

Thursday, April 10, 2025
Time of Issue: 0800 hours IST
(MORNING)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

Temperature:

- ❖ **Maximum Temperatures** had fallen by 4-8°C over Jammu, Kashmir, west Bihar; by 2-4°C over Ladakh, Assam, West Bengal, extreme south Gujarat region & Saurashtra, north interior Karnataka, extreme north Andaman; 1-2°C over Rajasthan, east & northwest Madhya Pradesh, south Chhattisgarh, North coastal Andhra Pradesh and no significant change over rest parts of the country.

Weather Systems, Forecast and Warnings:

- ❖ The **Low-pressure area** lies over westcentral Bay of Bengal at 0530 hrs IST of today, the 10th April, 2025 with the associated cyclonic circulation extending upto middle tropospheric levels. It is likely to move north-northeastwards and weaken gradually over central Bay of Bengal during next 24 hours.
- ❖ A trough runs from the above cyclonic circulation over westcentral Bay of Bengal to south Tamil Nadu in lower tropospheric levels.
- ❖ A trough runs from southeast Madhya Pradesh to east Gangetic West Bengal across Chhattisgarh & Jharkhand in lower tropospheric levels.
- ❖ An upper air cyclonic circulation lies over northwest Madhya Pradesh & neighbourhood in lower tropospheric levels.
- ❖ Under the influence of these systems;
 - ✓ **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, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Telangana, Karnataka and Central India during 10th-11th; East and Northeast India during 10th-13th April.
 - ✓ **Isolated Hailstorm** likely over Jharkhand on 10th April.
 - ✓ **Heavy rainfall** very likely at isolated places over Bihar, Arunachal Pradesh on 10th; Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya on 10th & 11th April.
- ❖ **A Western Disturbance as a trough in westerlies in middle tropospheric levels runs roughly along Long. 64°E to the north of Lat. 28°N. An upper air cyclonic circulation lies over West Rajasthan & neighbourhood and a trough runs from West Rajasthan to northwest Vidarbha 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; isolated to scattered rainfall over Himachal Pradesh during 10th-11th and Uttarakhand during 10th-12th April.
 - ✓ Isolated rainfall likely over plains of Northwest India during 10th-11th April.
 - ✓ **Isolated Hailstorm** likely over Himachal Pradesh and Uttarakhand on 10th April.
 - ✓ **Duststorm** very likely at isolated places over West Rajasthan during 10th-11th April.
 - ✓ **Thundersquall (wind speed reaching 50-60 kmph)** very likely at isolated places over Uttarakhand on 10th & 11th April.

Temperature Forecast:

- ❖ Fall in maximum temperatures by 2-4°C likely over Northwest India, Gujarat and Maharashtra during next 3 days and rise by 2-4°C during subsequent 3 days.
- ❖ Fall in maximum temperatures by 2-4°C likely over West India during next 4 days.

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

- ❖ **Heat wave conditions** very likely in isolated pockets over Rajasthan on 10th, 14th & 15th April.
- ❖ **Heat wave conditions** likely in isolated pockets of Saurashtra & Kutch on 10th April and over Punjab, Haryana & Delhi on 15th April.
- ❖ **Heat wave conditions** very likely in isolated pockets of Madhya Pradesh, Gujarat Region on 10th April.
- ❖ **Warm night** conditions very likely in isolated pockets of Madhya Pradesh, Rajasthan on 10th April.

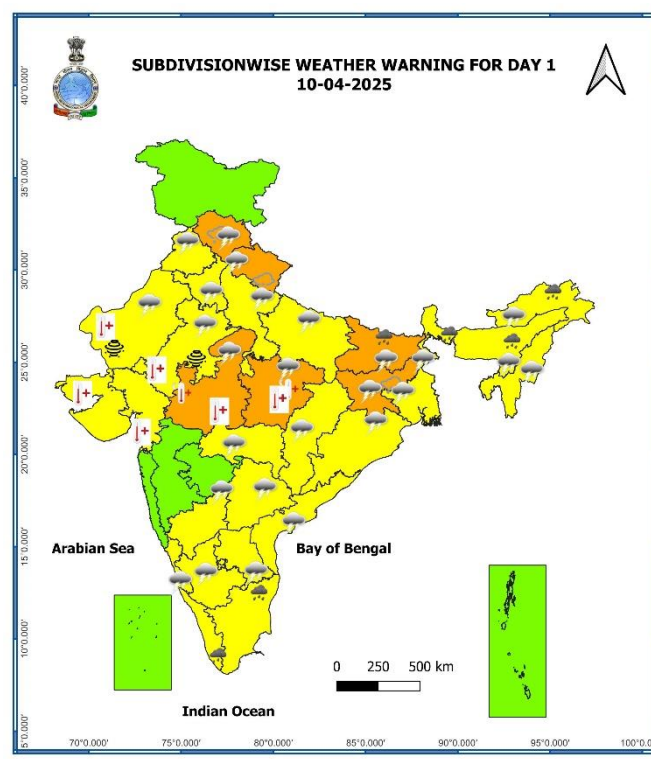
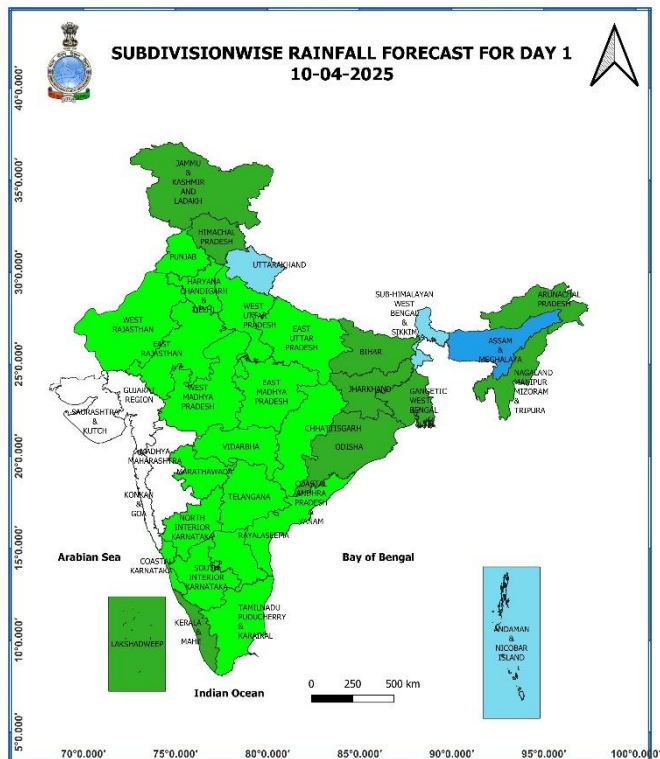
Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST to 1730 hours IST of yesterday): at few places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Andaman & Nicobar Islands; at isolated places over West Rajasthan, East Madhya Pradesh, Vidarbha, North Interior Karnataka, Odisha, Tamil Nadu, Puducherry & Karaikal and Assam & Meghalaya.
- ❖ **Significant amount of rainfall** (from 0830 hours IST to 1730 hours IST of yesterday): (in cm):
Meghalaya: Shillong 3.
- ❖ Yesterday, **Heat wave to severe heat wave conditions** prevailed many places over Rajasthan, at a few places over Saurashtra & Kutch, south Haryana and **heat wave conditions** at a few places over Himachal Pradesh, Delhi & adjoining west Uttar Pradesh, Gujarat region at isolated places over Madhya Pradesh.
- ❖ **Minimum Temperature Departures (as on 09-04-2025):** Minimum temperatures were **markedly above normal (5.1°C or more)** at most places over Punjab; at many places over Haryana-Chandigarh-Delhi; at a few places over Rajasthan; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, East Uttar Pradesh, Bihar and West Madhya Pradesh; **appreciably above normal (3.1°C to 5.0°C)** at isolated places over West Uttar Pradesh, East Madhya Pradesh, Chhattisgarh, Jharkhand, Marathwada, Vidarbha, Gujarat state and Arunachal Pradesh; **above normal (1.6°C to 3.0°C)** at a few places over Konkan & Goa, Andaman & Nicobar Islands, Assam & Meghalaya; at isolated places over Madhya Maharashtra, Sub-Himalayan West Bengal & Sikkim, Nagaland & Tripura and Tamil Nadu, Puducherry & Karaikal. These were **appreciably below normal (-3.1°C to -5.0°C)** at a few places over North Interior Karnataka; at isolated places over Telangana; **below normal (-3.0°C to -1.6°C)** at a few places over Coastal Andhra Pradesh & Yanam, Rayalaseema and normal over rest parts of the country (**Fig. 4**). Yesterday, the **lowest minimum temperature of 17.7°C** was reported at **Nahan (Haryana)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 09-04-2025):** Maximum Temperatures were **markedly above normal (5.1°C or more)** at many places over Rajasthan; at a few places over Punjab Haryana-Chandigarh-Delhi, Himachal Pradesh and Saurashtra & Kutch; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; **appreciably above normal (3.1°C to 5.0°C)** at many places over West Madhya Pradesh; at few places over Gujarat Region, East Madhya Pradesh, West Uttar Pradesh and Assam & Meghalaya; at isolated places over Konkan & Goa and Madhya Maharashtra; **above normal (1.6°C to 3.0°C)** at many places over East Madhya Pradesh; at isolated places over Coastal Andhra Pradesh & Yanam, Nagaland, Manipur, Mizoram & Tripura, Gangetic West Bengal and Tamil Nadu, Puducherry & Karaikal. These were **below normal (-3.0°C to -1.6°C)** at isolated places over Bihar, Odisha and normal over rest parts of the country (**Fig. 2**). Yesterday, the highest **maximum temperature of 45.6°C** was reported at **Kandla (Saurashtra & Kutch)** over the country.

Meteorological Analysis (Based on 0530 hours IST)

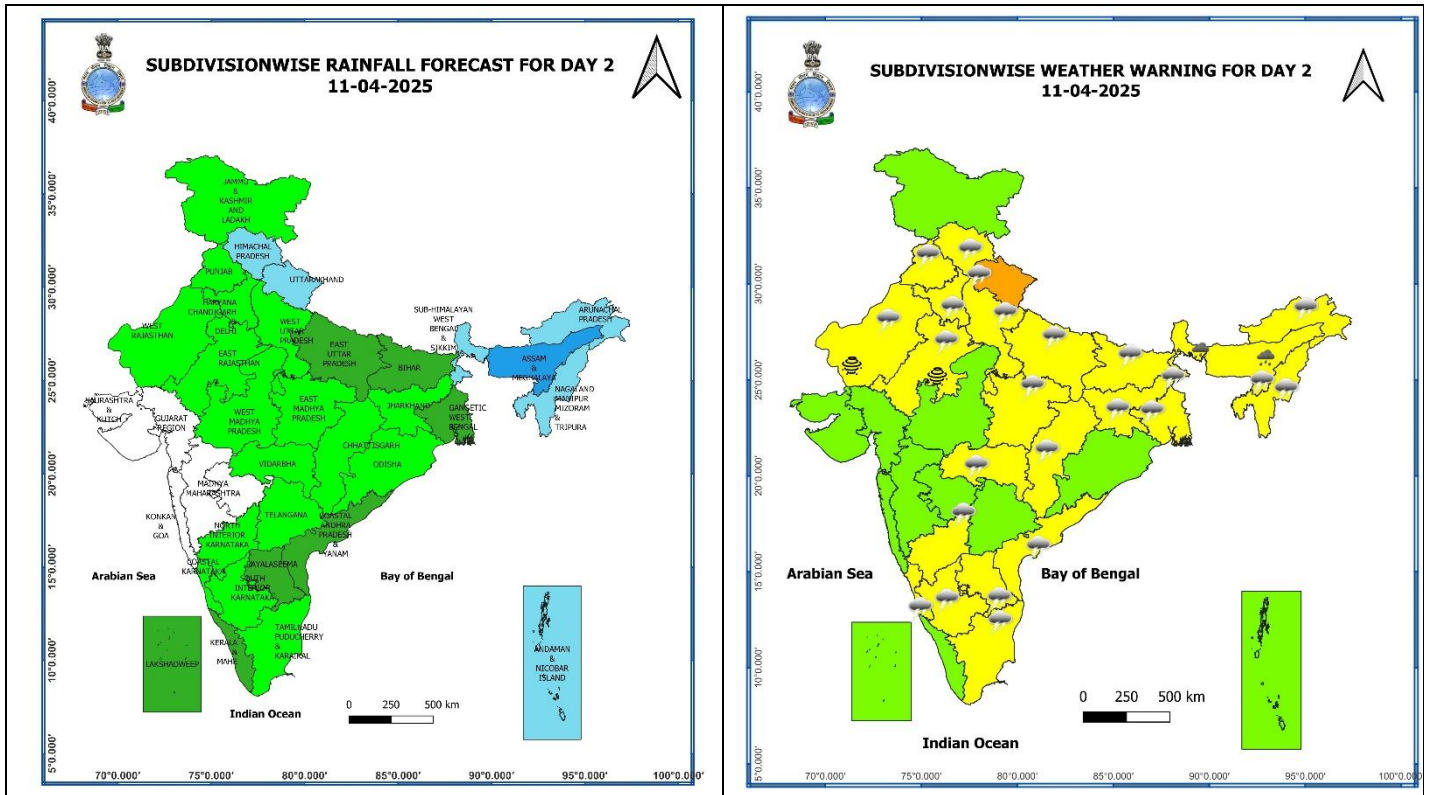
- ❖ The **Low-pressure area** over westcentral Bay of Bengal persisted at 0530 hrs IST of today, the 10th April, 2025 with the associated cyclonic circulation extending upto middle tropospheric levels. It is likely to move north-northeastwards and weaken gradually over central Bay of Bengal during next 24 hours.
- ❖ The **trough** from the above cyclonic circulation over westcentral Bay of Bengal to south Tamil Nadu extending upto 1.5 km above mean sea level persists.
- ❖ The **Western Disturbance** as a trough in westerlies with its axis at 5.8 km above mean sea level now runs roughly along Long. 64°E and to the north of Lat. 28°N.
- ❖ The upper air **cyclonic circulation** over West Rajasthan & neighbourhood at 1.5 km above mean sea level persists.
- ❖ The upper air **cyclonic circulation** over northwest Madhya Pradesh & neighbourhood at 1.5 km above mean sea level persists.
- ❖ The **trough** from west Rajasthan to northwest Vidarbha across Madhya Pradesh extending upto 0.9 km above mean sea level persists.
- ❖ The **trough** from southeast Madhya Pradesh to east Gangetic West Bengal across Chhattisgarh & Jharkhand at 0.9 km above mean sea level persists.
- ❖ The upper air **cyclonic circulation** over northeast Assam & neighbourhood extending upto 1.5 km above mean sea level persists.

Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 17th April, 2025)



10th April (Day 1):

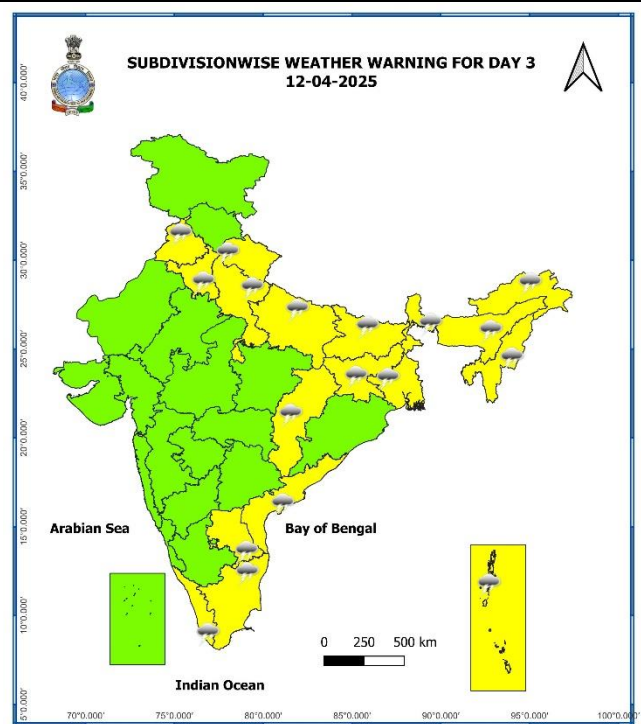
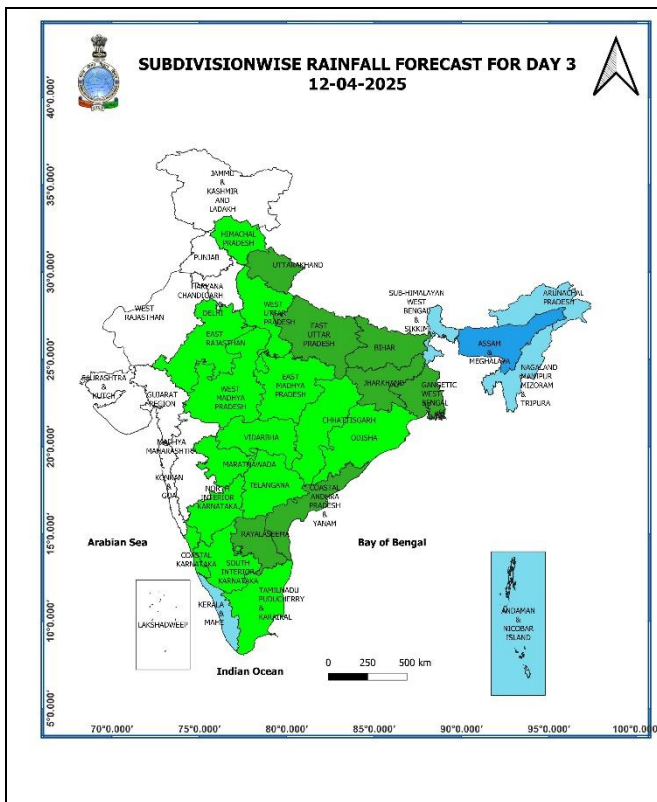
- ❖ **Heavy rainfall** very likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Bihar, Sub-Himalayan West Bengal & Sikkim, Tamil Nadu and Kerala.
- ❖ **Thundersquall accompanied with lightning, gusty winds (speed reaching 50 - 60 kmph) & hailstorm** very likely at isolated places over Uttarakhand; **Thunderstorm accompanied with lightning, gusty winds (speed reaching 40 - 50 kmph) & hailstorm** at isolated places over Jharkhand; **with lightning & gusty winds (speed reaching 30 - 40 kmph) & hailstorm** at isolated places over Himachal Pradesh; **with lightning & gusty winds (speed reaching 40 - 50 kmph)** at isolated places over Rajasthan, Vidarbha, West Bengal & Sikkim, Bihar, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam and North Interior Karnataka; **with lightning & gusty winds (speed reaching 30 - 40 kmph)** at isolated places over Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Kerala & Mahe, Rayalaseema, Telangana, Coastal Karnataka & South Interior Karnataka; **with lightning** at isolated places over Arunachal Pradesh.
- ❖ **Duststorm** very likely at isolated places over Rajasthan.
- ❖ **Heat wave conditions** very likely in isolated pockets over Rajasthan, Madhya Pradesh and Gujarat state.
- ❖ **Warm night conditions** very likely to prevail in isolated pockets over Rajasthan and Madhya Pradesh.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over central parts of central bay of Bengal and adjoining areas, over gulf of Mannar; adjoining Comorin area, along and off south Tamil Nadu coast, over southern parts of southwest bay of banal, along and off south Sri Lanka coast. **Squally wind with wind speed 45 kmph to 50 kmph gusting to 55 kmph** to prevail along and off Gujarat and adjoining north Maharashtra coasts. Fishermen are advised not to venture into these areas.



11th April (Day 2):

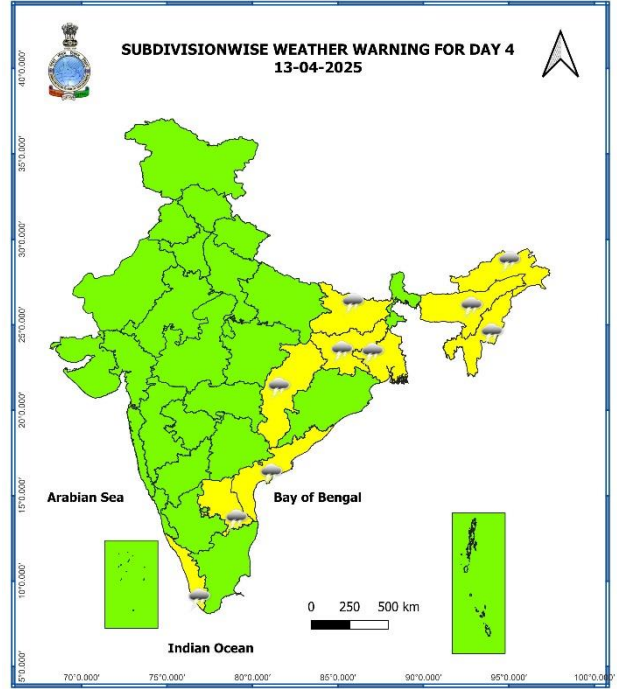
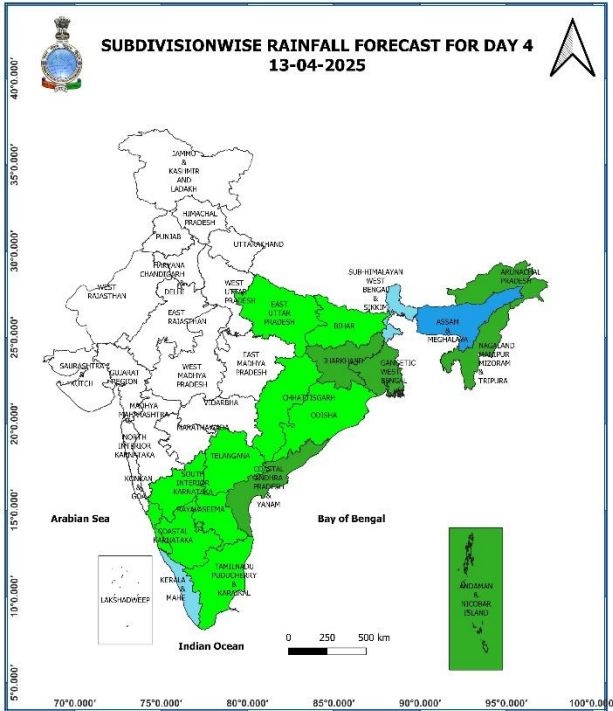
- ❖ **Heavy rainfall** very likely at isolated places over Assam & Meghalaya and Sub-Himalayan West Bengal & Sikkim.
- ❖ **Thundersquall accompanied with lightning, gusty winds (speed reaching 50 - 60 kmph)** very likely at isolated places over Uttarakhand; **Thunderstorm accompanied with lightning & gusty winds (speed reaching 40 - 50 kmph)** at isolated places over Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh, Rajasthan, Vidarbha, West Bengal & Sikkim, Bihar, Assam & Meghalaya, Coastal Andhra Pradesh & Yanam, Rayalaseema, North Interior Karnataka; **with lightning & gusty winds (speed reaching 30 - 40 kmph)** at isolated places over Himachal Pradesh, Chhattisgarh, Jharkhand, Odisha, Nagaland, Manipur, Mizoram & Tripura, Kerala & Mahe, Coastal Karnataka & South Interior Karnataka; **with lightning** at isolated places over Arunachal Pradesh and Tamil Nadu, Puducherry & Karaikal.
- ❖ **Duststorm** very likely at isolated places over Rajasthan.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over gulf of Mannar; adjoining Comorin area, along and off Tamil Nadu coast, along and off Sri Lanka coast and adjoining southwest bay of Bengal. **Squally wind with wind speed 45 kmph to 50 kmph gusting to 55 kmph** to along and off Gujarat and adjoining north Maharashtra coasts, along and off Oman coast and adjoining westcentral and northwest Arabian sea. Fishermen are advised not to venture into these areas.

* Red colour warning does not mean "Red Alert", Red colour warning means "Take Action".
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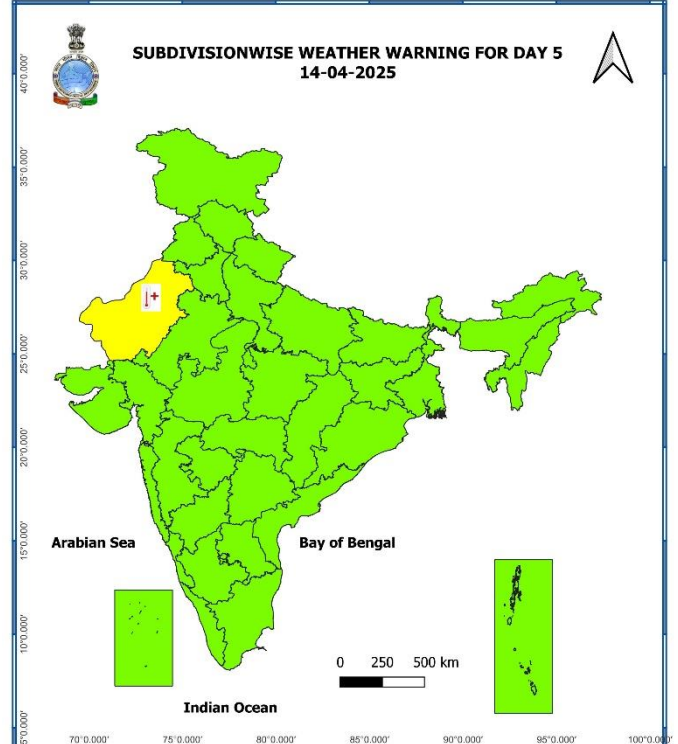
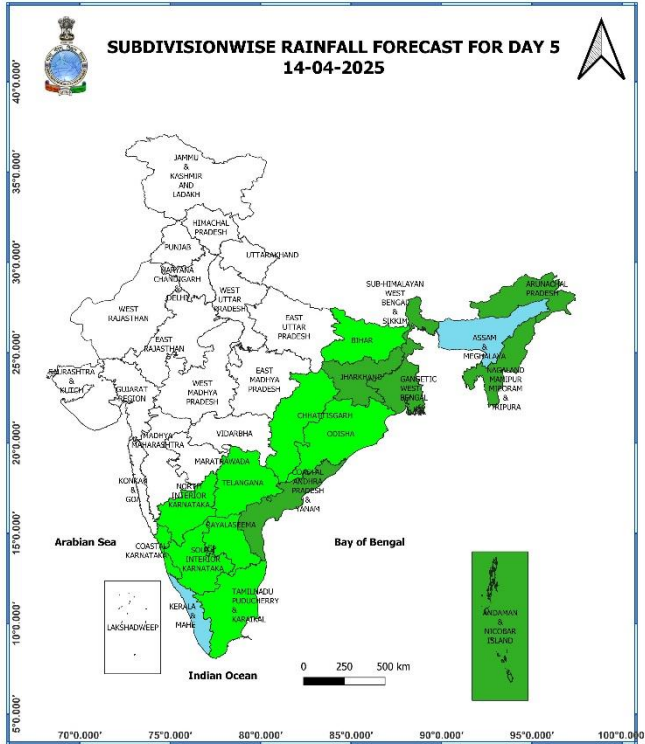
12th April (Day 3):

- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed reaching 40 - 50 kmph)** likely at isolated places over Uttar Pradesh, West Bengal & Sikkim, Jharkhand, Coastal Andhra Pradesh & Yanam and Rayalaseema; **with lightning & gusty winds (speed reaching 30 - 40 kmph)** at isolated places over Uttarakhand, Chhattisgarh, Bihar, Odisha, Assam & Meghalaya, Kerala & Mahe; **with lightning** at isolated places over Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura and 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 and off Tamil Nadu coast. **Squally wind with wind speed 45 kmph to 50 kmph gusting to 55 kmph** to prevail along and off Oman coast and adjoining westcentral and northwest Arabian sea. Fishermen are advised not to venture into these areas.



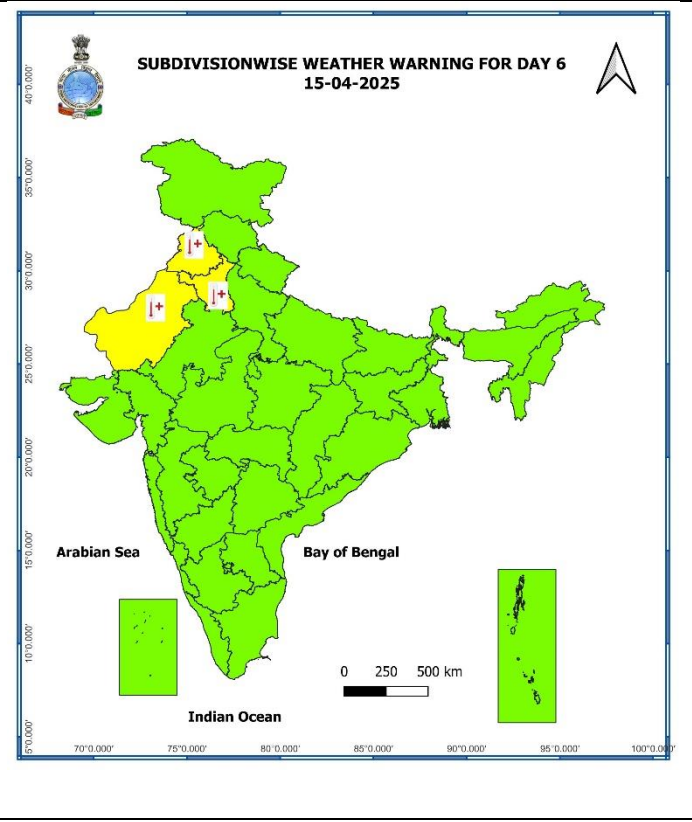
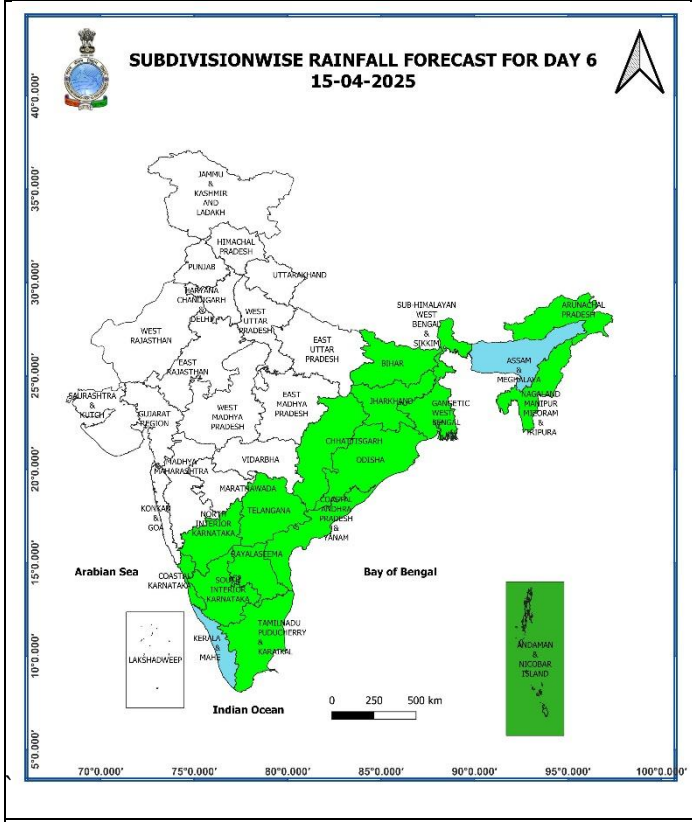
13th April (Day 4):

- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed reaching 40 - 50 kmph)** likely at isolated places over Gangetic West Bengal and Jharkhand; **with lightning & gusty winds (speed reaching 30 - 40 kmph)** at isolated places over Chhattisgarh, Bihar, Assam & Meghalaya, Coastal Andhra Pradesh & Yanam; **with lightning** at isolated places over Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura and Kerala & Mahe.
- ❖ **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.



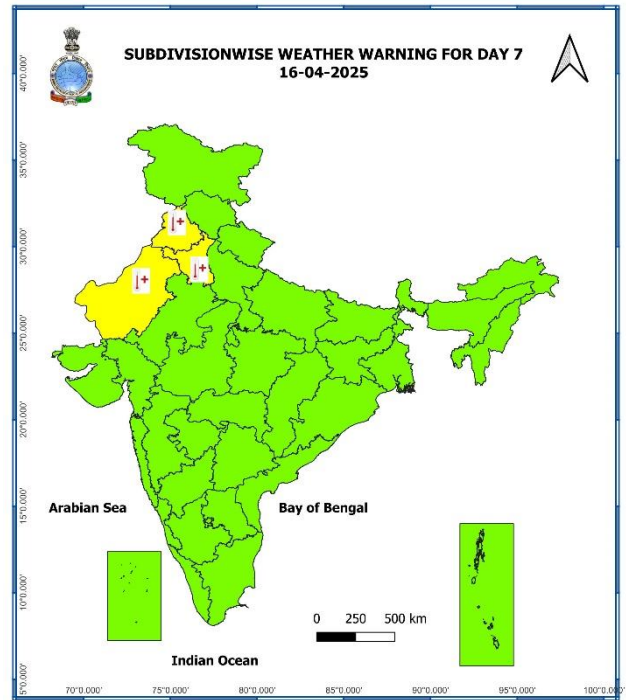
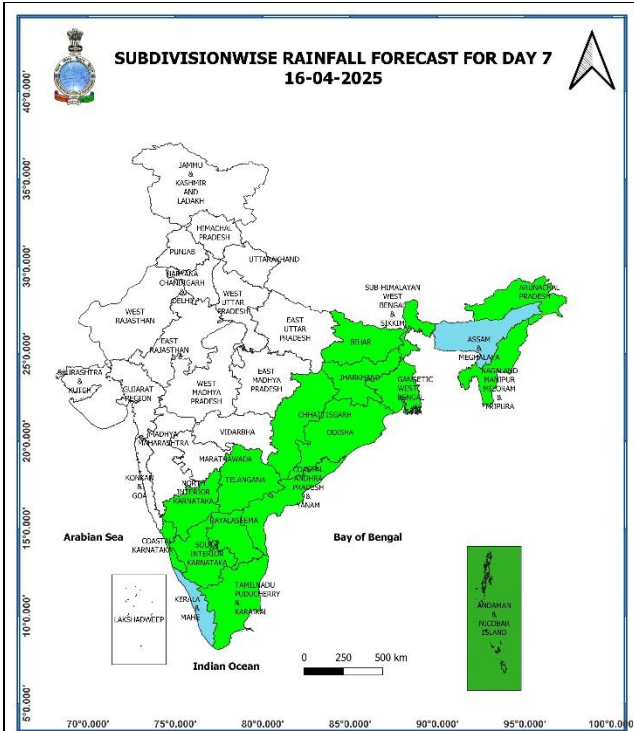
14th April (Day 5):

- ❖ **Heat wave conditions likely in isolated pockets over West Rajasthan.**



15th April (Day 6):

❖ **Heat wave conditions** likely in isolated pockets over Punjab, Haryana, Delhi and West Rajasthan.



16th April (Day 7):

- ❖ **Heat wave conditions** likely in isolated pockets over Punjab, Haryana, Delhi and West Rajasthan.

Weather Outlook for subsequent 3 days (During 17th April- 19th 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

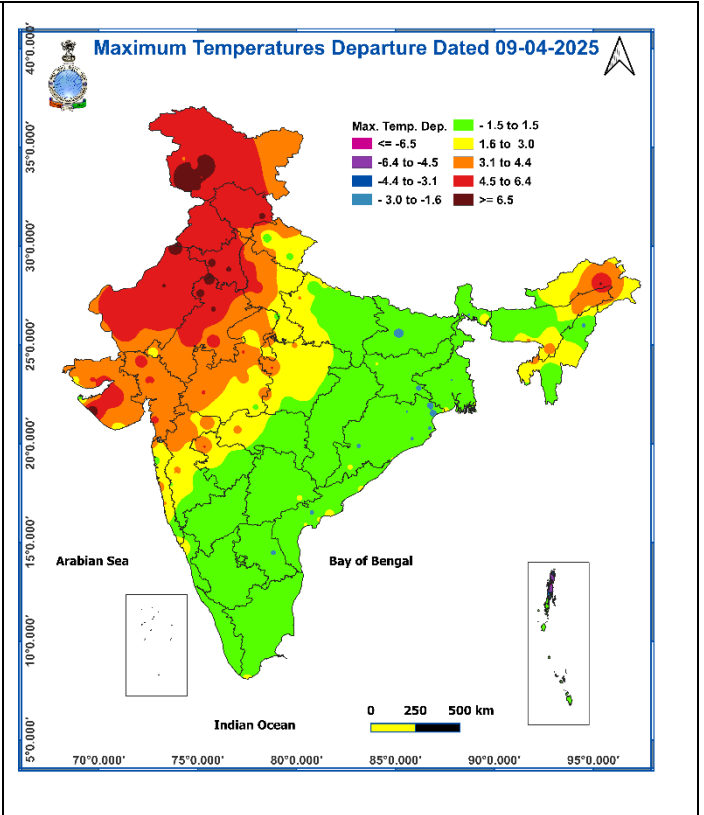
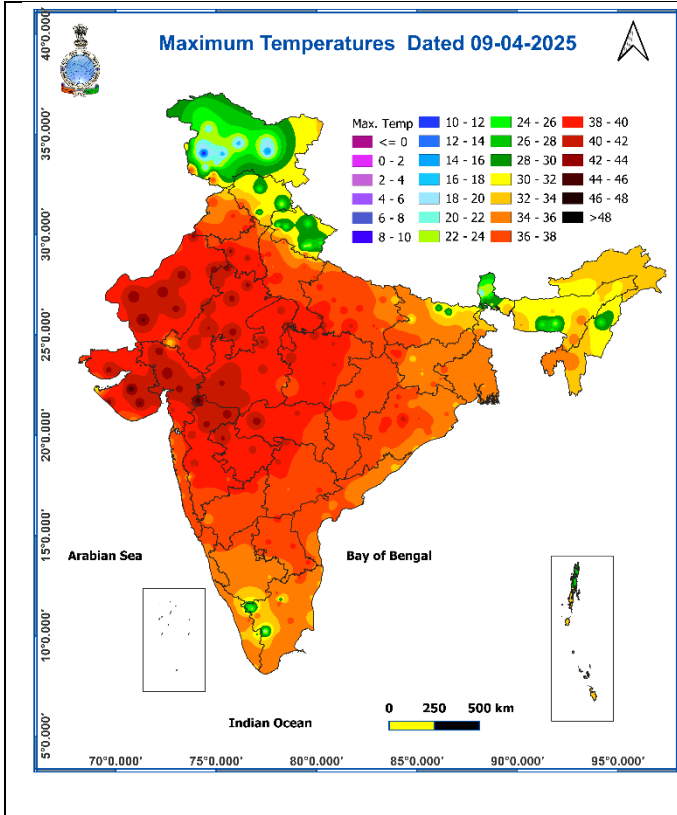
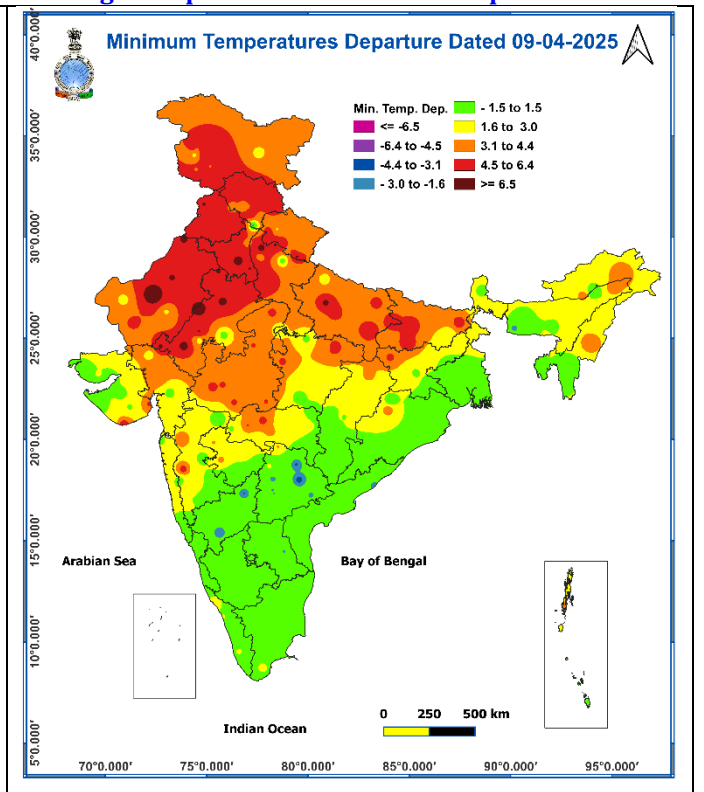
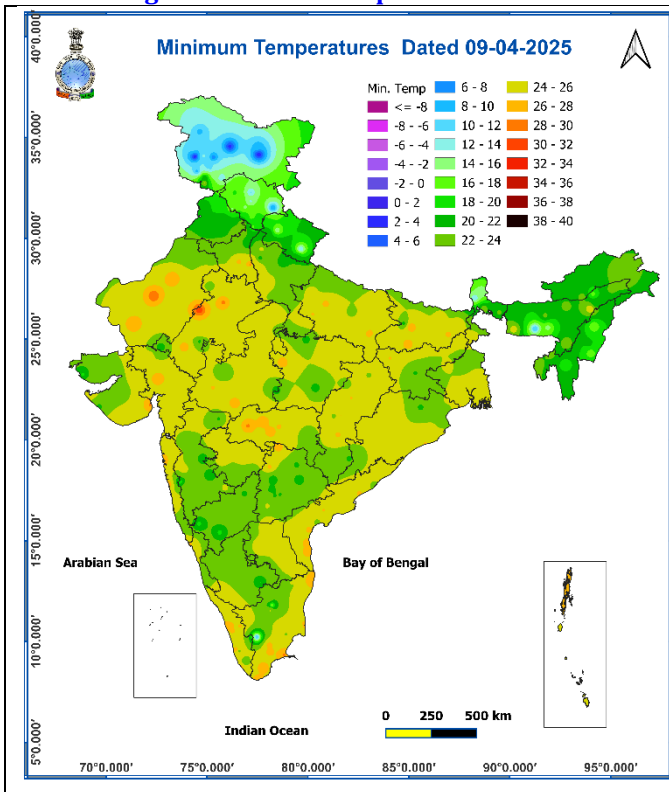


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures



Impact expected and action suggested due to Heat wave conditions likely in isolated pockets of Rajasthan, Gujarat state and Madhya Pradesh on 10th April.

Red alert Areas

- Very high likelihood of developing heat illness and heat stroke in all ages.
- Extreme care needed for vulnerable people.

Orange alert Areas

- High temperature & increased likelihood of heat illness symptoms in people who are either exposed to sun for a prolonged period or doing heavy work.
- High health concern for vulnerable people e.g. infants, elderly, people with chronic diseases.
- Avoid heat exposure- keep cool. Avoid dehydration.
- Drink sufficient water- even if not thirsty.
- Use ORS, homemade drinks like lassi, torani (rice water), lemon water, buttermilk, etc. to keep yourself hydrated.

Yellow alert Areas

- Moderate temperature & heat is tolerable for general public but moderate health concern likely for vulnerable people e.g. infants, elderly, people with chronic diseases.
- Avoid heat exposure.
- Wear lightweight, light colour, loose, cotton clothes.
- Cover your head, use a cloth, hat or umbrella.

Impact expected and action suggested due to isolated thunderstorm with lightning/gusty winds & Hailstorm over Himachal Pradesh, Jharkhand on 10th; Uttarakhand during 10th-11th April.

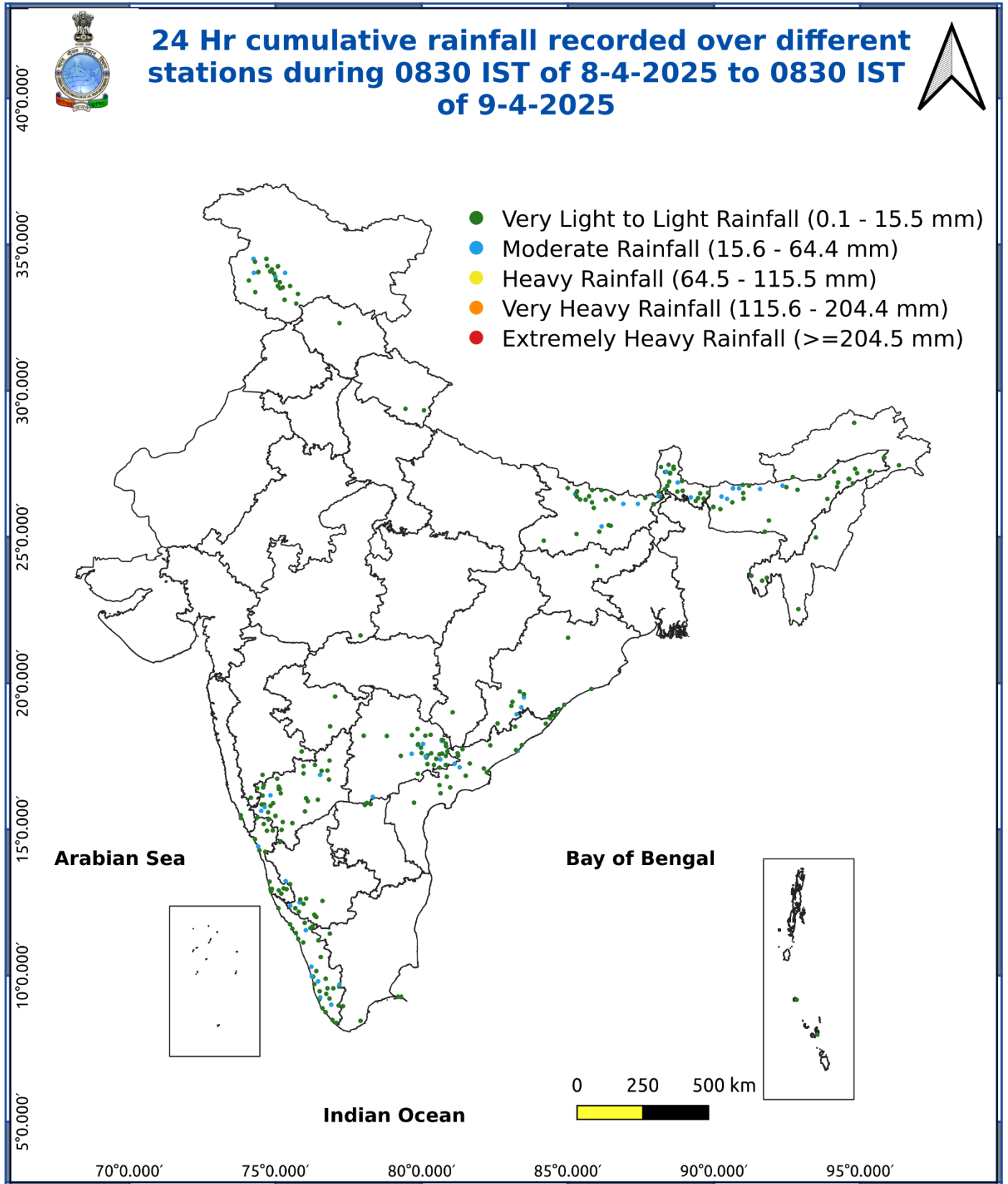
Impact expected:

- Strong wind/hail may damage plantation, horticulture and standing crops.
- Hail may injure people and cattle at open places.
- Partial damage to vulnerable structures due to strong winds.
- Minor damage to kutcha houses/walls and huts.
- Loose objects may fly.

Action suggested:

- Stay indoors, close windows & doors and avoid travel if possible.
- Take safe shelters; do not take shelter under trees.
- Do not lie on concrete floors and do not lean against concrete walls.
- Unplug electrical/ electronic appliances.
- Immediately get out of water bodies.
- Keep away from all the objects that conduct electricity.

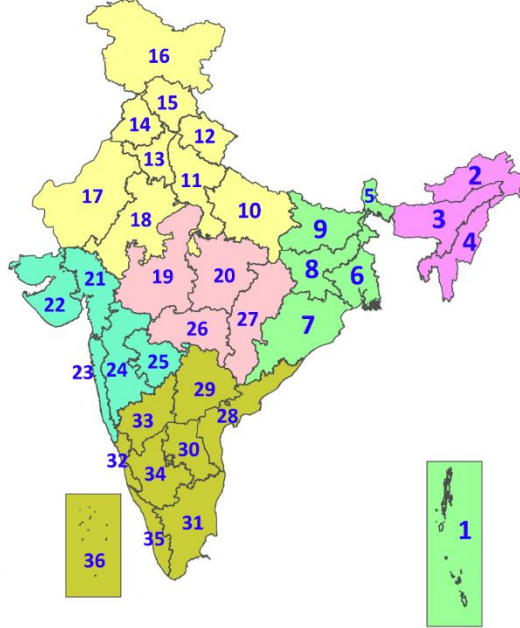
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



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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°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.