

Saturday, February 15, 2025
Time of Issue: 1345 hours IST
(MID-DAY)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

Realised weather during past 24 hours till 0830 hours IST of today (Annexure I)

Temperature:

- ❖ During Past 24 hours, Day temperatures have fallen by 1-2°C at many places over East India, Peninsular India, Saurashtra & Kutch; It has increased by 1-3°C at many places over Northwest India and Madhya Pradesh.
- ❖ Day temperatures continued to be **markedly above normal (5.1°C or more)** at isolated places over West Rajasthan; **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Punjab and East Rajasthan; **above normal (1.6°C to 3.0°C)** at a few places over Coastal Karnataka; at isolated places over Western Himalayan Region, Haryana-Chandigarh-Delhi, Konkan & Goa, Saurashtra & Kutch and Kerala & Mahe.
- ❖ During Past 24 hours, Night temperatures has raised by 3-6°C over many parts of Rajasthan and East Madhya Pradesh; by 1-3°C over many places in remaining parts of Northwest India, Bihar. It was fallen by 1-3°C at many places over Gangetic West Bengal, Odisha, Maharashtra, Telangana.
- ❖ Night temperatures were **markedly above normal (5.1°C or more)** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan Muzaffarabad, Himachal Pradesh, Rajasthan and Saurashtra & Kutch; **appreciably above normal (3.1°C to 5.0°C)** at a few places over Punjab, Uttarakhand, Konkan & Goa and Gujarat Region; at isolated places over East Madhya Pradesh. Coastal Andhra Pradesh & Yanam and Kerala & Mahe; **above normal (1.6°C to 3.0°C)** at most places over North Interior Karnataka; at many places over Haryana-Chandigarh-Delhi, West Uttar Pradesh, Central India, East India, Peninsular India; at isolated places over West Uttar Pradesh
- ❖ Further detailed temperature observations during past 24 hours till 0830 hours IST of today are provided in

Rainfall

- ❖ Light to moderate **Rainfall/Snowfall** at some places over Arunachal Pradesh; Light to moderate **Rainfall** at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Sub-Himalayan West Bengal & Sikkim and Andaman & Nicobar Islands.

ii. Weather Systems, Forecast and warning:

- ❖ The cyclonic circulation over Nagaland and neighbourhood at 1.5 km above mean sea level. Under its influence,
 - ✓ Scattered to Fairly widespread light to moderate rainfall/snowfall activity likely over Arunachal Pradesh during 15th-21st February with thunderstorm & lightning activity on 15th, 16th & 19th and over Assam & Meghalaya on 19th February.
 - ✓ Isolated to scattered light rainfall activity likely over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Sub-Himalayan West Bengal & Sikkim during next 7 days.
- ❖ A Western Disturbance as a trough in middle tropospheric westerlies with its axis at 5.8 km above mean sea level runs roughly along Long. 67°E to the north of Lat. 34°N with an Induced cyclonic circulation over Northwest Rajasthan & adjoining area of South Punjab and Pakistan in lower tropospheric levels. Under its influence,
 - ✓ Isolated to scattered light rainfall/snowfall activity likely over Himachal Pradesh. Isolated light rainfall activity likely over Punjab and Haryana on 15th February.
- ❖ A fresh **Western Disturbance** is likely to affect Western Himalayan Region from 17th February, 2025. Under its influence,
 - ✓ Isolated to scattered light rainfall/snowfall activity likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad & Himachal Pradesh during 17th-21st; Uttarakhand on 19th & 20th. Isolated light rainfall activity likely over Rajasthan during 17th-19th; Punjab, Haryana & West Uttar Pradesh on 19th & 20th February.

Temperature, Cold wave and Fog Forecast:

Forecast of temperature:

Minimum Temperature:

- ❖ Gradual fall in minimum temperatures by 2-3°C likely over Northwest India next 2 days and gradual rise by 2-3°C thereafter.
- ❖ Gradual rise in minimum temperature by 2-3°C likely over Uttar Pradesh & Central India during next 4 days.
- ❖ No significant change in minimum temperature likely over East India during next 24 hours and gradual rise by 2-3°C thereafter.
- ❖ Rise in minimum temperature by 2-3°C likely over West India during next 4-5 days.

Maximum temperature:

- ❖ Gradual fall in maximum temperatures by 2-3°C likely over Northwest India next 24 hours and gradual rise by 2-3°C thereafter.
- ❖ Gradual rise in maximum temperature by 2-3°C likely over Uttar Pradesh & Chhattisgarh during next 4 days.
- ❖ No significant change in maximum temperature likely over East India during next 24 hours and gradual rise by 2-3°C thereafter.
- ❖ Rise in maximum temperature by 2-3°C likely over West India during next 4-5 days.
- ❖ No significant change in maximum temperature likely over Telangana, Interior Karnataka, Rayalaseema during next 2 days and gradual rise by 2-3°C thereafter.

Dense Fog Warnings:

Dense fog conditions very likely to continue to prevail during early morning hours in isolated pockets of Odisha till 16th and over Sub-Himalayan West Bengal & Sikkim till 17th February.

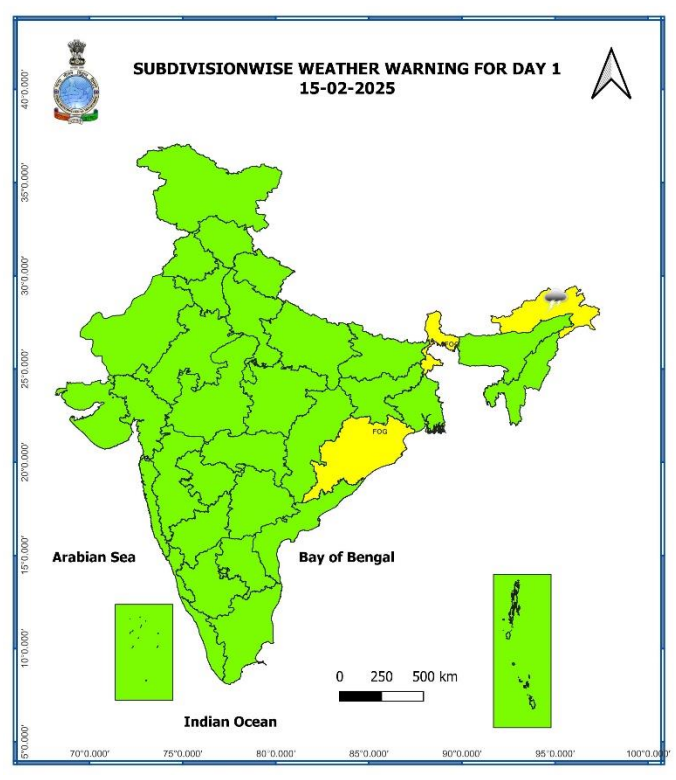
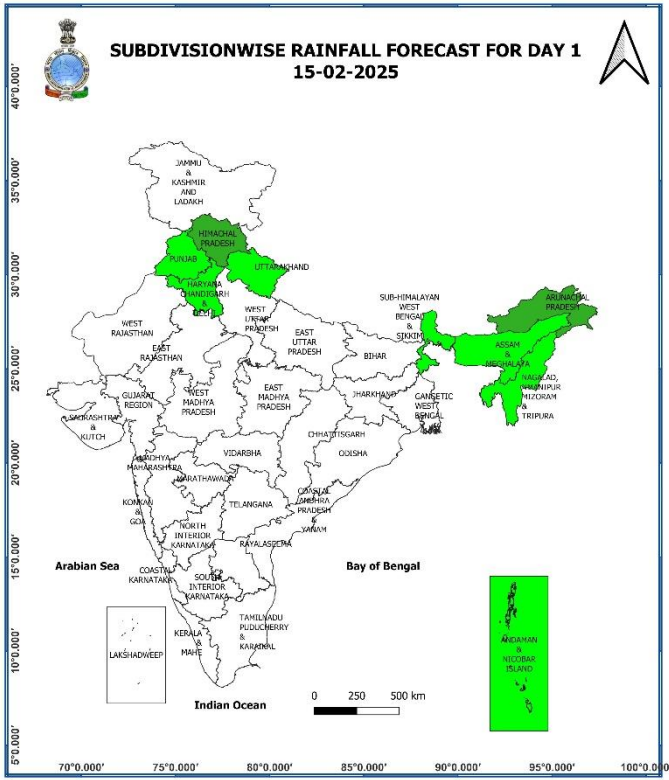
Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST of yesterday to 0830 hours IST of today): **at isolated places** over Arunachal Pradesh, Assam & Meghalaya and Sub-Himalayan West Bengal & Sikkim.
- ❖ **Significant amount of rainfall** (from 0830 hours IST of yesterday to 0830 hours IST of today) (in cm): **Arunachal Pradesh:** Tawang Chamgbu Kvk Aws (dist Tawang) 4, Tawang_ Aws (dist Tawang) 3, Mukto_arg (dist Tawang) 3, Jung_arg (dist Tawang) 1; **Assam & Meghalaya:** Jia Bharali N T Xing (dist Shonitpur) 1; **Sub-Himalayan West Bengal & Sikkim:** Gangtok (dist Gangtok) 1, Kabi (dist Mangan) 1, Yuksom (dist Gyalshing) 1, Tadong (dist Gangtok) 1.
- ❖ **Minimum Temperature Departures (as on 15-02-2025):** Minimum temperatures are **markedly above normal (5.1°C or more)** at isolated places over West Rajasthan; **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Punjab and East Rajasthan; **above normal (1.6°C to 3.0°C)** at a few places over Coastal Karnataka; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Haryana-Chandigarh-Delhi, Konkan & Goa, Saurashtra & Kutch and Kerala & Mahe. These are **appreciably below normal (-3.1°C to -5.0°C)** at isolated places over Telangana; **below normal (-1.6°C to -3.0°C)** at many places over Gangetic West Bengal and Jharkhand; at a few places over Chhattisgarh; at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Bihar, Uttar Pradesh, Odisha, Vidarbha, Marathwada and Tamil Nadu, Puducherry & Karaikal and near normal over rest parts of the country (**Fig. 4**). Today, the **lowest minimum temperature** of 7.7°C is reported at **Ambikapur (Chhattisgarh)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 14-02-2025):** Maximum temperatures were **markedly above normal (5.1°C or more)** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Rajasthan and Saurashtra & Kutch; **appreciably above normal (3.1°C to 5.0°C)** at a few places over Punjab, Uttarakhand, Konkan & Goa and Gujarat Region; at isolated places over East Madhya Pradesh. Coastal Andhra Pradesh & Yanam and Kerala & Mahe; **above normal (1.6°C to 3.0°C)** at most places over North Interior Karnataka; at many places over Haryana-Chandigarh-Delhi, West Uttar Pradesh, East Madhya Pradesh, Chhattisgarh, Odisha, Vidarbha, Madhya Maharashtra, Marathwada, Telangana, Rayalaseema, South Interior Karnataka and Tamil Nadu, Puducherry & Karaikal and Tamil Nadu, Puducherry & Karaikal; at isolated places over West Uttar Pradesh, Gangetic West Bengal, Jharkhand and Coastal Karnataka. These were **below normal (-1.6°C to -3.0°C)** at many places over Arunachal Pradesh and at isolated places over Assam & Meghalaya, Sub-Himalayan West Bengal & Sikkim and Nagaland, Manipur, Mizoram & Tripura and near normal over rest parts of the country (**Fig. 2**). Yesterday, the highest **maximum temperature** of 38.0°C was reported at **Palakkad (Kerala)** over the country.

Meteorological Analysis (Based on 0830 hours IST)

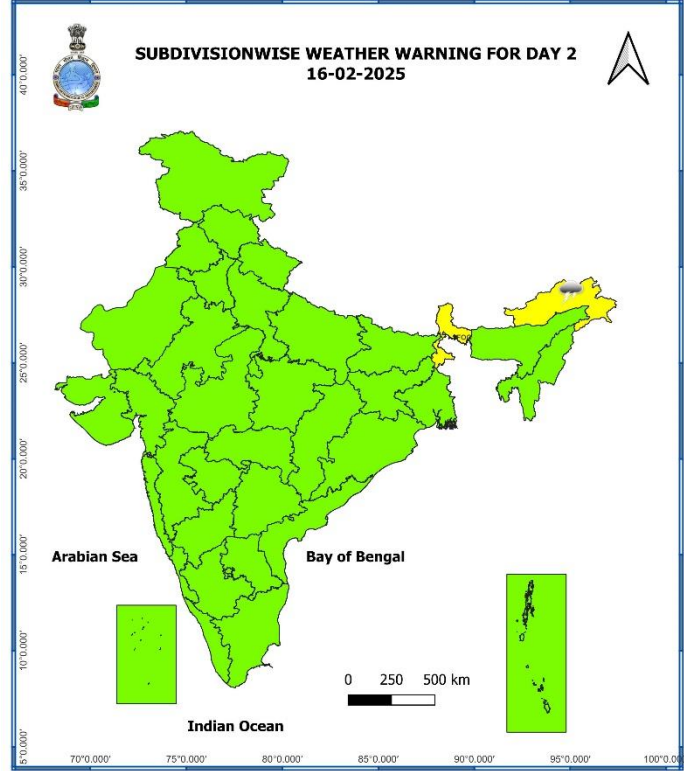
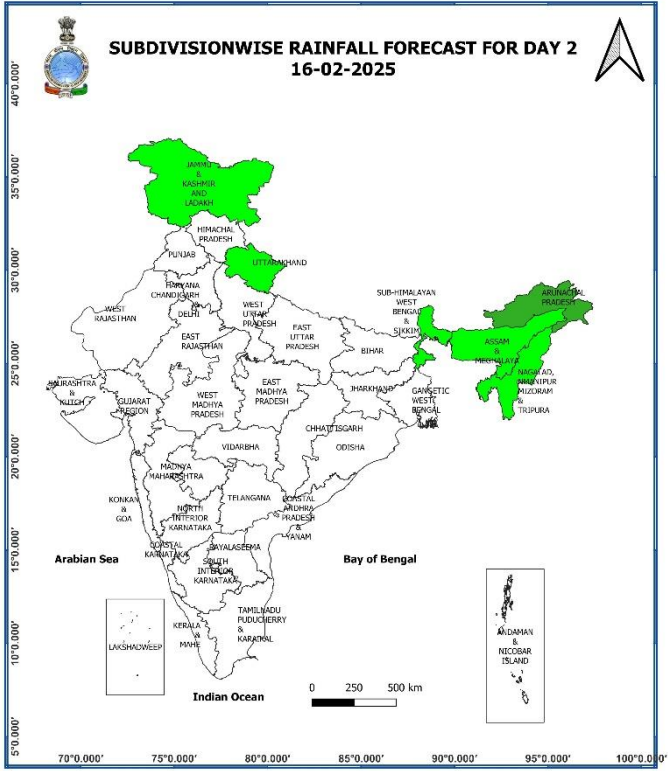
- ❖ A **Western Disturbance** as a trough in middle tropospheric westerlies with its axis at 5.8 km above mean sea level runs roughly along Long. 67°E to the north of Lat. 34°N.
- ❖ An **Induced cyclonic circulation** lies over Northwest Rajasthan & adjoining area of South Punjab and Pakistan and extends upto 1.5 km above mean sea level.
- ❖ Subtropical **westerly Jet Stream** with core winds of the order of 110-120 knots at 12.6 km above mean sea level is prevailing across Delhi over North India.
- ❖ The **cyclonic circulation** over Meghalaya & neighbourhood now lies over Nagaland and neighbourhood at 1.5 km above mean sea level.
- ❖ A fresh **Western Disturbance** is likely to affect Western Himalayan Region from 17th February, 2025.

Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 22nd February, 2025)



15th February (Day 1):

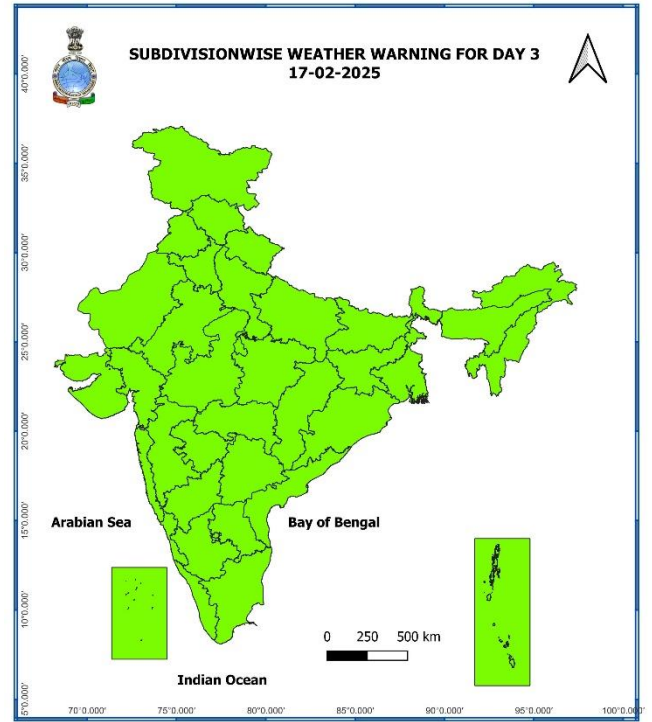
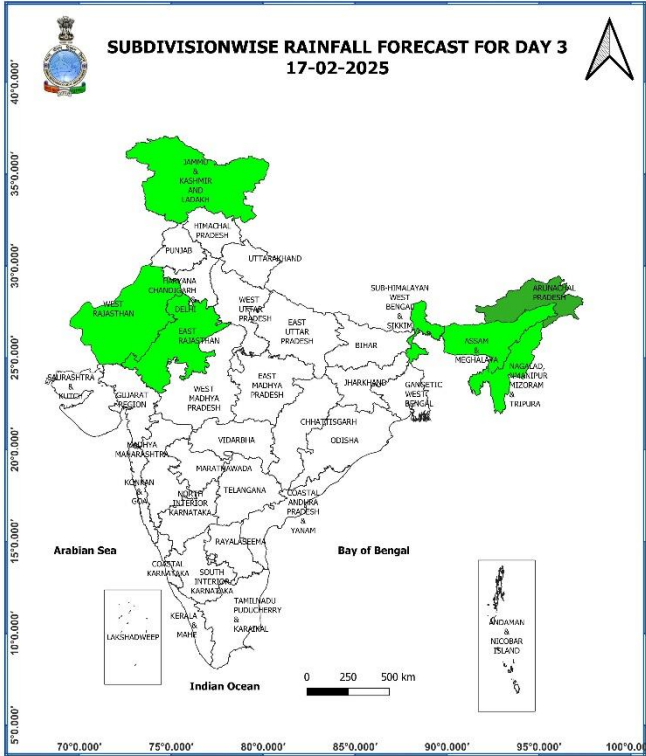
- ❖ **Dense fog conditions** very likely in isolated pockets of Sub-Himalayan West Bengal & Sikkim and Odisha.
- ❖ **Thunderstorm accompanied with lightning** very likely at isolated places over Himachal Pradesh, Uttarakhand, Arunachal Pradesh.



16th February (Day 2):

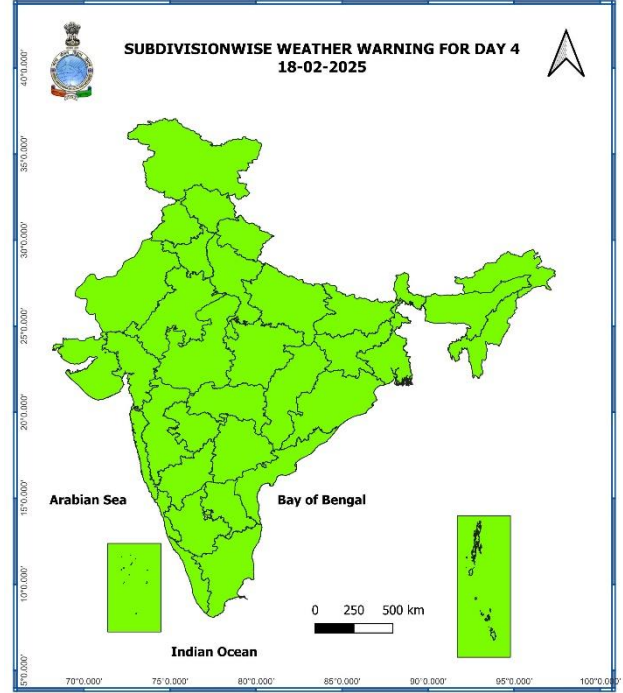
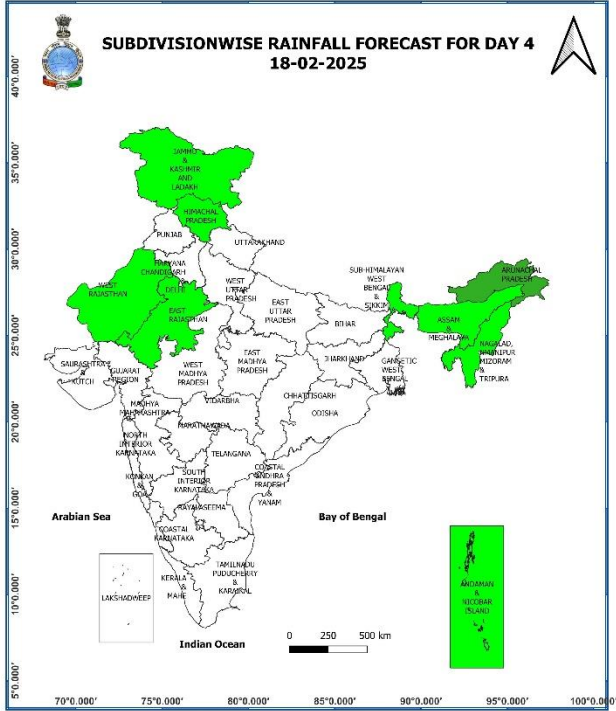
- ❖ **Dense fog conditions** very likely in isolated pockets of Sub-Himalayan West Bengal & Sikkim.
- ❖ **Thunderstorm accompanied with lightning** very likely at isolated places over Arunachal Pradesh.

* Red colour warning does not mean "Red Alert", Red colour warning means "Take Action".
Forecast and Warning for any day is valid from 0830 hours IST of day till 0830 hours IST of next day.
For more details, kindly visit <https://mausam.imd.gov.in> or contact: 011-2434-4599
(Service to the Nation since 1875)



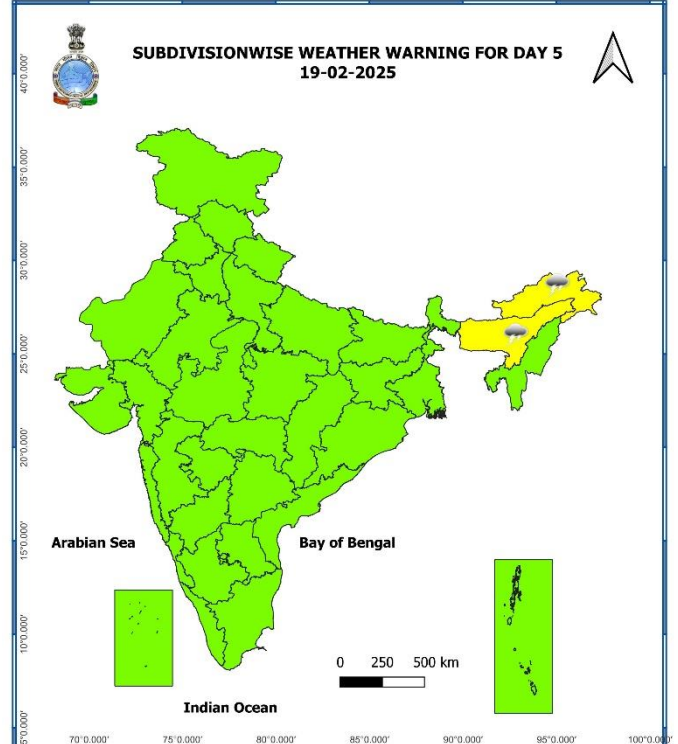
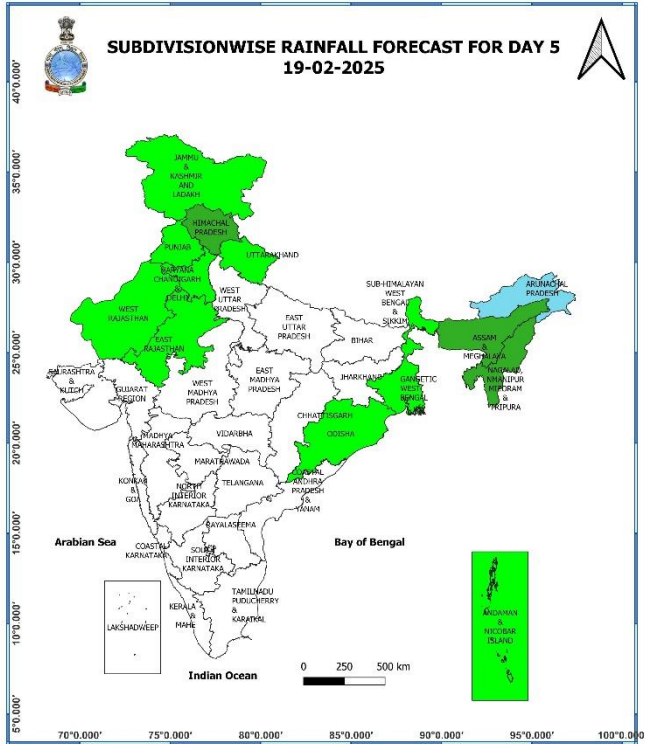
17th February (Day 3):

❖ No Weather Warning.



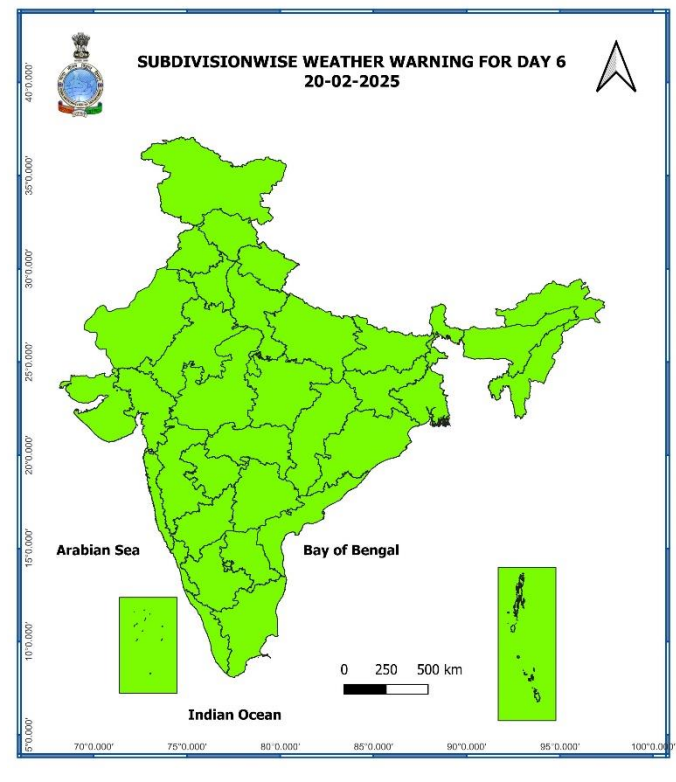
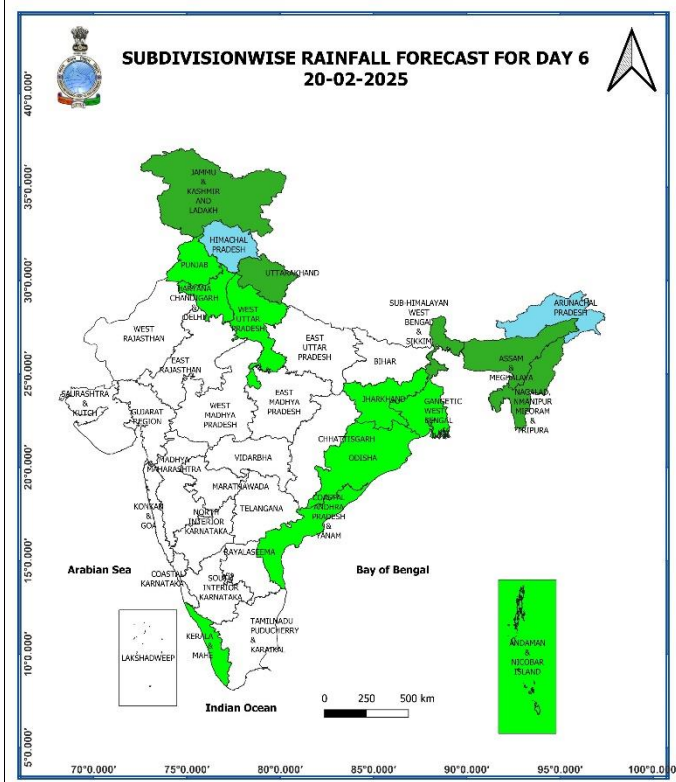
18th February (Day 4):

❖ **No Weather Warning.**



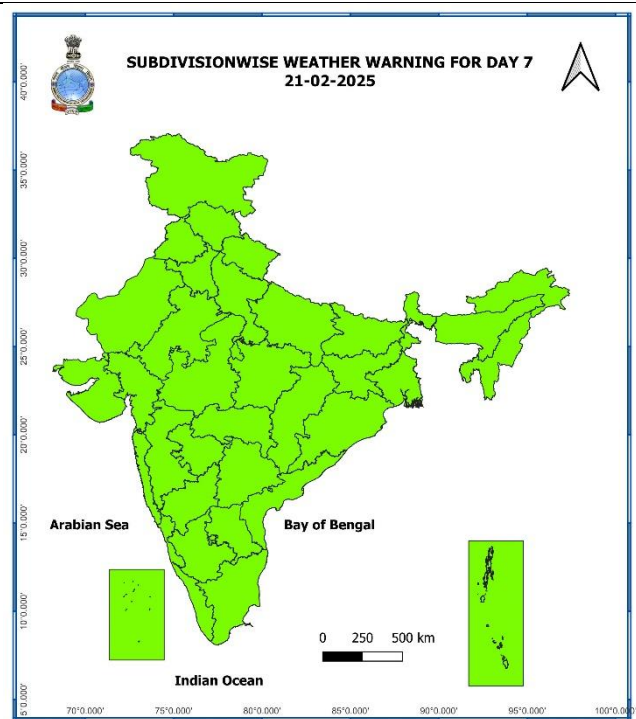
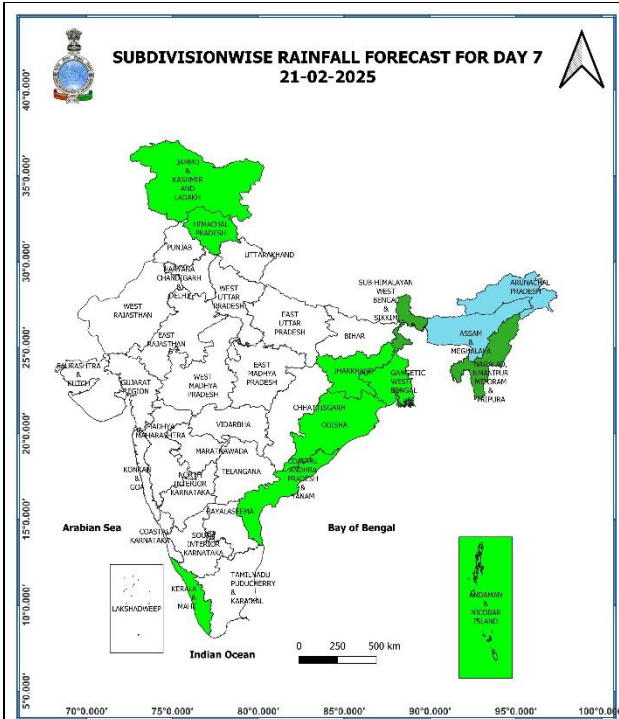
19th February (Day 5):

- ❖ **Thunderstorm accompanied with lightning** very likely at isolated places over Arunachal Pradesh and Assam & Meghalaya.



20th February (Day 6):

❖ **No Weather Warning.**



21st February (Day 7):

❖ **No Weather Warning.**

Weather Outlook for subsequent 3 days (During 22nd February- 24th February, 2025)

- ❖ **Scattered to fairly widespread rainfall/snowfall** likely over Western Himalayan region.
- ❖ **Isolated rainfall** likely over plains of Northwest, adjoining Central, East and Northeast 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

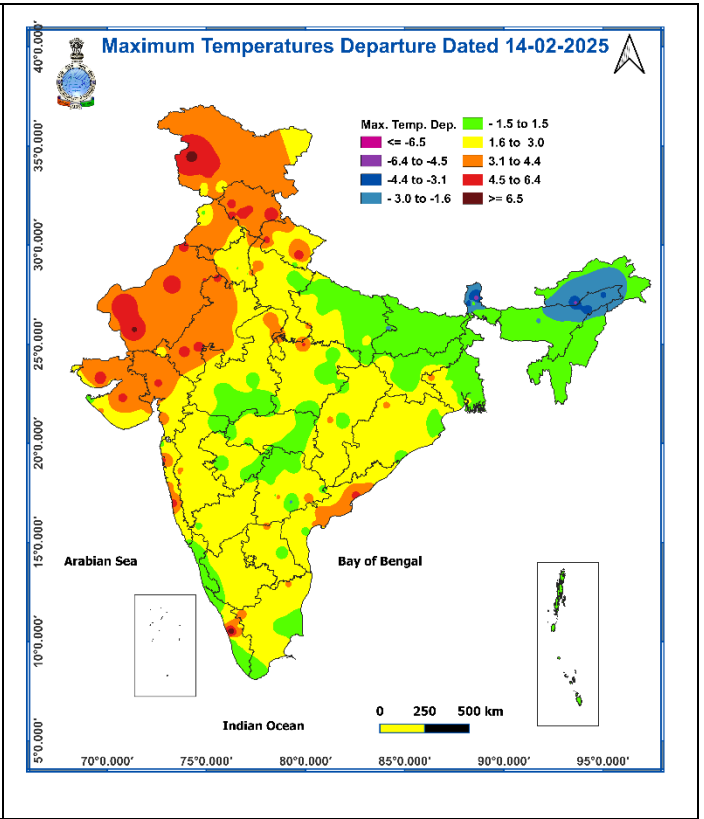
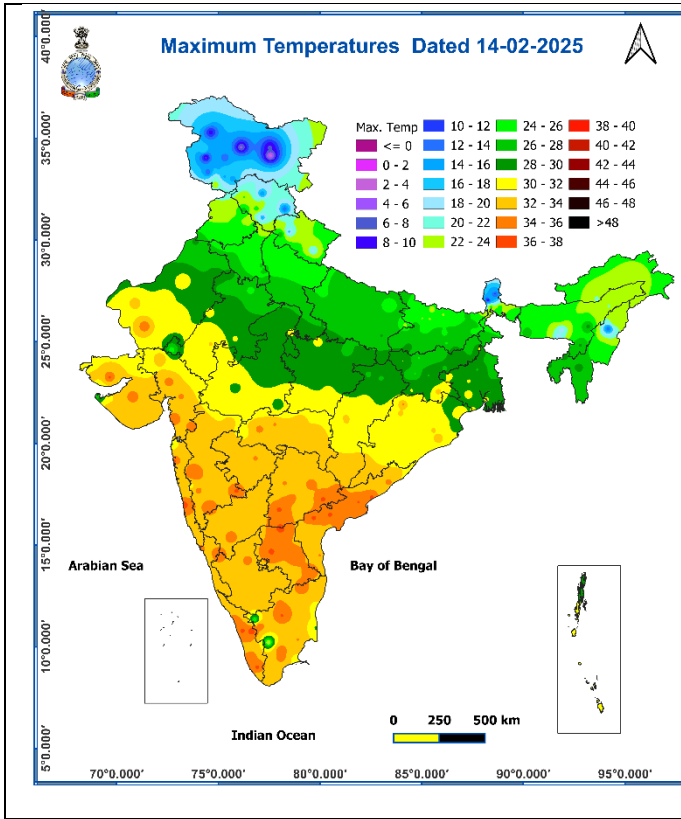
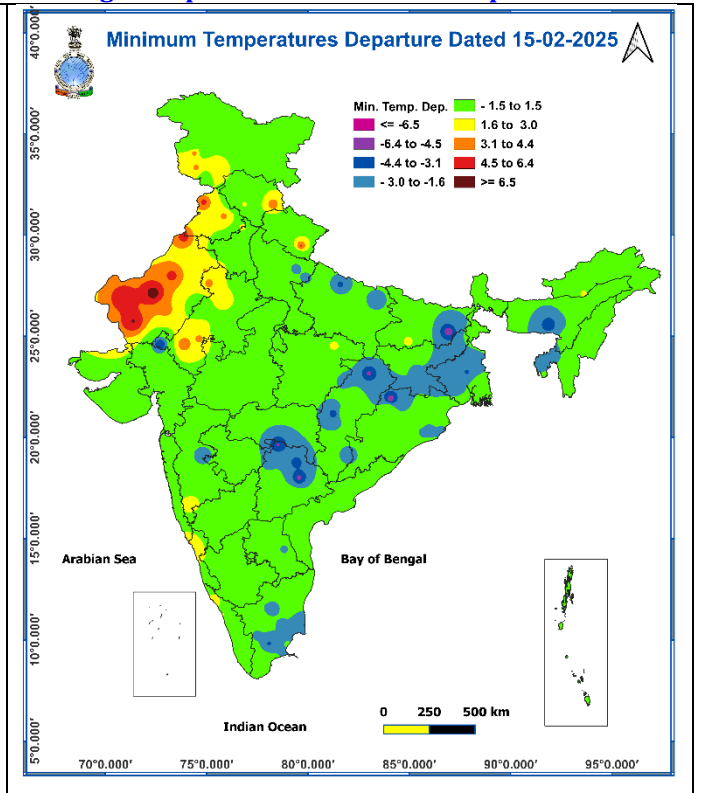
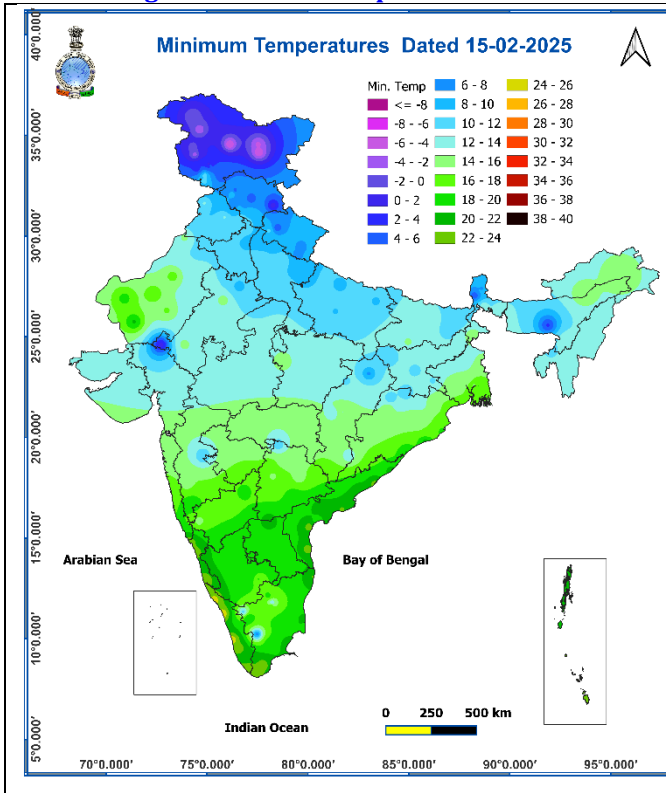


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures



Agromet advisories for likely impact of Cold wave (Based on the IBF and advisories issued by different AMFUs)

Agromet advisories for likely impact of Cold wave

- In **Himachal Pradesh**, apply light and frequent irrigation to the standing crops in the evening to protect them from low temperature stress or cold injuries. Use mulching and cover vegetable nurseries and young fruit plants with straw/polythene sheets to maintain optimum soil temperature.

Livestock

- To protect from cold, keep cattle inside the sheds during night and provide dry bedding. Also keep the chicks warm by providing artificial light in the poultry sheds.

Likely Impact of prevailing above-normal temperatures on Agriculture

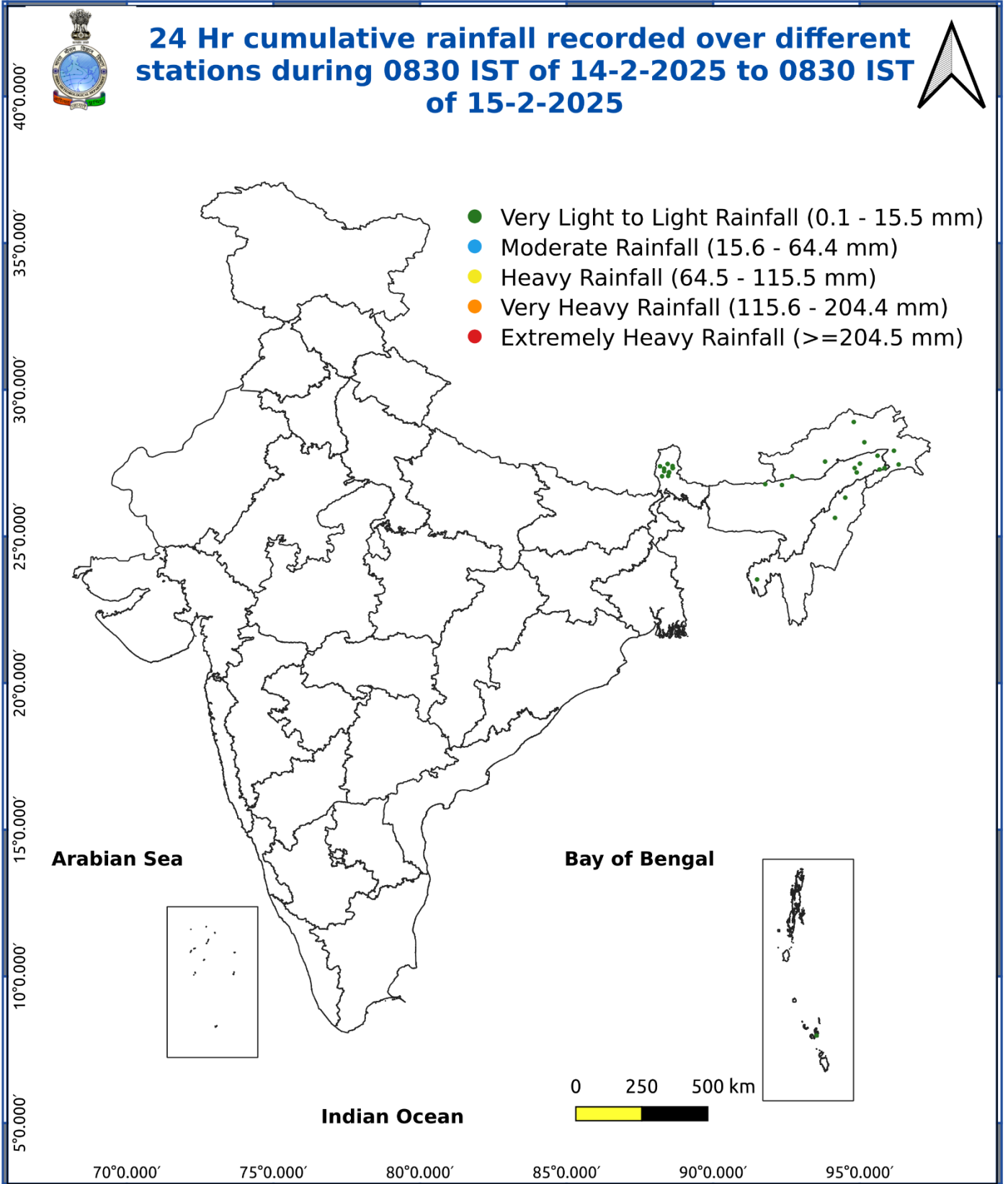
- Above normal temperatures in parts of Northwest and Central India may lead to forced maturity, sterile spikelets, and chaffy grains, reducing yields during critical growth stages like flowering and grain filling in crops like wheat and barley. Crops like mustard and chickpea may also experience early harvest.
- Vegetables like onions, garlic, and tomatoes may be affected during bulb formation or flowering, resulting in tip burning, bolting, and mismatched pollination, reducing their quality and yield. Horticultural crops like apples and stone fruits may experience early blooming due to warmer temperatures, resulting in poor fruit setting and quality.
- Livestock may experience heat stress, requiring adjustments in care and feeding practices, while fisheries face challenges in maintaining water quality.

Agromet Advisories

- Provide light and life-saving irrigation during sensitive growth stages such as grain filling, flowering, and tuber formation.
- Apply mulching to retain optimum soil moisture and regulate temperature.

Chemical sprays like potassium chloride and mineral nutrients are recommended to manage heat stress.

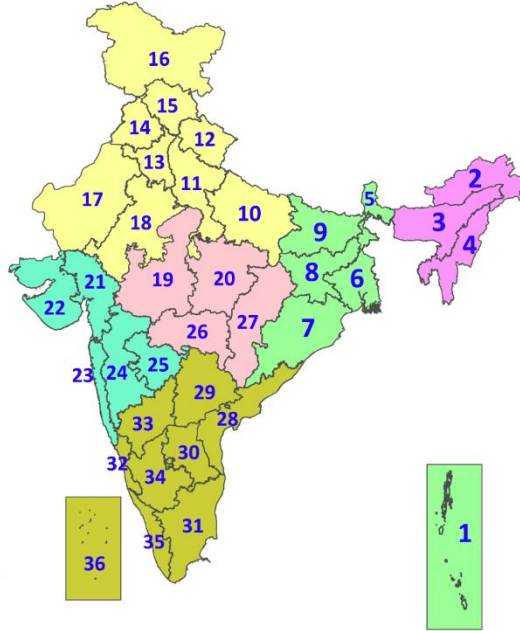
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



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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)