

Saturday, March 22, 2025

Time of Issue: 1330 hours IST

(MID-DAY)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

Weather Systems, Forecast and Warnings:

- ❖ A trough/wind discontinuity runs from southeast Uttar Pradesh to south Madhya Maharashtra with an embedded **cyclonic circulation** over central Chhattisgarh & neighbourhood in lower tropospheric levels. A north-south trough runs from North interior Karnataka to south Tamil Nadu in lower tropospheric levels. There is wind confluence over east & adjoining east peninsular India in association with the anticyclonic circulation over Bay of Bengal at lower tropospheric levels. Under the influence of these systems:
 - ✓ **Scattered to Fairly widespread** light/moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (speed 40-60 kmph)** likely over East Madhya Pradesh, Vidarbha, West Bengal, Sikkim, Bihar, Jharkhand, Odisha and Kerala on 22nd March and over Chhattisgarh, Andhra Pradesh, Telangana, Interior Karnataka on 22nd & 23rd March and reduction in intensity thereafter.
 - ✓ **Heavy rainfall** likely at isolated places over Gangetic West Bengal, Jharkhand, Odisha, south Tamil Nadu, Kerala & Mahe on 22nd March.
 - ✓ **Isolated hailstorms also likely over** West Bengal & Sikkim, Bihar, Jharkhand, Odisha, Chhattisgarh, Telangana and South Interior Karnataka on 22nd March.
 - ✓ **Scattered to Fairly widespread** light/moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (speed 30-40 kmph)** likely over Arunachal Pradesh during next 5 days; Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura, Tamilnadu Puducherry & Karaikal, Kerala & Mahe, Lakshadweep, Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana and Interior Karnataka during next 3-4 days.

Temperature Forecast:

Forecast of temperature:

Maximum temperature:

- ❖ No significant change in maximum temperatures likely over many places over Northwest India during next 24 hours and rise by 3-4°C during subsequent 4 days.
- ❖ Gradual rise in maximum temperatures by 2-4°C likely over Central India and Interior Maharashtra during next 4-5 days.
- ❖ No significant change in maximum temperatures likely over West India during next 24 hours and gradual rise by about 2-3°C for subsequent 3-4 days.
- ❖ No significant change in maximum temperatures likely over many places over South Peninsular India during next 3 days and rise by 2-3°C during subsequent 2 days.

Heat wave and Hot & Humid weather warning:

- ❖ **No heat wave likely over any parts of country during next 4-5 days.**
- ❖ **Hot & humid weather conditions** very likely to prevail in isolated pockets over coastal areas of Gujarat State during 22nd-25th March.

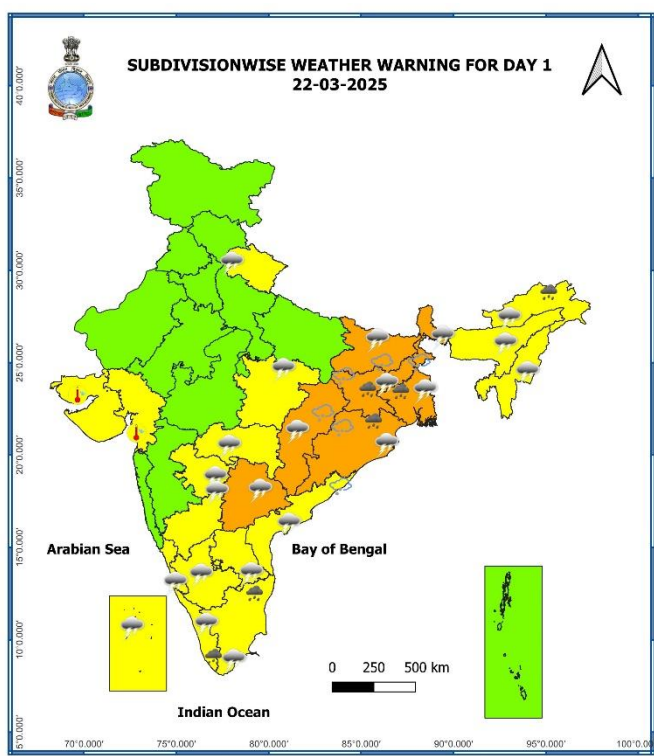
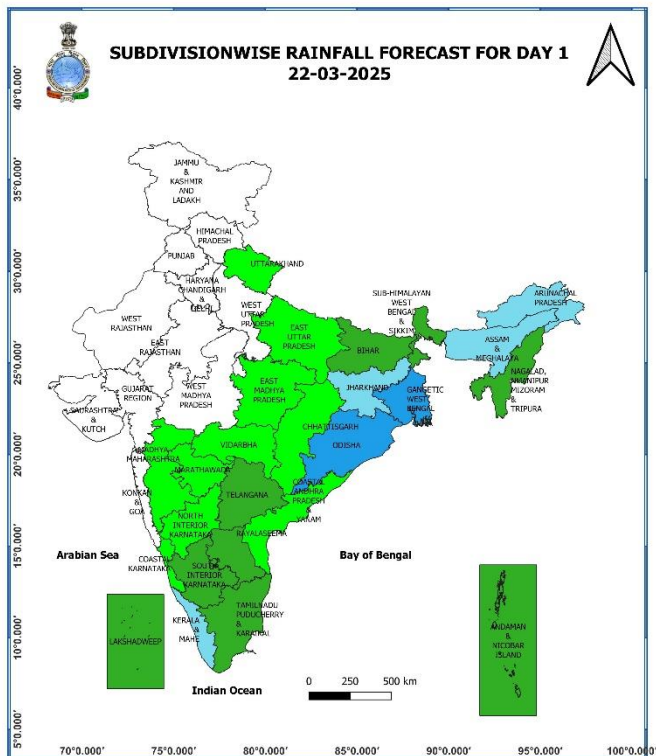
Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST of yesterday to 0830 hours IST of today): at many places over Gangetic West Bengal, Jharkhand; at a few places over East Madhya Pradesh, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim, Odisha, Arunachal Pradesh, Tamilnadu Puducherry & Karaikal; at isolated places over Himachal Pradesh, Uttarakhand, East Uttar Pradesh, Vidarbha, Andaman & Nicobar Islands, Bihar, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, North Interior Karnataka.
- ❖ **Significant amount of rainfall** (from 0830 hours IST of yesterday to 0830 hours IST of today) (in cm): **Odisha:** Baripada (dist Mayurbhanj) 12, Joda (dist Keonjhar) 9, Rajgangpur (dist Sundargarh) 7, Sharpada (dist Keonjhar) 6; **Tamilnadu:** Tuticorin Rly Station ARG (dist Thoothukudi) 8, Thirparappu (dist Kanyakumari) 4; **Kerala & Mahe:** Kottayam (dist Kottayam) 8, Alwaye (dist Ernakulam) 5, Aluva (dist Ernakulam) 5; **Telangana:** Ars_basanthpur(a) (dist Medak) 6, Gangadhara (dist Karimnagar) 6, Pegadapalle (dist Jagtial) 6; **Gangetic West Bengal:** Kansabati Dam (dist Bankura) 6, Phulberia (dist Purulia) 4, Tusuma (dist Purulia) 4, **Arunachal Pradesh:** Tuting_Aws (dist Upper Siang) 4, **Assam & Meghalaya:** Hazuah (dist Barpeta) 3, **Sub-Himalayan West Bengal & Sikkim:** Mangan (dist Mangan) 3, Singhik (dist Mangan) 3.
- ❖ **Heavy to very heavy rainfall** reported at isolated places over Odisha; Heavy rainfall at isolated places over Tamil Nadu, Kerala
- ❖ **Hailstorms reported** at isolated locations over Vidarbha, Gangetic West Bengal, Odisha, Jharkhand, East Madhya Pradesh, Chhattisgarh, Telangana.
- ❖ **Minimum Temperature Departures (as on 22-03-2025):** Minimum temperatures are **above normal (1.6°C to 3.0°C)** at many places over Andaman & Nicobar Islands; at a few places over Rayalaseema, Tamil Nadu, Puducherry & Karaikal; at isolated places over Kerala & Mahe, Lakshadweep, South Interior Karnataka, West Madhya Pradesh, Gujarat state, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, West Rajasthan. These are **appreciably below normal (-3.1°C to -5.0°C)** at a few places over Gangetic West Bengal, Odisha; at isolated places over Haryana-Chandigarh-Delhi, Uttarakhand, East Madhya Pradesh, Telangana, East Rajasthan; **below normal (-3.0°C to -1.6°C)** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Madhya Maharashtra, West Uttar Pradesh and near normal over rest parts of the country (**Fig. 4**). Today, the **lowest minimum temperature of 13.0°C** is reported at **Bahraich (East Uttar Pradesh)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 21-03-2025):** Maximum Temperatures were **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; **above normal (1.6°C to 3.0°C)** at isolated places over Himachal Pradesh, Uttarakhand, Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh, Saurashtra & Kutch, Konkan & Goa, Tamil Nadu, Puducherry & Karaikal. These were **appreciably below normal (-3.1°C to -5.0°C)** at a few places over Jharkhand; at isolated places over Bihar, Chhattisgarh, Assam & Meghalaya, Arunachal Pradesh; **below normal (-3.0°C to -1.6°C)** at a few places over Odisha; at isolated places over Madhya Pradesh, Madhya Maharashtra, Marathwada, Telangana, East Rajasthan, Nagaland, Manipur, Mizoram & Tripura and near normal over rest parts of the country. (**Fig. 2**). Yesterday, the highest **maximum temperature of 40.1°C** was reported at **Anantapur (Rayalaseema)** over the country.

Meteorological Analysis (Based on 0830 hours IST)

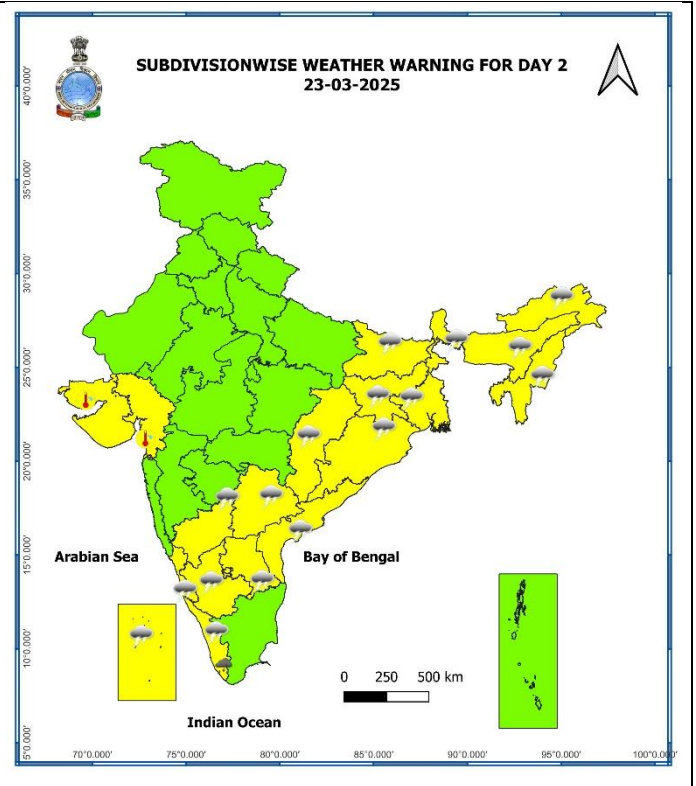
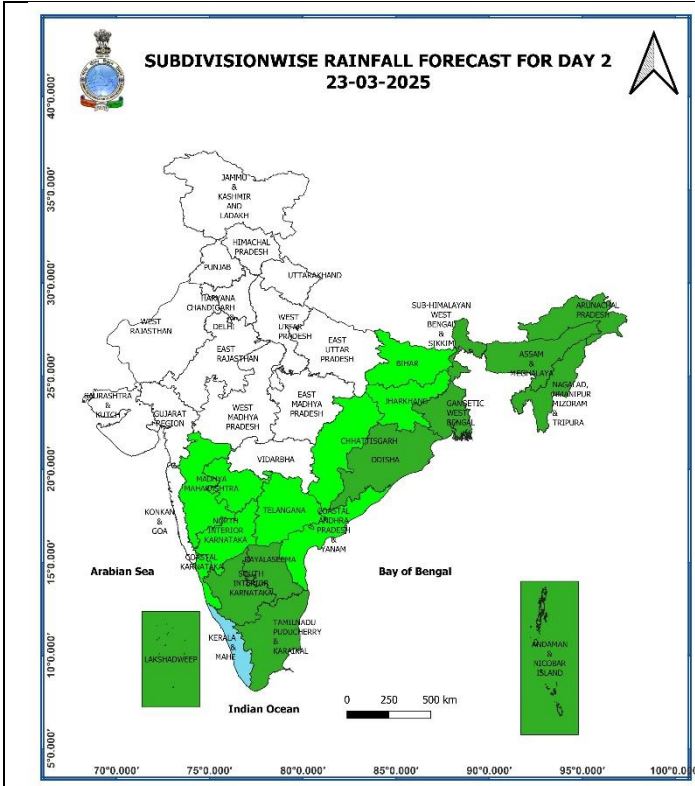
- ❖ The **Western Disturbance** as a trough in middle & upper tropospheric level with its axis between 3.1 & 7.6 km above mean sea level now runs roughly along Long. 82°E to the north of Lat. 20°N.
- ❖ The **cyclonic circulation** over central parts of Madhya Pradesh now lies over central Chhattisgarh & neighbourhood and extends upto 1.5 km above mean sea level.
- ❖ A **trough/wind discontinuity** runs from southeast Uttar Pradesh to south Madhya Maharashtra across the above cyclonic circulation over central Chhattisgarh & neighbourhood, interior Maharashtra and extends upto 1.5 km above mean sea level.
- ❖ A north-south **trough** runs from North interior Karnataka to south Tamil Nadu at 1.5 km above mean sea level.
- ❖ The **Cyclonic Circulation** over northeast Assam & neighbourhood extending upto 1.5 km above mean sea level persists.
- ❖ A fresh **Western Disturbance** is likely to affect Western Himalayan Region from the night of 24th March, 2025.
- ❖ The trough/wind discontinuity from south Chhattisgarh to South Interior Karnataka across Telangana and North Interior Karnataka at 1.5 km above mean sea level has become less marked.
- ❖ The **trough** in easterlies from Comorin area to south Tamil Nadu at 0.9 km above mean sea level has become less marked.

Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 29th March, 2025)



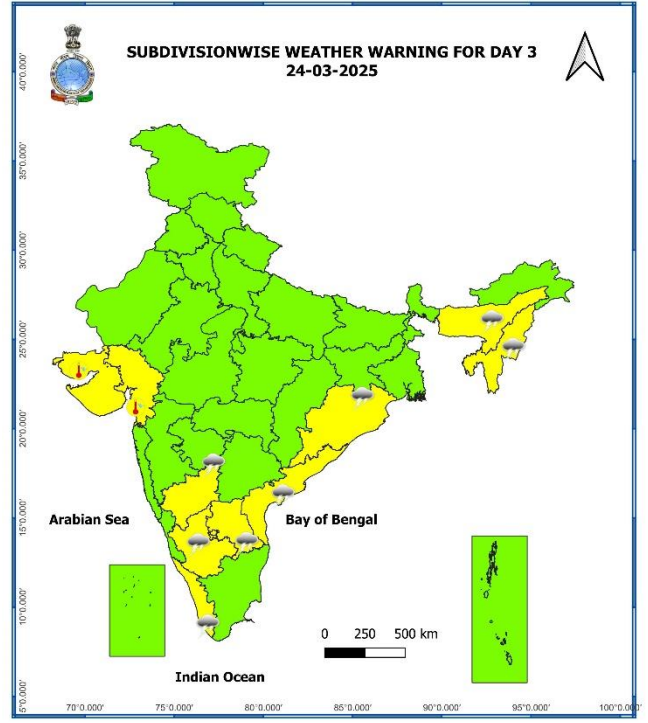
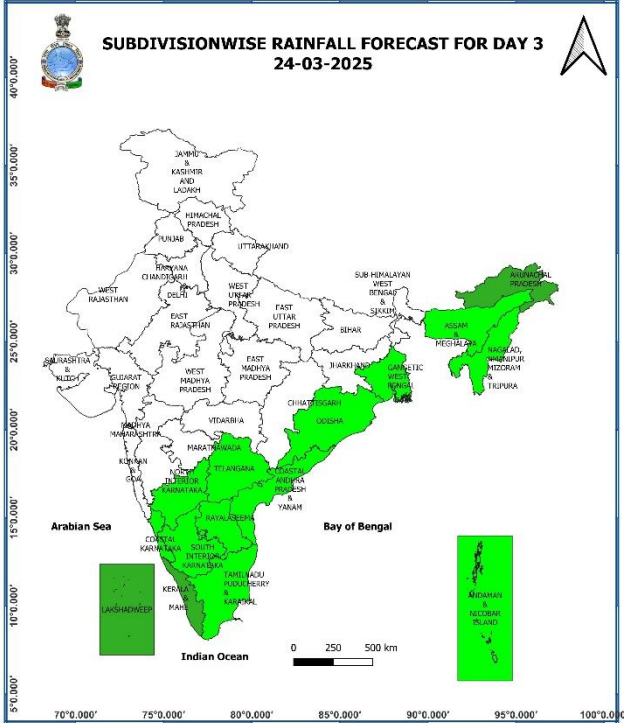
22nd March (Day 1):

- ❖ **Heavy rainfall** very likely at isolated places over Gangetic West Bengal, Jharkhand, Odisha, Arunachal Pradesh, south Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- ❖ **Thunderstorm accompanied with squally winds (speed reaching 50-60 kmph) Hailstorm & lightning** very likely at isolated places over Odisha, Gangetic West Bengal; **with gusty winds (speed reaching 40 - 50 kmph) Hailstorm & lightning** at isolated places over Sub-Himalayan West Bengal & Sikkim, Jharkhand, Bihar, Odisha, Chhattisgarh, South Interior Karnataka; **with gusty winds (speed reaching 40 - 50 kmph) lightning** at isolated places over East Madhya Pradesh, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana, North Interior Karnataka; **with gusty winds (speed reaching 30 - 40 kmph) & lightning** at isolated places over Marathwada; **with lightning** at isolated places over Uttarakhand, Vidarbha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Lakshadweep, Tamil Nadu, Puducherry & Karaikal, Coastal Karnataka.
- ❖ **Hot and Humid Conditions** very likely at isolated places over Gujarat state.
- ❖ **Squally Weather with wind Speed 35 Kmph To 45 Kmph** gusting to 55 Kmph is very likely to prevail along and off North Odisha Coast.



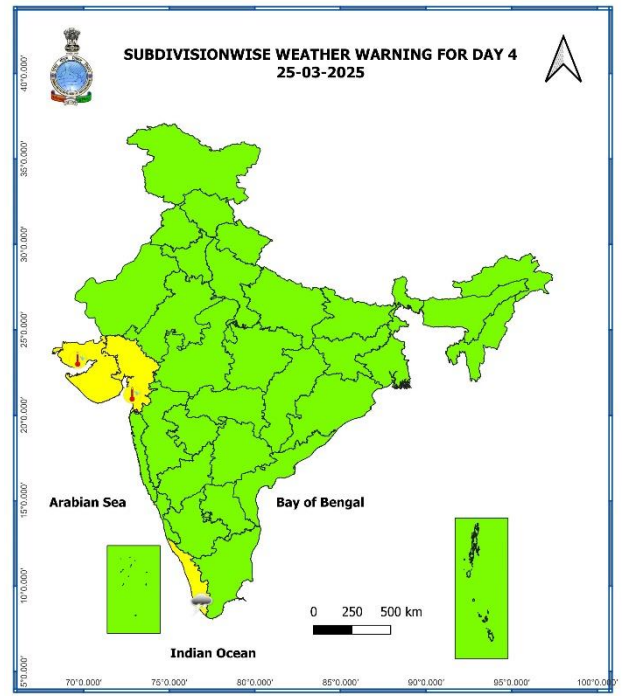
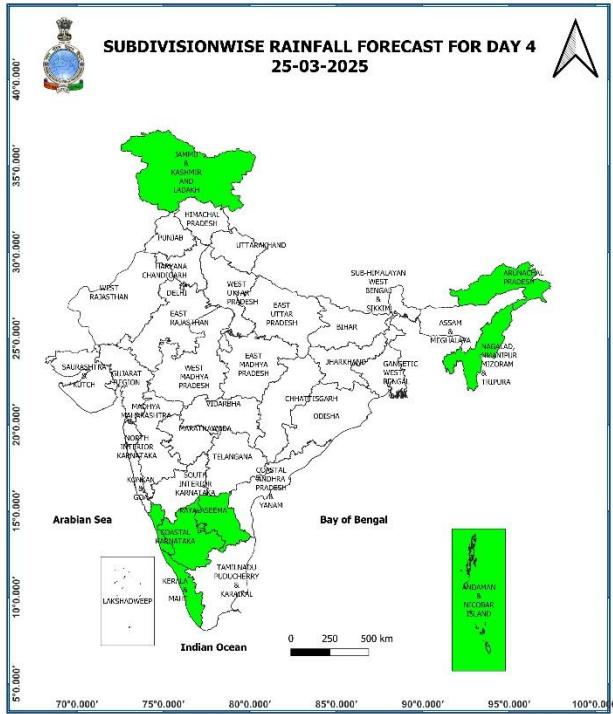
23rd March (Day 2):

- ❖ **Heavy rainfall** very likely at isolated places over Kerala & Mahe.
- ❖ **Thunderstorm accompanied with gusty winds (speed reaching 40 - 50 kmph) & lightning** very likely at isolated places over Chhattisgarh, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema, Interior Karnataka; **with gusty winds (speed reaching 30 - 40 kmph) & lightning** at isolated places over Telangana, Bihar, Jharkhand; **with lightning** at isolated places over West Bengal & Sikkim, Odisha, Arunachal Pradesh, Lakshadweep, Coastal Karnataka.
- ❖ **Hot and Humid Conditions** very likely at isolated places over Gujarat state.



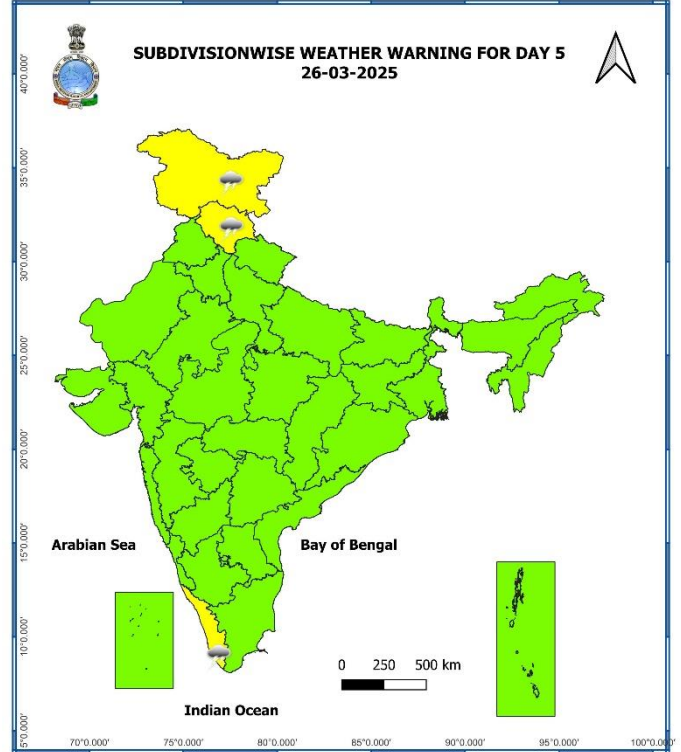
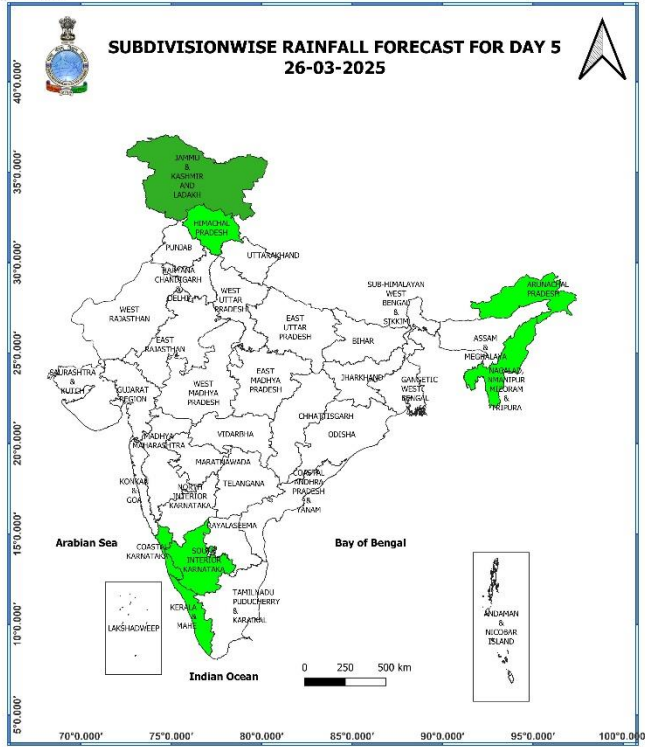
24th March (Day 3):

- ❖ **Thunderstorm accompanied with gusty winds (speed reaching 30 - 40 kmph) & lightning** very likely at isolated places over Rayalaseema, Telangana; **with lightning** at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Interior Karnataka, Odisha.
- ❖ **Hot and Humid Conditions** very likely at isolated places over Gujarat state.



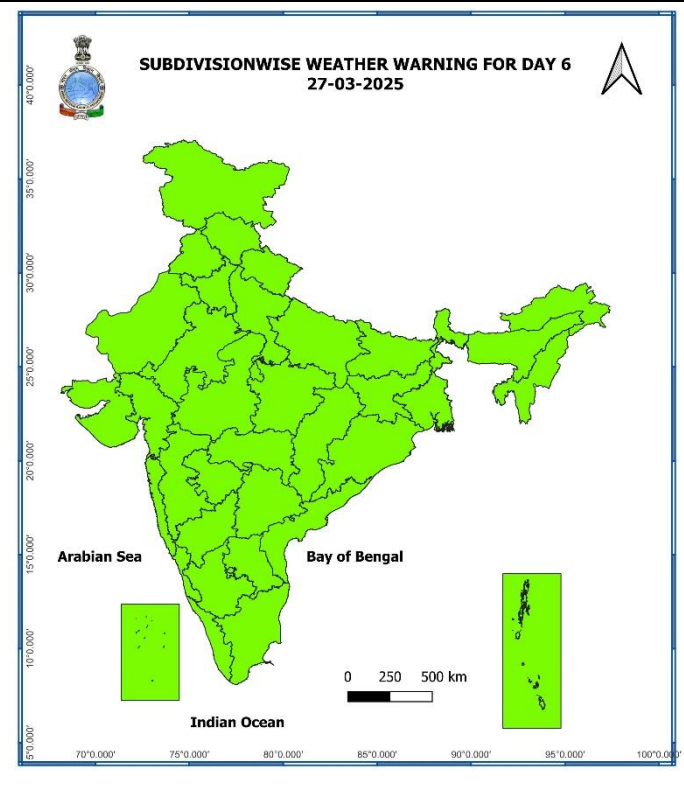
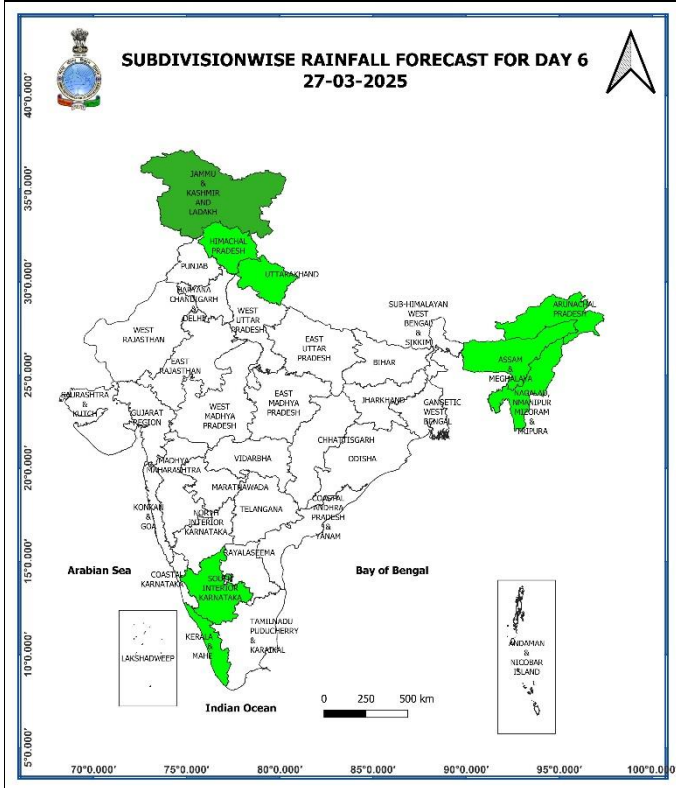
25th March (Day 4):

- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Kerala & Mahe.
- ❖ **Hot and Humid Conditions** likely at isolated places over Gujarat state.



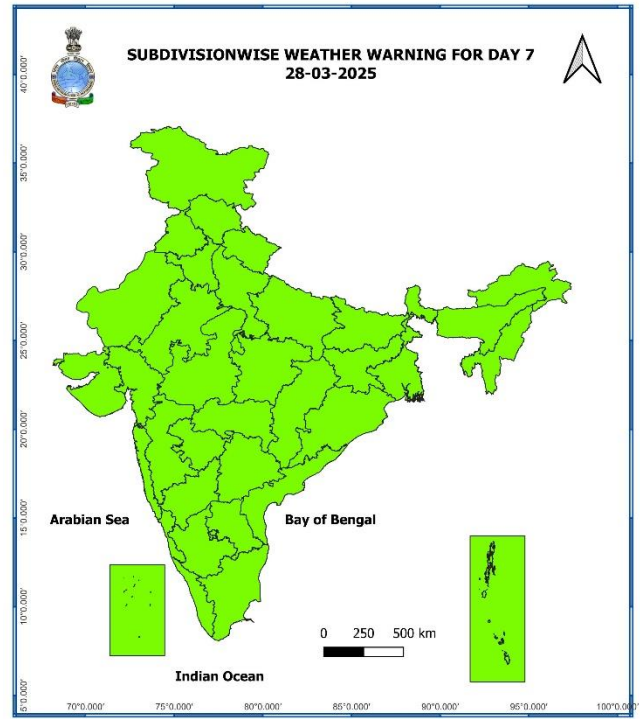
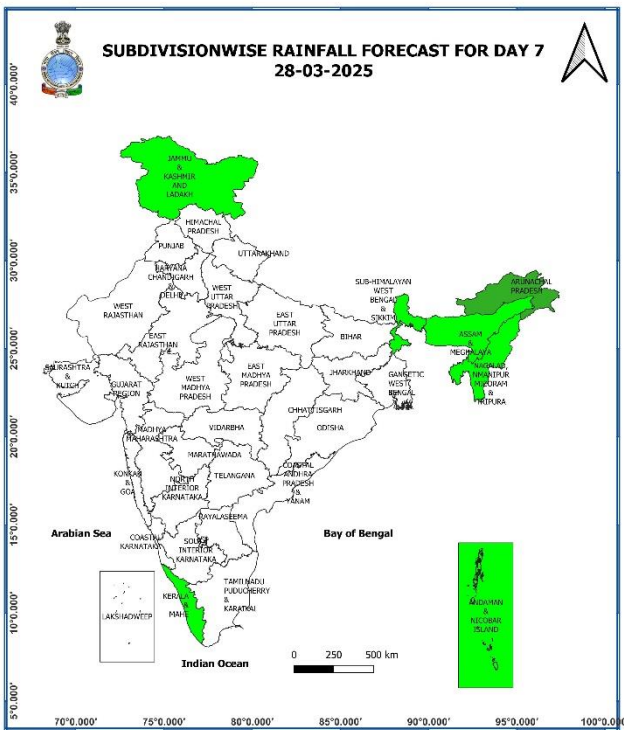
26th March (Day 5):

- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Kerala & Mahe.



27th March (Day 6):

❖ **No Weather Warning.**



28th March (Day 7):

❖ **No Weather Warning.**

Weather Outlook for subsequent 3 days (During 29th March-31st March, 2025)

❖ **Isolated to scattered rainfall** likely over Jammu & Kashmir, Northeast, East & adjoining Central 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

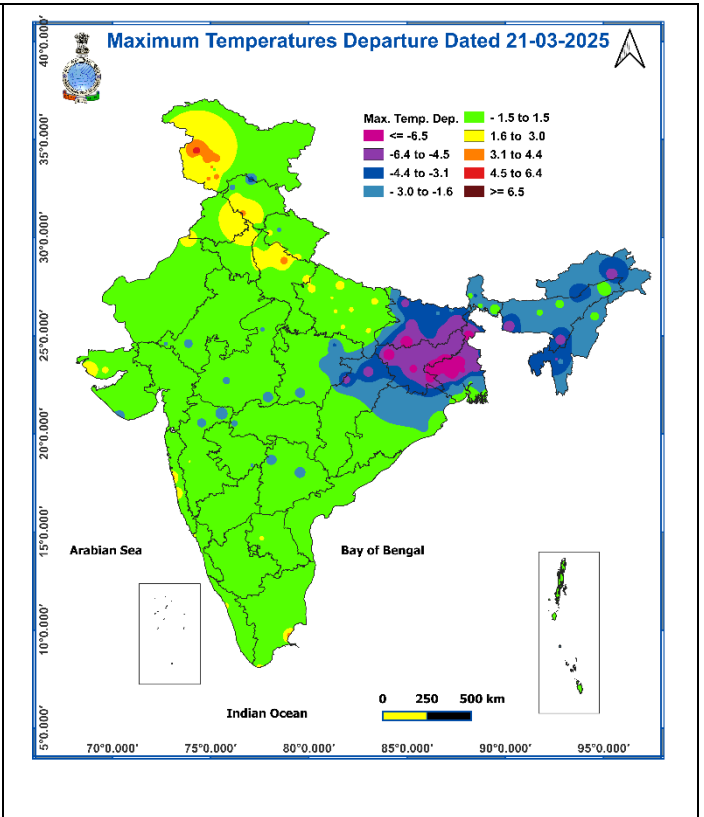
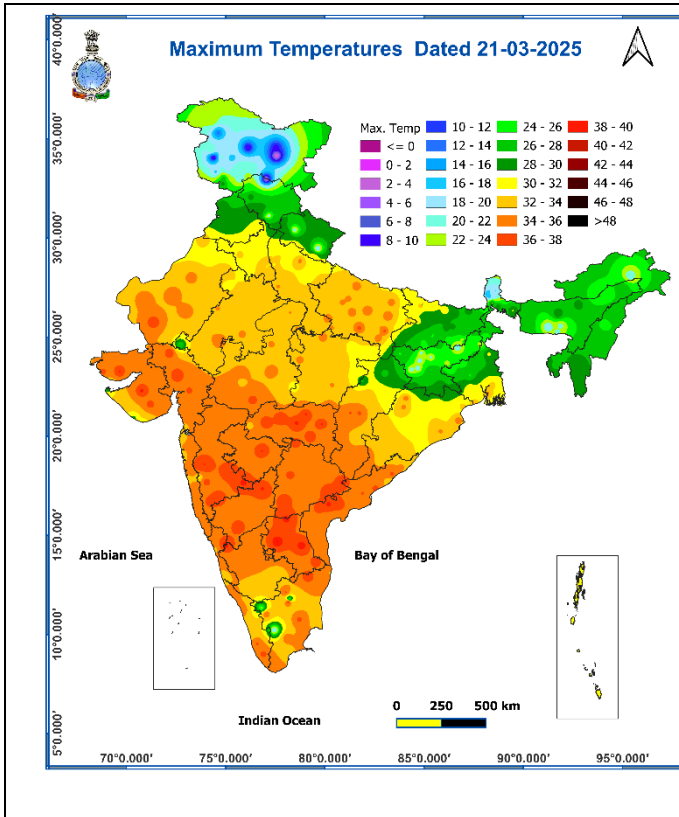
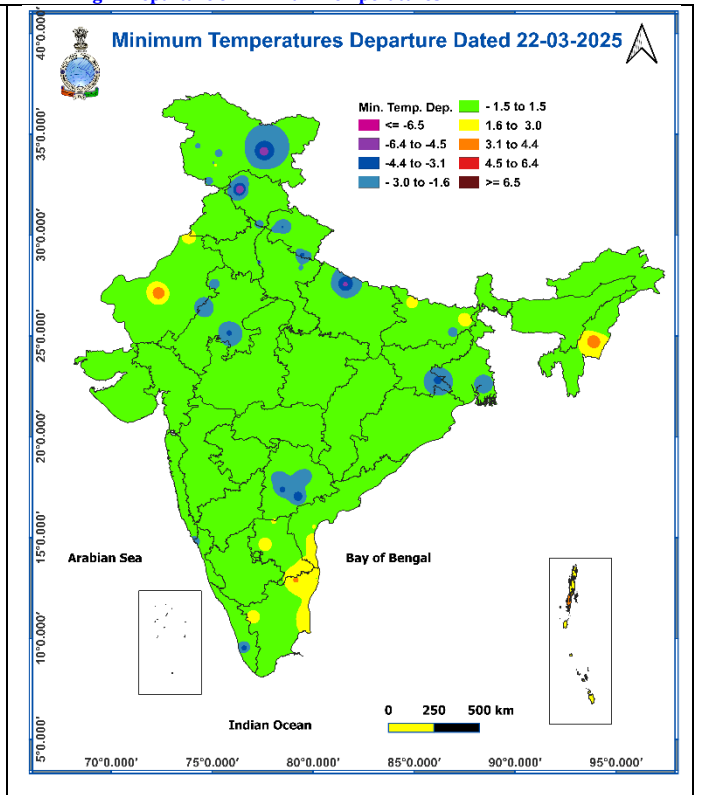
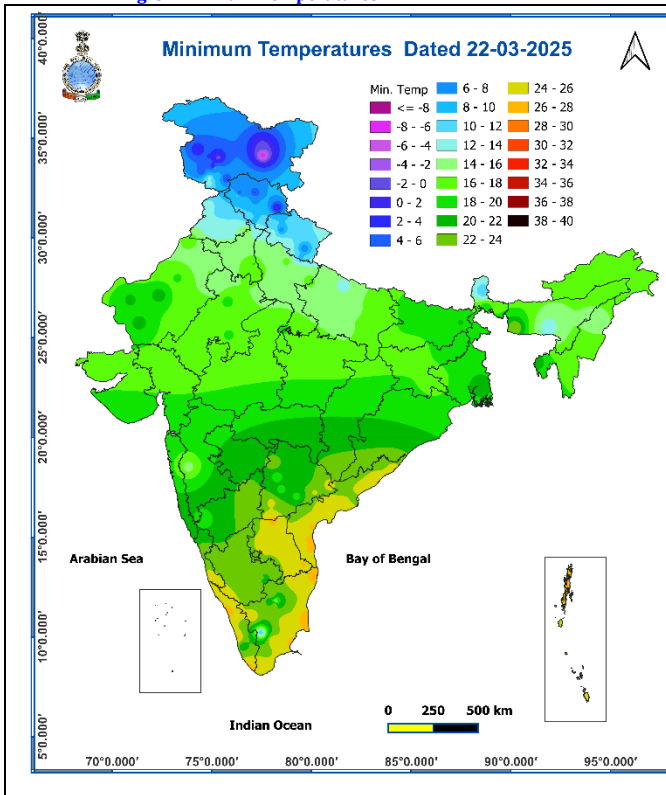


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures



Impact expected and action suggested due to thunderstorm accompanied with lightning/gusty winds & hailstorm over east India, Telangana on 22nd March 2025.

❖ **Impact expected:**

- ❖ Strong wind may damage plantation, horticulture and standing crops.
- ❖ 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.

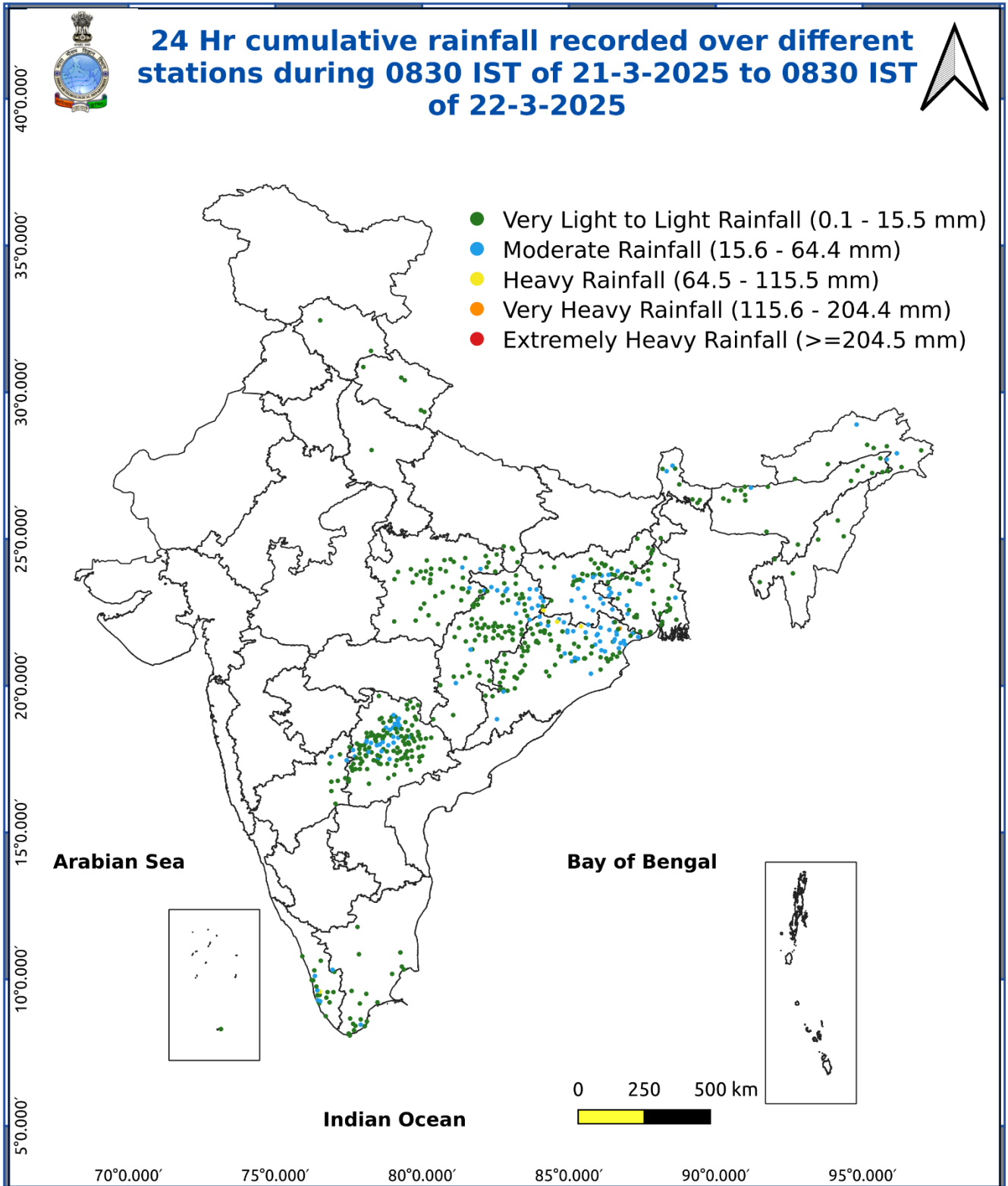
Agromet advisories for likely impact of Heavy Rainfall / Hailstorm

- In **West Bengal, Odisha, Jharkhand, Bihar, Chhattisgarh, South Interior Karnataka, Coastal Andhra Pradesh and Telangana**, keep 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 **Arunachal Pradesh, Gangetic West Bengal, Odisha, Jharkhand, Tamil Nadu and Kerala**, drain out excess water from standing crop and vegetable fields.
- Provide mechanical support to horticultural crops and staking to vegetables to avoid lodging.

Livestock

- 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.

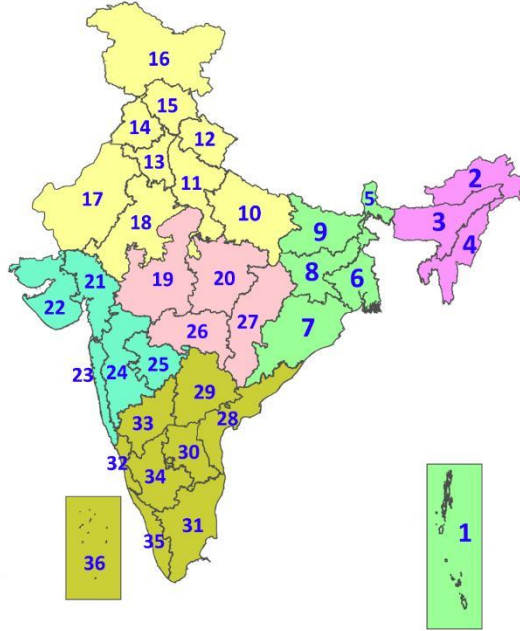
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



*** 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

COLOUR CODED WARNING

No Warning (No Action)

Watch (Be Aware)

Alert (Be Prepared To Take Action)

Warning (Take Action)



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

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 at least 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 Storm: Wind speed > 220 kmph (> 119 knots)