

Monday, March 31, 2025
Time of Issue: 1410 hours IST
(MID-DAY)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

Weather Systems, Forecast and Warnings:

- ❖ A Cyclonic Circulation lies over Marathwada & neighbourhood in lower tropospheric levels.
- ❖ A North-south trough runs from above Cyclonic Circulation over Marathwada to north Tamil Nadu across interior Karnataka in the lower tropospheric levels.
- ❖ Under the influence of these systems and confluence of moist winds from Arabian sea and Bay of Bengal in lower levels;
- ✓ **Thunderstorm, lightning & gusty winds (speed 30-60 kmph)** likely over Madhya Pradesh, Vidarbha, Telangana, Coastal Karnataka, Kerala & Mahe, Konkan & Goa, Madhya Maharashtra during 31st March to 04th April; Gujarat State on 01st & 02nd April; Chhattisgarh, Odisha, Marathwada, Coastal Andhra Pradesh & Yanam, Interior Karnataka during 31st March to 04th April; Gangetic West Bengal, Jharkhand, Rayalaseema during 02nd-04th April;
- ✓ **Hailstorm** likely over Madhya Pradesh, Vidarbha during 01st-04th; Madhya Maharashtra, Marathwada on 01st & 02nd; Chhattisgarh, Telangana on 02nd & 03rd; Odisha during 02nd-04th; Jharkhand on 03rd & 04th; North Interior Karnataka during 01st-03rd; South Interior Karnataka on 03rd April.
- ✓ **Heavy rainfall** very likely at isolated places over Coastal & South Interior Karnataka on 03rd & 04th April; Kerala & Mahe during 03rd-06th April.
- ❖ Under the influence of Subtropical Westerly Jet core over northeast India in middle and upper tropospheric levels and a lower-level cyclonic circulation over northeast Assam and adjoining Arunachal Pradesh;
- ✓ **Scattered to fairly widespread** light/moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (speed 40-50 kmph)** likely over south Assam, northeast Assam, Arunachal Pradesh and Tripura on 31st March.

Temperature Forecast:

- ❖ Gradual rise in maximum temperatures by 2-3°C likely over East during 31st March to 2nd April and no significant change till 4th April.
- ❖ Gradual rise in maximum temperatures by 2-4°C likely over Northwest India during 31st March to 2nd April and no significant change till 4th April.
- ❖ No significant change in maximum temperatures likely over Central India & south Peninsular India till 2nd April and fall by 2-4°C thereafter.
- ❖ No significant change in maximum temperatures likely over Maharashtra till tomorrow, 1st April and fall by 2-4°C thereafter.
- ❖ No significant change in maximum temperatures likely over rest parts of the country during till 4th April.

Heat wave and Hot & Humid weather warning:

- ❖ **Heat Wave conditions very likely to prevail at isolated pockets of Saurashtra & Kutch on 31st March & 01st April.**

Hot & humid weather conditions very likely to prevail at isolated pockets of Assam on 31st March & 01st April; Tripura during 31st March- 03rd April; Gujarat state during 31st March-04th April.

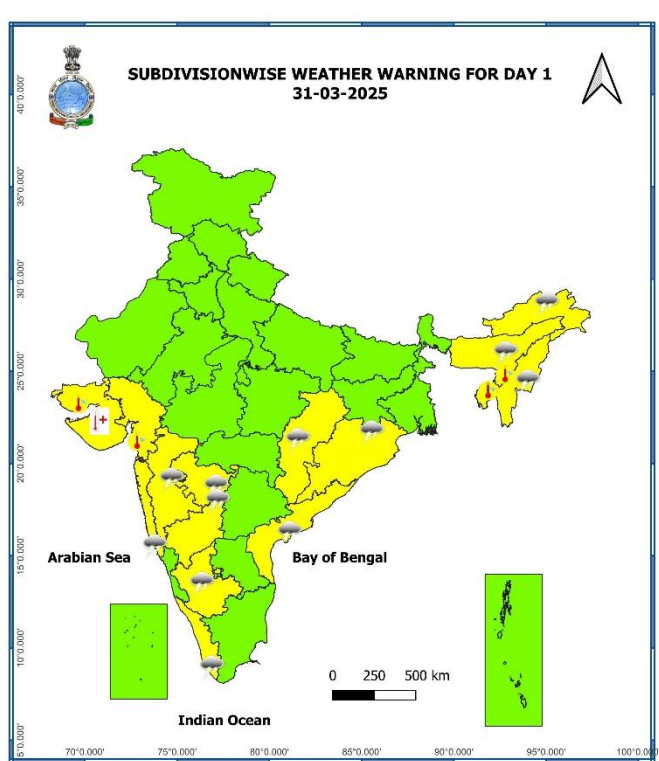
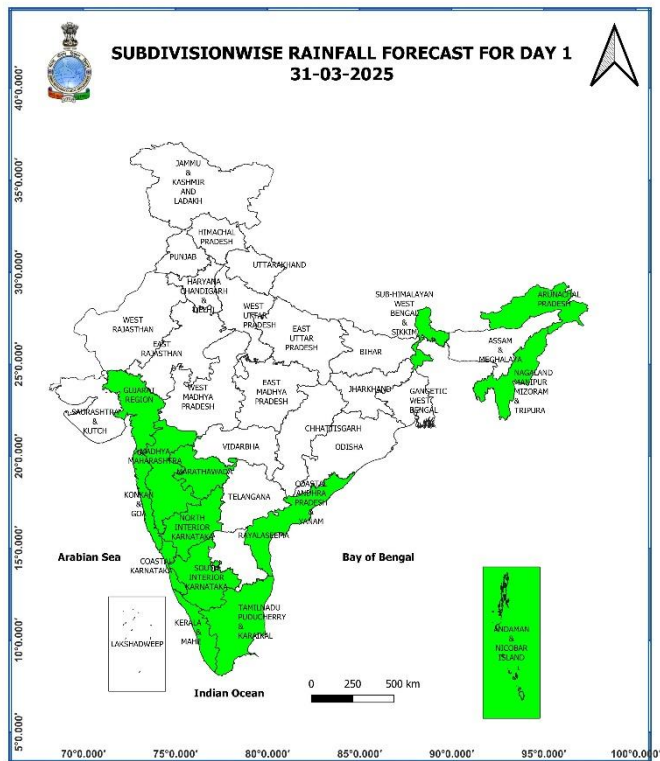
Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST of yesterday to 0830 hours IST of today): at isolated places over Arunachal Pradesh, Madhya Maharashtra and Karnataka.
- ❖ **Significant amount of rainfall** (from 0830 hours IST of yesterday to 0830 hours IST of today): (in cm): **Coastal Karnataka:** Haliyal (dist Uttara Kannada) 3. **North Interior Karnataka:** Dharwad Pto (dist Dharwad) 2, Hungund (dist Bagalkote) 1, Kittur (dist Belagavi) 1, Hubballi (dist Dharwad) 1.
- ❖ **Squally/Gusty winds** prevailed at isolated locations over North Interior Karnataka.
- ❖ **Minimum Temperature Departures (as on 31-03-2025):** Minimum temperatures are **appreciably above normal (3.1°C to 5.0°C)** at isolated places Madhya Maharashtra and Marathwada; **above normal (1.6°C to 3.0°C)** at many places over Konkan & Goa; at isolated places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Odisha, Coastal Andhra Pradesh & Yanam, West Bengal & Sikkim. These are **markedly below normal (-5.1°C or less)** at isolated places over Rajasthan, Haryana-Chandigarh-Delhi, East Uttar Pradesh, Saurashtra & Kutch; **below normal (-3.0°C to -1.6°C)** at many places over West Uttar Pradesh; at a few places over Punjab, Himachal Pradesh, Uttarakhand; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Bihar, Madhya Pradesh, Chhattisgarh, Jharkhand and Tamil Nadu, Puducherry & Karaikal and near normal over rest parts of the country (**Fig. 4**). Today, the **lowest minimum temperature of 10.0°C** is reported at **Sikar (East Rajasthan)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 30-03-2025):** Maximum Temperatures were **appreciably above normal (3.1°C to 5.0°C)**) at isolated places over Himachal Pradesh, Uttarakhand, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Saurashtra & Kutch, Odisha, Sub-Himalayan West Bengal & Sikkim; **above normal (1.6°C to 3.0°C)** at a few places over Vidarbha; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Chhattisgarh, Telangana, Jharkhand, Gangetic West Bengal, Bihar, Madhya Maharashtra. These were **below normal (-3.0°C to -1.6°C)** at isolated places over Arunachal Pradesh and near normal over rest parts of the country (**Fig. 2**). Yesterday, the highest **maximum temperature of 42.3°C** was reported at **Akola (Vidarbha)** over the country.

Meteorological Analysis (Based on 0830 hours IST)

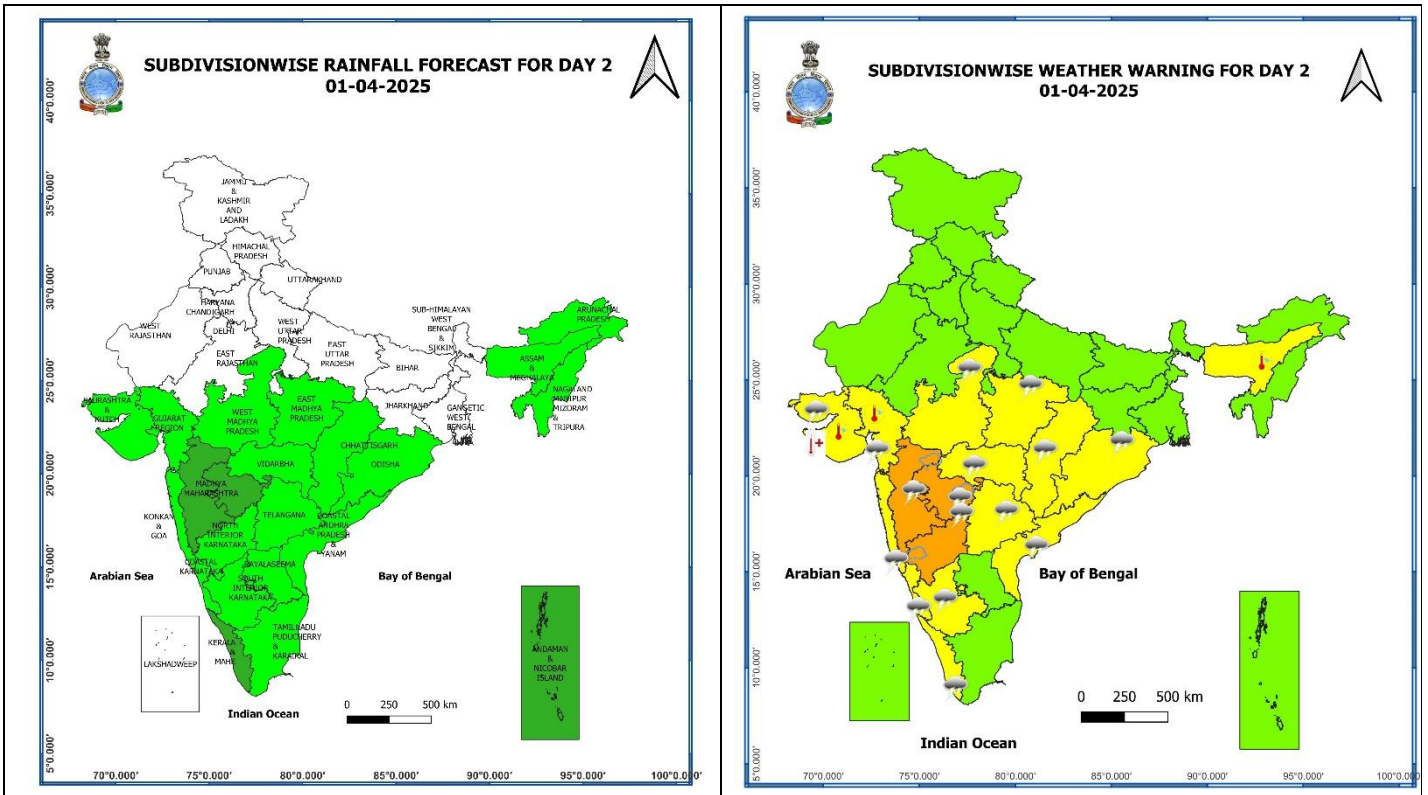
- ❖ A **Cyclonic Circulation** lies over Marathwada & neighbourhood and extends upto 1.5 km above mean sea level.
- ❖ The **trough** from south Chhattisgarh to south Tamil Nadu now runs from south Chhattisgarh to Madhya Maharashtra across Vidarbha, above cyclonic circulation over Marathawada at 0.9 km above mean sea level.
- ❖ A north-south **trough** runs from the **Cyclonic Circulation** over Marathwada to north Tamil Nadu across Interior Karnataka and extends upto 1.5 km above mean sea level.
- ❖ The upper air **Cyclonic Circulation** over southeast Bay of Bengal now lies over southwest Bay of Bengal at 3.1 km above mean sea level.
- ❖ A **Cyclonic Circulation** lies over northeast Assam & neighbourhood at 3.1 km above mean sea level.
- ❖ The **Cyclonic Circulation** over south Tamil Nadu & neighbourhood at 0.9 km above mean sea level has become less marked.
- ❖ The upper air **Cyclonic Circulation** over Nagaland & neighbourhood at 1.5 km above mean sea level has become less marked.
- ❖ A fresh **Western Disturbance** is likely to affect Western Himalayan Region from 3rd April 2025.

Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 07th April, 2025)



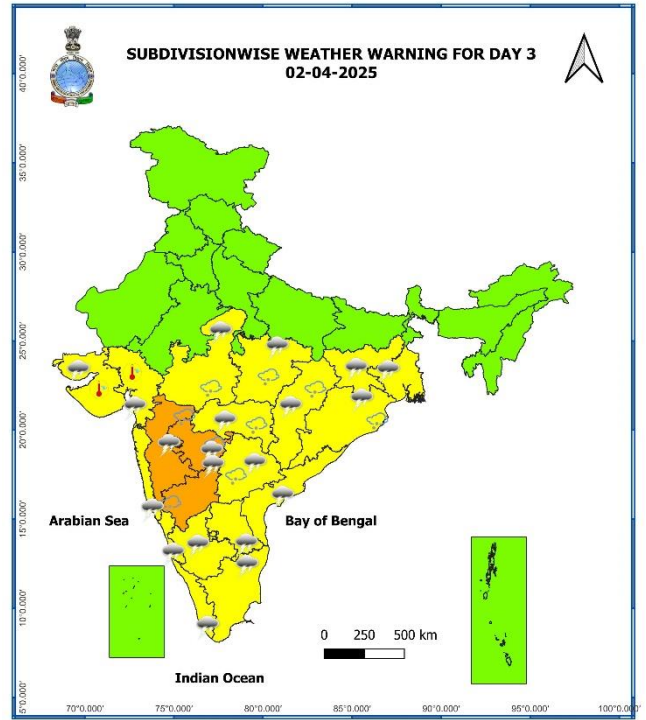
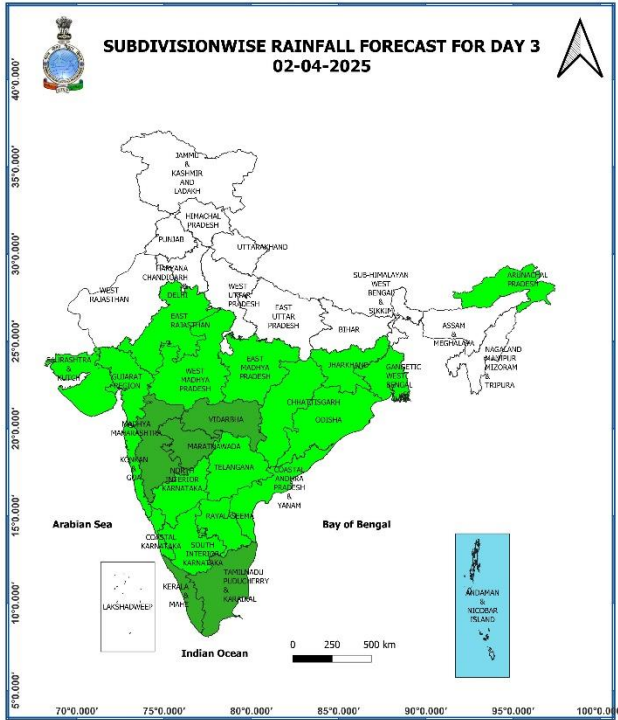
31st March (Day 1):

- ❖ **Thunderstorm accompanied with gusty winds (speed reaching 40 - 50 kmph) & lightning** very likely at isolated places over Chhattisgarh, Madhya Maharashtra, North Interior Karnataka; **with gusty winds (speed reaching 30 - 40 kmph)** at isolated places over Odisha, Assam & Meghalaya, Konkan & Goa, Marathwada, Coastal Andhra Pradesh & Yanam, South Interior Karnataka; **with lightning** at isolated places over Arunachal Pradesh, Kerala & Mahe, Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Heat wave conditions** very likely at isolated places over Saurashtra & Kutch.
- ❖ **Hot and Humid Conditions** very likely at isolated places over Assam & Meghalaya, Tripura, Gujarat state.



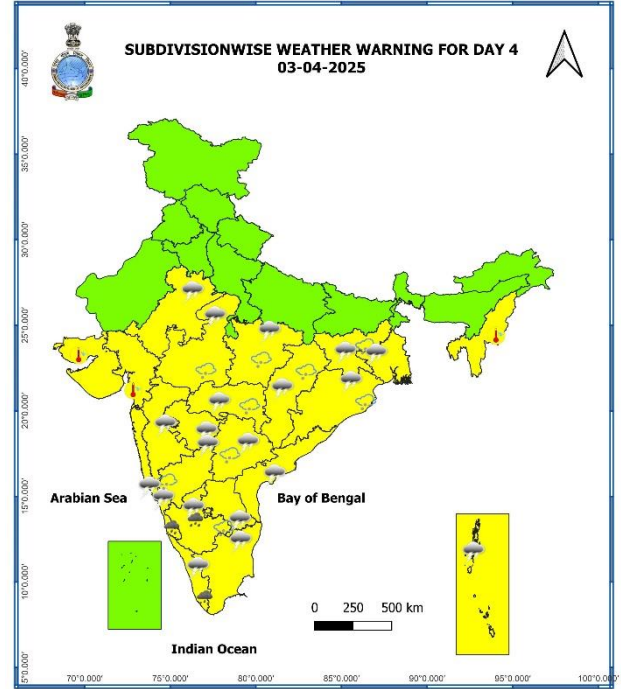
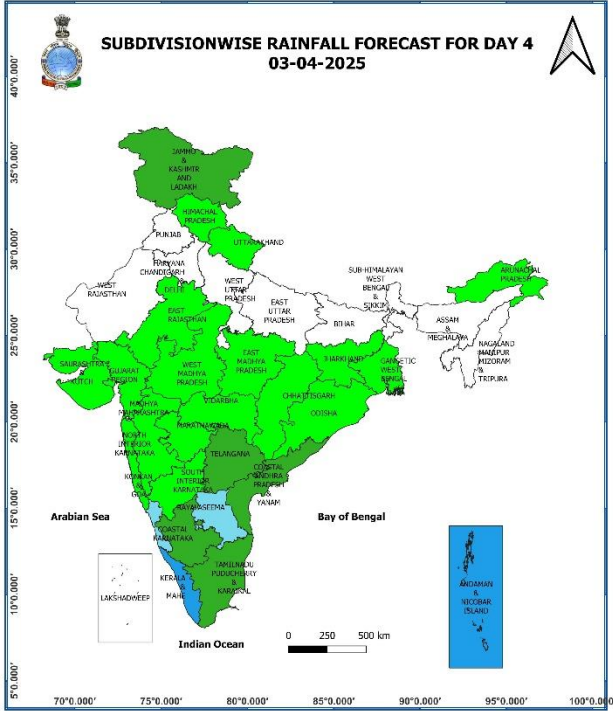
01st April (Day 2):

- ❖ **Thundersquall (wind speed reaching 50 - 60 kmph) accompanied with lightning & hail** very likely at isolated places over Madhya Maharashtra, Marathwada, North Interior Karnataka; **with gusty winds (speed reaching 40 - 50 kmph) & lightning** at isolated places over Madhya Pradesh, Vidarbha, Chhattisgarh, Konkan & Goa, Telangana; **with gusty winds (speed reaching 30 - 40 kmph)** at isolated places over Odisha, Gujarat state, Coastal Andhra Pradesh & Yanam, South Interior Karnataka and with **lightning** at isolated places over Kerala & Mahe and Coastal Karnataka .
- ❖ **Hot and Humid Conditions** very likely at isolated places over Assam & Meghalaya and Tripura, Gujarat state.
- ❖ **Heat wave conditions** very likely at isolated places over Saurashtra & Kutch.



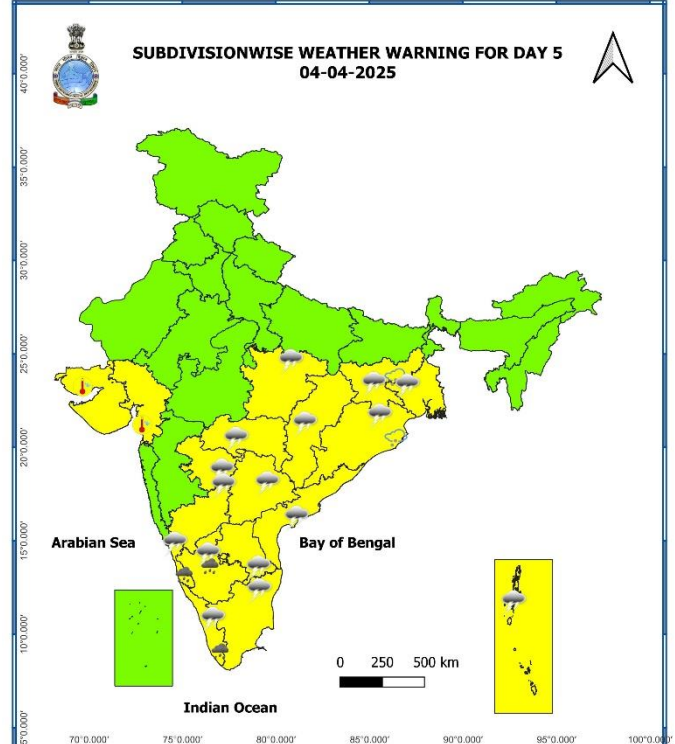
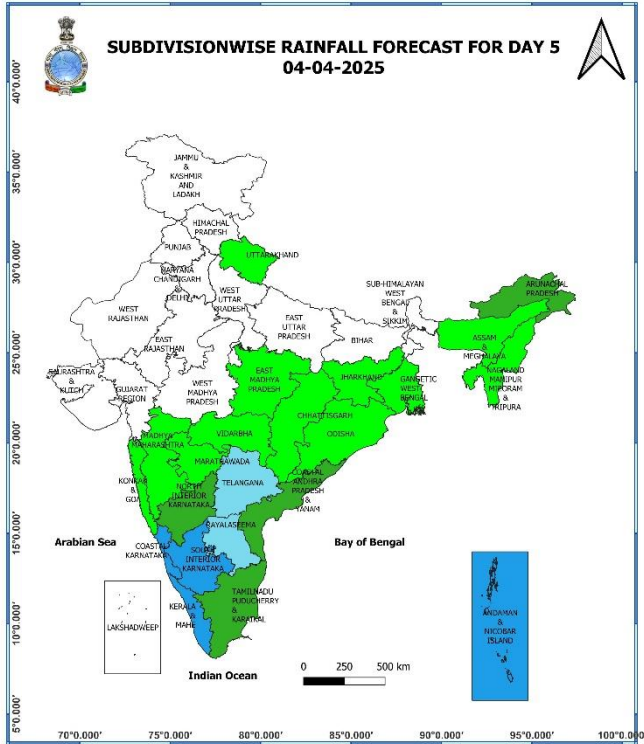
02nd April (Day 3):

- ❖ **Thundersquall (wind speed reaching 50 - 60 kmph) accompanied with lightning & hail likely at isolated places over Vidarbha, Chhattisgarh, Madhya Maharashtra, Marathwada, North Interior Karnataka; with gusty winds (speed reaching 40 - 50 kmph), Hail & lightning at isolated places over Madhya Pradesh, Odisha, Telangana; with gusty winds (speed reaching 40 - 50 kmph) & lightning at isolated places over Jharkhand, Konkan & Goa, Coastal Andhra Pradesh & Yanam, Coastal Karnataka, South Interior Karnataka; with gusty winds (speed reaching 30 - 40 kmph) at isolated places over Gangetic West Bengal, Gujarat state, Rayalaseema; with lightning Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe.**
- ❖ **Hot and Humid Conditions** likely at isolated places over Tripura, Gujarat state.



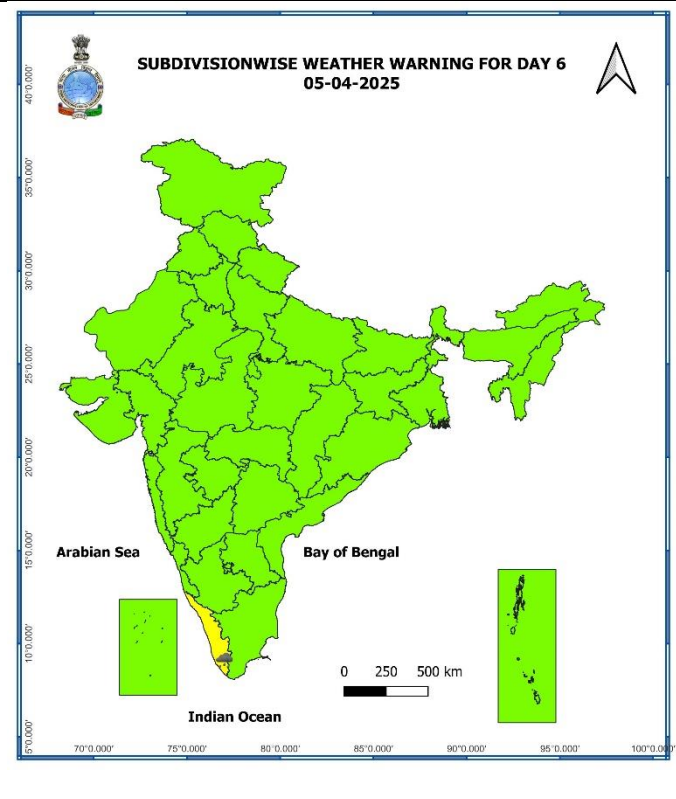
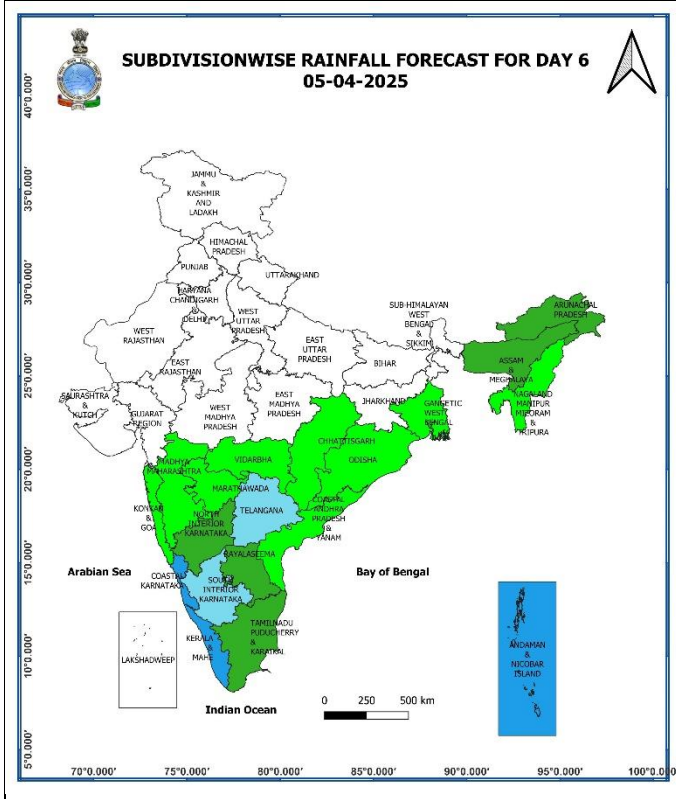
03rd April (Day 4):

- ❖ **Heavy rainfall** likely at isolated places over Kerala & Mahe, Coastal & South Interior Karnataka.
- ❖ **Thundersquall (wind speed reaching 50 - 60 kmph) accompanied with lightning & hail** likely at isolated places over Vidarbha, Chhattisgarh, Jharkhand, Odisha, North Interior Karnataka; **with gusty winds (speed reaching 40 - 50 kmph), Hail & lightning** at isolated places over Madhya Pradesh, Telangana, South Interior Karnataka; **with gusty winds (speed reaching 40 - 50 kmph) & lightning** at isolated places over Madhya Maharashtra, Marathwada, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema, Coastal Karnataka; **with gusty winds (speed reaching 30 - 40 kmph)** at isolated places over Gangetic West Bengal, Konkan & Goa; **with lightning** at isolated places over Tamil Nadu, Puducherry & Karaikal, Andaman & Nicobar Islands.
- ❖ **Hot and Humid Conditions** likely at isolated places over Tripura, Gujarat state.



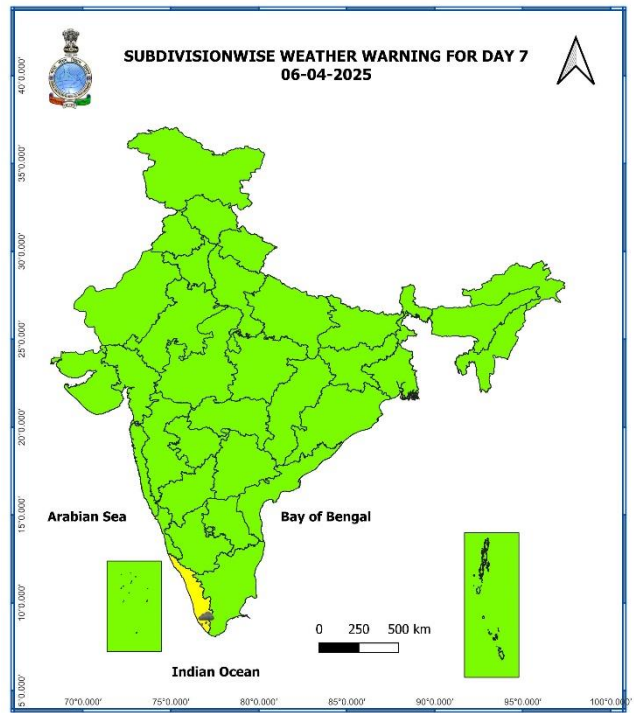
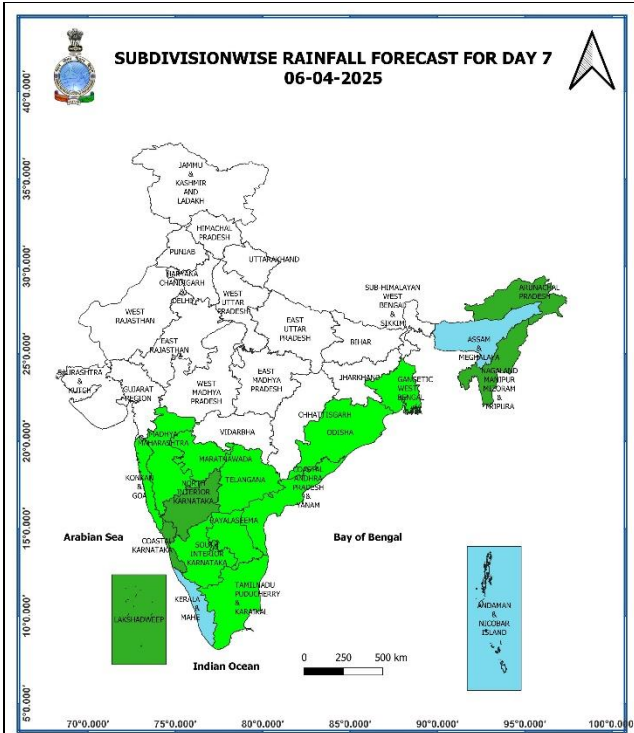
04th April (Day 5):

- ❖ **Heavy rainfall** likely at isolated places over Kerala & Mahe, Coastal & South Interior Karnataka.
- ❖ **Thundersquall (wind speed reaching 50 - 60 kmph)** accompanied with **lightning & hail** likely at isolated places over Jharkhand, Odisha; **with gusty winds (speed reaching 40 - 50 kmph) & lightning** at isolated places over East Madhya Pradesh, Chhattisgarh, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema, Rayalaseema, Karnataka; **with gusty winds (speed reaching 30 - 40 kmph)** at isolated places over Vidarbha, Gangetic West Bengal, Marathwada; **with lightning** Tamil Nadu, Puducherry & Karaikal, Andaman & Nicobar Islands.
- ❖ **Hot and Humid Conditions** likely at isolated places over Gujarat state.



05th April (Day 6):

❖ **Heavy rainfall** likely at isolated places over Kerala & Mahe.



06th April (Day 7):

- ❖ Heavy rainfall likely at isolated places over Kerala & Mahe.

Weather Outlook for subsequent 3 days (During 07th April- 09th April, 2025)

- ❖ Isolated to scattered rainfall likely over central India, Arunachal Pradesh, Andaman & Nicobar Islands, Odisha and 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

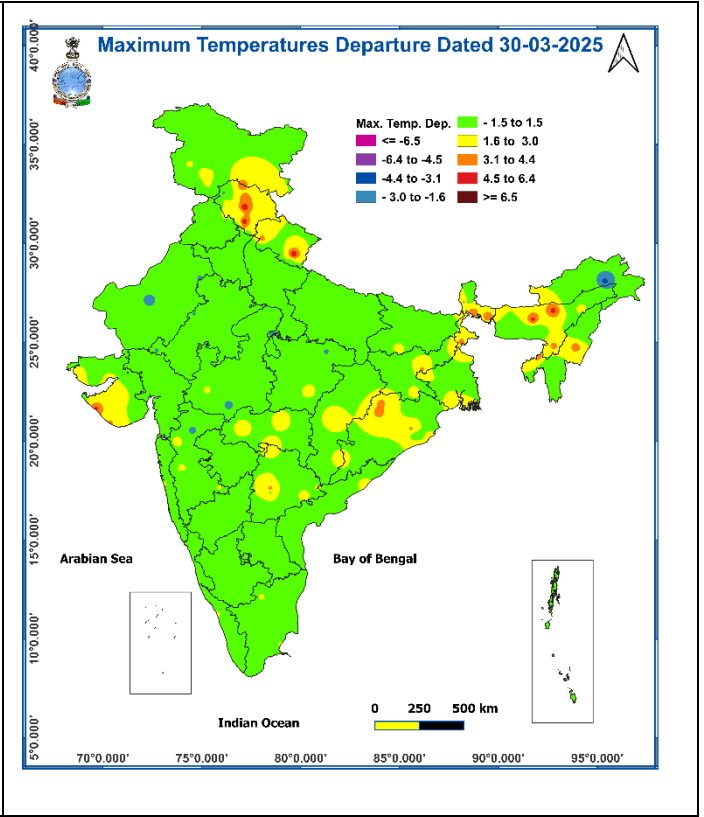
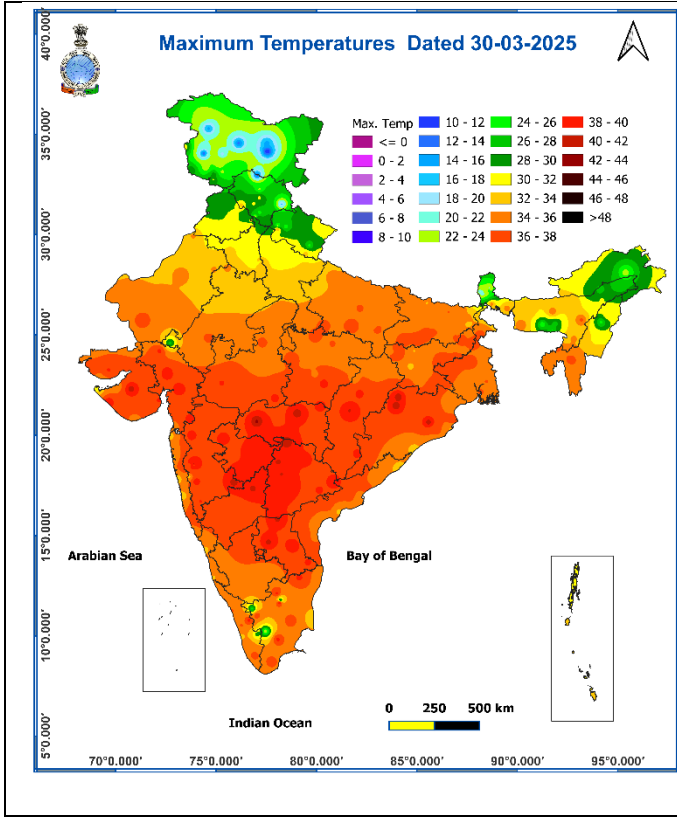
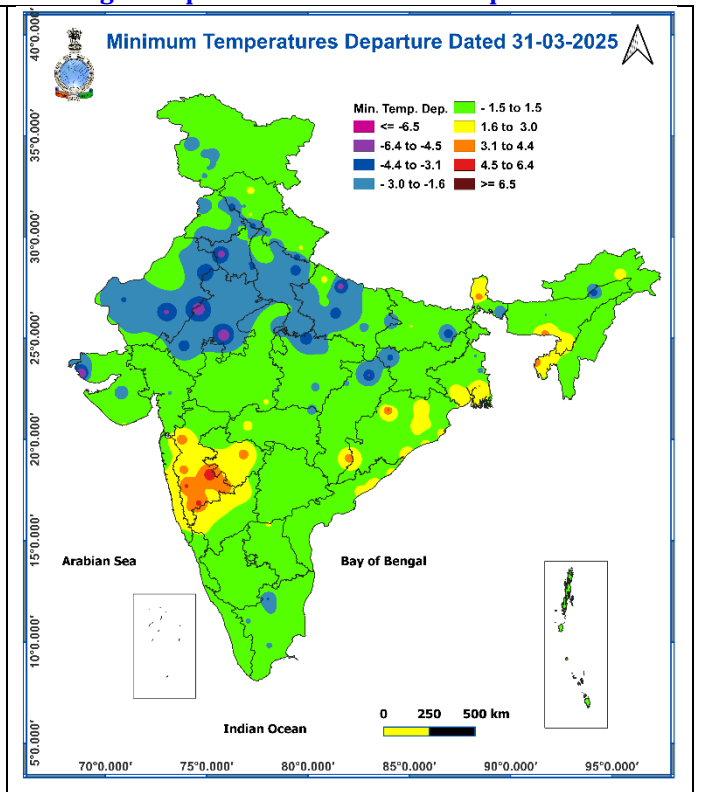
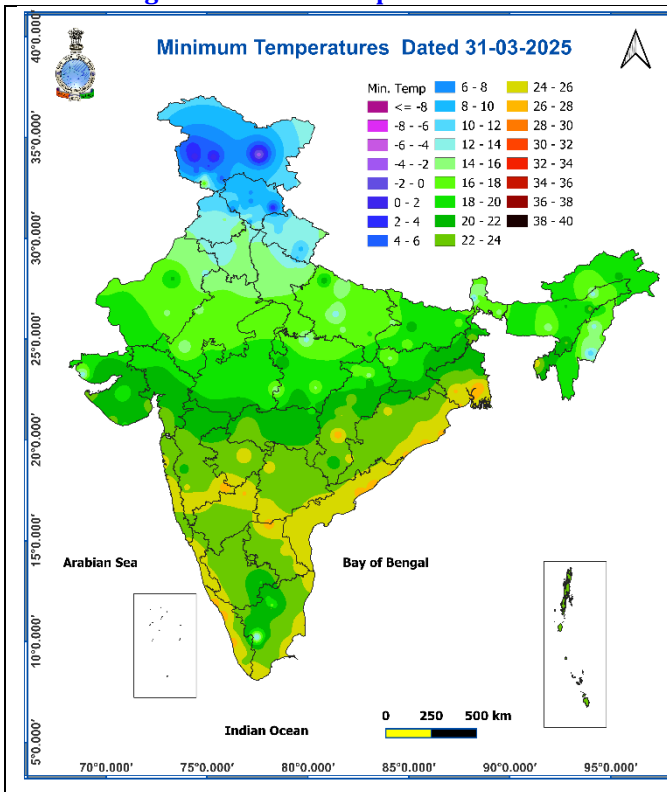


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures



Impact expected and action suggested due Heat Wave conditions over Saurashtra & Kutch on 31st March & 1st April.

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 central and adjoining east & Peninsular India during 01st -04th 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.

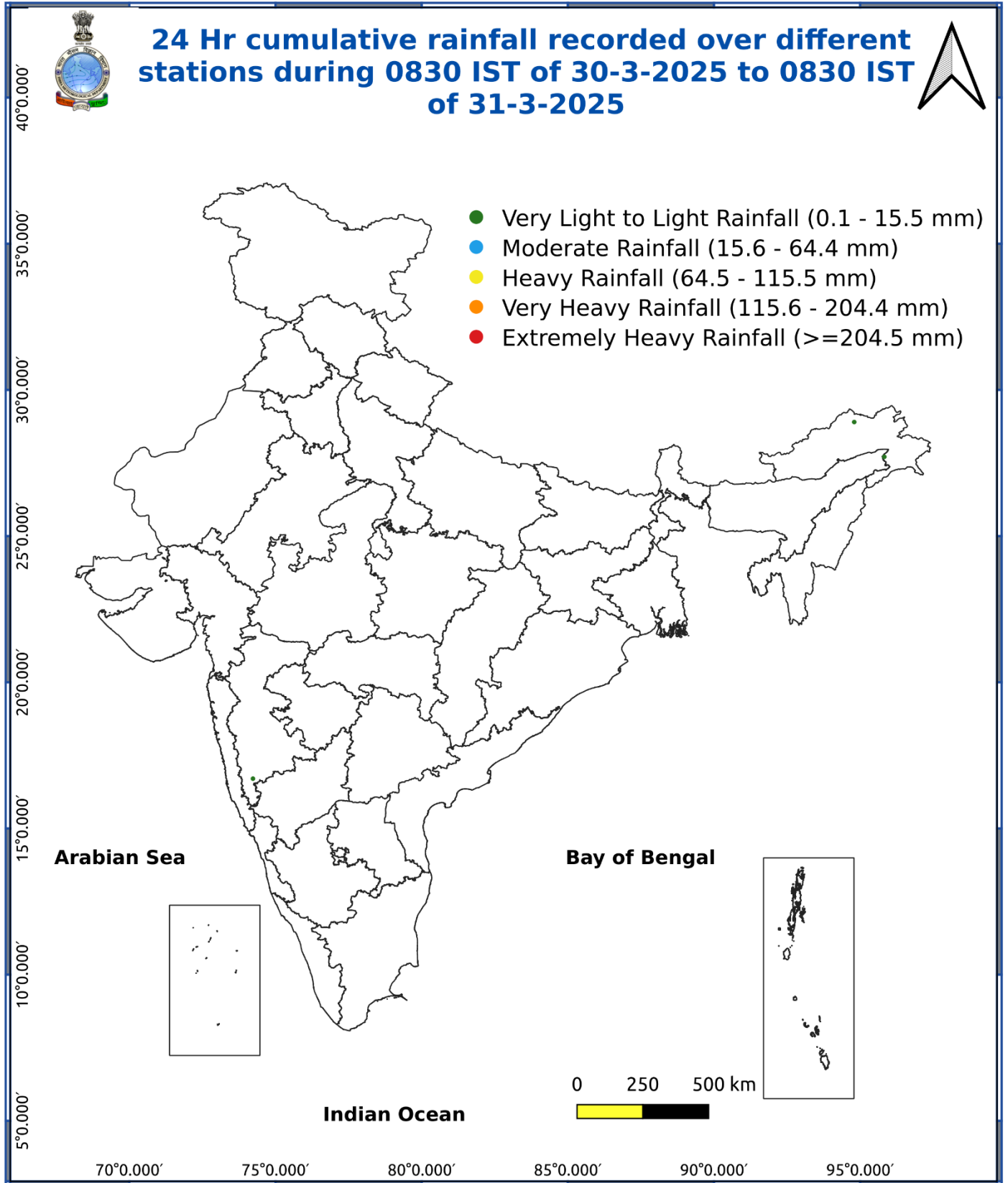
Agromet advisories for likely impact of Hailstorm, Heavy Rainfall, Strong Surface Winds

- In **Madhya Maharashtra, Marathwada, Vidarbha, Coastal and North Interior Karnataka, Telangana, Madhya Pradesh, Chhattisgarh, Odisha and Jharkhand**, immediately harvest the matured crops, fruits and vegetables and shift the harvested produce in safer places or cover the produce with tarpaulin sheets in the fields to avoid the adverse impact of likely hailstorm. Use hail net and hail caps to prevent mechanical damage in orchards due to hailstorms.
- In **Tamilnadu, Kerala, Coastal and South Interior Karnataka**, make provision to drain out excess water from standing crop and vegetable fields.
- Provide mechanical support to horticultural crops and staking to vegetables to avoid lodging.

Livestock/ poultry

- Keep the animals inside the shed during heavy rainfall/hailstorm and provide them balanced feed. Store feed and fodder in a safe place to prevent spoilage.

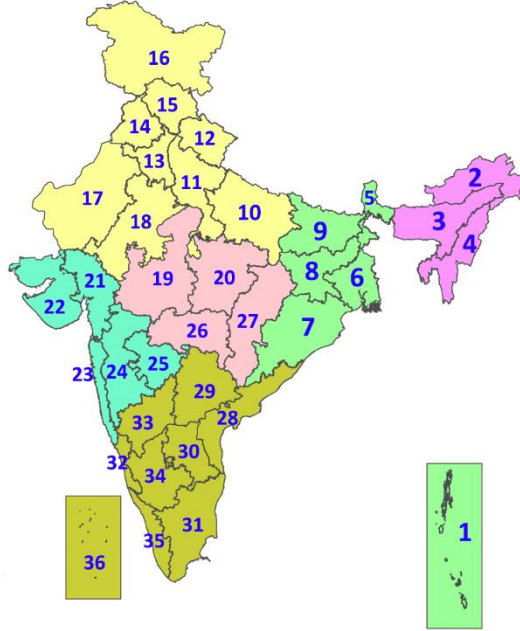
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



* 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.