



Government of India  
Ministry of Earth Sciences  
India Meteorological Department



Press Release

Date: 20<sup>th</sup> September, 2024

Time of Issue: 1330 hours IST

**Subject:(i) Isolated heavy rainfall very likely over Andaman & Nicobar Islands on 20<sup>th</sup> September 2024.**  
**(ii) A low pressure area is likely over northwest & adjoining westcentral Bay of Bengal around 23<sup>rd</sup> September 2024.**

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

**Heavy rainfall** at isolated places over Andaman & Nicobar Islands, Coastal Andhra Pradesh & Yanam.

**Weather Systems:**

- ✓ Conditions are becoming favourable for withdrawal of **Southwest Monsoon** from parts of West Rajasthan and Kachchh around from 23<sup>rd</sup> September.
- ✓ An upper air **cyclonic circulation** is likely over north Andaman Sea & neighbourhood around 21<sup>st</sup> September 2024. It is likely to move northwestwards, thereafter, under its influence, a low pressure area is likely over northwest & adjoining westcentral Bay of Bengal around 23<sup>rd</sup> September 2024.
- ✓ A **cyclonic circulation** over lies over northeast Rajasthan & neighbourhood in lower tropospheric levels.

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

**Central India:**

- ✓ Isolated to Scattered light to moderate rainfall very likely over the region during next 3 days; Scattered to Fairly Widespread light to moderate rainfall very likely over remaining days over the region during the week.
- ✓ Isolated **heavy rainfall** very likely over Chhattisgarh during 23<sup>rd</sup>-26<sup>th</sup>; Vidarbha & East Madhya Pradesh during 24<sup>th</sup>-26<sup>th</sup>; West Madhya Pradesh on 25<sup>th</sup> & 26<sup>th</sup> September.

## East & Northeast India

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over Andaman & Nicobar Islands; Scattered to Fairly widespread light to moderate rainfall very likely over Odisha, Gangetic West Bengal during the week; Isolated to Scattered light to moderate rainfall very likely over Bihar, Jharkhand & Sub-Himalayan West Bengal & Sikkim next 5 days & Scattered to Fairly widespread light to moderate rainfall during subsequent 2 days.
- ✓ Isolated **heavy rainfall** very likely over Andaman & Nicobar Islands on 20<sup>th</sup>; Odisha during 22<sup>nd</sup>-24<sup>th</sup>; Nagaland, Manipur, Mizoram & Tripura during 22<sup>nd</sup>-26<sup>th</sup>; Arunachal Pradesh, Assam & Meghalaya during 23<sup>rd</sup>-26<sup>th</sup>; Sub-Himalayan West Bengal & Sikkim on 26<sup>th</sup> September.
- ✓ **Hot and Humid Weather** very likely over Sub-Himalayan West Bengal & Sikkim on 20<sup>th</sup> & 21<sup>st</sup>; Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during 20<sup>th</sup>-22<sup>nd</sup> September.
- ✓ **Above normal Maximum temperature** very likely over Northeast India during next 3 days.

## Northwest India

- ✓ Isolated to Scattered light to moderate rainfall very likely over the region except West Rajasthan where mainly dry weather likely to prevail during the week.

## West & South Peninsular India

- ✓ Isolated to Scattered light rainfall very likely over the region during next 4 days & Scattered to Fairly widespread light to moderate rainfall thereafter for subsequent 3 days.
- ✓ Isolated **heavy rainfall** very likely over Madhya Maharashtra, Konkan & Goa on 24<sup>th</sup> & 25<sup>th</sup>; Marathwada on 25<sup>th</sup>; Gujarat Region on 25<sup>th</sup> & 26<sup>th</sup>; Coastal Andhra Pradesh & Yanam on 20<sup>th</sup>, 24<sup>th</sup> & 25<sup>th</sup>; North Interior Karnataka on 24<sup>th</sup> September.
- ✓ **Above normal Maximum temperature** very likely over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe during next 3 days.
- ✓

For more details, kindly refer:

[https://mausam.imd.gov.in/responsive/all\\_india\\_forecast\\_bulletin.php](https://mausam.imd.gov.in/responsive/all_india_forecast_bulletin.php)

For District wise warnings refer:

<https://mausam.imd.gov.in/responsive/districtWiseWarningGIS.php>

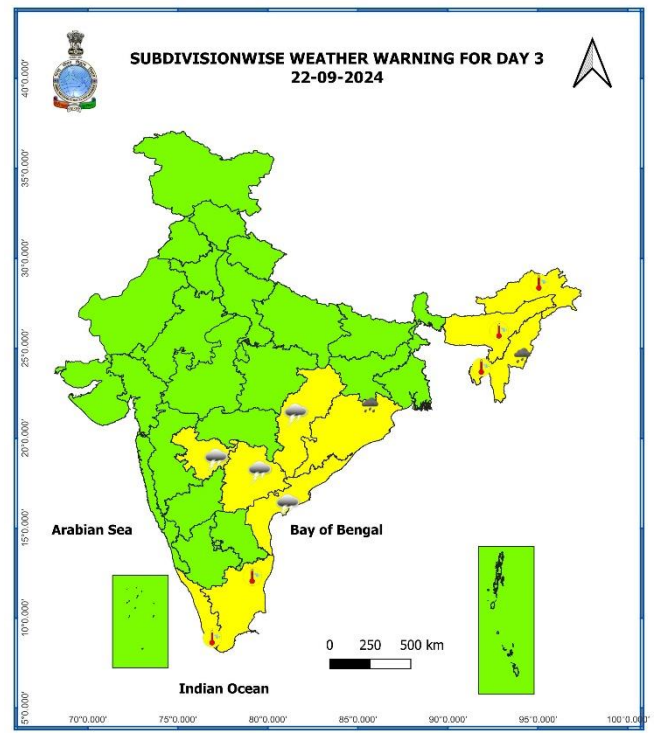
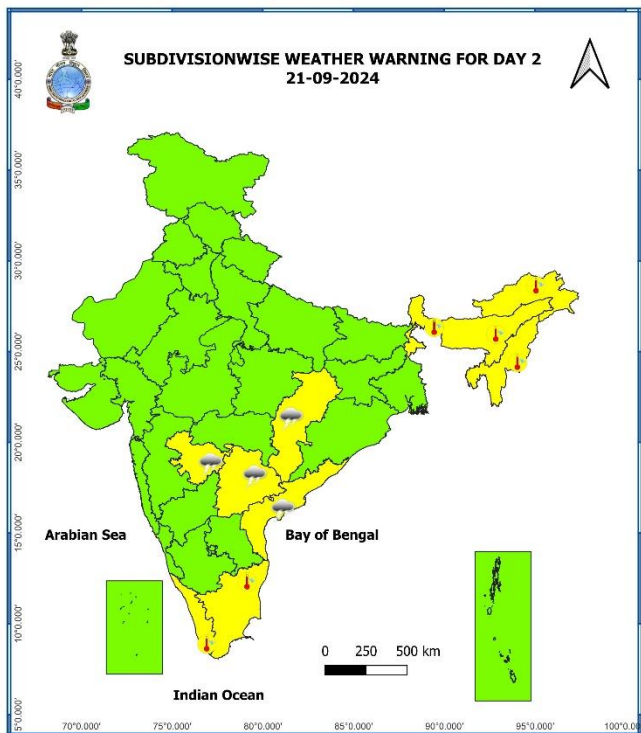
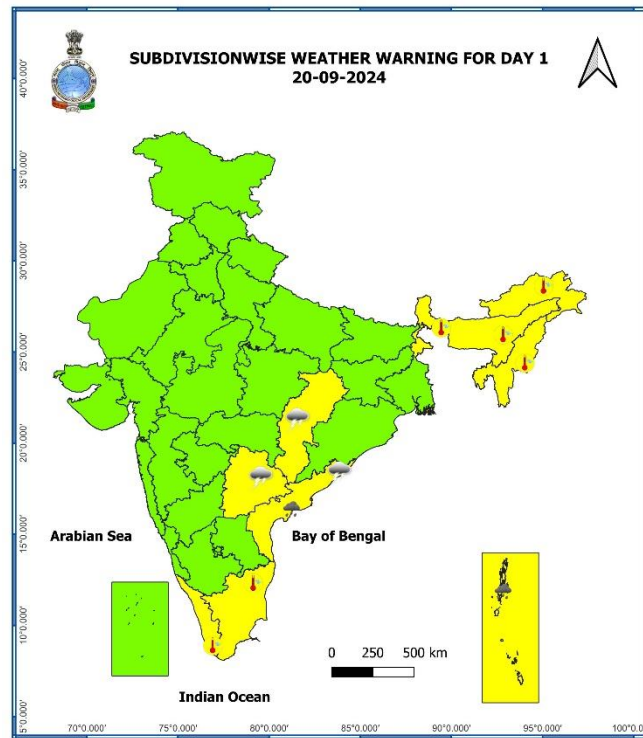
## ANNEXURE I

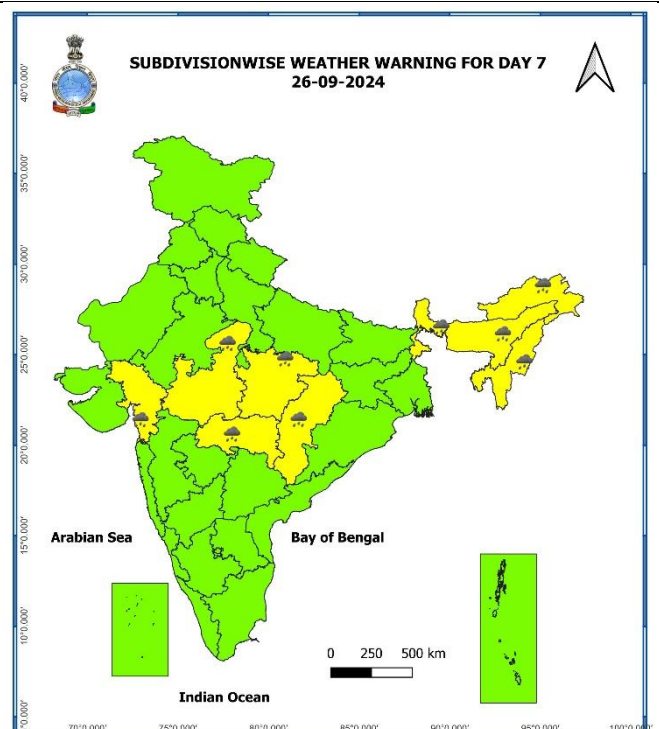
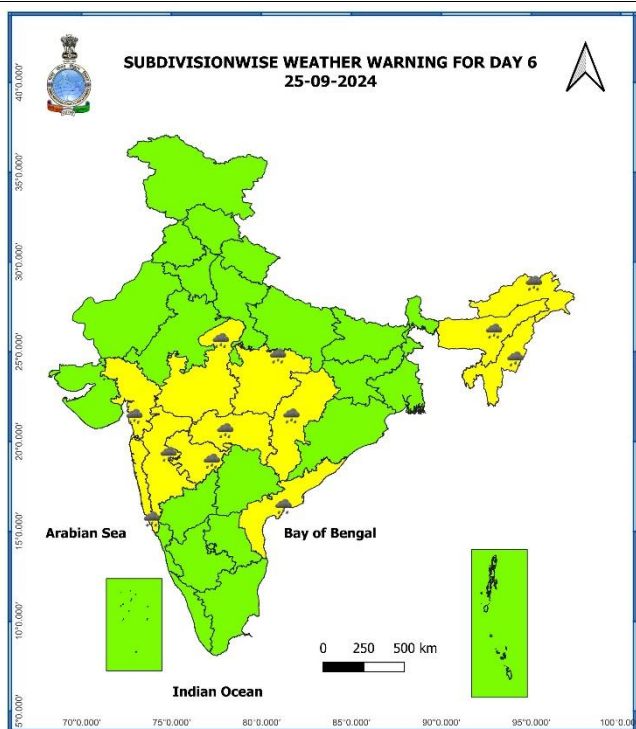
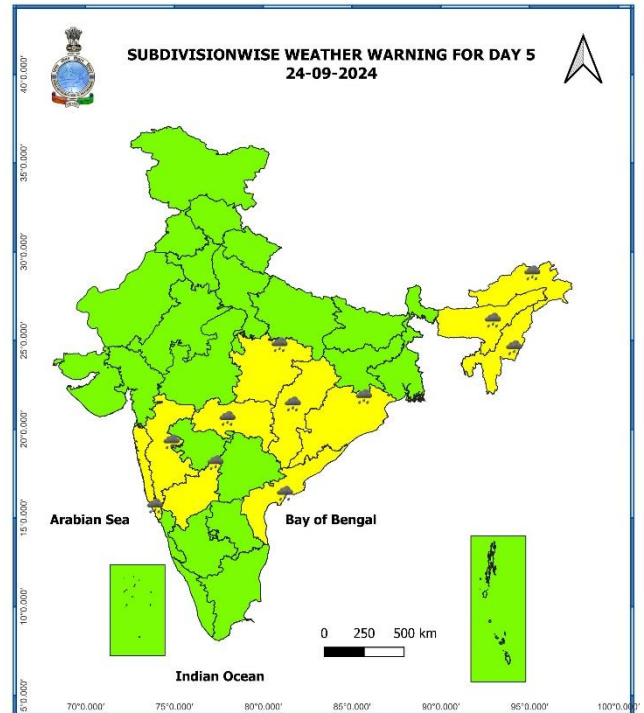
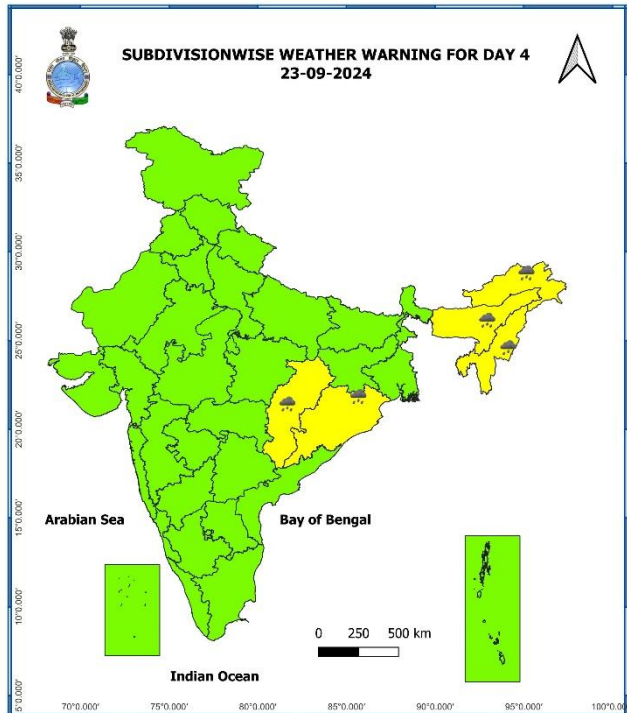
**Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 20.09.2024 (in cm):**

- ❖ **Andaman & Nicobar Islands:** Hut Bay (dist South Andaman) 8,
- ❖ **Coastal Andhra Pradesh & Yanam:** Gantyada (dist Vizianagaram) 7,

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

- As the lead period increases forecast accuracy decreases.





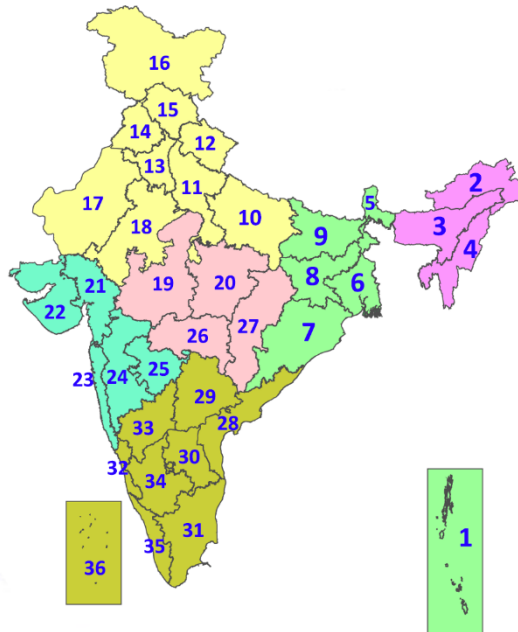
- Action may be taken based on ORANGE AND RED COLOUR warnings.
- Vulnerable regions likely urban and hilly areas action may be initiated for heavy rainfall warning.
- As the lead period increases forecast accuracy decreases.

### **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  $4.5^\circ\text{C}$  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 Strom: Wind speed  $> 220$  kmph ( $> 119$  knots)

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