

Monday, November 11, 2024  
Time of Issue: 0800 hours IST  
(MORNING)

## ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

### Significant Weather Features:

#### Weather Systems:

- ❖ The **cyclonic circulation** over southwest Bay of Bengal extending upto 3.6 km above mean sea level persisted over the same area at 0530 hrs IST of today, the 11<sup>th</sup> November 2024. Under its influence a low pressure area is likely to form over the same area during next 36 hours. Thereafter, it is likely to move slowly nearly westwards towards Tamil Nadu/Sri Lanka coasts during subsequent 2-days.
- ❖ A trough runs from the above cyclonic circulation over southwest Bay of Bengal to eastcentral Bay of Bengal and extends upto middle tropospheric levels.

#### Forecast & Warnings (upto 7 days):

- ✓ 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 11<sup>th</sup>-14<sup>th</sup> November.
- ✓ **Isolated heavy rainfall** very likely over Tamil Nadu during 11<sup>th</sup>-15<sup>th</sup>; Coastal Andhra Pradesh & Yanam and Rayalaseema during 12<sup>th</sup>-14<sup>th</sup>; Kerala & Mahe during 13<sup>th</sup> -16<sup>th</sup>; Coastal & South Interior Karnataka on 14<sup>th</sup> November.
- ✓ **Dense to very dense fog** conditions very likely to prevail in night/morning hours in isolated pockets of west Punjab & northwest Rajasthan during next 2 days; Dense fog in isolated pockets of Himachal Pradesh during next 3 days.

#### i. Temperature conditions and Forecast:

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

On 10<sup>th</sup> November, there was no significant change in Minimum temperature over the country. Minimum temperatures continued to be above normal by 3-5°C over Punjab, Delhi, Uttar Pradesh, Uttarakhand, Rajasthan, East Madhya Pradesh, Bihar, Jharkhand, Gujarat State, Odisha and by 2-3°C over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Gangetic West Bengal, West Madhya Pradesh, Vidarbha, Coastal Andhra Pradesh & Yanam and near normal over remaining parts of the country. Yesterday, **the lowest minimum temperature of 14.2°C** was reported at Ridge (**Delhi**) over the plains of the country.

**Forecast of temperature:** No large change in Minimum temperature over the country during next 2-3 days.

#### ii. Weather forecast over Delhi/NCR during 11<sup>th</sup> November to 13<sup>th</sup> November 2024

##### Past Weather:

There had been slight rise in maximum temperature and no significance change in minimum temperature over Delhi/NCR on 10<sup>th</sup> November. The Maximum and Minimum temperatures over Delhi were in the range of 30-33°C and 14 -20°C respectively. The Maximum temperatures was above normal by 1 - 3°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 southeast/east direction with wind speed reaching 04-10 kmph prevailed on 10<sup>th</sup> November. Mist/Shallow fog reported at Safdarjung airport. Safdarjung airport recorded lowest visibility 700m at 0700 hours IST which improved thereafter becoming 0800m at 0830 hours IST of yesterday. Palam airport recorded lowest visibility 1200m at 0800 hours IST of yesterday. The mainly smog condition with wind speed upto 04 -10 kmph from southeast/east direction prevailed over the region in the forenoon yesterday.

##### Weather Forecast:

**11 November:** Mainly clear sky. The predominant surface wind is likely to be from northeast direction with wind speed less than 08 kmph during morning hours. Smog/mist/ shallow to moderate fog at few places in the morning. The wind speed will increase thereafter becoming less than 10 kmph from south/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.

**12 November:** Mainly clear sky. The predominant surface wind is likely to be from southwest direction with wind speed less than 10 kmph during morning hours. Smog/mist/ shallow to moderate fog at few places in the morning. The wind speed will gradually increase becoming 08- 12 kmph from southwest direction during afternoon. It will decrease thereafter becoming less than 10 kmph from northwest direction during evening and night. Smog/ mist is likely in the evening/night.

**13 November:** Mainly clear sky. The predominant surface wind is likely to be from northwest direction with wind speed less than 10 kmph during morning hours. Smog/mist/ shallow to moderate fog at few places in the morning. The wind speed will increase thereafter becoming 08 - 12 kmph from northwest direction during afternoon. It will gradually decrease becoming 06 - 10 kmph from northwest direction during evening and night. Smog/ mist is likely in the evening/night.

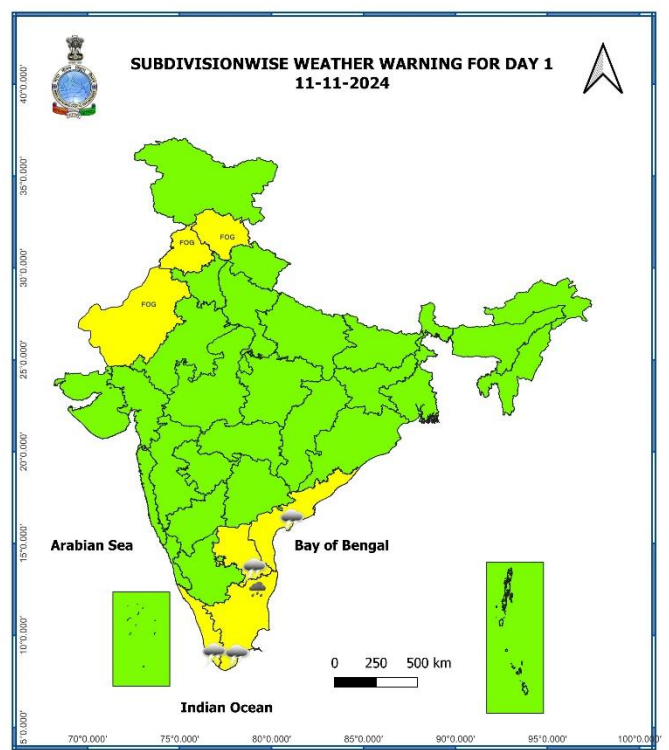
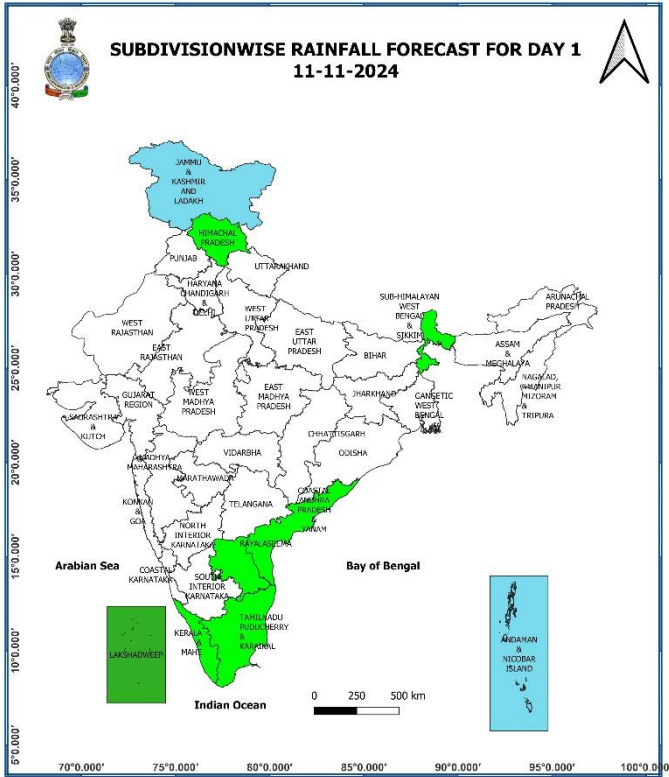
## Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST to 1730 hours IST of yesterday): **at isolated places** over Tamil Nadu, Puducherry & Karaikal, Rayalaseema and Andaman & Nicobar Islands.
- ❖ **Fog conditions observed** (at 0530 hours IST of today): **Moderate to dense fog** in isolated pockets of Punjab (Amritsar Airport-100m, Bhatinda-200 m), West Uttar Pradesh (Bareilly-100 m) and East Uttar Pradesh (Gorakhpur-300m), South Interior Karnataka (Bangalore-100 m).
- ❖ **Heavy rainfall recorded** (from 0830 hours IST to 1730 hours IST of yesterday): Nil.
- ❖ **Significant amount of rainfall** (from 0830 hours IST to 1730 hours IST of yesterday) (in cm): **Andaman & Nicobar Islands: Car Nicobar-1.**
- ❖ **Minimum Temperature Departures (as on 10-11-2024):** Minimum temperatures were **markedly above normal (5.1°C or more)** at isolated places over Punjab, East Uttar Pradesh, Haryana-Chandigarh-Delhi; **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, West Uttar Pradesh, Rajasthan, East Madhya Pradesh, Bihar, Jharkhand, Gangetic West Bengal, Gujarat state, Odisha, Tamil Nadu, Puducherry & Karaikal; **above normal (1.6°C to 3.0°C)** at a few places over Andaman & Nicobar Islands, Vidarbha, Coastal Andhra Pradesh & Yanam; at isolated places over Chhattisgarh, Madhya Maharashtra, Konkan & Goa, Telangana, Rayalaseema, Assam & Meghalaya, Kerala & Mahe. Yesterday, **the lowest minimum temperature of 14.2°C** was reported at Ridge (**Delhi**) over the plains of the country. (**Fig.4**)
- ❖ **Maximum Temperature Departures (as on 10-11-2024):** Maximum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Rajasthan and Tamil Nadu, Puducherry & Karaikal; **above normal (1.6°C to 3.0°C)** at most places over Rayalaseema and Kerala & Mahe; at many places over East Rajasthan, South Interior Karnataka; at a few places over Sub-Himalayan West Bengal & Sikkim, Telangana and Gujarat state; at isolated places over Haryana-Chandigarh-Delhi, Bihar, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gangetic West Bengal, Odisha, Chhattisgarh, West Madhya Pradesh, Coastal Karnataka and Uttarakhand. Yesterday, **the highest maximum temperature of 37.9°C** was reported at **Rajkot (Saurashtra & Kutch)** over the country. (**Fig. 2**)

## Meteorological Analysis (Based on 0530 hours IST)

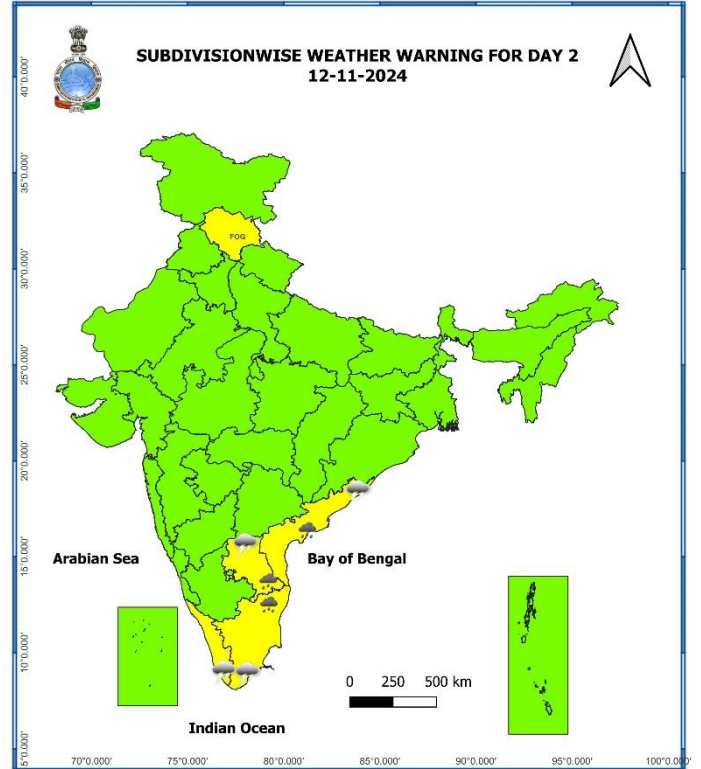
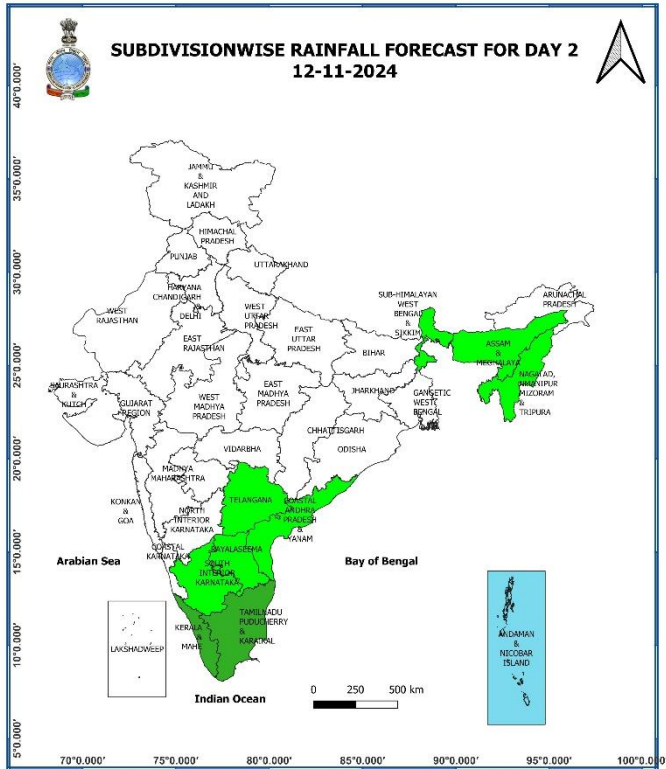
- ❖ The **cyclonic circulation** over southwest Bay of Bengal extending upto 3.6 km above mean sea level persisted over the same area at 0530 hrs IST of today, the 11<sup>th</sup> November 2024. Under its influence a low pressure area is likely to form over the same area during next 36 hours. Thereafter, it is likely to move slowly nearly westwards towards Tamil Nadu/Sri Lanka coasts during subsequent 2-days.
- ❖ The **trough** from the above cyclonic circulation over southwest Bay of Bengal to eastcentral Bay of Bengal extending upto 5.8 km above mean sea levels persisted.

**Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 18<sup>th</sup> November, 2024)**



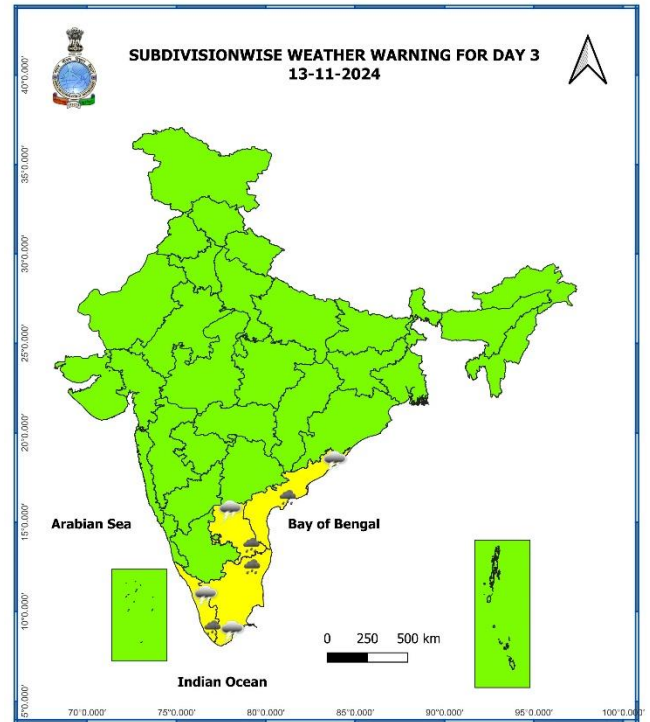
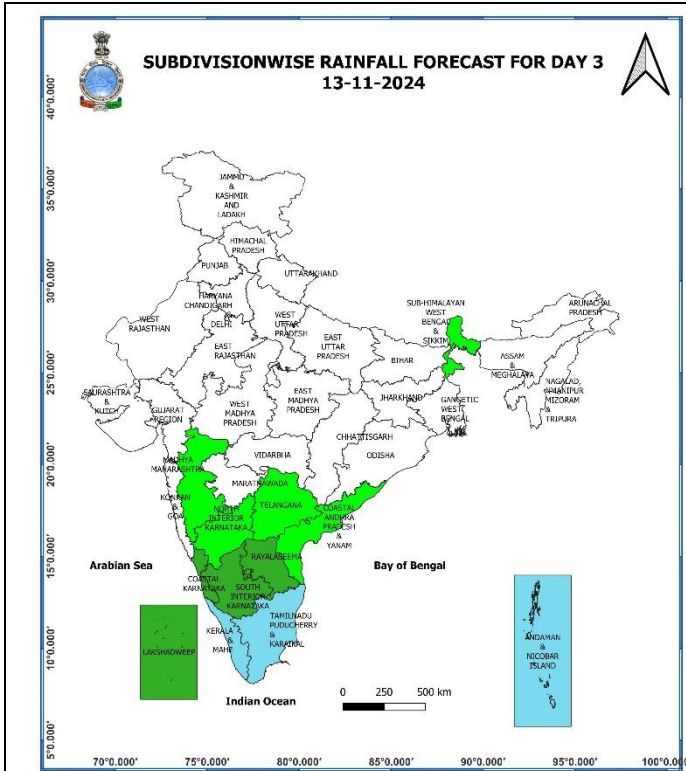
**11 November (Day 1):**

- ❖ **Heavy rainfall ( $\geq 7$  cm)** likely at isolated places over Tamil Nadu, Puducherry & Karaikal.
- ❖ **Dense to very dense fog conditions** very likely in isolated pockets of west Punjab, northwest Rajasthan and **dense fog conditions** in isolated pockets of Himachal Pradesh in the morning hours.
- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam and Rayalaseema.
- ❖ **Squally weather with wind speed 35-45 kmph gusting to 55 kmph** over many parts of southwest Bay of Bengal and adjoining areas of southeast Bay of Bengal, Sri Lanka, along and off Tamil Nadu coasts, gulf of Mannar and adjoining Comorin area. Fishermen are advised not to venture into these areas.



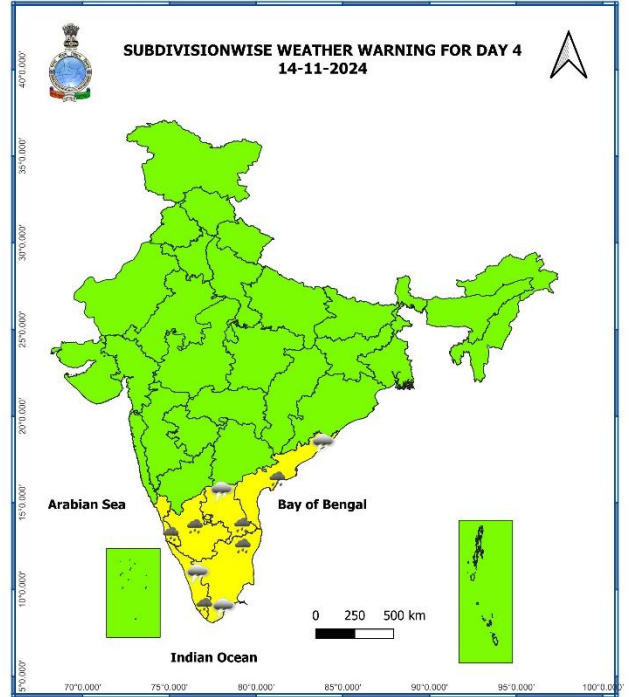
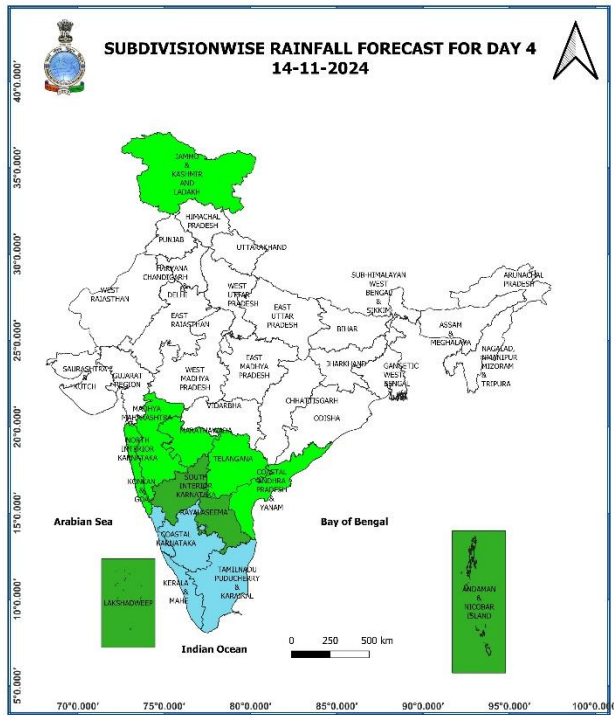
## 12 November (Day 2):

- ❖ **Heavy rainfall ( $\geq 7$  cm)** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam and Rayalaseema.
- ❖ **Dense fog conditions** likely in isolated pockets of Himachal Pradesh in the morning hours.
- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam and Rayalaseema.
- ❖ **Squally weather with wind speed 35-45 kmph gusting to 55 kmph** over many parts of southwest Bay of Bengal and adjoining areas of westcentral Bay of Bengal, Sri Lanka, along and off Tamil Nadu coasts, gulf of Mannar and adjoining Comorin area. Fishermen are advised not to venture into these areas.



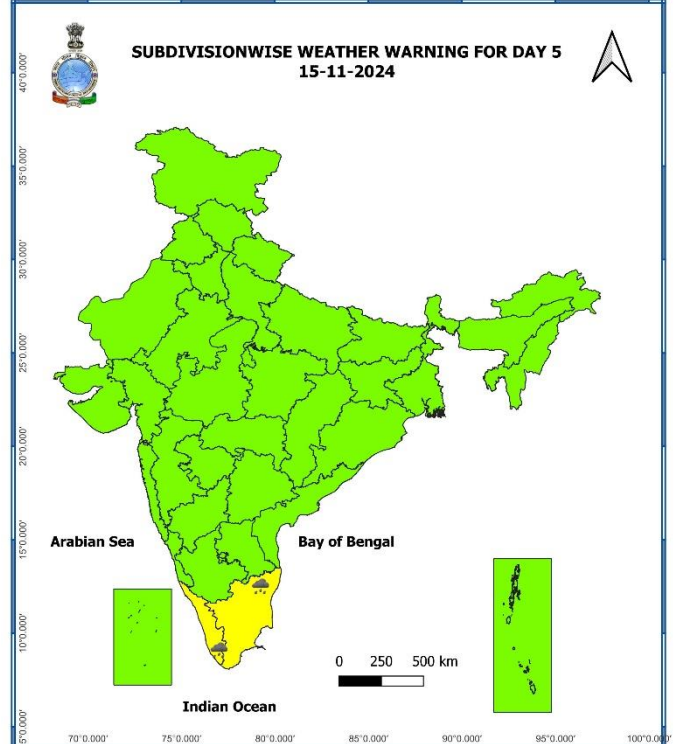
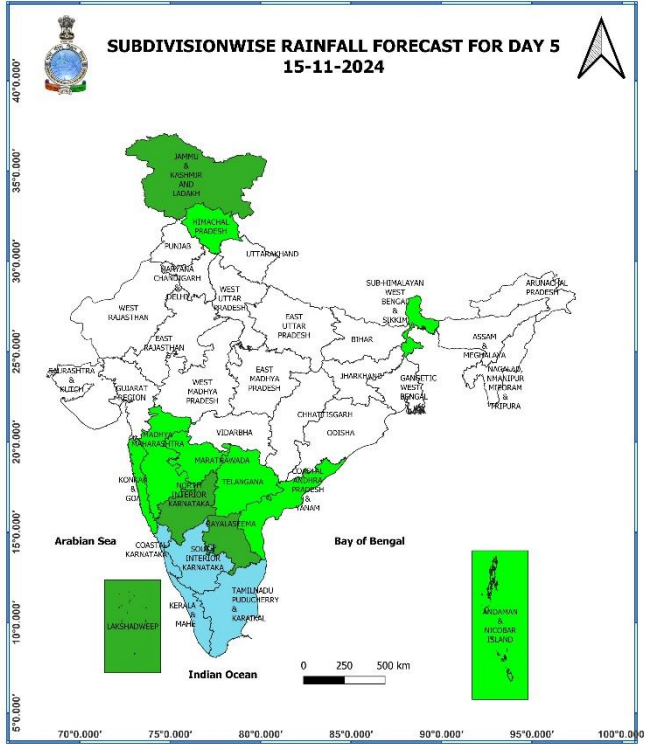
### 13 November (Day 3):

- ❖ **Heavy rainfall ( $\geq 7$  cm)** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam and Rayalaseema.
- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam and Rayalaseema.
- ❖ **Squally weather with wind speed 35-45 kmph gusting to 55 kmph** over many parts of southwest Bay of Bengal and adjoining areas of westcentral Bay of Bengal, Sri Lanka, along and off Tamil Nadu coasts, gulf of Mannar and adjoining Comorin area. Fishermen are advised not to venture into these areas.



#### 14 November (Day 4):

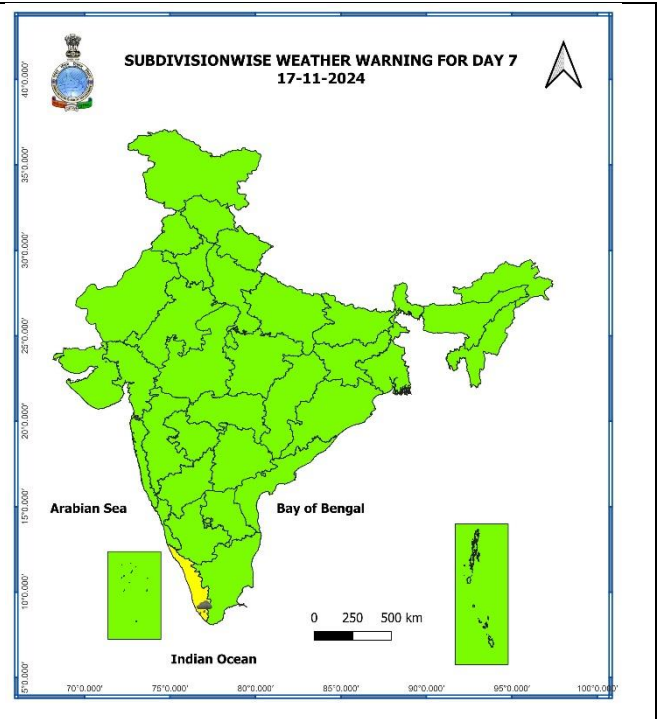
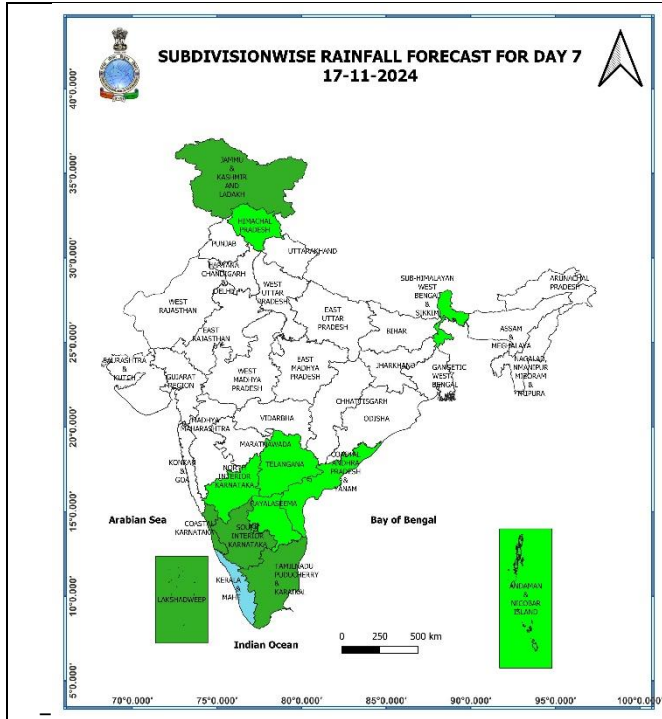
- ❖ **Heavy rainfall ( $\geq 7$  cm)** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Coastal & South Interior Karnataka, Coastal Andhra Pradesh & Yanam, Rayalaseema and Kerala & Mahe.
- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam and Rayalaseema.



**15 November (Day 5):**

- ❖ **Heavy rainfall ( $\geq 7$  cm)** likely at isolated places over Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.





### 17 November (Day 7):

- ❖ Heavy rainfall ( $\geq 7$  cm) likely at isolated places over Kerala & Mahe.

### Weather Outlook for subsequent 3 days (During 18<sup>th</sup> November – 20<sup>th</sup> November, 2024)

- ❖ Isolated to Scattered light rainfall likely over some parts of western Himalayan region and south peninsular India.
- ❖ Mainly dry weather will prevail over rest parts of country.

- 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.

Fig. 1: Maximum Temperatures

Fig. 2: Departure of Maximum Temperatures

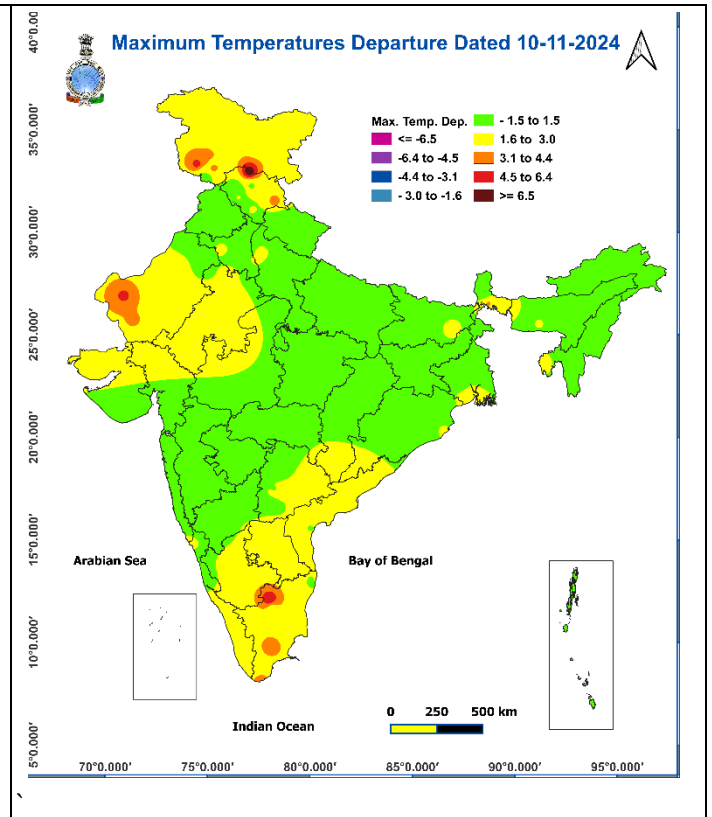
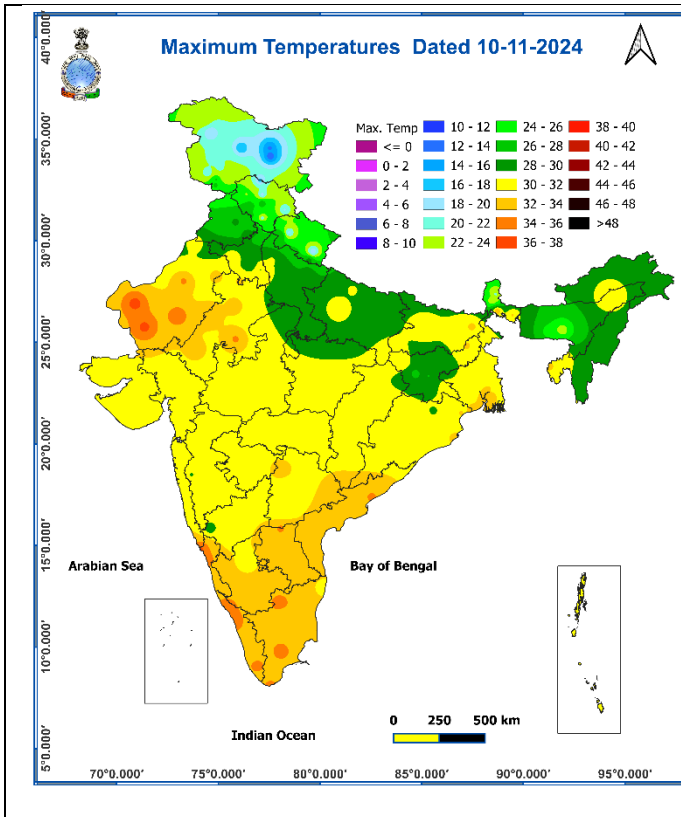


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures

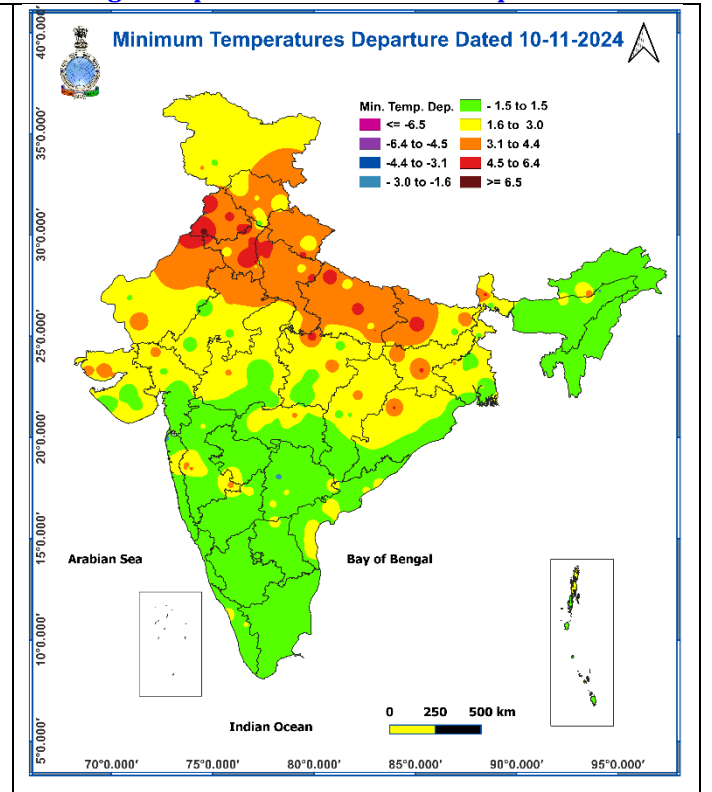
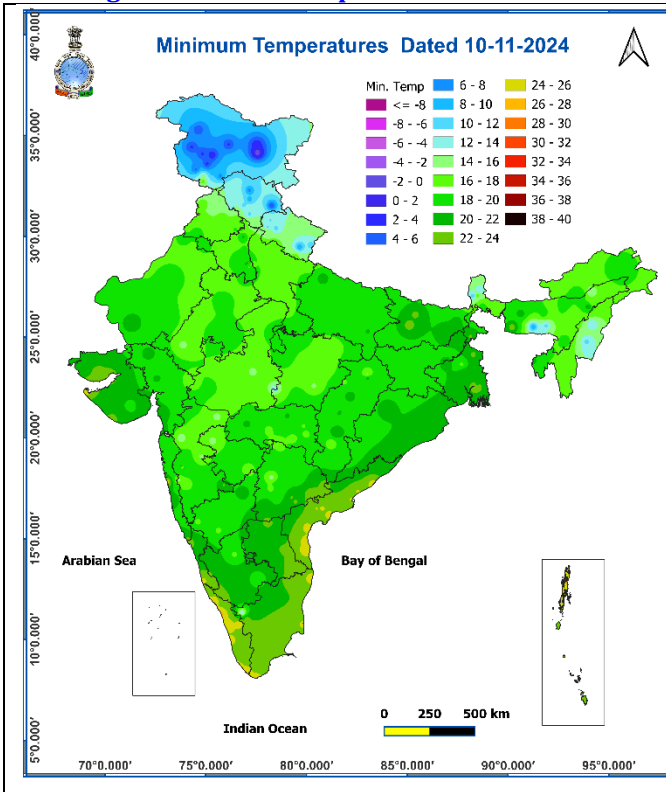
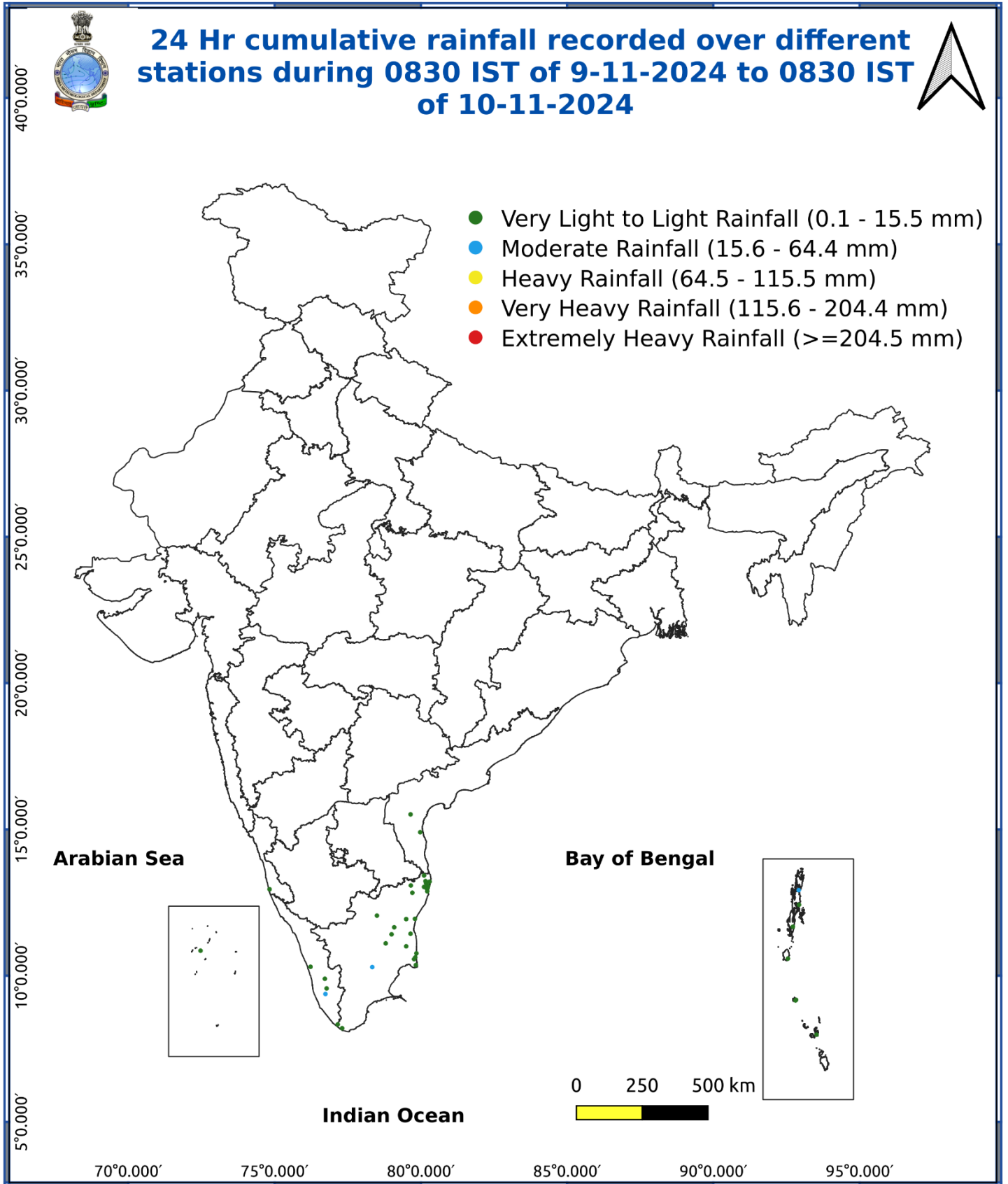


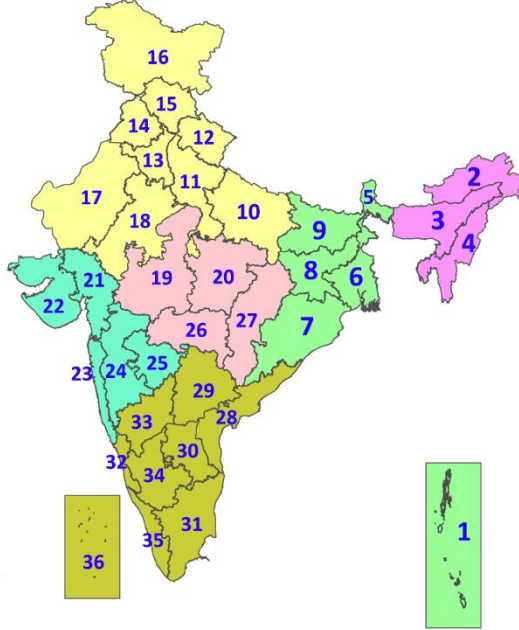
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



\* 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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## 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

## 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)