be from southeast direction with wind speed upto 06 - 10 kmph till evening. It would decrease thereafter becoming less than 06 kmph from variable directions during night. Smog/ mist is likely in the evening/night.

10.11.2024: Mainly clear sky. The predominant surface wind is likely to be from Southeast direction with wind speed less than 08 kmph during morning hours. Smog/Shallow to moderate fog/mist in the morning. The wind speed will increase thereafter becoming less than 10 kmph from southeast direction during afternoon. It will decrease thereafter becoming less than 06 kmph from variable directions during evening and night. Smog/ mist is likely in the evening/night.

11.11.2024: Mainly clear sky. The predominant surface wind is likely to be from variable directions with wind speed less than 04 kmph during morning hours. Smog/Shallow to moderate fog/mist in the morning. The wind speed will gradually increase becoming 06- 10 kmph from south/southeast direction during afternoon. It will decrease thereafter becoming less than 06 kmph from north/northeast directions during evening and night. Smog/ mist is likely in the evening/night.

12.11.2024: Mainly clear sky. The predominant surface wind is likely to be from southwest direction with wind speed less than 06 kmph during morning hours. Smog/Shallow to moderate fog/mist in the morning. The wind speed will increase thereafter becoming 06 - 10 kmph from southeast/east directions during afternoon. It will gradually decrease becoming 04 – 06 kmph from southeast direction during evening and night. Smog/ mist is likely in the evening/night.

For more details, kindly refer National Weather Bulletin:
https://mausam.imd.gov.in/responsive/all_india_forcast_bulletin.php
For District wise warnings refer: https://mausam.imd.gov.in/responsive/districtWiseWarningGIS.php
For Fishermen warnings, kindly refer:
https://rsmcnewdelhi.imd.gov.in/uploads/archive/51/51_bdf575_GRAPHIC.png

ANNEXURE I

Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 09.11.2024 (in cm):

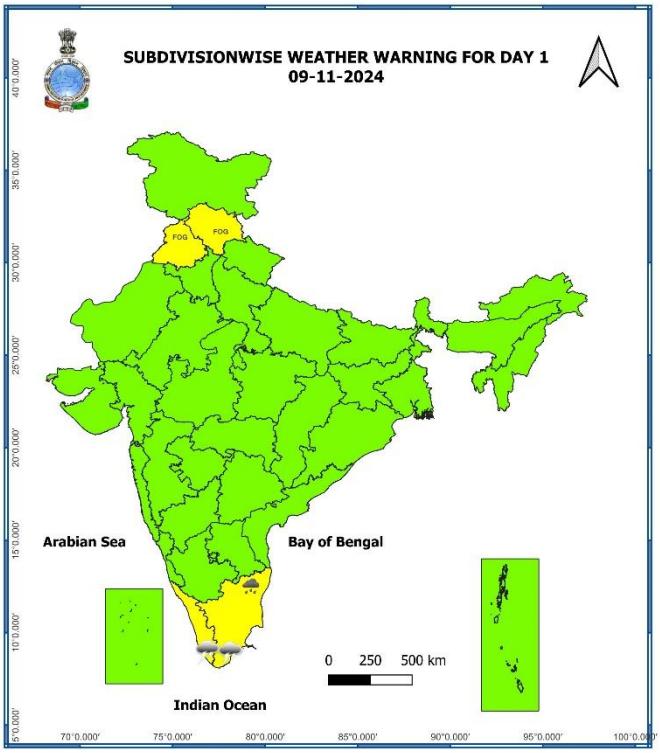
- **Tamil Nadu, Puducherry & Karaikal:** Adayamadai (dist Kanniyakumari), Thuckalay (dist Kanniyakumari), Kozhiporvilai (dist Kanniyakumari) 9 each, Kodiayakarai (dist Nagapattinam) 8;
- **Kerala & Mahe:** Kunnathanam(dist Pathanamthitta) 9.

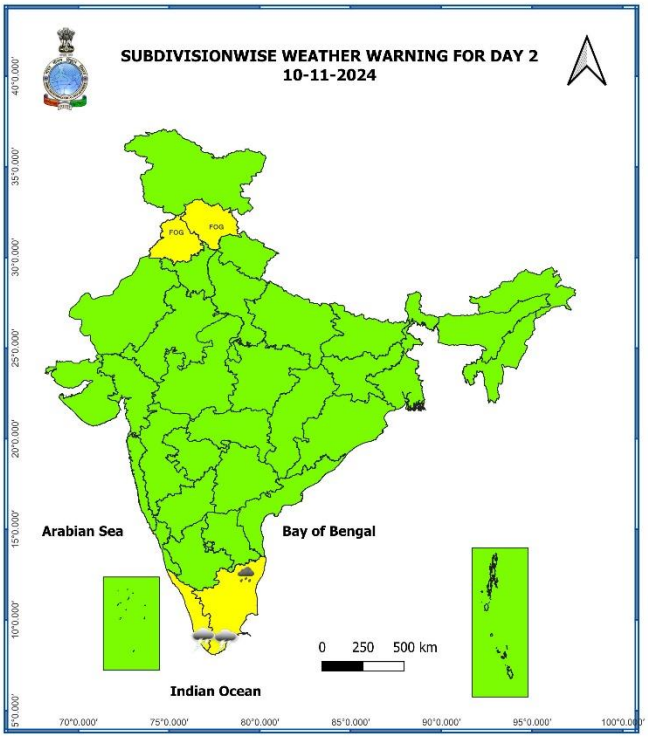
ANNEXURE II

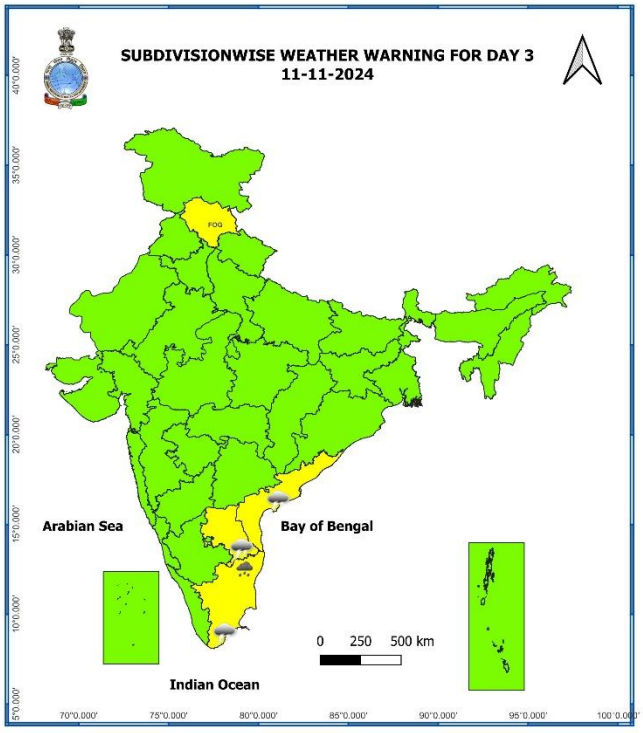
7 Days Rainfall Forecast								
S. No.	Subdivision	09-Nov	10-Nov	11-Nov	12-Nov	13-Nov	14-Nov	15-Nov
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	FWS	FWS	FWS	FWS	SCT	SCT	SCT
2	ARUNACHAL PRADESH	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
3	ASSAM & MEGHALAYA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	DRY	DRY	DRY	DRY	ISOL	DRY	DRY
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
6	GANGETIC WEST BENGAL	DRY	ISOL	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	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
10	EAST UTTAR PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
11	WEST UTTAR PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
12	UTTARAKHAND	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
13	HARYANA CHANDIGARH & DELHI	DRY	DRY	DRY	DRY	DRY	DRY	DRY
14	PUNJAB	DRY	DRY	DRY	DRY	DRY	DRY	ISOL
15	HIMACHAL PRADESH	DRY	DRY	ISOL	DRY	DRY	ISOL	ISOL
16	JAMMU & KASHMIR AND LADAKH	DRY	SCT	FWS	DRY	DRY	ISOL	SCT
17	WEST RAJASTHAN	DRY	DRY	DRY	DRY	DRY	DRY	DRY
18	EAST RAJASTHAN	DRY	DRY	DRY	DRY	DRY	DRY	DRY
19	WEST MADHYA PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
20	EAST MADHYA PRADESH	DRY	DRY	DRY	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	ISOL	ISOL
24	MADHYA MAHARASHTRA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
25	MARATHAWADA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
26	VIDARBHA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
27	CHHATTISGARH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
28	COASTAL ANDHRA PRADESH & YANAM	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
29	TELANGANA	DRY	DRY	DRY	ISOL	ISOL	ISOL	ISOL
30	RAYALASEEMA	ISOL	ISOL	ISOL	ISOL	SCT	SCT	SCT
31	TAMILNADU PUDUCHERRY & KARAIKAL	ISOL	ISOL	ISOL	SCT	FWS	FWS	FWS
32	COASTAL KARNATAKA	DRY	DRY	DRY	DRY	SCT	FWS	WS
33	NORTH INTERIOR KARNATAKA	DRY	DRY	DRY	DRY	DRY	SCT	ISOL
34	SOUTH INTERIOR KARNATAKA	DRY	DRY	DRY	ISOL	SCT	FWS	FWS
35	KERALA & MAHE	SCT	SCT	ISOL	SCT	FWS	FWS	FWS
36	LAKSHADWEEP	SCT	SCT	SCT	DRY	DRY	SCT	SCT

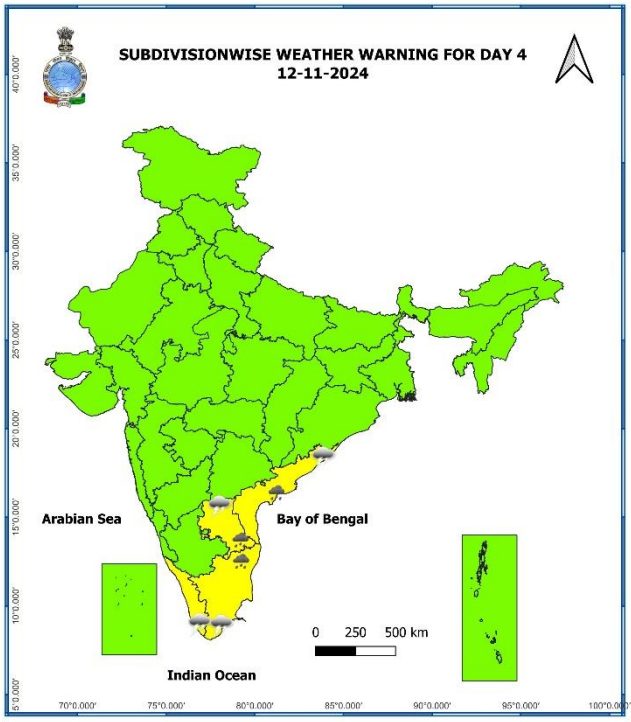
- **As the lead period increases forecast accuracy decreases.**

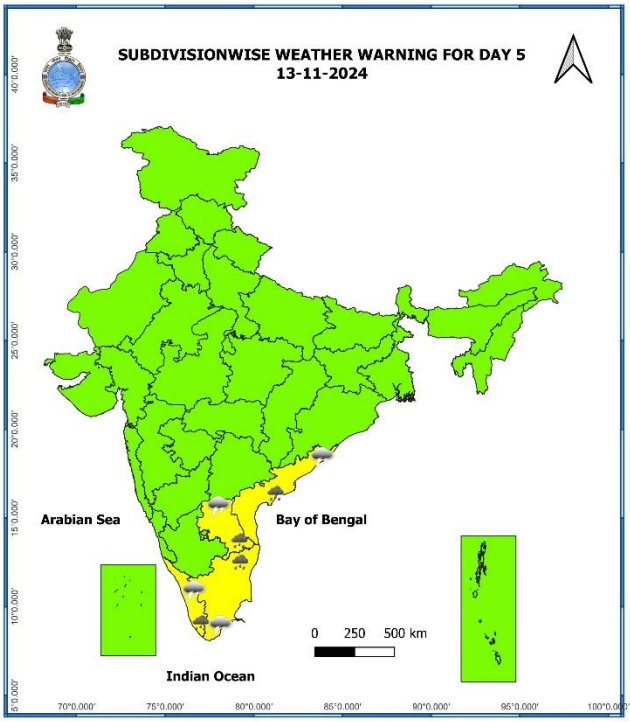
ANNEXURE III

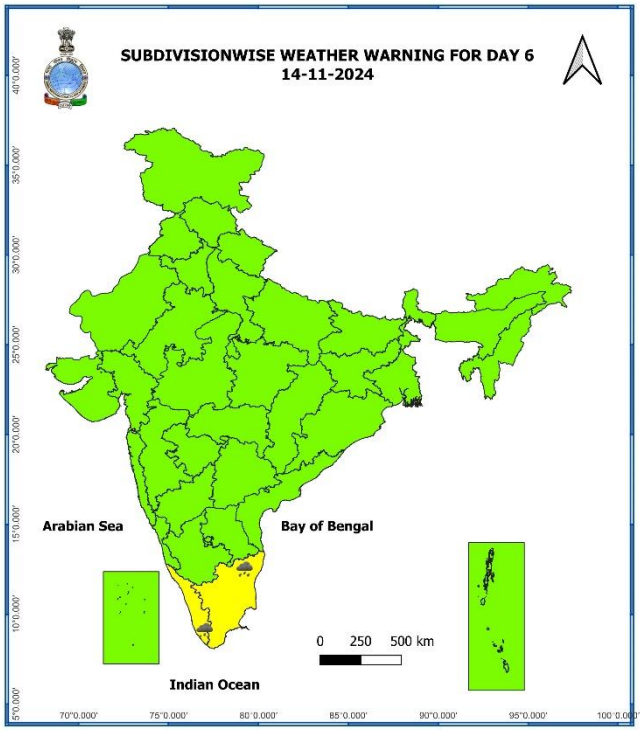


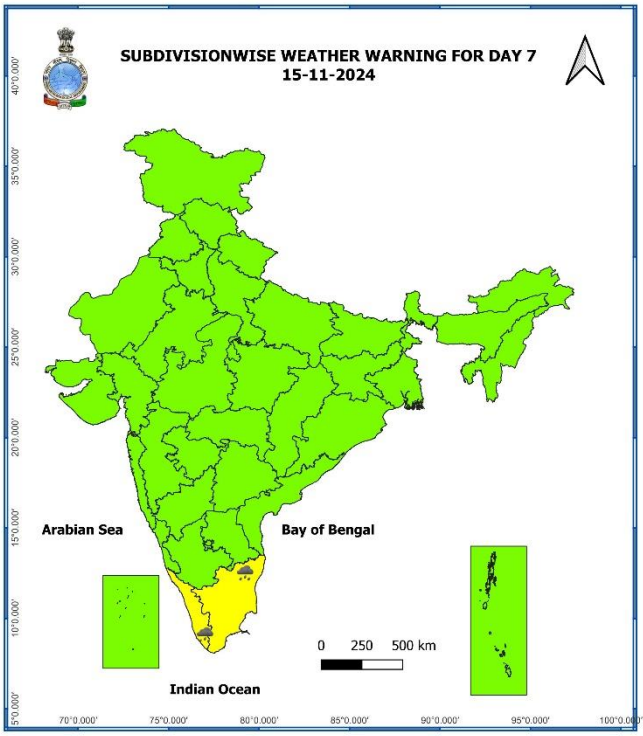












- **Action may be taken based on ORANGE AND RED COLOUR warnings.**
- **Vulnerable regions likely urban and hilly areas action may be initiated for heavy rainfall warning.**
- **As the lead period increases forecast accuracy decreases.**

Agromet advisories for Heavy Rainfall likely over various parts of the country

- In **Tamil Nadu**, drain out excess water from rice, cotton, sugarcane, turmeric & vegetable fields and coconut & banana orchards. Undertake propping in sugarcane and provide mechanical support to banana plantations to prevent lodging.
- Keep the harvested produce at safer places.
- Provide mechanical support to horticultural crops and staking to vegetables.

Legends & abbreviations:

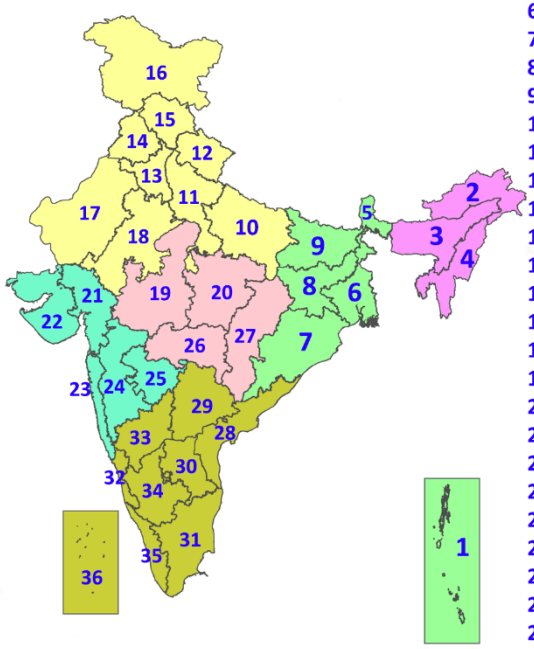
- **Heavy Rain:**64.5-115.5mm; **Very Heavy Rain:**115.6-204.4mm; **Extremely Heavy Rain:** >204.4mm.
- **Obsy:** Observatory; **AWS:** Automatic Weather Station; **ARG:** Automatic Rain Gauge; **dist:** District: **NH:** National Highway; **KVK**: Krishi Vigyan Kendra; **DVC:** Damodar Valley Corporation; **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.

राष्ट्रीय मौसम पूर्वानुमान केन्द्र
भारत मौसम विज्ञान विभाग
पृथ्वी विज्ञान मंत्रालय

National Weather Forecasting Centre
India Meteorological Department
Ministry of Earth Sciences

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 Rain
Very Heavy Rain
Extremely Heavy Rain
Thunder & Lightning
Hailstorm
Dust Raising Winds

Heavy Snow
Dust Storm
Heat Wave
Warm Night
Hot Day
Hot & Humid
Strong Surface Winds

Cold Wave
Cold Day
Ground Frost

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 ≥40° C for plains and ≥30° 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 ≥6.5° C

(b). Based on Actual maximum temperature

- **Heat Wave:** When actual maximum temperature ≥45°C.
- **Severe Heat Wave:** When actual maximum temperature ≥47°C

(c). Criteria for heat wave for coastal stations

When maximum temperature departure is >4.5°C from normal. Heat Wave may be described provided maximum temperature ≥37°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 °C.

Cold Wave

When minimum temperature of a station ≤10°C for plains and ≤0°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 ≤ -6.5 °C

(b) Based on actual Minimum Temperature (for Plains only)

- **Cold Wave :** When Minimum Temperature is ≤ 4.0 °C
- **Severe Cold Wave:** When Minimum Temperature is ≤ 2.0 °C

(c) For Coastal Stations

When Minimum Temperature departure is ≤-4.5 °C & actual Minimum Temperature is ≤ 15 °C

Cold Day

When minimum temperature of a station ≤10°C for plains and ≤0°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 ≤ -6.5 °C

Fog

Phenomenon of small droplets suspended in air and the horizontal visibility < 1km

- **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 ≤4°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
(Service to the Nation since 1875)