

Monday, November 11, 2024  
Time of Issue: 1420 hours IST  
(MID-DAY)

## ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

### Significant Weather Features:

#### Weather Systems:

- ❖ The cyclonic circulation over southwest Bay of Bengal persists over the same area and now extends upto middle tropospheric levels. Under its influence a low pressure area is likely to form over the same area during next 24 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 Westcentral Bay of Bengal off North Coastal Andhra Pradesh in lower tropospheric levels.
- ❖ A fresh Western Disturbance is likely to affect the Western Himalayan region from 14<sup>th</sup> November, 2024.

#### 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, Coastal Andhra Pradesh & Yanam and Rayalaseema during 11<sup>th</sup>-15<sup>th</sup> November.
- ✓ **Isolated heavy rainfall** very likely over Tamil Nadu during 11<sup>th</sup>-17<sup>th</sup>; Kerala & Mahe during 13<sup>th</sup>-17<sup>th</sup>; Rayalaseema on 12<sup>th</sup> & 13<sup>th</sup>; South Interior Karnataka on 13<sup>th</sup> & 14<sup>th</sup> and over Coastal Andhra Pradesh & Yanam during 12<sup>th</sup>-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 during 12<sup>th</sup>-15<sup>th</sup>; **Dense fog** in isolated pockets of Himachal Pradesh during next 5 days.

#### i. Temperature conditions and Forecast:

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

No significant change in minimum temperature observed over most parts of the country during past 24 hours. Minimum temperatures continue to be above normal by 3-5°C over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Uttar Pradesh, Himachal Pradesh, Uttarakhand, northwest Rajasthan, Bihar, Jharkhand and by 2-3°C over southwest Rajasthan, north Gujarat and East Madhya Pradesh and near normal over remaining parts of the country. Today, **the lowest minimum temperature of 13.2°C** is reported at Mandla (**East Madhya Pradesh**) over the plains of the country.

##### ❖ Forecast of temperature:

- ❖ No significant change in minimum temperatures very likely over northwest and central India during next 4-5 days.
- ❖ No significant change in minimum temperatures very likely over East India during next 2 days and gradual fall by 3-4°C thereafter for subsequent 3 days.
- ❖ **ii. Weather forecast over Delhi/NCR during 11<sup>th</sup> November to 13<sup>th</sup> November 2024**

#### Past Weather:

There has been slight fall in maximum and minimum temperature over Delhi/NCR during past 24hr. The Maximum and Minimum temperature over Delhi is in the range of 30-32°C and 14 -19°C respectively. The maximum temperature was above normal by 1 - 2°C over the region and minimum temperature was above normal by 3 -5°C over most places in the region. Mainly clear sky condition with predominant surface wind from variable directions with wind speed reaching 04-06 kmph prevailed during past 24hr. 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. Palam airport recorded lowest visibility 1000m at 0730 hours IST. The mainly smog condition with wind speed less than 06 kmph from variable directions prevailed over the region in the forenoon today.

#### Weather Forecast:

**11.11.2024:** Mainly clear sky. The predominant surface wind is likely to be variable with wind speed upto 04 - 08 kmph till evening. It would decrease thereafter becoming less than 06 kmph during night. Smog/ mist is likely in the evening/night.

**12.11.2024:** Mainly clear sky. The predominant surface wind is likely to be from south direction with speed less than 06 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 southwest direction during afternoon. It will decrease thereafter becoming less than 08 kmph from northwest direction during evening and night. Smog/ mist is likely in the evening/night.

**13.11.2024:** Mainly clear sky. The predominant surface wind is likely to be from northwest direction with speed less than 08 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 northwest 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.

**14.11.2024:** Mainly clear sky. The predominant surface wind is likely to be variable with wind speed less than 04 kmph during morning hours. Smog/mist/ shallow to moderate fog at few places in the morning. The wind speed will increase thereafter becoming 08 - 10 kmph from north direction during afternoon. It will gradually decrease becoming 04 - 08 kmph from variable directions during evening and night. Smog/ mist is likely in the evening/night.

\* 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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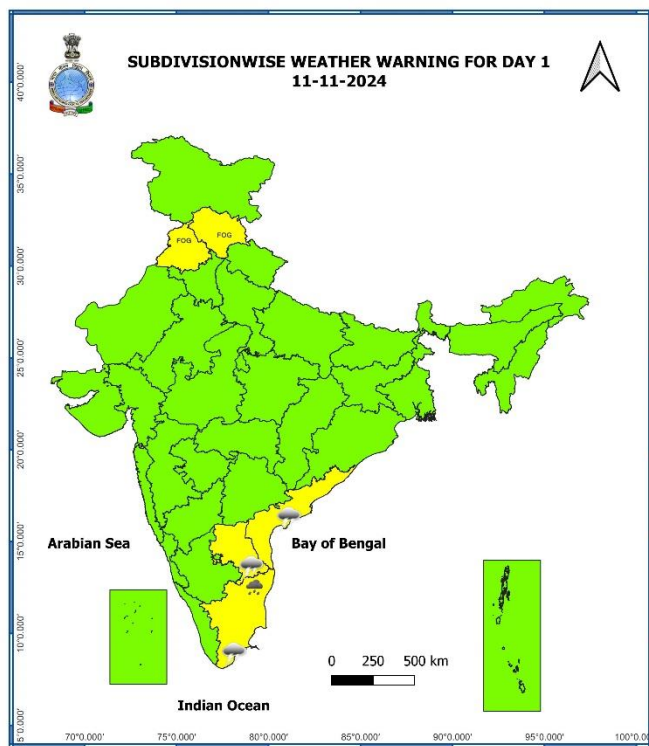
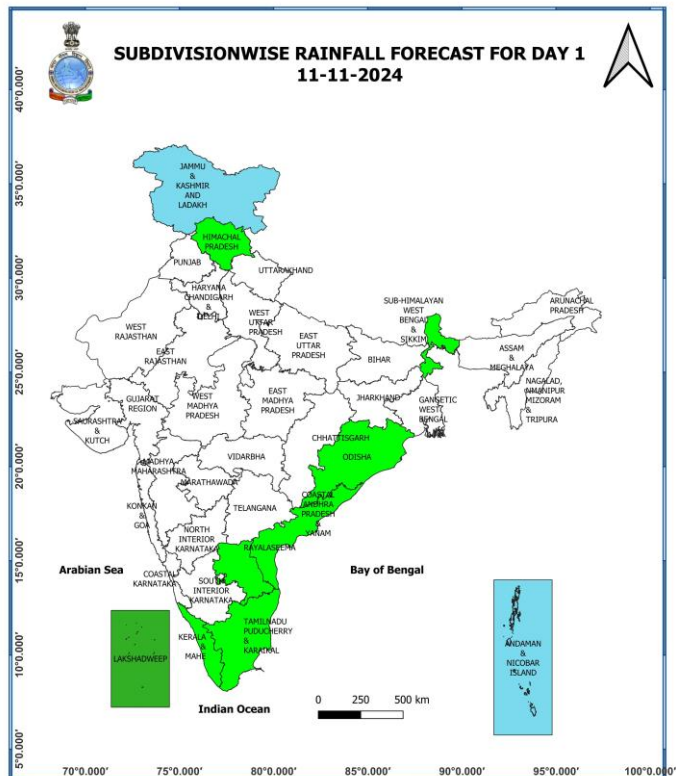
## Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST of yesterday to 0830 hours IST of today): **at a few places** over Andaman & Nicobar Islands and **at isolated places** over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Rayalaseema and Andaman & Nicobar Islands.
- ❖ **Fog conditions observed** (at 0830 hours IST of today): **Dence to very dense fog** in isolated pockets of Punjab (Amritsar- 00 m) and **dense fog** in isolated pockets of Himachal Pradesh (Bilashpur-50 m).
- ❖ **Heavy rainfall recorded** (from 0830 hours IST of yesterday to 0830 hours IST of today): Nil.
- ❖ **Significant amount of rainfall** (from 0830 hours IST of yesterday to 0830 hours IST of today) (in cm): **Andaman & Nicobar Islands:** Car Nicobar-2. **Kerala & Mahe:** Kanjirappally (dist Kottayam) 3, Varkala (dist Thiruvananthapuram) 3.
- ❖ **Minimum Temperature Departures (as on 11-11-2024):** Minimum temperatures are **markedly above normal (5.1°C or more)** at isolated places over Punjab, Uttar Pradesh, Haryana-Chandigarh-Delhi, Bihar, West Rajasthan; **appreciably above normal (3.1°C to 5.0°C)** at a few places over Uttarakhand; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Jharkhand; **above normal (1.6°C to 3.0°C)** at many places over East Rajasthan, Chhattisgarh, Odisha, West Bengal & Sikkim; at a few places over Saurashtra & Kutch and Madhya Pradesh; at isolated places over Gujarat Region, Vidarbha, Coastal Andhra Pradesh & Yanam, Madhya Maharashtra, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura. Today, **the lowest minimum temperature of 13.2°C** is reported at **Mandla (East Madhya Pradesh)** 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 0830 hours IST)

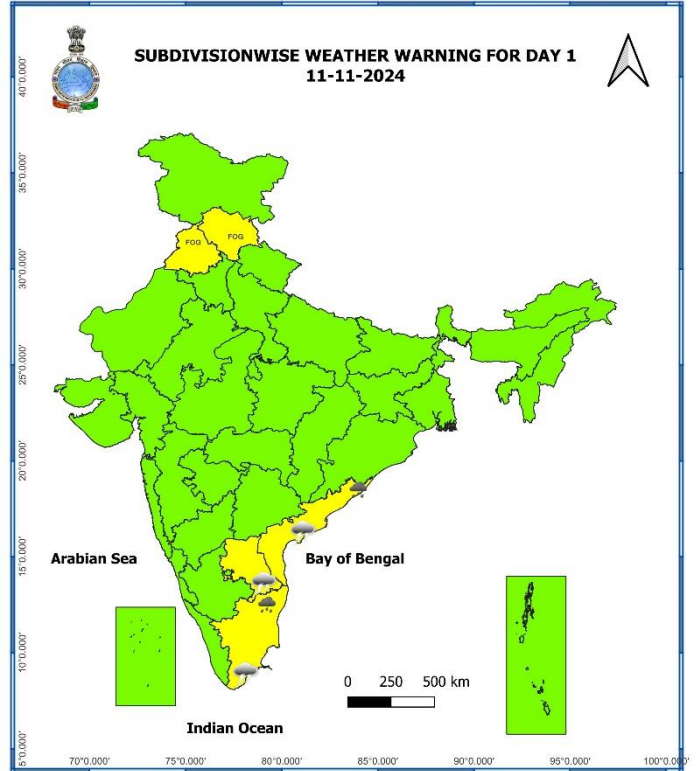
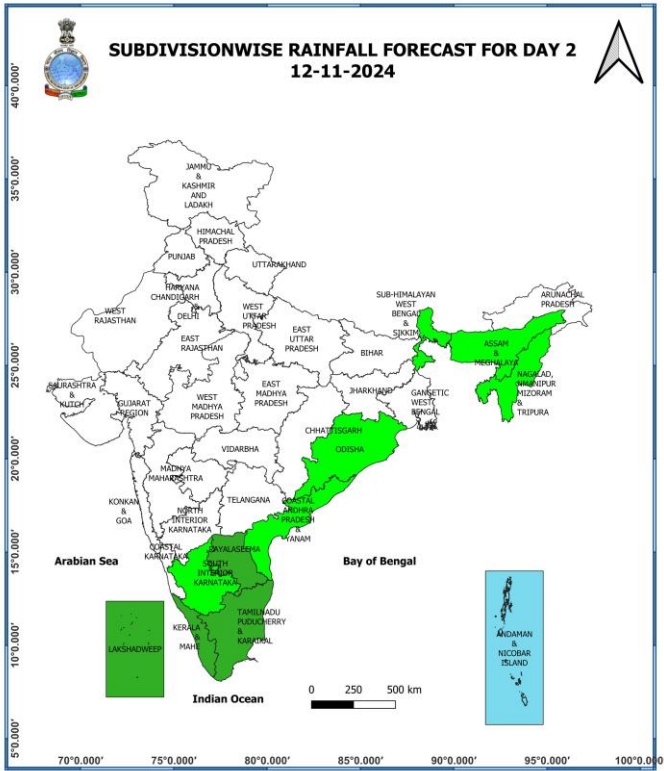
- ❖ The **cyclonic circulation** over southwest Bay of Bengal persists over the same area and now extends upto 5.8 km above mean sea level tilting southwestwards with height at 0830 hrs IST of today, the 11<sup>th</sup> November 2024. Under its influence a low pressure area is likely to form over the same area during next 24 hours. Thereafter, it is likely to move slowly nearly westwards towards Tamil Nadu/Sri Lanka coasts during subsequent 2-days.
- ❖ The **trough** from southwest Bay of Bengal to eastcentral Bay of Bengal now runs from the above cyclonic circulation over southwest Bay of Bengal to Westcentral Bay of Bengal off North Coastal Andhra Pradesh and extends upto 1.5 km above mean sea level.
- ❖ A fresh **Western Disturbance** seen as a trough in middle tropospheric westerlies with its axis at 5.8 km above mean sea level runs roughly along Long. 70°E to the north of Lat. 32°N.
- ❖ Another fresh Western Disturbance is likely to affect Western Himalayan Region from 14<sup>th</sup> November, 2024.

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



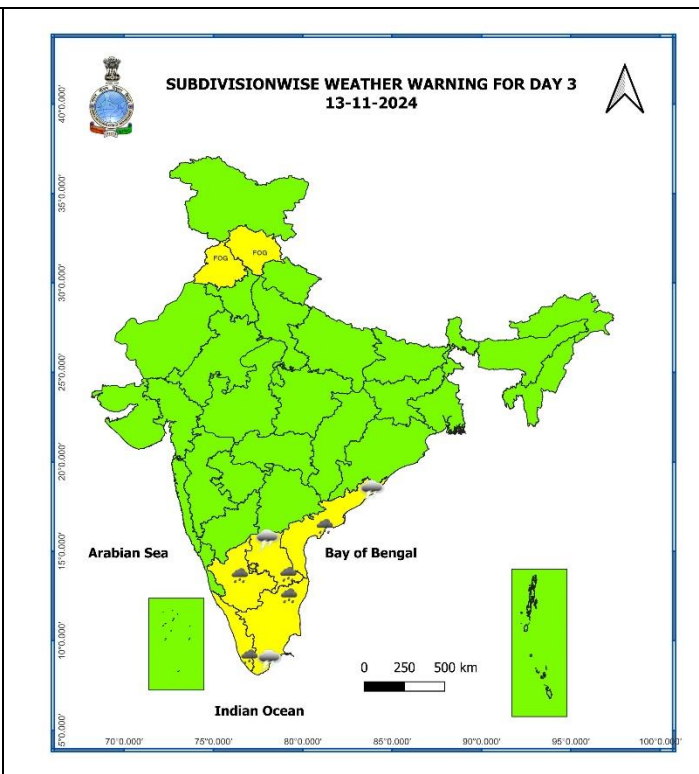
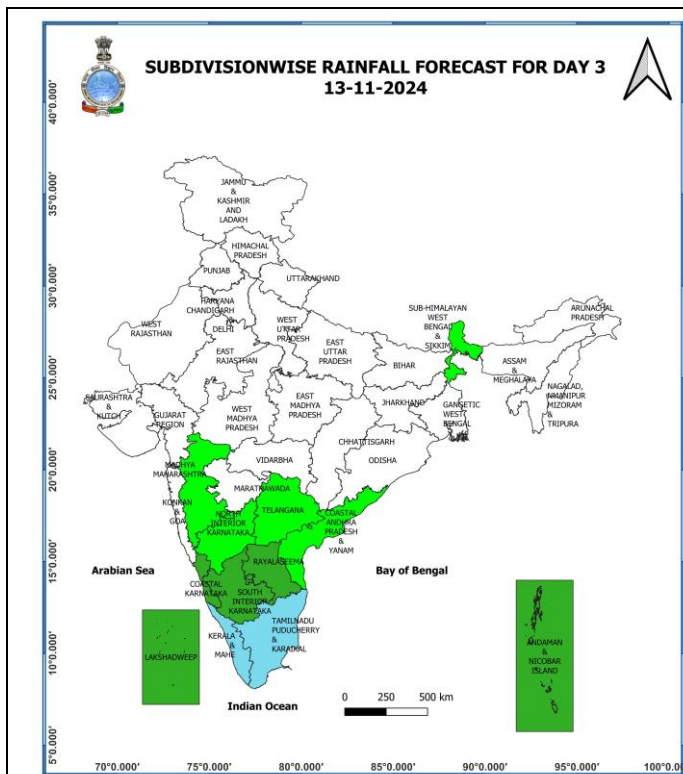
**11 November (Day 1):**

- ❖ **Heavy rainfall ( $\geq 7$  cm)** likely at isolated places over Coastal Andhra Pradesh & Yanam and Tamil Nadu, Puducherry & Karaikal.
- ❖ **Dense to very dense fog conditions** very likely in isolated pockets of Punjab, 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, 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 & some western parts of westcentral Bay of Bengal, along and off Sri Lanka coast, along and off Tamil Nadu coast, Gulf of Mannar and adjoining Comorin area. Fishermen are advised not to venture into these areas.



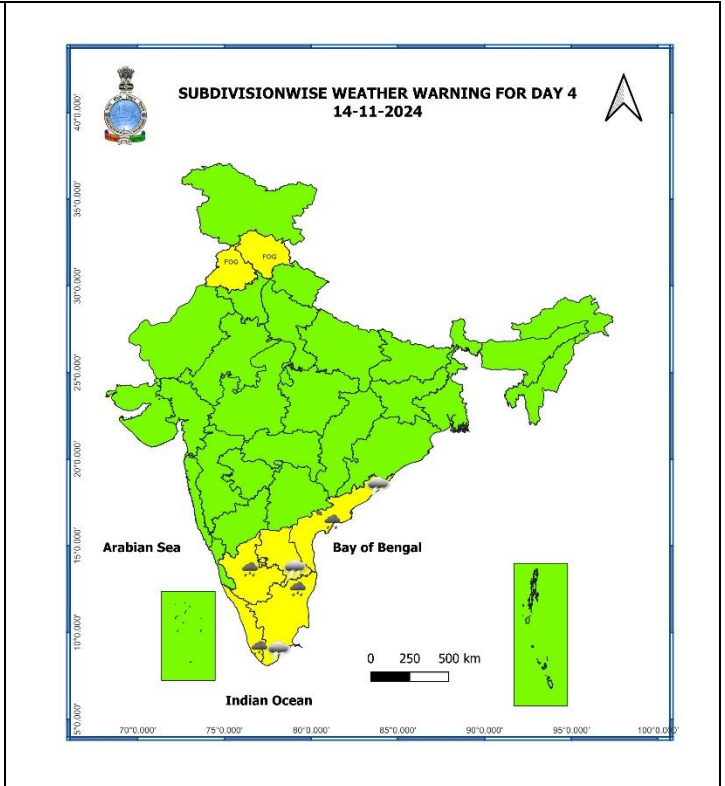
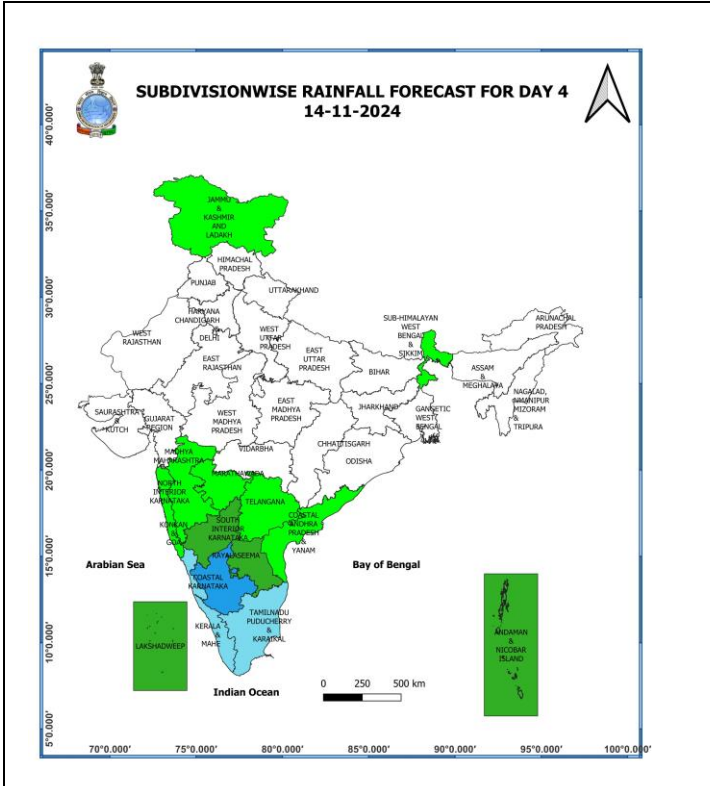
## 12 November (Day 2):

- ❖ **Heavy rainfall ( $\geq 7$  cm)** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam and Rayalaseema.
- ❖ **Dense to very dense fog conditions** very likely in isolated pockets of Punjab 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, 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, along and off Sri Lanka coast, along and off Tamil Nadu coasts, Gulf of Mannar and adjoining Comorin area. Fishermen are advised not to venture into these areas



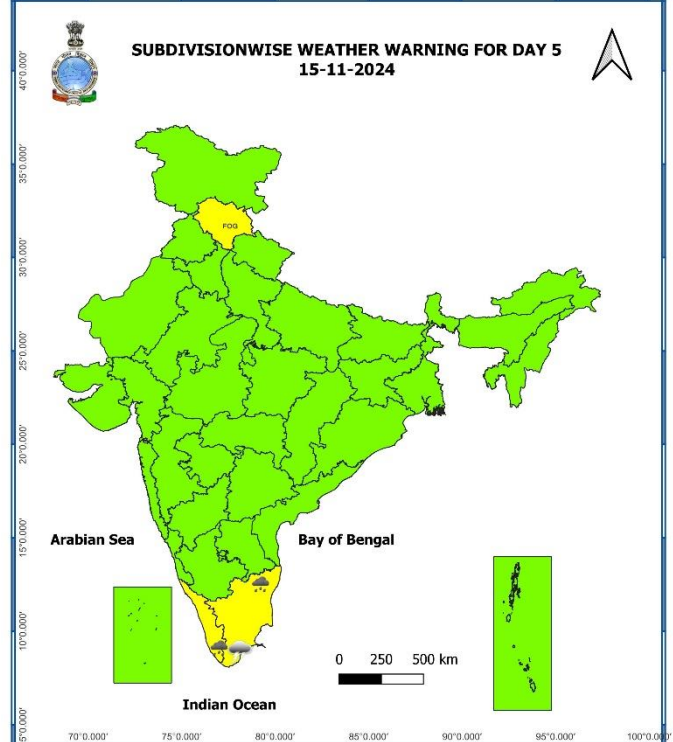
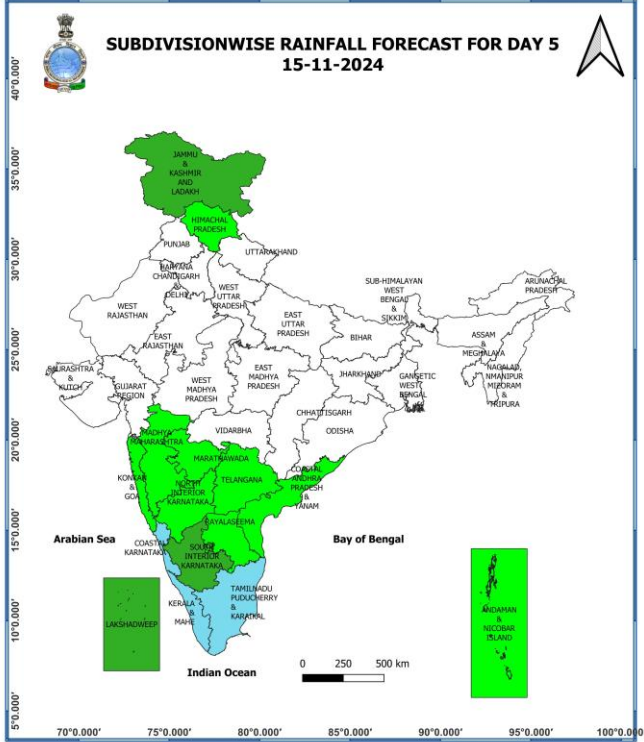
**13 November (Day 3):**

- ❖ **Heavy rainfall ( $\geq 7$  cm)** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam and Rayalaseema and South Interior Karnataka.
- ❖ **Dense to very dense fog conditions** very likely in isolated pockets of Punjab 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, Coastal Andhra Pradesh & Yanam and Rayalaseema.
- ❖ **Squally weather with wind speed 35-45 kmph gusting to 55 kmph** over parts of southwest Bay of Bengal, along and off Sri Lanka coast, along and off Tamil Nadu coast, Gulf of Mannar and adjoining Comorin area. Fishermen are advised not to venture into these areas.



**14 November (Day 4):**

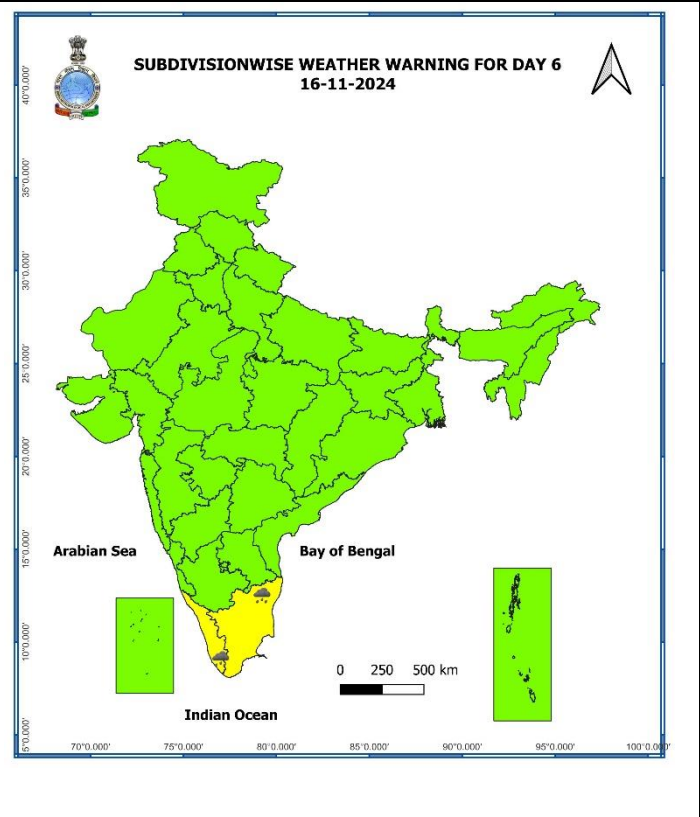
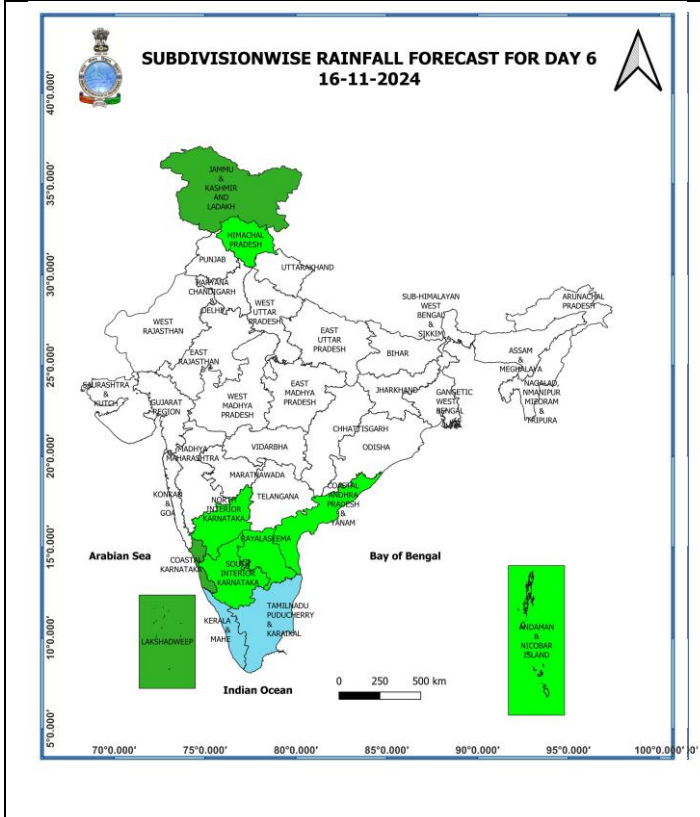
- ❖ **Heavy rainfall ( $\geq 7$  cm)** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, South Interior Karnataka, Coastal Andhra Pradesh & Yanam and Kerala & Mahe.
- ❖ **Dense to very dense fog** conditions very likely in isolated pockets of Punjab and **dense fog** conditions in isolated pockets of Himachal Pradesh in the morning hours.
- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam and Rayalaseema.



**15 November (Day 5):**

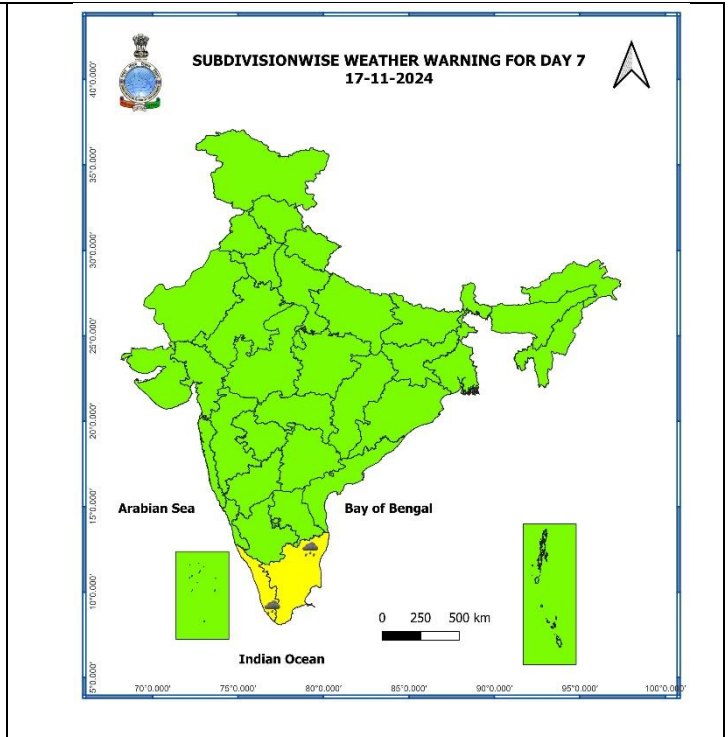
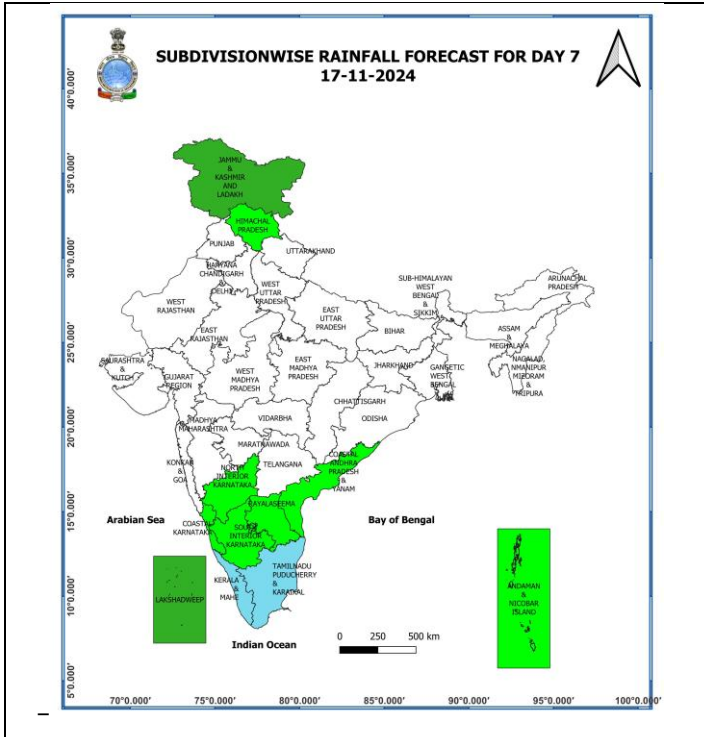
- ❖ **Heavy rainfall ( $\geq 7$  cm)** likely at isolated places over Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- ❖ **Dense to fog** conditions very likely in isolated pockets of Himachal Pradesh.
- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Tamil Nadu, Puducherry & Karaikal.





**16 November (Day 6):**

- ❖ **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 Tamil Nadu, Puducherry & Karaikal and 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

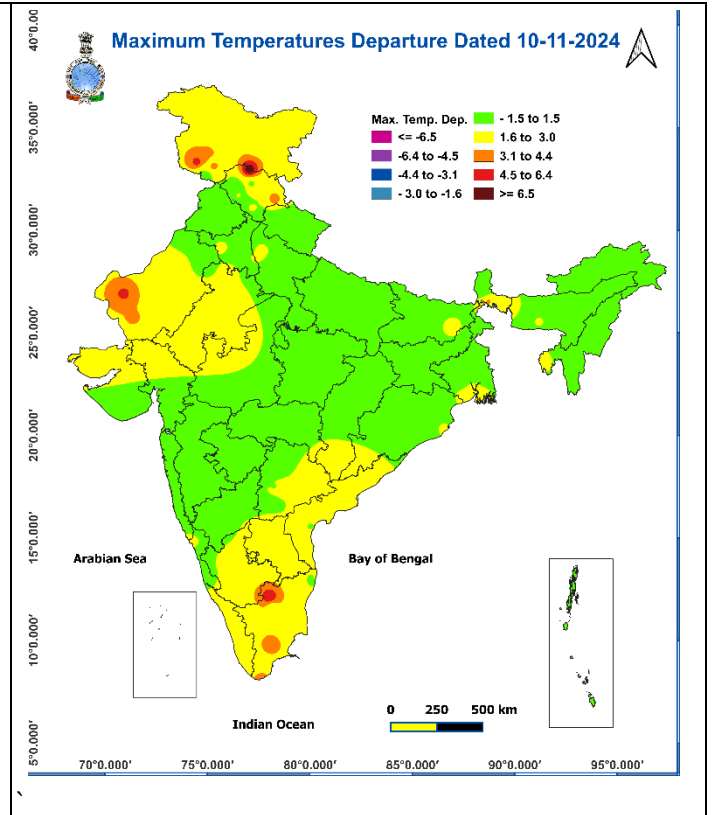
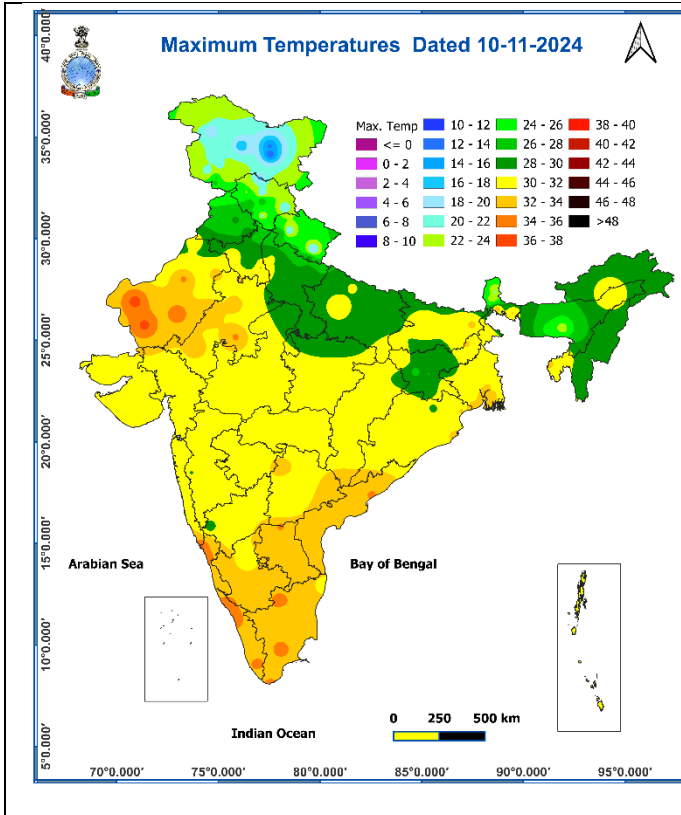


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures

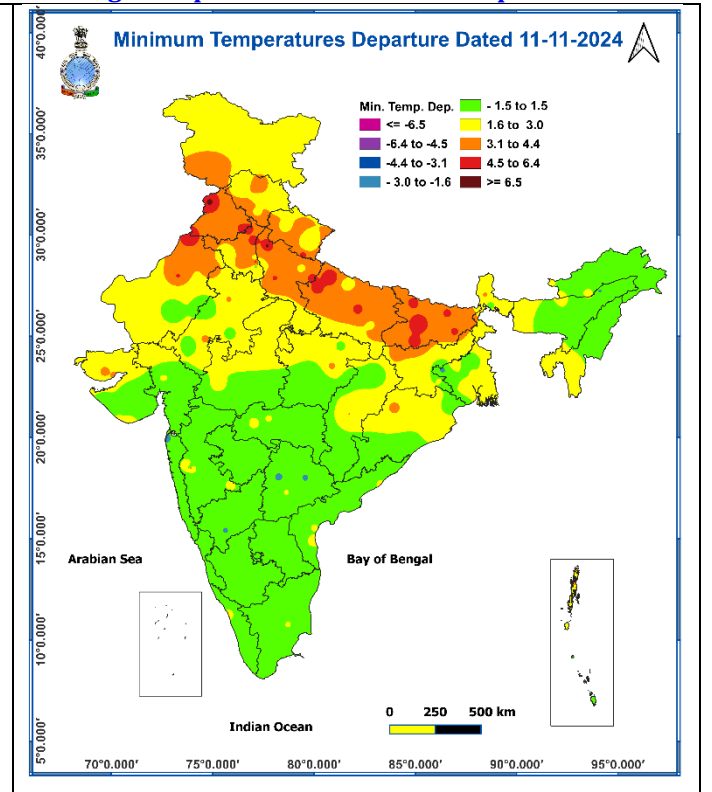
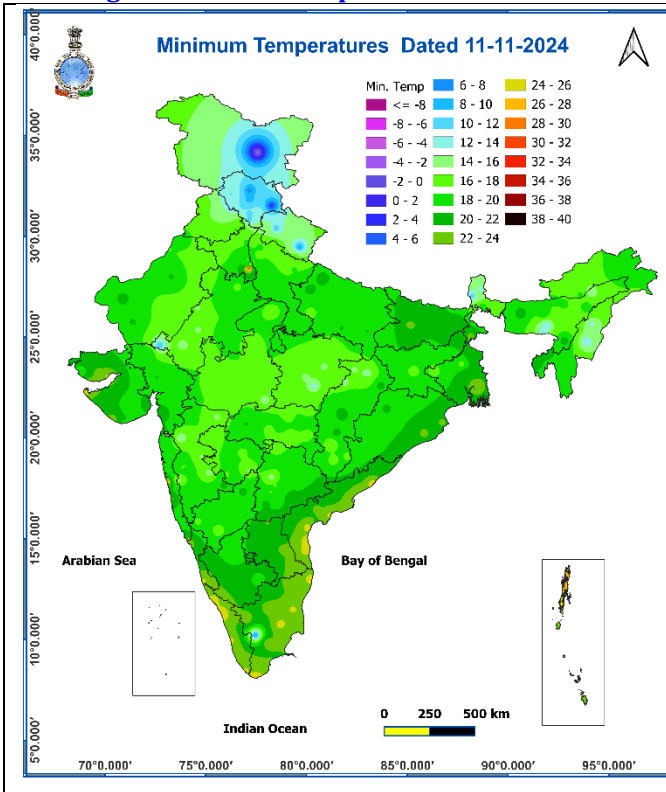
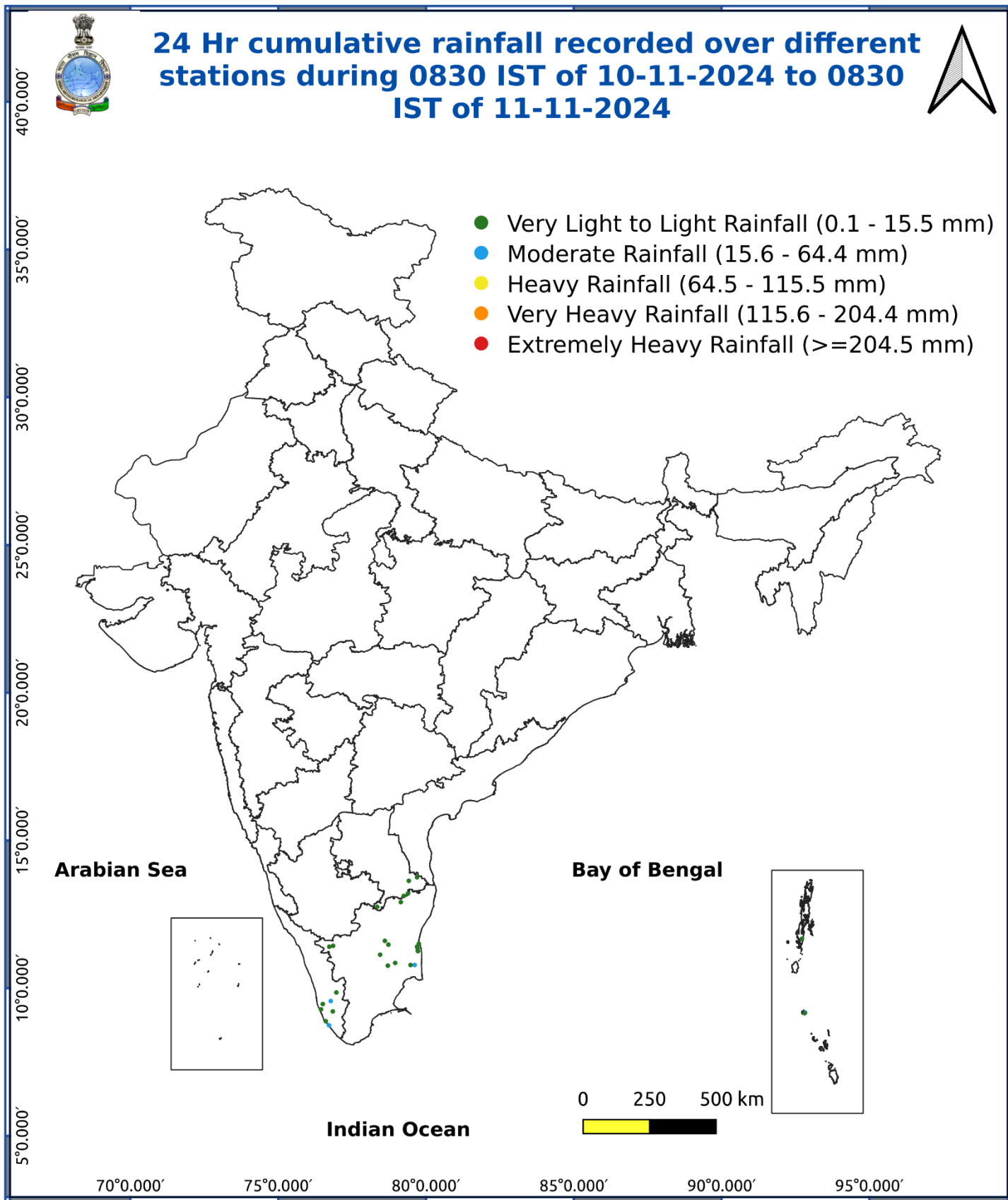


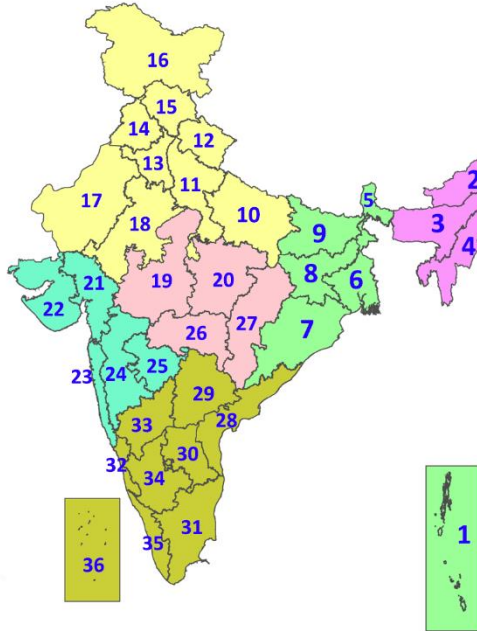
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



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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)