

Sunday, February 23, 2025
Time of Issue: 0800 hours IST
(MORNING)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

Weather Systems, Forecast and warning:

- ❖ A trough in westerlies runs from south Gangetic West Bengal to south Chhattisgarh across Odisha in the lower levels. Under the influence of this system;
 - ✓ **Isolated to Scattered** light/moderate rainfall accompanied with **thunderstorm, lightning with squall (speed 40-60 kmph)** very likely over Odisha on 23rd & 24th, Gangetic West Bengal on 23rd; **thunderstorm, lightning with gusty winds (speed 30-40 kmph)** very likely over Assam & Meghalaya and Jharkhand on 23rd February. Isolated to scattered light/moderate rainfall accompanied with **thunderstorm & lightning** very likely over Chhattisgarh, Sub-Himalayan West Bengal & Sikkim, Bihar, Arunachal Pradesh & Nagaland, Manipur, Mizoram & Tripura on 23rd; Assam & Meghalaya on 23rd & 24th.
 - ✓ **Hailstorm activity also likely at isolated places over Gangetic West Bengal on 23rd February.**
- ❖ Under the influence of an active easterly wave **Heavy rainfall** at isolated places likely over Andaman & Nicobar Islands on 25th & 26th February. **Isolated to Scattered** light/moderate rainfall accompanied with **thunderstorm, lightning** very likely over Andaman & Nicobar Islands during 24th-26th February.
- ❖ A **fresh Western Disturbance** is likely to affect Northwest India from the night of 24th February, 2025. Under its influence,
 - ✓ **Fairly widespread to widespread** light to moderate rainfall/snowfall accompanied with thunderstorm & lightning likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh & Uttarakhand on 25th & 26th February.
 - ✓ **Heavy rainfall/snowfall** at isolated places likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad during 25th-28th; Himachal Pradesh during 26th-28th; Uttarakhand on 27th & 28th February.
 - ✓ Isolated to scattered light to moderate rainfall likely over Punjab, Haryana, Chandigarh during 26th- 28th; over West Uttar Pradesh & Rajasthan on 27th & 28th and East Uttar Pradesh on 28th February.

Temperature Forecast:

Forecast of temperature:

Minimum Temperature:

- ❖ Gradual fall in minimum temperatures by 1-2°C likely over Northwest India during next 24 hours and gradual rise by 3-5°C thereafter.
- ❖ No significant change in minimum temperatures likely over Central India & Gujarat State during next 2 days and rise by 2-3°C thereafter.
- ❖ No significant change in minimum temperatures likely over rest parts of India during next 3-4 days.

Maximum temperature:

- ❖ No significant change in maximum temperatures likely over Western Himalayan region during next 48 hours and gradual fall by 4-5°C thereafter.
- ❖ Gradual rise in maximum temperatures by 2-4°C likely over plains of Northwest India during next 3 days and no significant change thereafter.
- ❖ No significant change in maximum temperatures likely over Central India & Gujarat State during next 48 hours and rise by 2-3°C thereafter.
- ❖ No significant change in maximum temperatures likely over rest parts of India during next 3-4 days.

Dense Fog Warnings:

- ❖ **Dense fog conditions** very likely to continue to prevail during night/early morning hours in isolated pockets of Sikkim till 24th February.

Main Weather Observations:

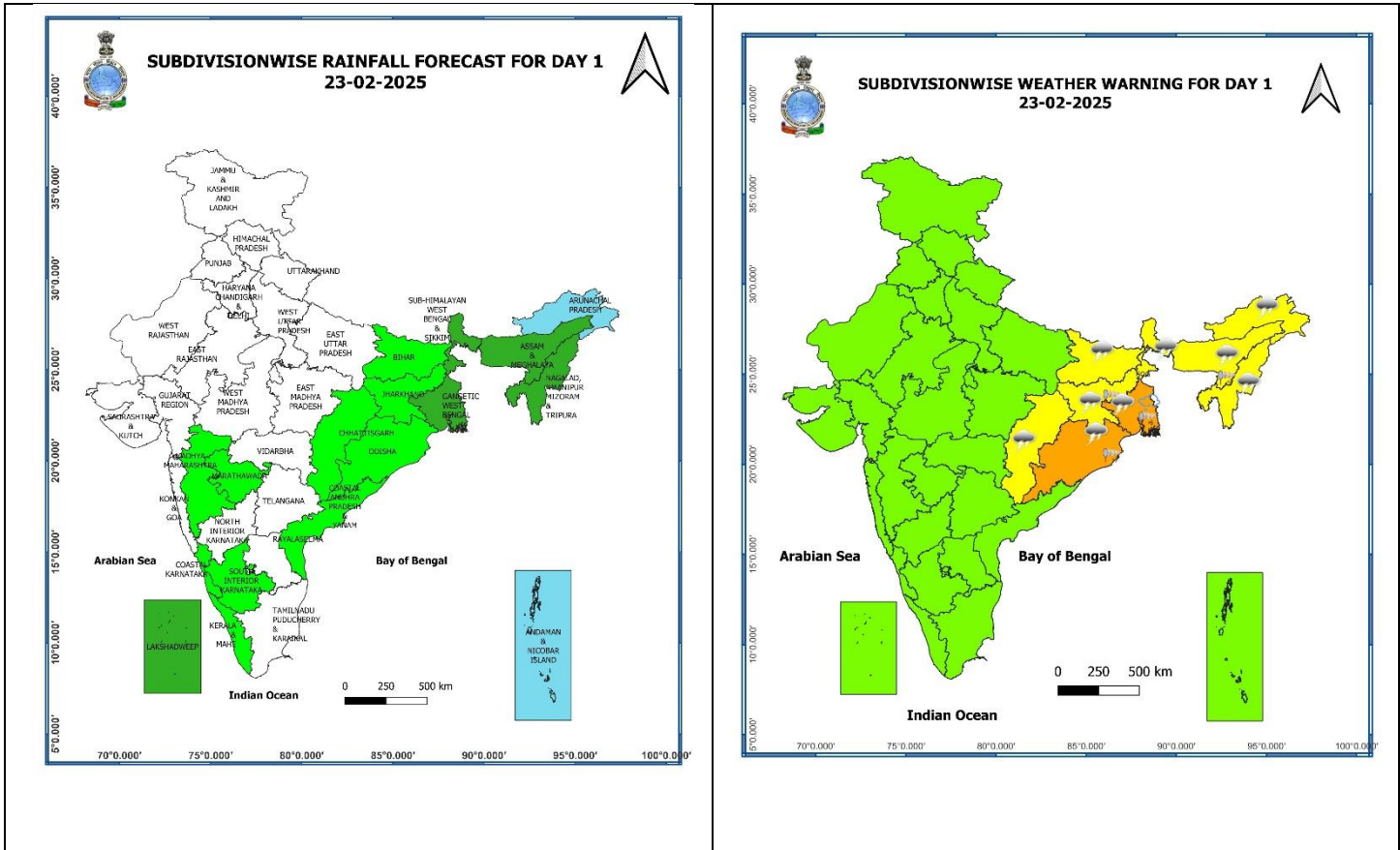
- ❖ **Rainfall distribution** (from 0830 hours IST to 1730 hours IST of yesterday): at a few places over Arunachal Pradesh and Gangetic West Bengal; at isolated places over Assam & Meghalaya, Odisha and Jharkhand.
- ❖ **Significant amount of rainfall** (from 0830 hours IST to 1730 hours IST of yesterday): (in cm):
Gangetic West Bengal: Berhampore & Panagarh – 1 each; **Odisha:** Angul-2;
- ❖ **Hailstorms reported** at isolated locations over Sub-Himalayan West Bengal & Sikkim and Odisha.
- ❖ **Minimum Temperature Departures (as on 22-02-2025):** Minimum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at a few places over East Madhya Pradesh, Coastal Karnataka; at isolated places over East Uttar Pradesh, Bihar, Odisha, Madhya Maharashtra, Gujarat Region, Assam & Meghalaya; **above normal (1.6°C to 3.0°C)** at few places over Gangetic West Bengal, Andaman & Nicobar Islands, Konkan & Goa, Jharkhand; at isolated places over Kerala & Mahe, Saurashtra & Kutch, Chhattisgarh, Telangana, Rayalaseema, Tamil Nadu, Puducherry & Karaikal, North Interior Karnataka, Punjab, West Uttar Pradesh. These were **below normal (-3.0°C to -1.6°C)** at isolated places over East Madhya Pradesh and near normal over rest parts of the country (Fig. 4). Yesterday, the **lowest minimum temperature of 8.7°C** was reported at **Ambala (Haryana)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 22-02-2025):** Maximum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at a few places over Konkan & Goa; at isolated places over Saurashtra & Kutch; **above normal (1.6°C to 3.0°C)** at many places over Madhya Maharashtra and Gujarat Region; at a few places over Bihar and Marathwada; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, East Uttar Pradesh, Jharkhand, Odisha, Coastal Andhra Pradesh & Yanam, Telangana, Coastal & north Interior Karnataka. These were **markedly below normal (-3.1°C to -5.0°C)** at isolated places over Arunachal Pradesh and Assam & Meghalaya **below normal (-3.0°C to -1.6°C)** at isolated places over Nagaland, Manipur, Mizoram & Tripura and Gangetic West Bengal and near normal over rest parts of the country (Fig. 2). Yesterday, the highest **maximum temperature of 38.4°C** was reported at **Ratnagiri (Konkan & Goa)** over the country.



Meteorological Analysis (Based on 0530 hours IST)

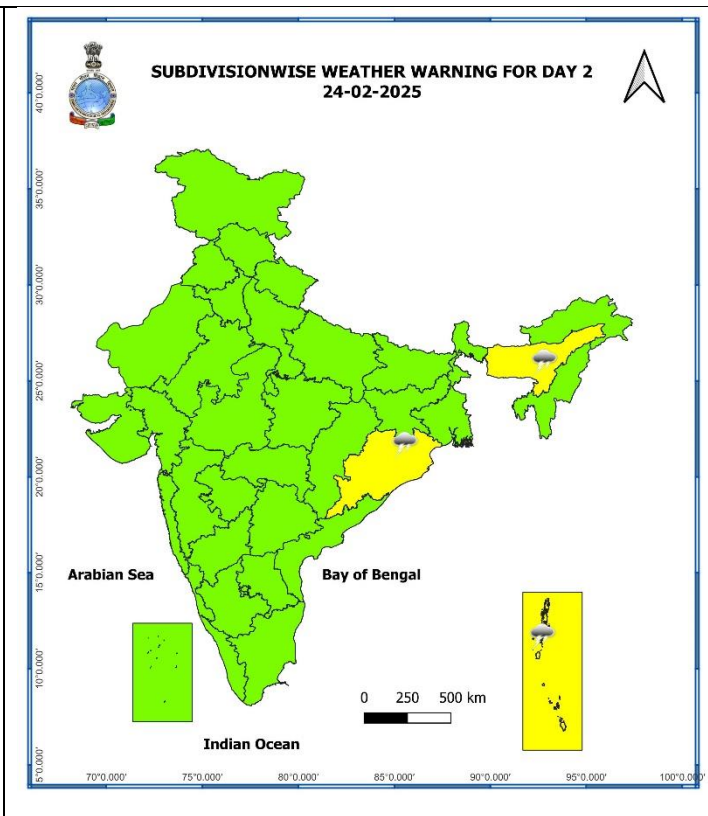
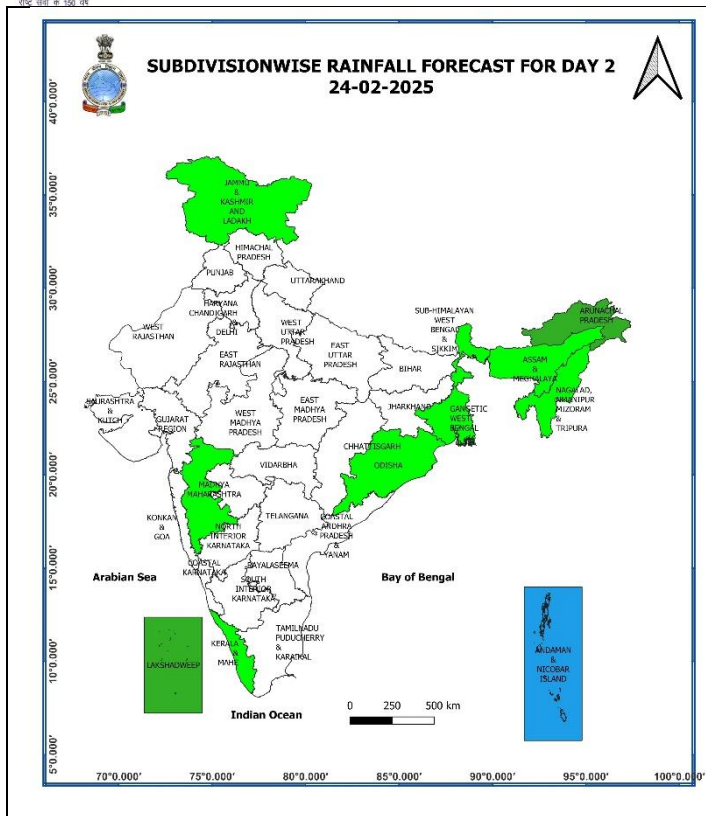
- ❖ The **cyclonic circulation** over northeast Pakistan & adjoining Jammu region at 1.5 km above mean sea level persists.
- ❖ The **trough in westerlies** from south Gangetic West Bengal to north Coastal Andhra Pradesh now runs from south Gangetic West Bengal to south Chhattisgarh across Odisha and at 0.9 km above mean sea level.
- ❖ The **cyclonic circulation** over northeast Assam and neighbourhood extending upto 1.5 km above mean sea level persists.
- ❖ A fresh **Western Disturbance** is likely to affect Northwest India from the night of 24th February, 2025.
- ❖ The **trough in easterlies** from north Kerala to central Madhya Maharashtra at 0.9 km above mean sea level has become less marked.

Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 02nd March, 2025)



23rd February (Day 1):

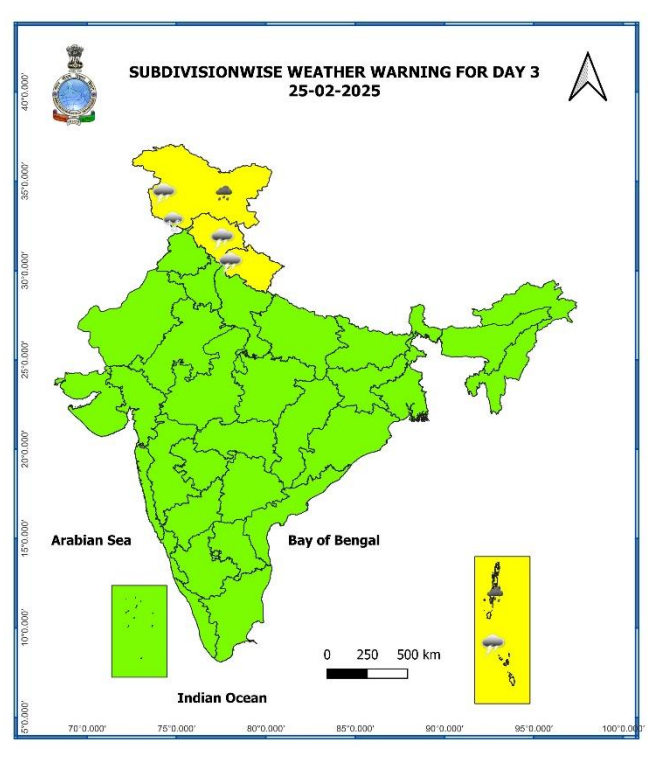
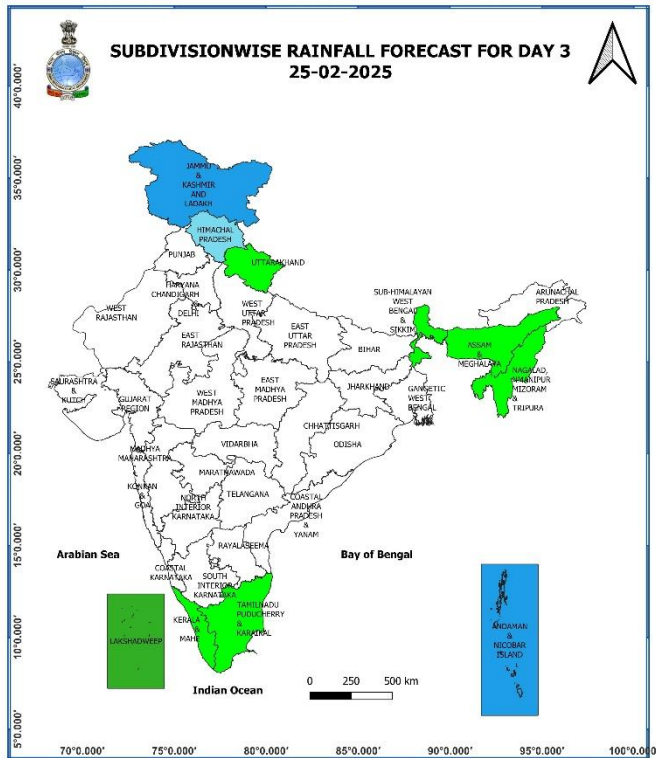
- ❖ **Thundersquall accompanied with gusty winds (40-50 kmph), hailstorm & lightning** at isolated places over Odisha, Gangetic West Bengal; **with gusty winds (30-40 kmph) & lightning** likely at isolated places over Jharkhand, Assam & Meghalaya; **with lightning** at isolated places over Chhattisgarh, Sub-Himalayan West Bengal & Sikkim, Bihar, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Dense fog conditions** very likely in isolated pockets of Sikkim.



24th February (Day 2):

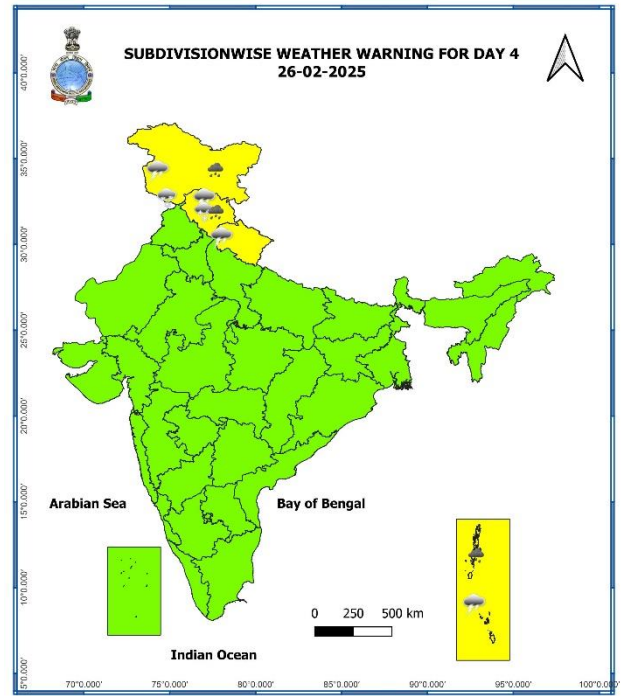
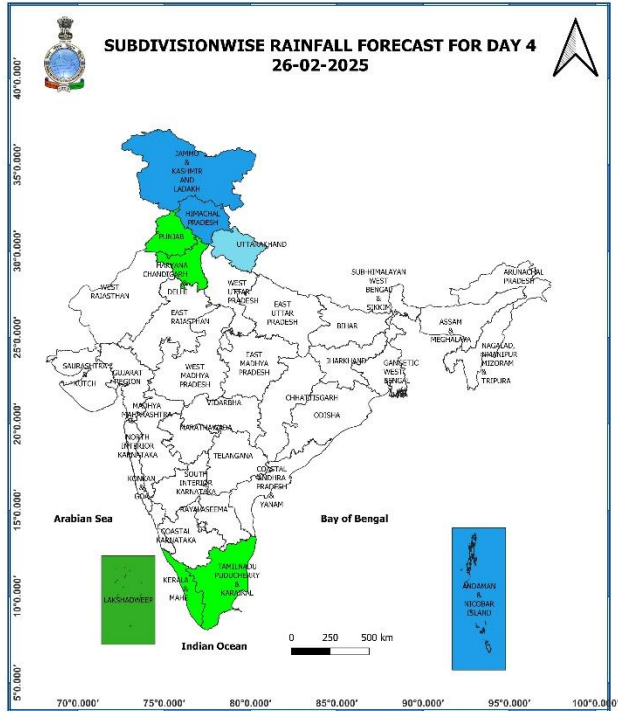
- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Andaman & Nicobar Islands, Odisha, Assam & Meghalaya.

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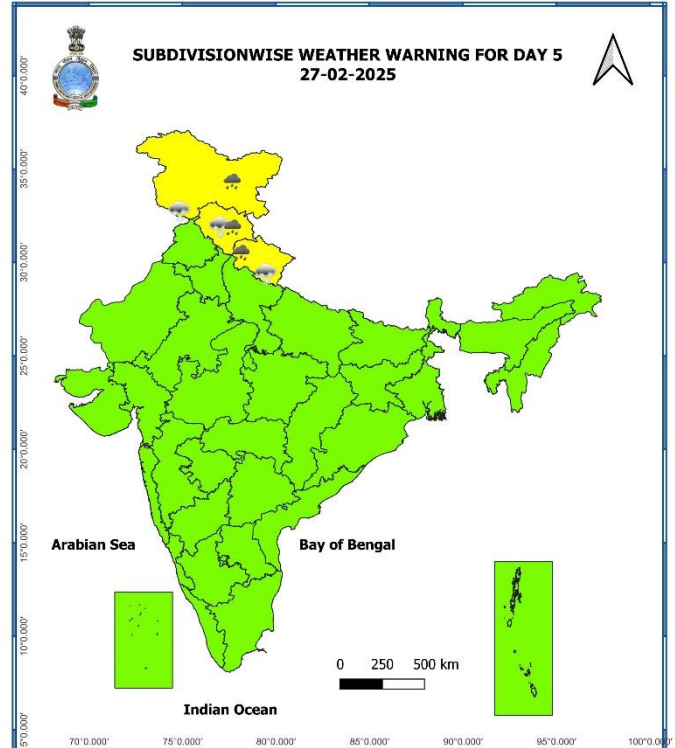
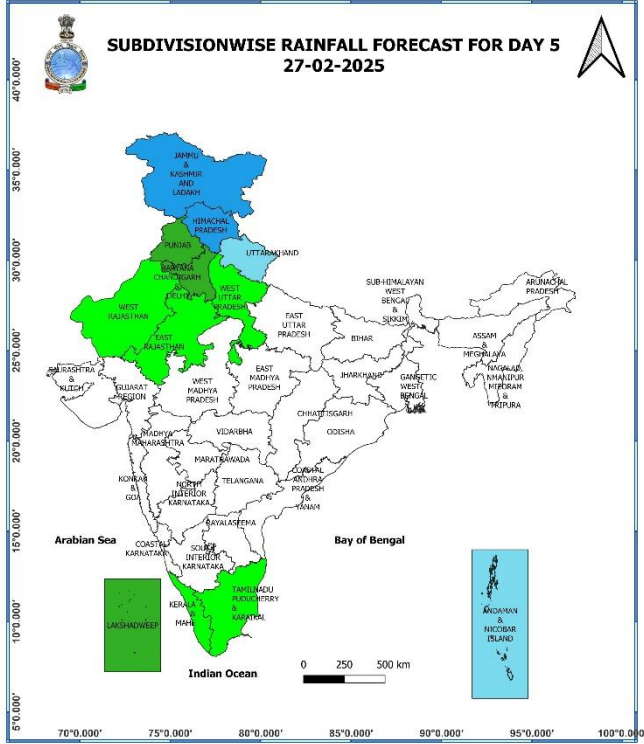
25th February (Day 3):

- ❖ **Heavy Rainfall/Snowfall (≥ 7 cm)** likely at isolated places of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and **Heavy Rainfall (≥ 7 cm)** likely at isolated places of Andaman & Nicobar Islands.
- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Assam, Meghalaya, Mizoram, Tripura, and Andaman & Nicobar Islands.



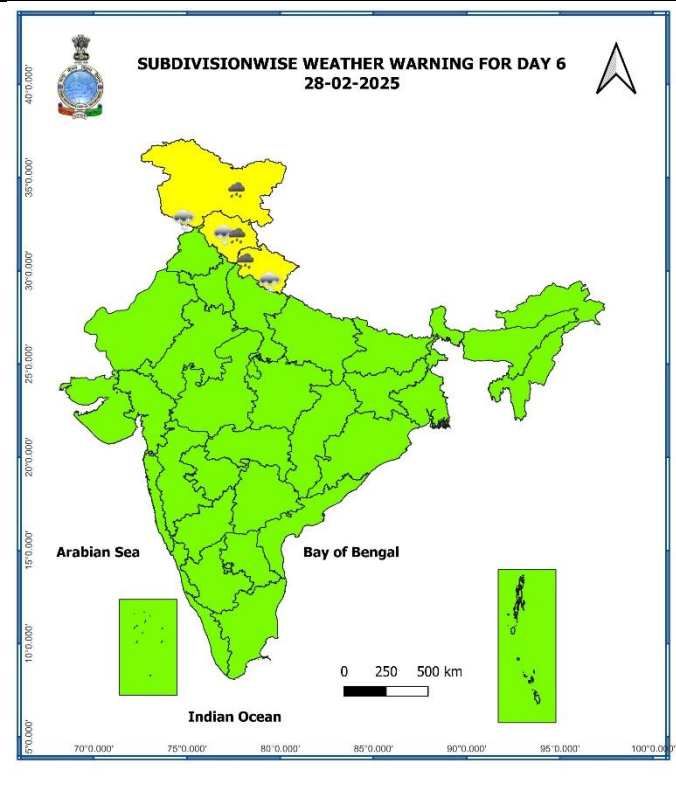
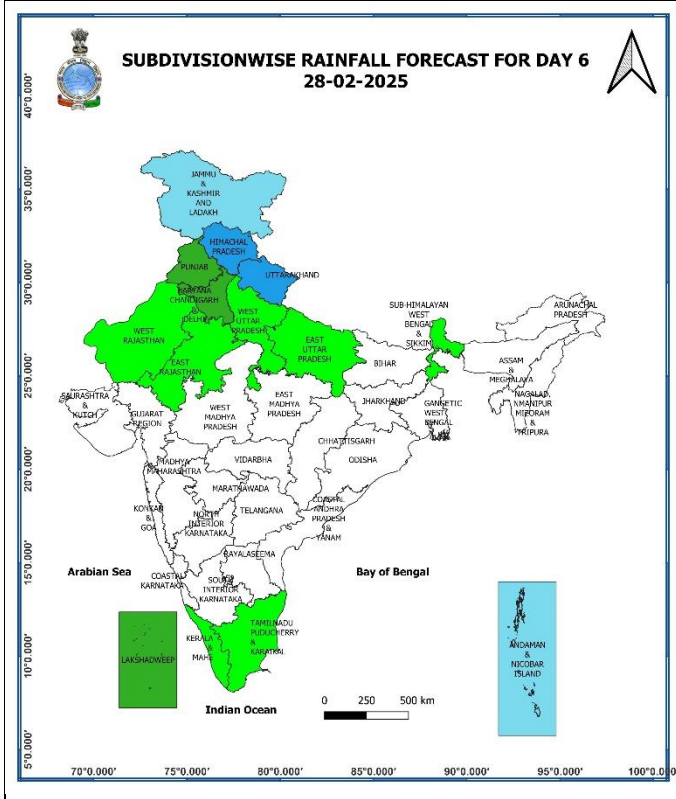
26th February (Day 4):

- ❖ **Heavy Rainfall/Snowfall (≥ 7 cm)** likely at isolated places of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and **Heavy Rainfall (≥ 7 cm)** likely at isolated places of Andaman & Nicobar Islands.
- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Andaman & Nicobar Islands.



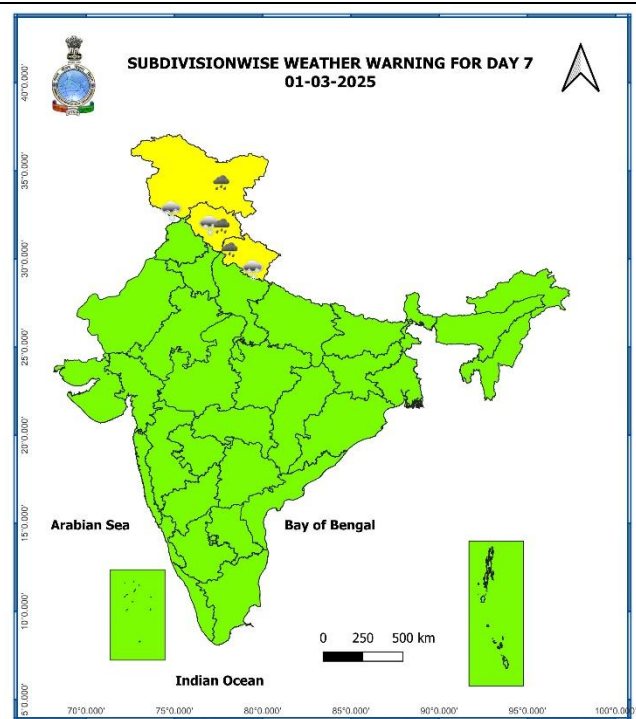
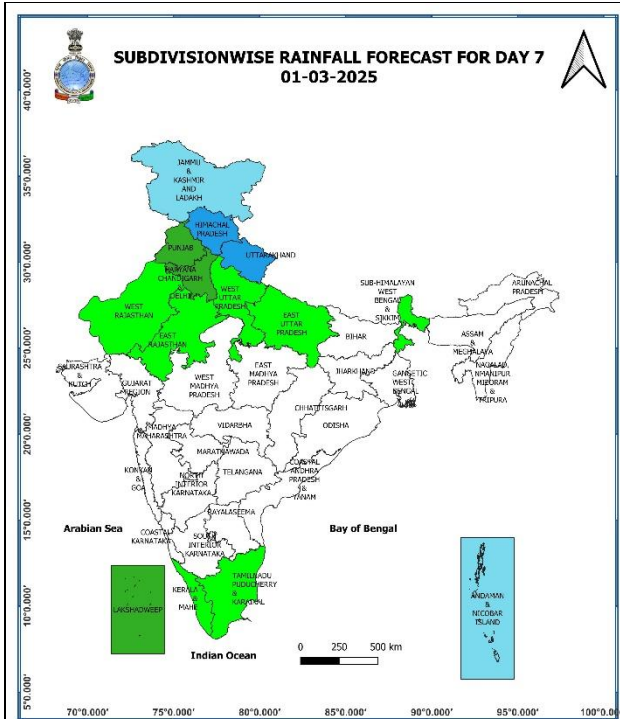
27th February (Day 5):

- ❖ Heavy Rainfall/Snowfall (≥ 7 cm) likely at isolated places of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand.



28th February (Day 6):

- ❖ **Heavy Rainfall/Snowfall (≥ 7 cm)** likely at isolated places of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand.



01st March (Day 7):

- ❖ **Heavy Rainfall/Snowfall (≥ 7 cm)** likely at isolated places of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand.

Weather Outlook for subsequent 3 days (During 02nd March- 04th March, 2025)

- ❖ **Scattered to fairly widespread rainfall/snowfall** likely over Western Himalayan region.
- ❖ **Isolated to scattered rainfall** likely over plains of Northwest India, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal and Andaman & Nicobar Islands.

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

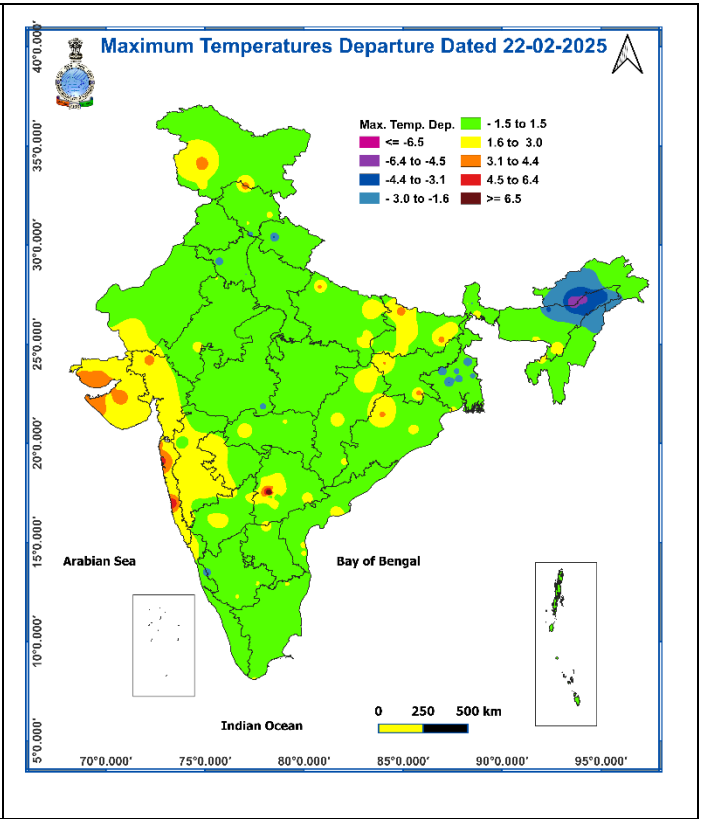
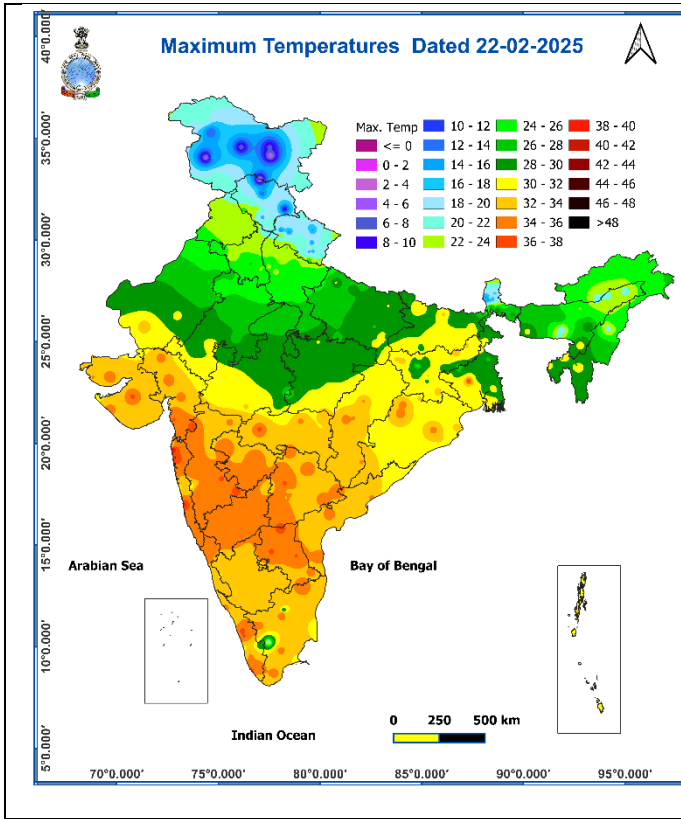
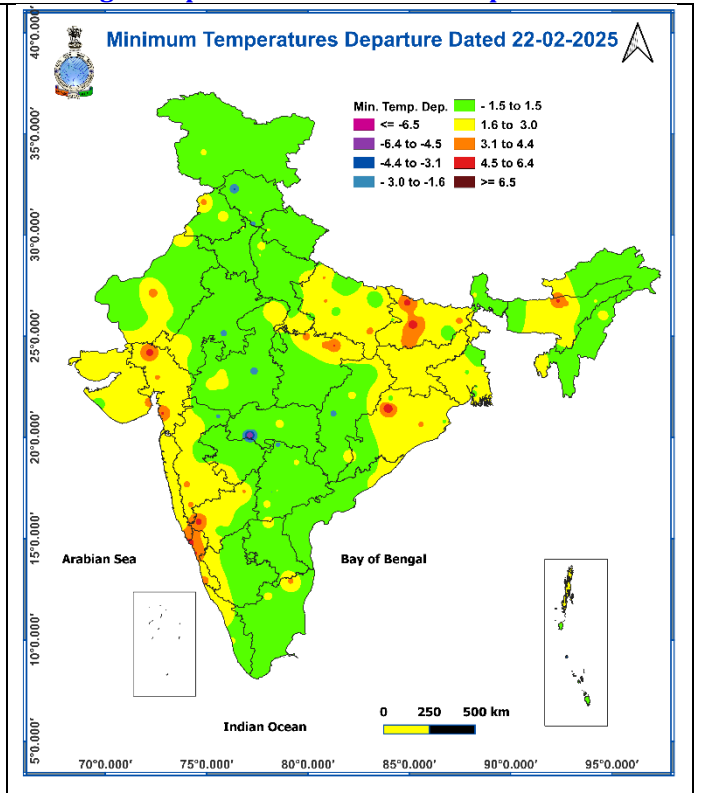
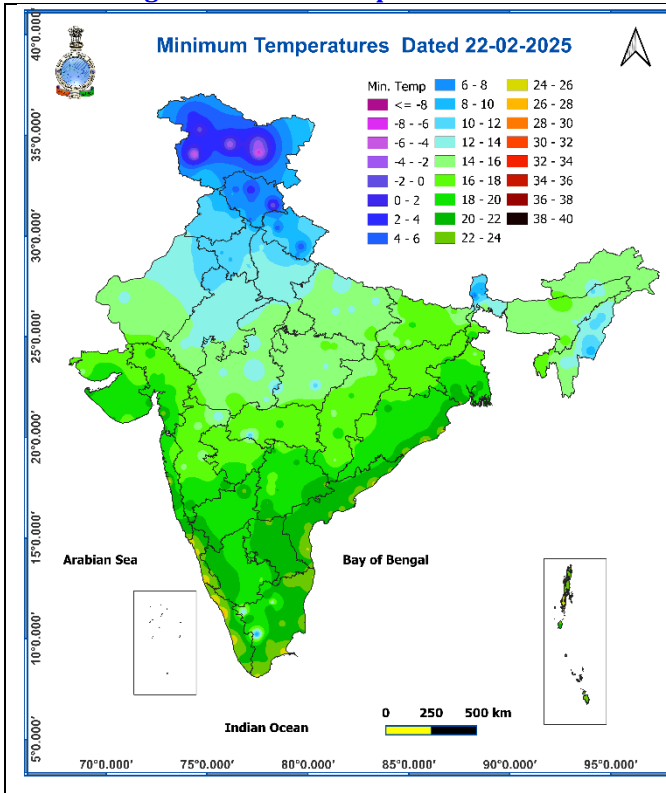


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures



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Agromet advisories for likely impact of Hailstorms

- Use hail nets or hail caps in fruit orchards and vegetable plants to protect them from mechanical damage in **Arunachal Pradesh, Gangetic West Bengal, Sikkim, Odisha, Jharkhand** and **Chhattisgarh**.
- Keep the harvested produce in safer places or cover the produce with tarpaulin sheets in the fields.
- Provide mechanical support to horticultural crops and staking to vegetables.

Livestock

- Keep the animals inside the shed during hailstorms and provide them with balanced feed.
- Store feed and fodder in a safe place to prevent spoilage.

Impact expected and action suggested due to isolated thunderstorm with lightning/gusty winds & Hailstorm

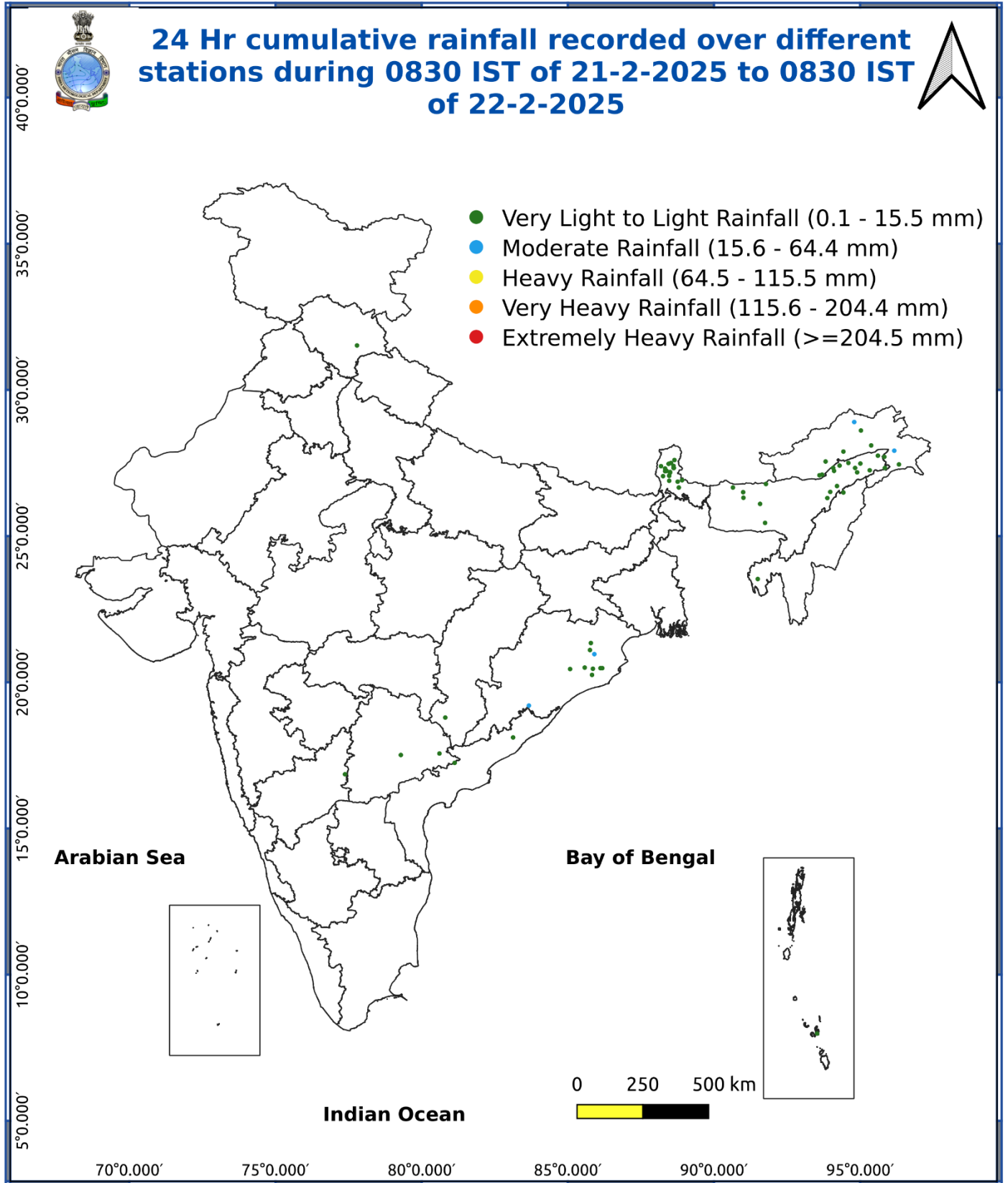
Impact expected:

- 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.

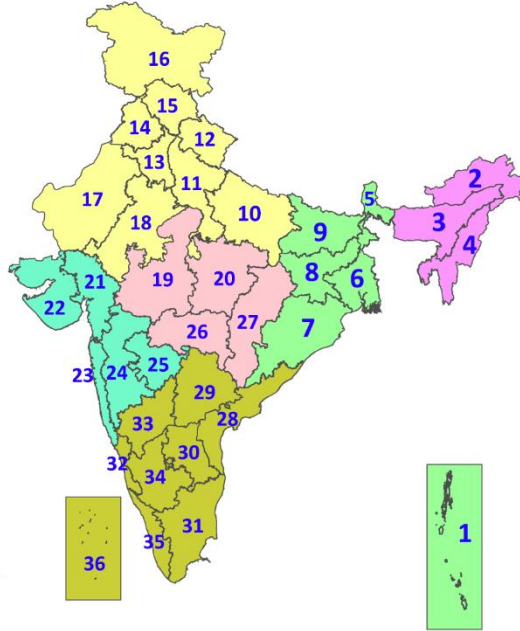
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



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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 *	<p>Heavy: 64.5 to 115.5 mm/cm *</p> <p>Very Heavy: 115.6 to 204.4 mm/cm*</p> <p>Extremely Heavy: > 204.4 mm/cm *</p>
Heat Wave	<p>When maximum temperature of a station reaches $\geq 40^\circ\text{C}$ for plains and $\geq 30^\circ\text{C}$ for hilly regions</p> <p>(a) Based on Departure from normal</p> <p>Heat Wave: Maximum Temperature Departure from normal 4.5°C to 6.4°C.</p> <p>Severe Heat Wave: Maximum Temperature Departure from normal $\geq 6.5^\circ\text{C}$</p> <p>(b). Based on Actual maximum temperature</p> <p>Heat Wave: When actual maximum temperature $\geq 45^\circ\text{C}$.</p> <p>Severe Heat Wave: When actual maximum temperature $\geq 47^\circ\text{C}$</p> <p>(c). Criteria for heat wave for coastal stations</p> <p>When maximum temperature departure is $>4.5^\circ\text{C}$ from normal. Heat Wave may be described provided maximum temperature $\geq 37^\circ\text{C}$</p>
Warm Night	<p>When maximum temperature remains 40°C</p> <p>Warm Night: When minimum temperature departure 4.5°C to 6.4°C.</p> <p>Severe Warm Night: When minimum temperature departure $>6.4^\circ\text{C}$.</p>
Cold Wave	<p>When minimum temperature of a station $\leq 10^\circ\text{C}$ for plains and $\leq 0^\circ\text{C}$ for hilly regions.</p> <p>(a). Based on departure</p> <p>Cold Wave: Minimum Temperature Departure from normal -4.5°C to -6.4°C.</p> <p>Severe Cold Wave: Minimum Temperature Departure from normal $\leq -6.5^\circ\text{C}$</p> <p>(b) Based on actual Minimum Temperature (for Plains only)</p> <p>Cold Wave : When Minimum Temperature is $\leq 4.0^\circ\text{C}$</p> <p>Severe Cold Wave: When Minimum Temperature is $\leq 2.0^\circ\text{C}$</p> <p>(c) For Coastal Stations</p> <p>When Minimum Temperature departure is $\leq -4.5^\circ\text{C}$ & actual Minimum Temperature is $\leq 15^\circ\text{C}$</p>
Cold Day	<p>When minimum temperature of a station $\leq 10^\circ\text{C}$ for plains and $\leq 0^\circ\text{C}$ for hilly regions</p> <p>Based on departure</p> <p>Cold Day: Maximum Temperature Departure from normal -4.5°C to -6.4°C.</p> <p>Severe Cold Day: Maximum Temperature Departure from normal $\leq -6.5^\circ\text{C}$</p>
Fog	<p>Phenomenon of small droplets suspended in air and the horizontal visibility $< 1\text{km}$</p> <p>Moderate Fog: When the visibility between 500-200 metres</p> <p>Dense Fog: when the visibility between 50- 200 metres</p> <p>Very Dense Fog: when the visibility < 50 metres</p>
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)