

Friday, April 11, 2025
Time of Issue: 1330 hours IST
(MID-DAY)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

Weather Systems, Forecast and Warnings:

- ❖ The **Western Disturbance** as a **trough** in westerlies in middle tropospheric levels runs roughly along Long. 70°E to the north of Lat. 26°N. An **upper air cyclonic circulation** lies over northwest Rajasthan, 2nd over northwest Madhya Pradesh and a trough runs from west Rajasthan to Coastal Andhra Pradesh in lower tropospheric levels.
- ❖ The **upper air cyclonic circulations** also lie over (1) northeast Assam & (2) Sub-Himalayan West Bengal and a trough runs from northeast Madhya Pradesh to Bangladesh across Jharkhand in lower tropospheric levels. Under the influence of these systems:
 - ✓ **Scattered to fairly widespread** light/moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (speed 40-50 kmph)** likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Himachal Pradesh on 11th and Uttarakhand on 11th & 12th April.
 - ✓ **Scattered to fairly widespread** light/moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (speed 40-50 kmph)** likely over northeast and adjoining east India during next 7 days.
 - ✓ Isolated to scattered rainfall accompanied with **thunderstorm, lightning & gusty winds (speed 40-50 kmph)** likely over plains of West, Central and adjoining East India during 11th-14th April.
 - ✓ **Heavy rainfall** likely over Uttarakhand, Bihar, Kerala & Mahe on 11th; Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh on 11th & 12th; Assam & Meghalaya during 11th-15th April.
 - ✓ **Isolated Hailstorm** likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Punjab, Haryana Chandigarh, Chhattisgarh on 11th; Uttarakhand, East Madhya Pradesh on 11th & 12th; Uttar Pradesh on 12th April.
 - ✓ **Duststorm** very likely at isolated places over Rajasthan on 11th & 12th April.
 - ✓ **Thundersquall (wind speed reaching 50-60 kmph)** very likely at isolated places over Punjab, Haryana Chandigarh & Delhi, Rajasthan on 11th & 12th and Odisha on 11th April.
- ❖ **Scattered to fairly widespread** light/moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (speed 30-40 kmph)** likely over Kerala & Mahe during next 7 days and Lakshadweep during next 2 days. **Isolated to Scattered** light/moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (speed 40-50 kmph)** likely over Tamilnadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Telangana, Karnataka during next 5 days.
 - ✓ **Thundersquall (wind speed reaching 50-60 kmph)** very likely at isolated places over Coastal Andhra Pradesh & Yanam on 11th April.

Temperature Forecast:

- ❖ Fall in maximum temperatures by 2°C likely over Northwest India during next 3 days and gradual rise by 3-5°C thereafter during subsequent 4 days.
- ❖ Fall in maximum temperatures by 2°C likely over Central India during next 3 days and gradual rise by 2-4°C thereafter during subsequent 4 days.
- ❖ Fall in maximum temperatures by 2-3°C likely over west India during next 3 days and gradual rise by 2-3°C thereafter during subsequent 4 days.
- ❖ No significant change over rest parts of the country.

Heat wave, warm night and Hot & Humid weather warning:

- ❖ **Heat wave conditions** very likely at isolated/some places over West Rajasthan on 14th & 15th with severe heat wave conditions at isolated pockets on 16th & 17th April
- ❖ **Heat wave conditions** are very likely at isolated places over Gujarat state during 15th-17th; Punjab, Haryana and East Rajasthan on 16th & 17th April.

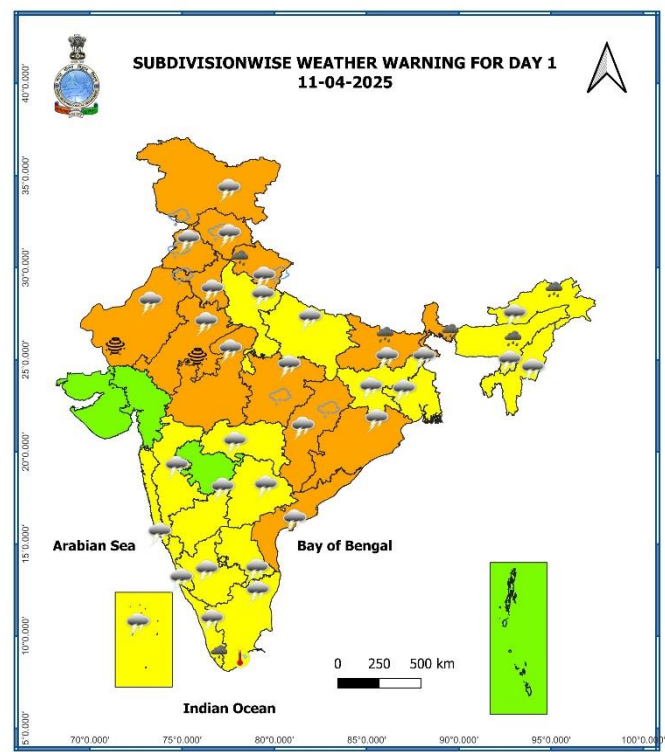
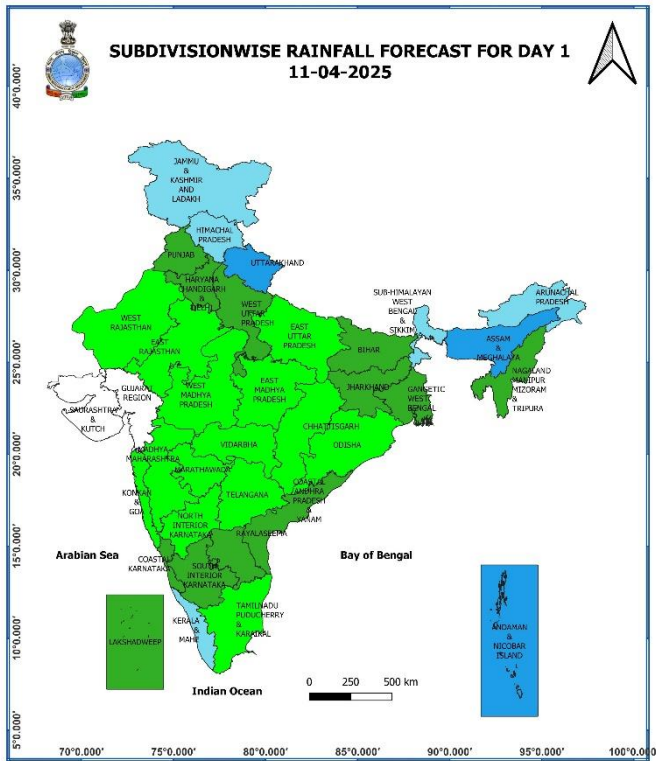
Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST of yesterday to 0830 hours IST of today): **Light/moderate Rainfall with thunderstorm & lightning observed** at most places over Andaman & Nicobar Islands, West Bengal & Sikkim, Jharkhand, Bihar ; a many places over Arunachal Pradesh, Assam & Meghalaya , Odisha, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Uttarakhand, East Uttar Pradesh; at a few places over Nagaland, Manipur, Mizoram & Tripura, Himachal Pradesh, Lakshadweep, cap, Rayalaseema, Telangana, Karnataka; at isolated places over Punjab, Haryana Chandigarh & Delhi, West Uttar Pradesh, East Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Konkan & Goa, Marathwada, Tamilnadu Puducherry & Karaikal, Kerala & Mahe.
- ❖ **Significant amount of rainfall** (from 0830 hours IST of yesterday to 0830 hours IST of today) (in cm): **Sub-Himalayan West Bengal & Sikkim:** Alipurduar (pto) (dist Alipurduar) 10, Amfu Pundibari (dist Cooch Behar) 6; **Tamilnadu:** Zone 01 Kathivakkam (dist Chennai) 6, Ennore AWS (dist Tiruvallur) 4, **Odisha:** Karanjia (Mayurbhanj) 7, Jeypore (Koraput) 5, Nayagarh (Nayagarh) 5, Sharpada (Keonjhar) 5, Kantapada (Cuttack) 4, Kankadahad (Dhenkanal) 4, Banarpal (Angul) 4, Ranpur (Nayagarh) 4, Dhenkanal Pto (Dhenkanal) 4, Telkoi (Keonjhar) 4, **Meghalaya:** Williamnagar (dist East Garo Hills) 8, Gossaigaon Aws (dist Kokrajhar) 5, Bihubar (dist Sibsagar) 5, **Bihar:** Bhawanipur (dist Purnea) 7, Rajauli (dist Nawada) 7, Hilsa (dist Nalanda) 7, Korha (dist Katihar) 6, Akbarpur (dist Nawada) 6, Matiyani (dist Begusarai) 6, Asthawan (dist Nalanda) 6, Sarmera (dist Nalanda) 5, Bihar Shrif (dist Nalanda) 5, Puraini (dist Madhepura) 5, Baltara (dist Khagaria) 5, Rahui (dist Nalanda) 5, Silao (dist Nalanda) 5, Barari (dist Katihar) 5, Salakhua (dist Saharsa) 5, Ben (dist Nalanda) 5, Noorsarai (dist Nalanda) 5, Raghunathpur (dist Siwan) 5, Pakrivarma (dist Nawada) 5, Amarpur (dist Banka) 5.
- ❖ Yesterday, **Heat wave to severe heat wave conditions** prevailed in isolated pockets of Himachal Pradesh, Haryana, Rajasthan.
- ❖ **Warm night conditions** prevailed in isolated pockets of Haryana.
- ❖ **Hailstorm** occurred at isolated places over Assam & Meghalaya, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Uttarakhand, Himachal Pradesh, Punjab, Haryana, West Uttar Pradesh, Madhya Pradesh, Nagaland, Manipur, Mizoram & Tripura, Marathwada, Jharkhand.
- ❖ **Heavy rainfall** recorded at isolated places over Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Uttarakhand.
- ❖ **Minimum Temperature Departures (as on 11-04-2025):** Minimum temperatures are **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Punjab, Rajasthan, Haryana-Chandigarh, Saurashtra & Kutch, Madhya Maharashtra, East Madhya Pradesh; **above normal (1.6°C to 3.0°C)** at a few places over Konkan & Goa; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, East Madhya Pradesh, Gujarat Region, Marathwada, Coastal Andhra Pradesh & Yanam, Chhattisgarh, Tamil Nadu, Puducherry & Karaikal, Nagaland, Manipur, Mizoram & Tripura. These are **appreciably below normal (-3.1°C to -5.0°C)** at isolated places over Bihar, Jharkhand, Gangetic West Bengal, Rayalaseema **below normal (-3.0°C to -1.6°C)** at a few places over East Uttar Pradesh; at isolated places over Telangana and normal over rest parts of the country (**Fig. 4**). Today, the **lowest minimum temperature** of **15.1°C** is reported at Nahan (**Haryana**) over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 10-04-2025):** Maximum Temperatures are **markedly above normal (5.1°C or more)** at isolated places over Madhya West Rajasthan, Vidarbha, Marathwada, Arunachal Pradesh, Tamil Nadu, Puducherry & Karaikal and Gujarat state; **appreciably above normal (3.1°C to 5.0°C)** at few places over Punjab, Himachal Pradesh; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Haryana-Chandigarh-Delhi, East Rajasthan, Assam & Meghalaya; **above normal (1.6°C to 3.0°C)** at isolated places over Coastal Andhra Pradesh & Yanam, Nagaland, Manipur, Mizoram & Tripura, Gangetic West Bengal and Konkan & Goa. These were **appreciably below normal (-3.1°C to -5.0°C)** at few places over Bihar; at isolated places over Uttar Pradesh, Sub-Himalayan West Bengal & Sikkim; **below normal (-3.0°C to -1.6°C)** at many places over Andaman & Nicobar Islands; at isolated places over Odisha, Jharkhand, Kerala & Mahe and normal over rest parts of the country (**Fig. 2**). Yesterday, the highest **maximum temperature** of **46.5°C** was reported at **Nandurbar (Madhya Maharashtra)** over the country.

Meteorological Analysis (Based on 0830 hours IST)

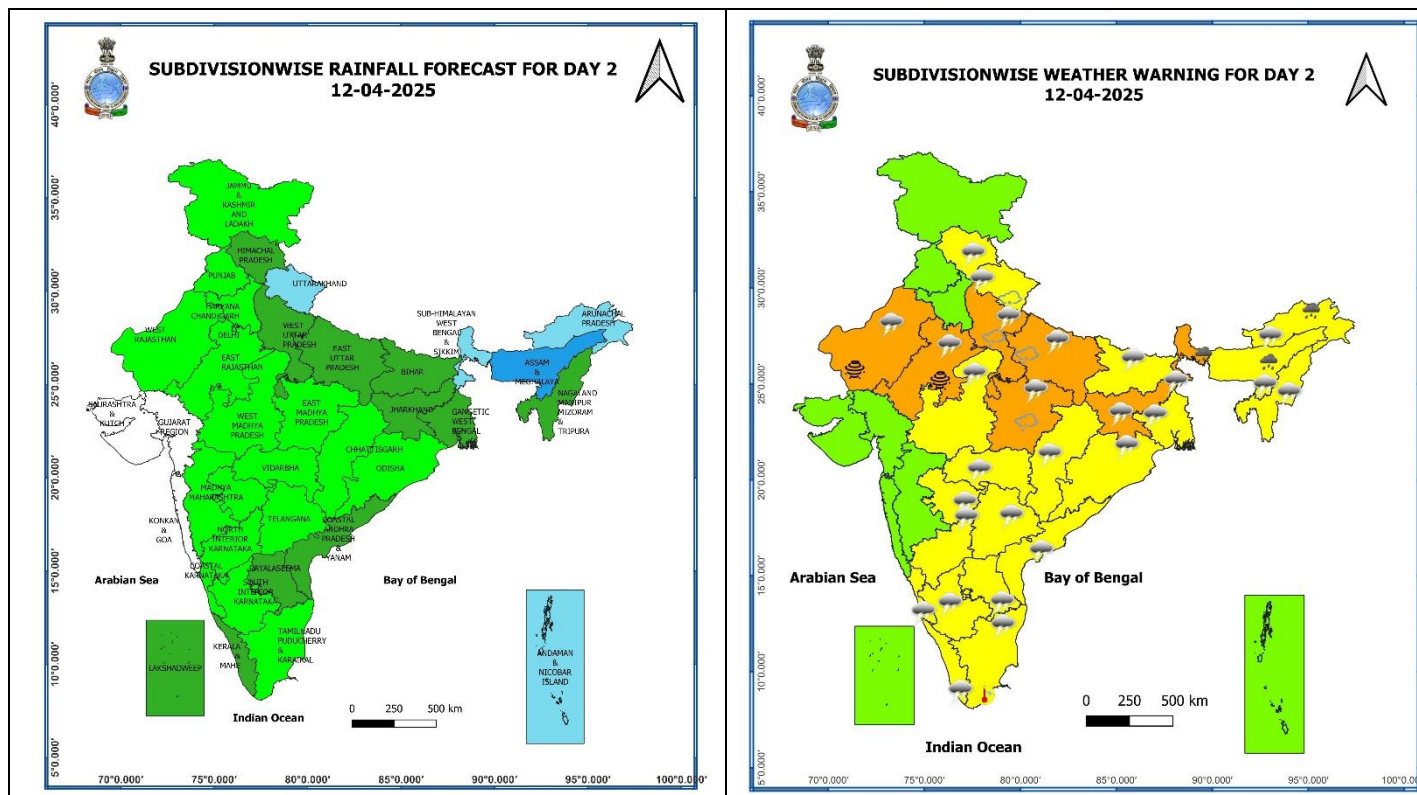
- ❖ The **Low-pressure area** over westcentral Bay of Bengal has become less marked. However, the associated cyclonic circulation persists over the same area and extends upto 1.5 km above mean sea level.
- ❖ The **Western Disturbance** as a trough in westerlies in middle and upper tropospheric level with its axis at 5.8 km above mean sea level now runs roughly along Long. 70°E to the north of Lat. 26°N.
- ❖ The upper air **cyclonic circulation** over northwest Rajasthan & neighbourhood at 1.5 km above mean sea level persists.
- ❖ The upper air **cyclonic circulation** over northwest Madhya Pradesh & neighbourhood at 0.9 km above mean sea level persists.
- ❖ The **trough** from west Rajasthan to north Vidarbha now runs from west Rajasthan to Coastal Andhra Pradesh across East Rajasthan, cyclonic circulation over northwest Madhya Pradesh and Vidarbha at 0.9 km above mean sea level.
- ❖ A **trough** runs from northeast Madhya Pradesh to Bangladesh across Jharkhand and extends upto 1.5 km above mean sea level.
- ❖ The **trough** in middle and upper tropospheric westerlies with its axis at 5.8 km above mean sea level now runs roughly along Long. 86°E and to the north of Lat. 23°N.
- ❖ The upper air **cyclonic circulation** over Sub-Himalayan West Bengal, Sikkim & neighbourhood at 3.1 km above mean sea level persists.
- ❖ A **trough** runs from above **cyclonic circulation** over Sub-Himalayan West Bengal, Sikkim & neighbourhood to Westcentral Bay of Bengal at 3.1 km above mean sea level.
- ❖ The upper air **cyclonic circulation** over northeast Assam & neighbourhood persists and now extends upto 1.5 km above mean sea level.
- ❖ The upper air **cyclonic circulation** over north Bangladesh at 0.9 km above mean sea level has become less marked.
- ❖ The upper air **cyclonic circulation** over central parts of Assam at 0.9 km above mean sea level has become less marked.
- ❖ The upper air **cyclonic circulation** over Punjab & neighbourhood at 1.5 km above mean sea level has become less marked.

Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 18th April, 2025)



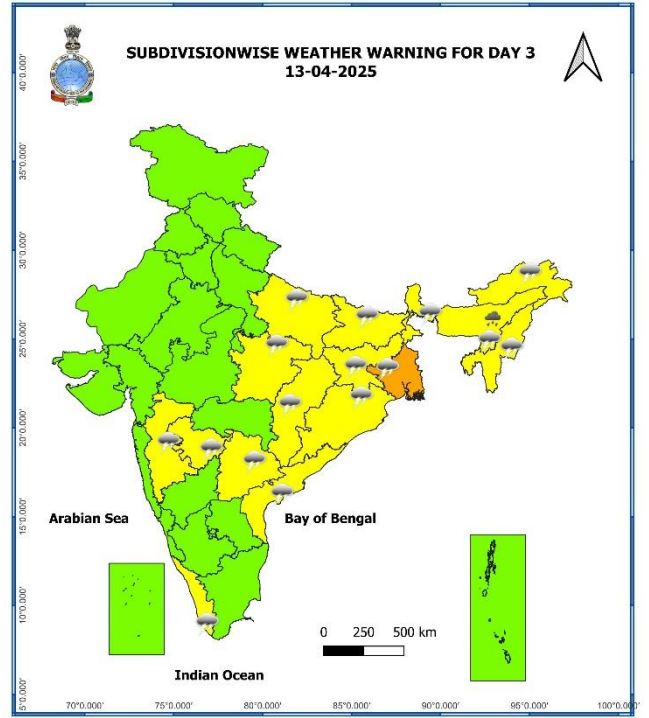
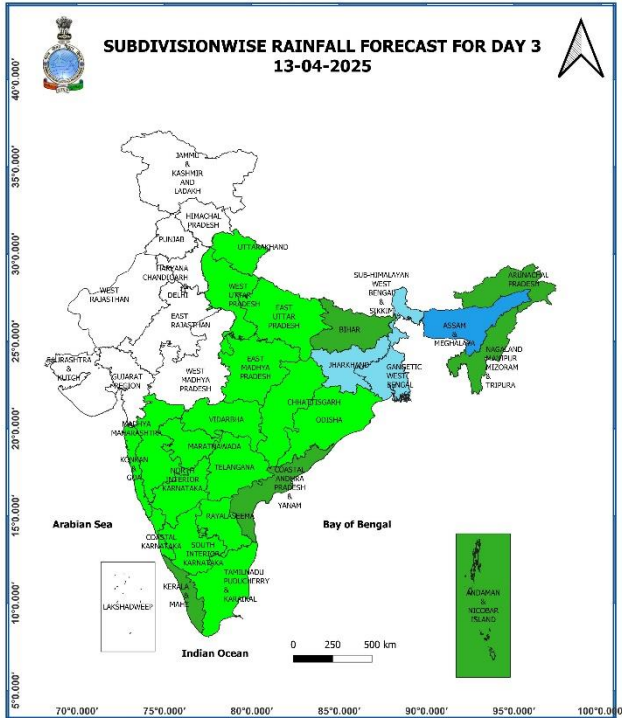
11th April (Day 1):

- ❖ **Heavy rainfall** very likely at isolated places over Sub-Himalayan West Bengal & Sikkim, Bihar, Arunachal Pradesh, Assam & Meghalaya and Kerala & Mahe.
- ❖ **Thundersquall accompanied with lightning, gusty Winds (speed reaching 50 - 60 kmph) & hailstorm** very likely at isolated places over Punjab, Haryana-Chandigarh-Delhi, East Madhya Pradesh; **Thundersquall accompanied with lightning, gusty Winds (speed reaching 50 - 60 kmph)** at isolated places over West Madhya Pradesh, Coastal Andhra Pradesh & Yanam, Odisha; **Thunderstorm accompanied with lightning, gusty Winds (speed reaching 40 - 50 kmph) & hailstorm** at isolated places over Himachal Pradesh, Uttarakhand, Chhattisgarh; **with lightning & gusty Winds (speed reaching 30 - 40 kmph) & hailstorm** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; **with lightning & gusty Winds (speed reaching 40 - 50 kmph)** at isolated places over West Uttar Pradesh, Vidarbha, West Bengal & Sikkim, Bihar, Jharkhand, Rayalaseema, Assam & Meghalaya, Interior Karnataka, **with lightning & gusty Winds (speed reaching 30 - 40 kmph)** at isolated places over Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Madhya Maharashtra, Kerala & Mahe, Telangana, Coastal Karnataka, East Uttar Pradesh; **with lightning** at isolated places over Tamil Nadu, Puducherry & Karaikal, Lakshadweep and Arunachal Pradesh.
- ❖ **Duststorm** very likely at isolated places over Rajasthan.
- ❖ **Hot & humid weather** very likely at isolated places over Tamil Nadu, Puducherry & Karaikal.
- ❖ **Squally weather with Wind speed 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail Lakshadweep area, over many parts of eastcentral Bay of Bengal and adjoining northern parts of southeast Bay of Bengal, off north Andhra Pradesh coast and adjoining westcentral Bay of Bengal, over gulf of Mannar and adjoining Comorin area, along and off Tamil Nadu coast, along and off Sri Lanka coast and adjoining southwest Bay of Bengal. Fishermen are advised not to venture into these areas.



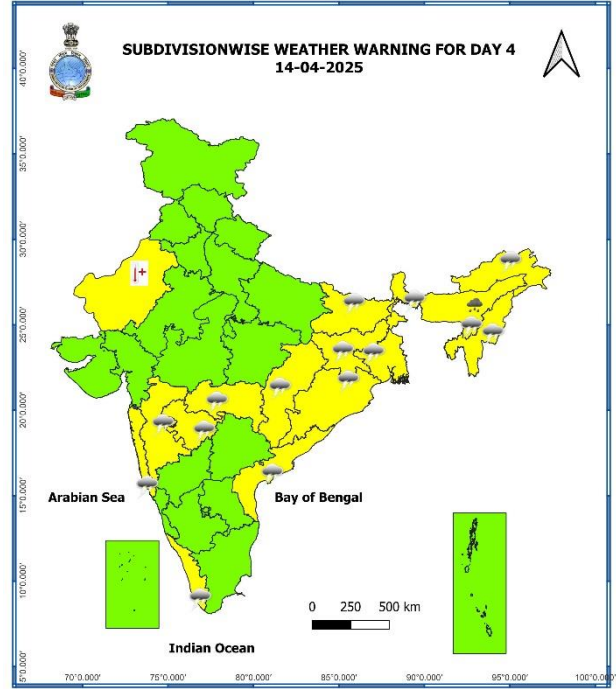
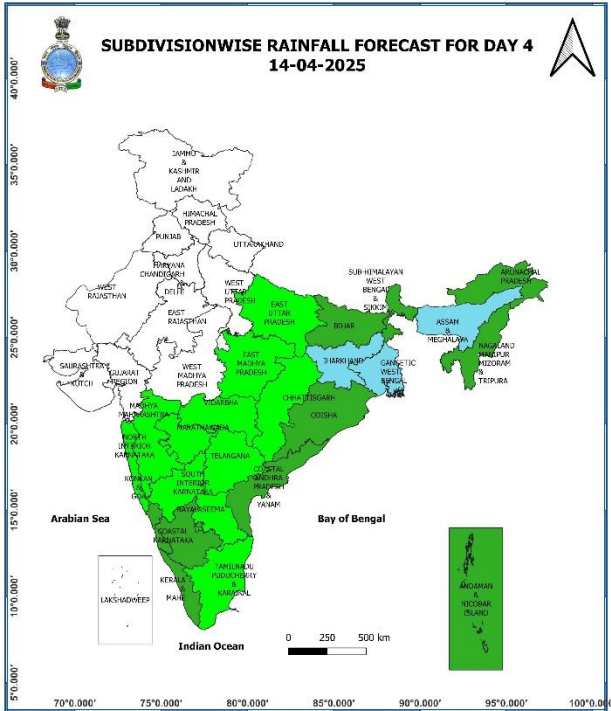
12th April (Day 2):

- ❖ **Heavy rainfall** very likely at isolated places over Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh and Assam & Meghalaya.
- ❖ **Thundersquall accompanied with lightning, gusty Winds (speed reaching 50 - 60 kmph) & hailstorm** very likely at isolated places over East Madhya Pradesh; **Thundersquall accompanied with lightning, gusty Winds (speed reaching 50 - 60 kmph)** at isolated places over East Rajasthan, Jharkhand; **Thunderstorm accompanied with lightning, gusty Winds (speed reaching 40 - 50 kmph) & hailstorm** at isolated places over Uttar Pradesh; **with lightning & gusty Winds (speed reaching 30 - 40 kmph) & hailstorm** at isolated places over Uttarakhand; **with lightning & gusty Winds (speed reaching 40 - 50 kmph)** at isolated places over West Madhya Pradesh, Gangetic West Bengal, Nagaland, Manipur, Mizoram & Tripura, Assam & Meghalaya, Coastal Andhra Pradesh & Yanam, Rayalaseema, Interior Karnataka, **with lightning & gusty Winds (speed reaching 30 - 40 kmph)** at isolated places over Vidarbha, Chhattisgarh, Odisha, Marathwada, Kerala & Mahe, Coastal Karnataka, Telangana; **with lightning** at isolated places over Himachal Pradesh, Tamil Nadu, Puducherry & Karaikal and Arunachal Pradesh.
- ❖ **Duststorm** very likely at isolated places over Rajasthan.
- ❖ **Hot & humid weather** very likely at isolated places over Tamil Nadu, Puducherry & Karaikal.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over Gulf of Mannar & adjoining Comorin area along & off Tamil Nadu coast. Fishermen are advised not to venture into these areas.



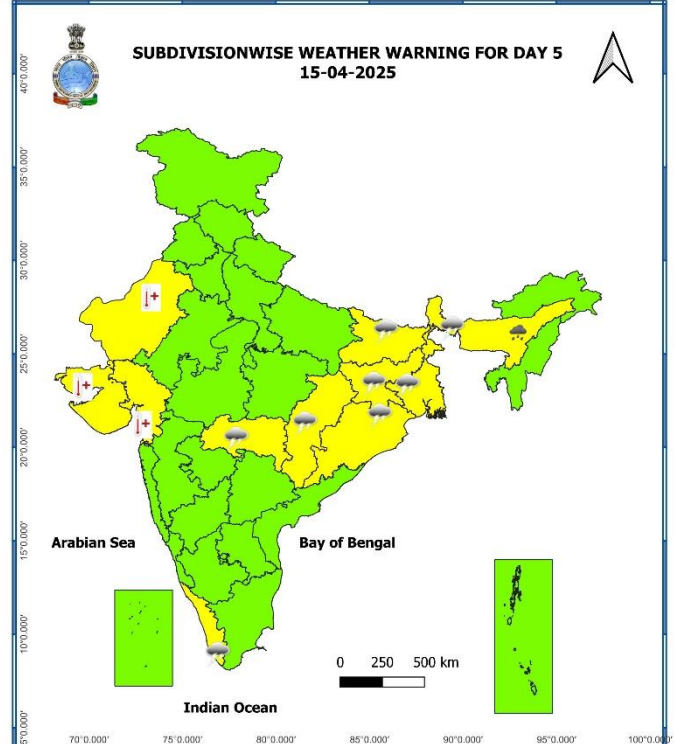
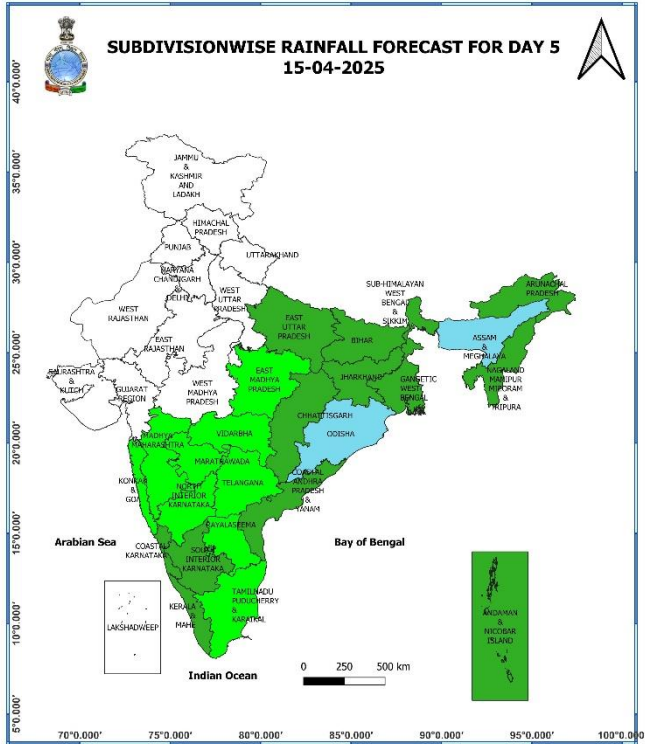
13th April (Day 3):

- ❖ **Heavy rainfall** very likely at isolated places over Assam & Meghalaya.
- ❖ **Thundersquall accompanied with lightning, gusty winds (speed reaching 50 - 60 kmph)** very likely at isolated places over Gangetic West Bengal; **Thunderstorm accompanied with lightning, gusty winds (speed reaching 40 - 50 kmph)** at isolated places over East Madhya Pradesh, Sub-Himalayan West Bengal & Sikkim, Bihar, Nagaland, Manipur, Mizoram & Tripura, Assam & Meghalaya; **with lightning & gusty winds (speed reaching 30 - 40 kmph)** at isolated places over Madhya Maharashtra, Marathwada, Coastal Andhra Pradesh & Yanam, Telangana; **with lightning** at isolated places over East Uttar Pradesh, Kerala & Mahe and Arunachal Pradesh.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over Gulf of Mannar; adjoining Comorin area. Fishermen are advised not to venture into these areas.



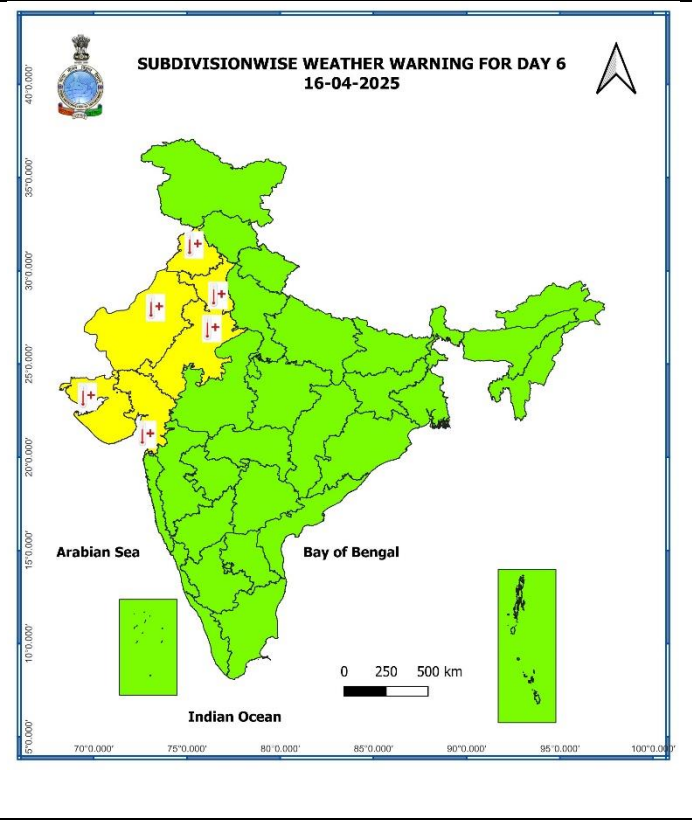
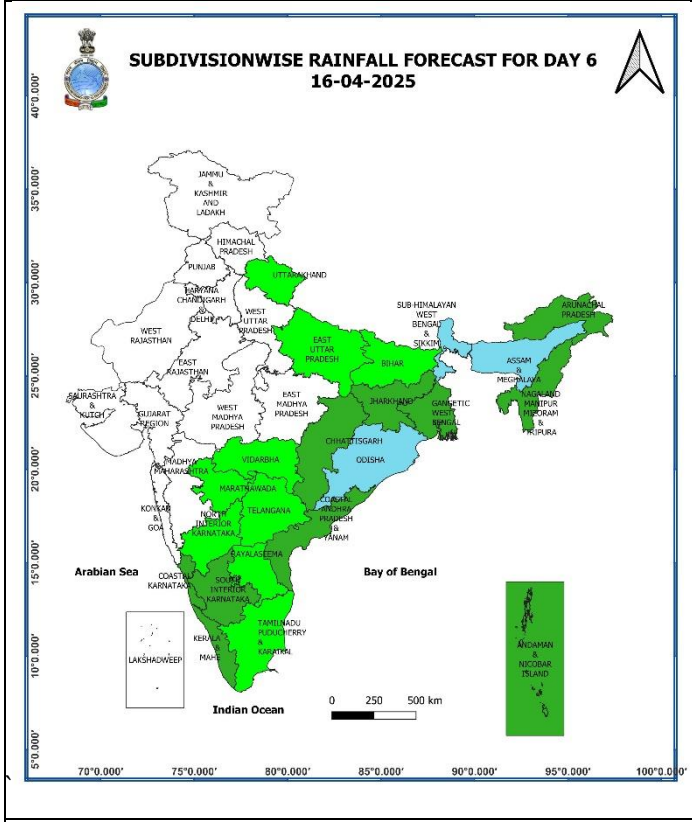
14th April (Day 4):

- ❖ **Heavy rainfall** likely at isolated places over Assam & Meghalaya.
- ❖ **Heat wave conditions** very likely in isolated pockets over West Rajasthan.
- ❖ **Thunderstorm accompanied with lightning, gusty winds (speed reaching 40 - 50 kmph)** likely at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gangetic West Bengal, Bihar, Jharkhand, Odisha; **with lightning & gusty winds (speed reaching 30 - 40 kmph)** at isolated places over Madhya Maharashtra, Marathwada, Coastal Andhra Pradesh & Yanam, Vidarbha, Chhattisgarh and Sub-Himalayan West Bengal & Sikkim and **with lightning** at isolated places over Kerala & Mahe and Arunachal Pradesh.



15th April (Day 5):

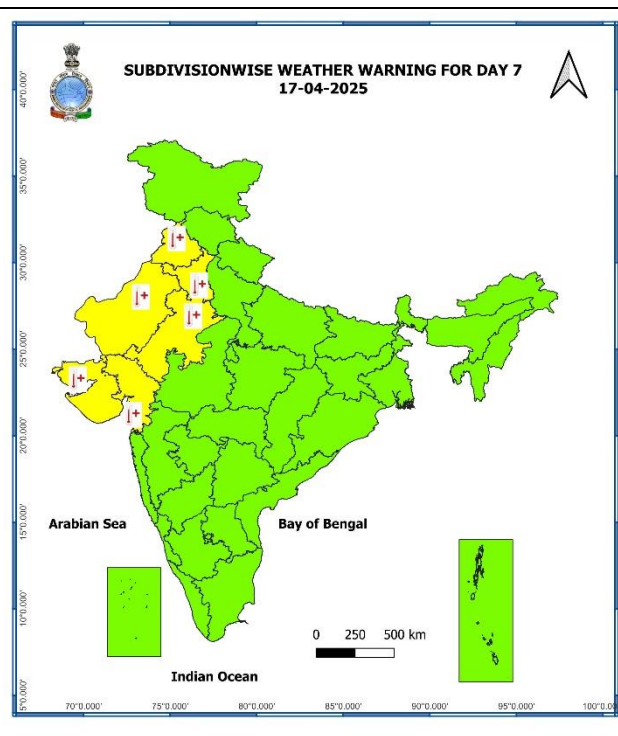
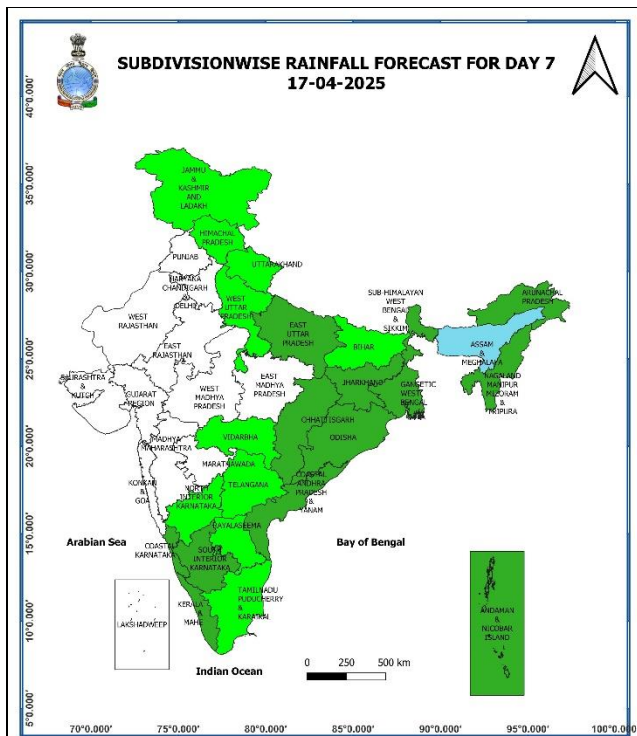
- ❖ **Heavy rainfall** very likely at isolated places over Assam & Meghalaya.
- ❖ **Thunderstorm accompanied with lightning, gusty winds (speed reaching 40 - 50 kmph)** likely at isolated places over Chhattisgarh, Odisha; **with lightning & gusty winds (speed reaching 30 - 40 kmph)** at isolated places over Vidarbha, Bihar, Jharkhand, West Bengal & Sikkim and **with lightning** at isolated places over Kerala & Mahe.
- ❖ **Heat wave** likely in isolated pockets over West Rajasthan and Gujarat state.



16th April (Day 6):

❖ **Heat wave to severe heat wave conditions** likely in isolated pockets over West Rajasthan. **Heat wave conditions** in isolated pockets over Punjab, Haryana, Delhi, Gujarat state and East Rajasthan.

* 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)



17th April (Day 7):

- ❖ Heat wave to severe heat wave conditions likely in isolated pockets over West Rajasthan. Heat wave conditions in isolated pockets over Punjab, Haryana, Delhi, Gujarat state and East Rajasthan.

Weather Outlook for subsequent 3 days (During 18th April- 20th April, 2025)

Isolated to scattered rainfall likely over Western Himalayan region, East & Northeast India, south peninsular India.

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

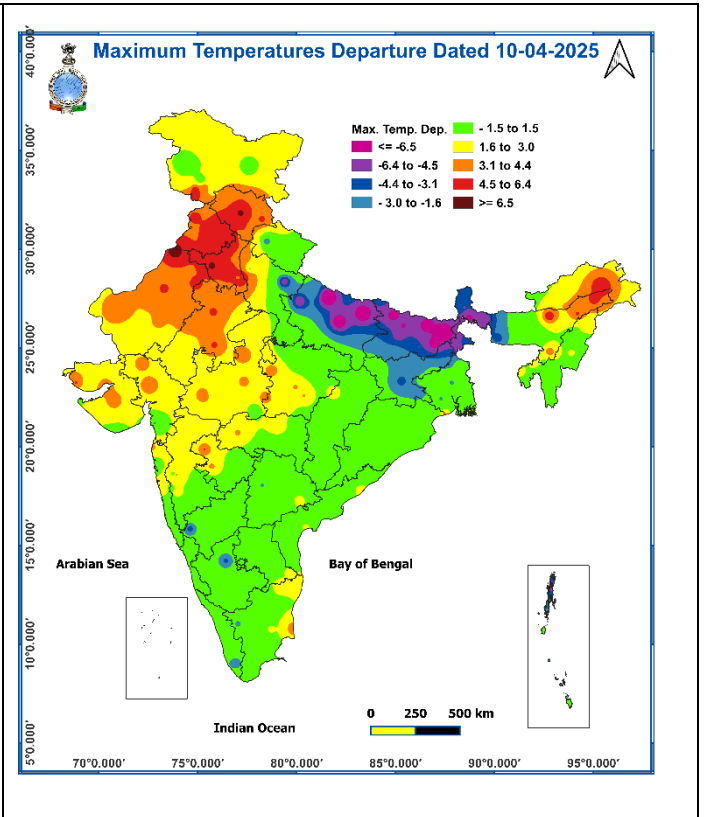
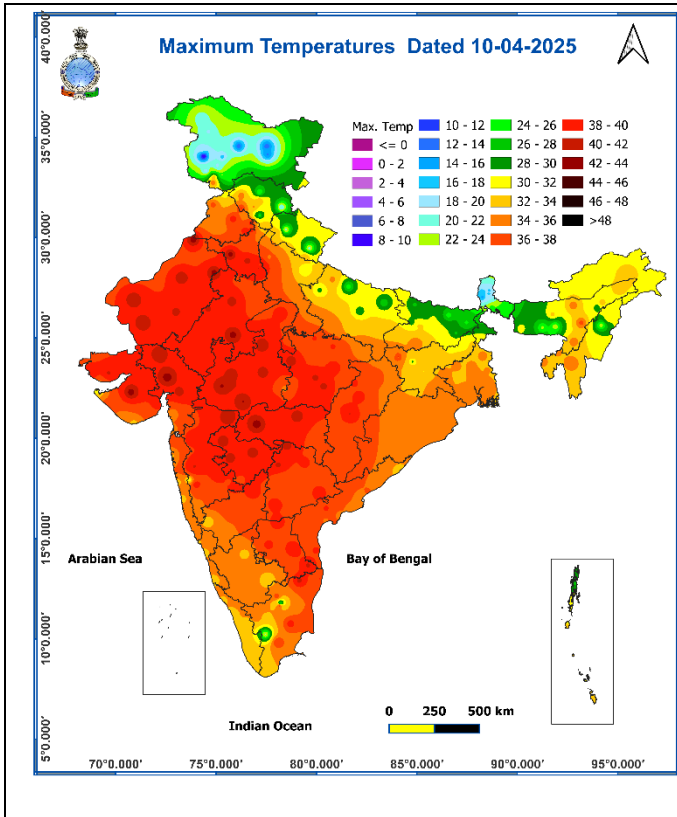


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures

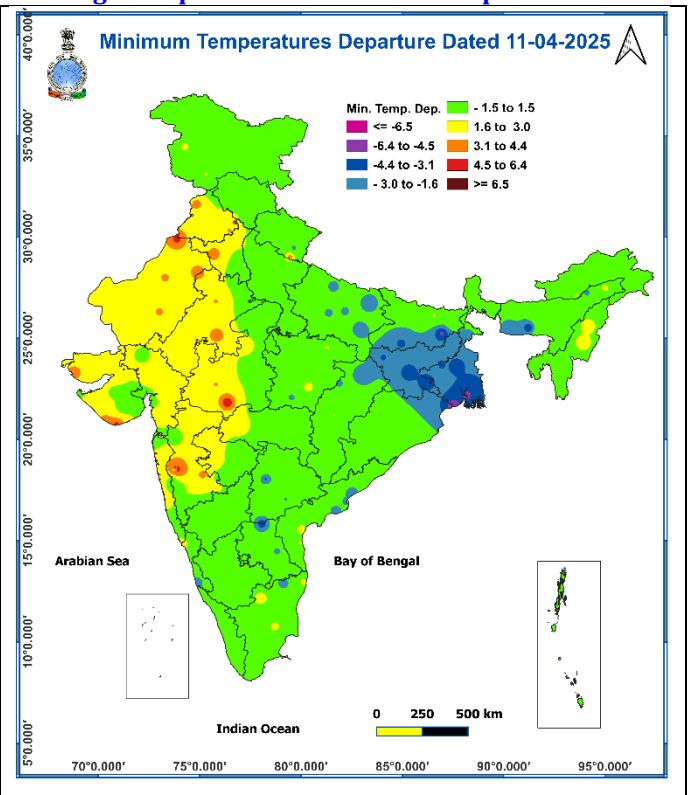
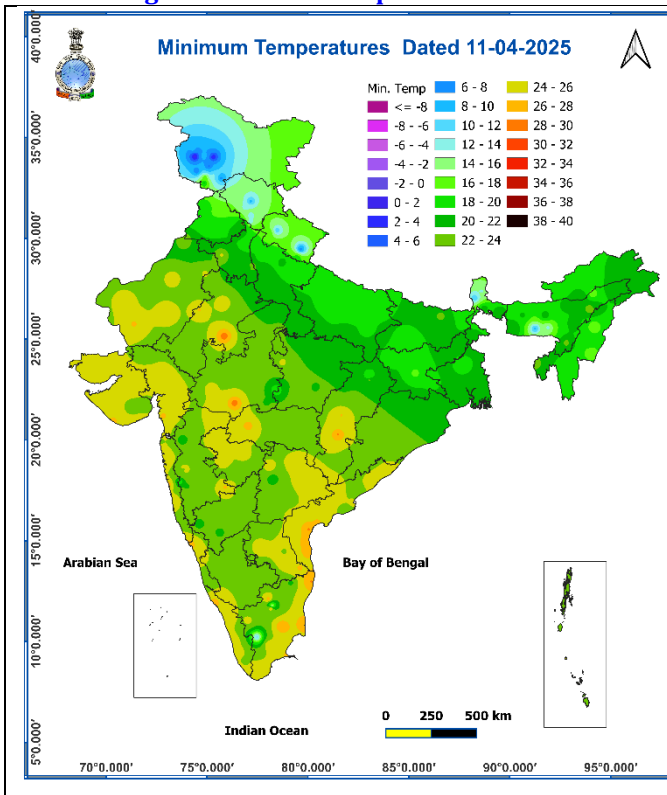
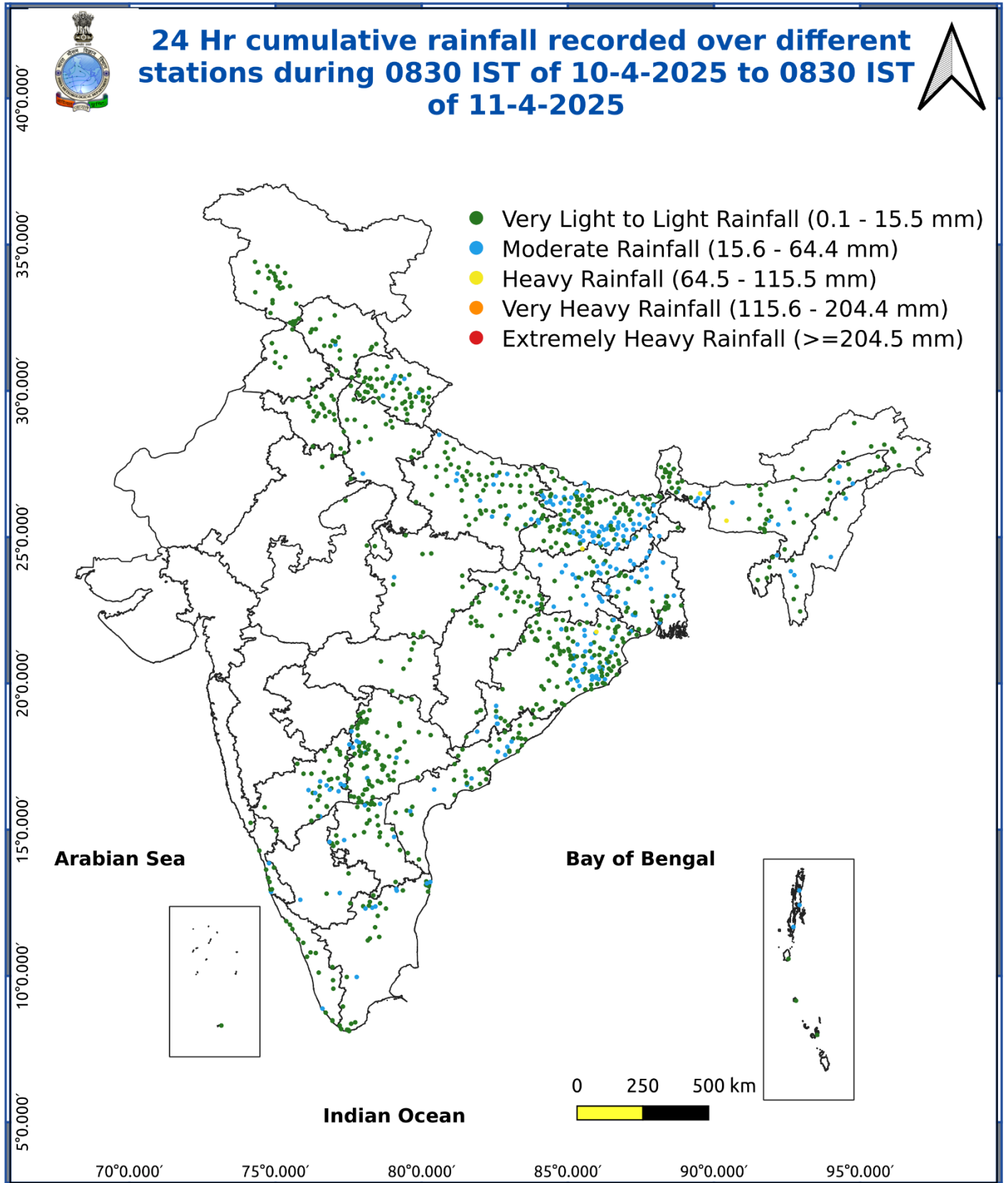


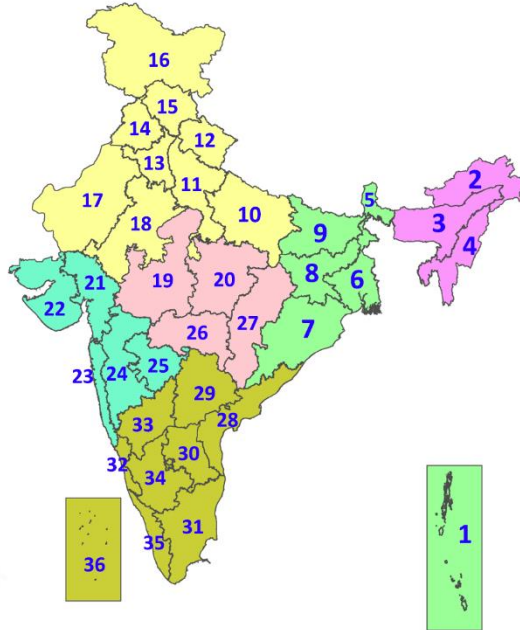
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



* 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
(Service to the Nation since 1875)

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°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)

Hot and Humid: When maximum temperatures remains 3°C above normal along with the above normal relative humidity.