

Friday, December 27, 2024
Time of Issue: 1420 hours IST
(MID-DAY)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

Weather Systems, Forecast and warning:

- ❖ A **Western disturbance** as a cyclonic circulation lay over north Pakistan & neighbourhood in lower & middle tropospheric levels with a trough aloft in upper tropospheric westerlies along Long. 68°E to the north of Lat. 17°N.
- ❖ An **induced cyclonic circulation** over southwest Rajasthan and a **trough** runs from north Pakistan to eastcentral Arabian Sea across **induced cyclonic circulation** in lower tropospheric levels.
- ❖ In addition, there is an interaction of westerly winds due to Western Disturbance with easterly winds from anti-cyclone over north Chhattisgarh at lower tropospheric levels along with high moisture feeding from Arabian Sea as well as Bay of Bengal over northwest & central India mainly during 27th & 28th December. Under the influence of these systems:
 - ✓ Fairly widespread to widespread Rainfall/Snowfall accompanied with thunderstorm, lightning is likely over Western Himalayan Region on 27th & 28th December with isolated **Heavy Rainfall/Snowfall** likely over Himachal Pradesh on 27th and Uttarakhand on 27th & 28th December.
 - ✓ Fairly widespread to widespread Rainfall accompanied with thunderstorm, lightning is likely over Punjab, Haryana-Chandigarh-Delhi, West Uttar Pradesh and East Rajasthan on 27th & Isolated to Scattered rainfall accompanied with thunderstorm, lightning & gusty winds (wind speed 30-40 kmph) likely over the same region on 28th December with isolated **Heavy rainfall** likely over Haryana-Chandigarh-Delhi, West Uttar Pradesh, East Rajasthan and west Madhya Pradesh on 27th December.
 - ✓ Isolated to Scattered rainfall accompanied with thunderstorm, lightning & gusty winds (wind speed 30-50 kmph) likely over East Uttar Pradesh, West Rajasthan, west Madhya Pradesh, Vidarbha, interior Maharashtra and Gujarat Region on 27th & 28th December.
 - ✓ **Thunderstorm accompanied with hailstorms also likely over Southeast Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh, Delhi, Uttar Pradesh, East Rajasthan, Vidarbha, Madhya Maharashtra, Marathwada & Gujarat Region on 27th and Madhya Pradesh on 27th & 28th December.**

ii. Temperature, Cold Wave and Fog Forecast:

Temperature Conditions during past 24 hours till 0830 hours IST of today:

- ❖ Minimum temperatures were **below 0°C** over many parts of Jammu, Kashmir & Ladak; **10-15°C** over Northwest, central and east India; **12-18°C** over many parts of Central, West & East India. Today, the lowest minimum temperature of 5.4°C is reported at Churu (West Rajasthan) over the plains of the country.
- ❖ There has been a rise by 2-4°C in minimum temperature over many parts of Northwest India adjoining central India during past 24 hours.
- ❖ Minimum temperatures are **markedly above normal (5.1°C or more)** at most places over North Interior Karnataka; at many places over Madhya Pradesh, Gujarat Region, East Rajasthan, Madhya Maharashtra, Marathwada, Vidarbha and Telangana; at a few places over Odisha; at isolated places over Haryana-Chandigarh-Delhi, Uttar Pradesh and Chhattisgarh; **appreciably above normal (3.1°C to 5.0°C)** at most places over Punjab, Jharkhand, Coastal Karnataka and Rayalaseema; at a few places over Tamil Nadu, Puducherry & Karaikal; at isolated places over West Rajasthan, Bihar, Gangetic West Bengal and Coastal Andhra Pradesh & Yanam; **above normal (1.6°C to 3.0°C)** at isolated places over Uttarakhand and Assam & Meghalaya. These are below normal (-1.6°C to -3.0°C) at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and near normal over rest parts of the country.

Forecast of temperature:

- ❖ No significant change in minimum temperatures during next 48 hours and fall by 2-4°C likely over Northwest, West, Central and East India during Subsequent 3 days.

Cold Wave Warnings:

Cold wave conditions very likely in some parts of Himachal Pradesh from 29th to 31st December.

Cold Day Warnings:

Cold day to severe cold day conditions very likely in some parts of Himachal Pradesh on 27th & 28th December.

Cold Day conditions very likely in isolated pockets of Uttarakhand and Haryana-Chandigarh-Delhi on 27th & 28th December.

Dense Fog Warnings:

Dense to Very dense fog conditions very likely to prevail during late night/early morning hours in isolated pockets of Rajasthan during 27th-29th December;

Dense fog conditions very likely to prevail during late night/early morning hours in isolated pockets of Himachal Pradesh on 29th & 30th; Punjab during 27th-30th; Haryana, Chandigarh during 28th-30th, West Uttar Pradesh 29th & 30th; Orissa on 27th; Jharkhand on 28th; Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during 27th-29th December.

Ground frost Warnings:

Ground frost conditions very likely in isolated pockets of Arunachal Pradesh and Nagaland, Manipur, Mizoram & Tripura on 27th December.

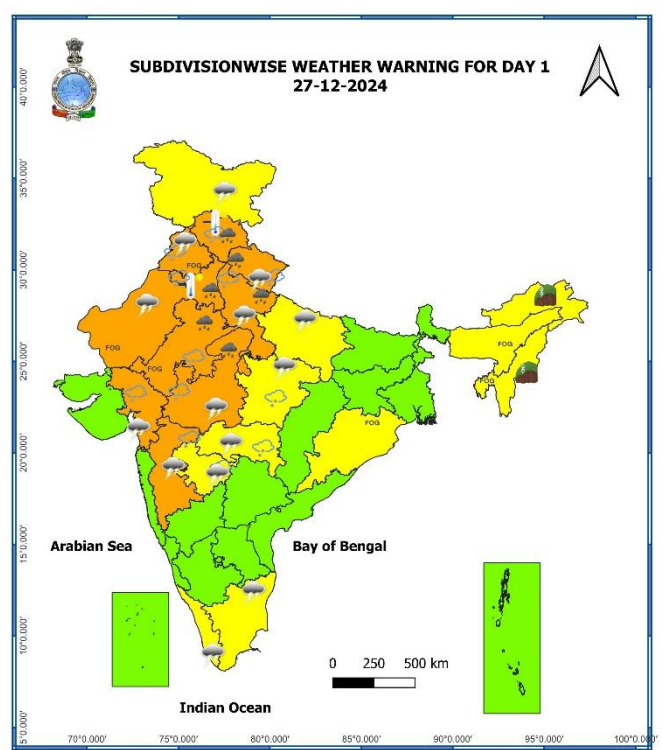
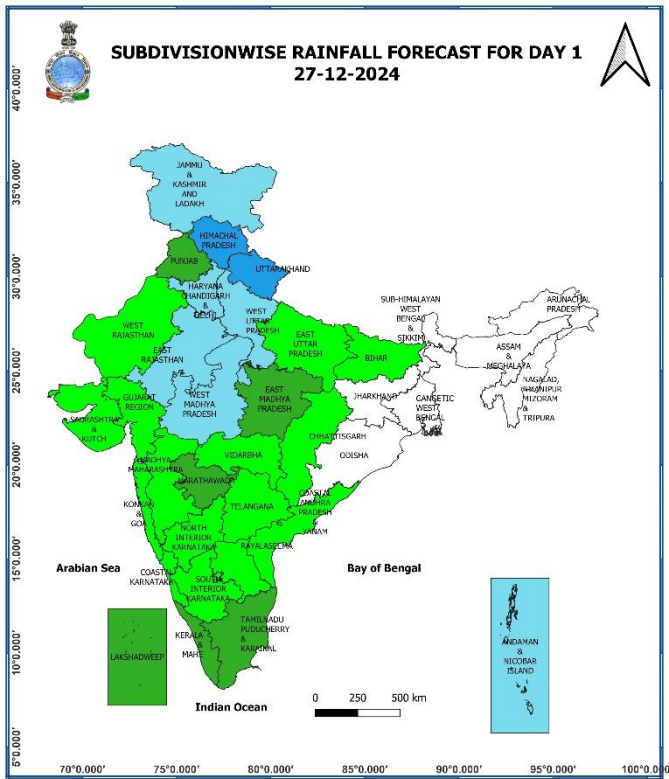
Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST of yesterday to 0830 hours IST of today): **at most places** over Rayalaseema; **at many places** over Haryana; **at a few places** over Marathwada, Tamil Nadu, Puducherry & Karaikal and South Interior Karnataka; **at isolated places** over Odisha, Himachal Pradesh, Punjab, Rajasthan, West Madhya Pradesh, Vidarbha, Madhya Maharashtra, Kerala & Mahe, Coastal Andhra Pradesh & Yanam and North Interior Karnataka.
- ❖ **Heavy rainfall observed** (from 0830 hours IST of yesterday to 0830 hours IST of today): **Heavy rainfall** at isolated places over Tamil Nadu, Rayalaseema and coastal Andhra Pradesh.
- ❖ **Significant amount of rainfall** (from 0830 hours IST of yesterday to 0830 hours IST of today): **Coastal Andhra Pradesh & Yanam:** Kavali (dist Spsr Nellore) 8, Kandukur (dist Spsr Nellore) 5; **Tamil Nadu:** Tiruttani (dist Tiruvallur) 8, Zone 06 Perambur (dist Chennai), Zone 05 Basin bridge (dist Chennai), Zone 08 Anna Nagar West (dist Chennai), Pallipattu (dist Tiruvallur), Kodanad (dist The Nilgiris), Tiruttani AWS (dist Tiruvallur) 6 each, Tiruttani PTO (dist Tiruvallur), Coonoor (dist The Nilgiris), Zone 06 Kolathur (dist Chennai), Zone 04 Tondiarpet (dist Chennai) 5 each; **Rayalaseema:** Nagari (dist Chittoor) 7.
- ❖ **Fog reported** (upto 0830 hours IST of today): **Dense fog (50-199 m)** reported in isolated pockets of Odisha and Meghalaya; **Moderate fog (visibility 200-499 m)** reported in isolated pockets of Delhi, Rajasthan, Meghalaya and Manipur.
- ❖ **Visibility reported** (upto 0830 hours IST of today) (≤ 200 meter): **Odisha:** Bolangir 80m; **Meghalaya:** Barapani 50m; **Punjab:** Amritsar & Halwara IAF-200 each; **Delhi:** Safdarjung & Ayanagar-200 each; **East Uttar Pradesh:** Varanasi- Babatpur-200; **West Rajasthan:** Churu-200; **East Rajasthan:** Udaipur Dabok-200.
- ❖ **Minimum Temperatures Departures (as on 27-12-2024):** Minimum temperatures are **markedly above normal (5.1°C or more)** at most places over North Interior Karnataka; at many places over Madhya Pradesh, Gujarat Region, East Rajasthan, Madhya Maharashtra, Marathwada, Vidarbha and Telangana; at a few places over Odisha; at isolated places over Haryana-Chandigarh-Delhi, Uttar Pradesh and Chhattisgarh; **appreciably above normal (3.1°C to 5.0°C)** at most places over Punjab, Jharkhand, Coastal Karnataka and Rayalaseema; at a few places over Tamil Nadu, Puducherry & Karaikal; at isolated places over West Rajasthan, Bihar, Gangetic West Bengal and Coastal Andhra Pradesh & Yanam; **above normal (1.6°C to 3.0°C)** at isolated places over Uttarakhand and Assam & Meghalaya. These are **below normal (-1.6°C to -3.0°C)** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and near normal over rest parts of the country. Today, **the lowest minimum temperature** of 5.4°C is reported at **Churu (West Rajasthan)** over the plains of the country (Fig. 4).
- ❖ **Maximum Temperature Departures (as on 26-12-2024):** Maximum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at a few places over East Uttar Pradesh; at isolated places over Chhattisgarh, Bihar, Gangetic West Bengal, East Madhya Pradesh; **above normal (1.6°C to 3.0°C)** at most places over Jharkhand, West Uttar Pradesh; at many places over Punjab, Uttarakhand; at a few places over Himachal Pradesh, Assam & Meghalaya, Haryana-Chandigarh-Delhi, Sub-Himalayan West Bengal & Sikkim; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, West Madhya Pradesh, Vidarbha, Odisha, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura. These were **markedly below normal (-5.1° C or less)** at isolated places over Saurashtra & Kutch; **appreciably below normal (-3.1°C to -5.0°C)** at isolated places over West Rajasthan, Telangana; **below normal (-1.6°C to -3.0°C)** at a few places over Rayalaseema; at isolated places over Gujarat Region, East Rajasthan, Konkan & Goa, Marathwada, Coastal Andhra Pradesh & Yanam, Tamil Nadu, Puducherry & Karaikal and near normal over rest part of the country . Yesterday, the **highest maximum temperature** of 34.8°C was reported at **Punalur (Kerala)** over the plains of the country (Fig. 2).

Meteorological Analysis (Based on 0830 hours IST)

- ❖ The **Western disturbance** as a cyclonic circulation now lies over north Pakistan & neighbourhood between 3.1 & 5.8 km above mean sea level with a trough aloft in upper tropospheric westerlies with its axis at 7.6 km above mean sea level now runs roughly along Long. 68°E to the north of Lat. 17°N.
- ❖ The **induced cyclonic circulation** over southwest Rajasthan & neighbourhood extending upto 1.5 km above mean sea level persists.
- ❖ A **trough** runs from north Pakistan to eastcentral Arabian Sea across induced cyclonic circulation over southwest Rajasthan & neighbourhood at 1.5 km above mean sea level.
- ❖ The **upper air cyclonic circulation** over east Bangladesh & neighbourhood at 1.5 km above mean sea level persists.
- ❖ A **cyclonic circulation** lies over southeast Arabian Sea off south Kerala coast at 3.1 km above mean sea level.
- ❖ **Subtropical westerly Jet Stream** with core winds of the order upto 110 knots at 12.6 km above mean sea level continues to prevail over Northwest India.
- ❖ A **fresh western disturbance** is likely to affect western Himalayan region from 01st January, 2025.
- ❖ The **upper air cyclonic circulation** over north Punjab & neighbourhood at 1.5 km above mean sea level has become less marked.
- ❖ The **upper air cyclonic circulation** over southwest & adjoining westcentral Bay of Bengal off South Andhra Pradesh-North Tamil Nadu coasts extending upto 1.5 km above mean sea level has become less marked.

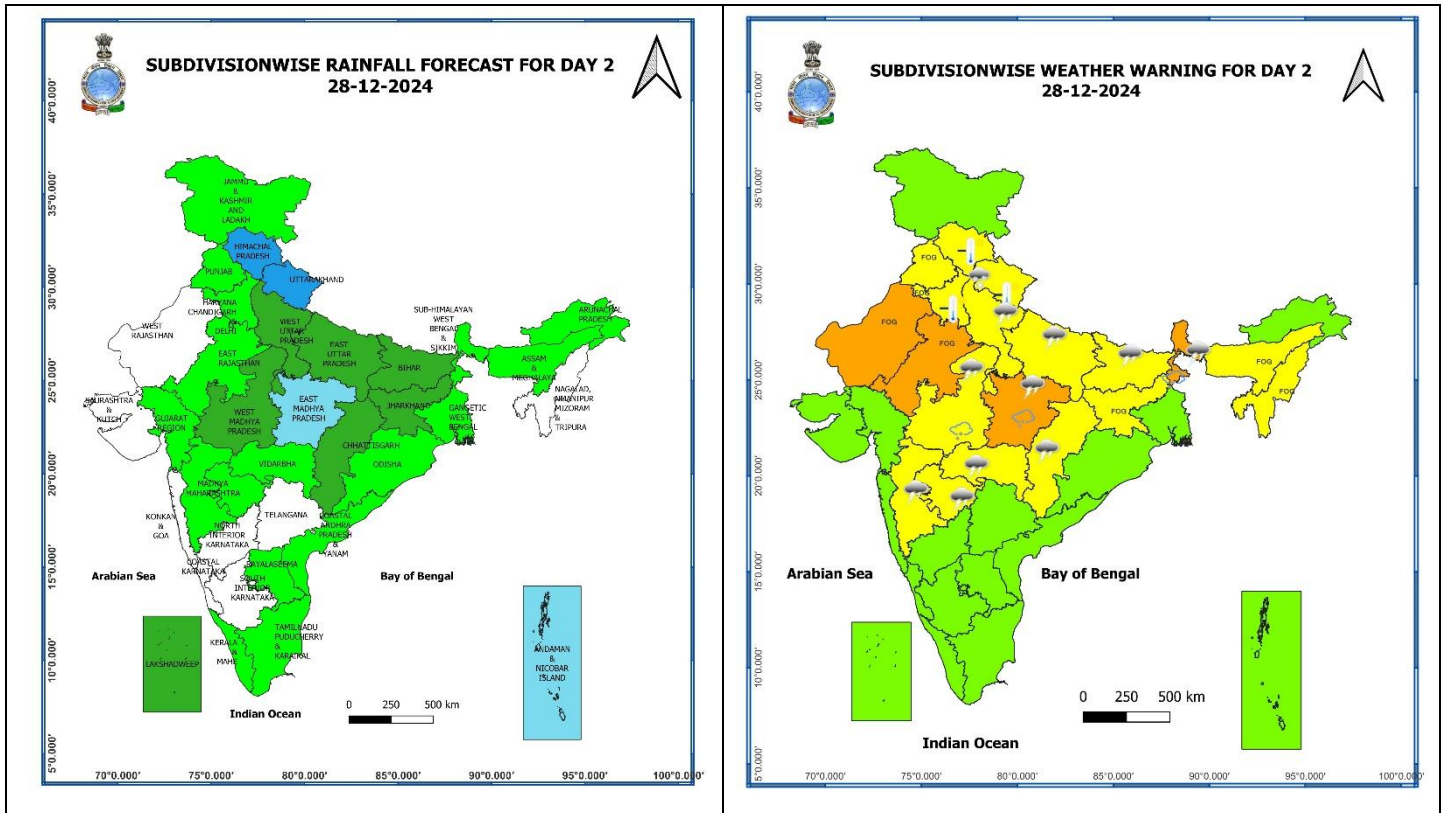
Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 03rd January, 2025)



27 December (Day 1):

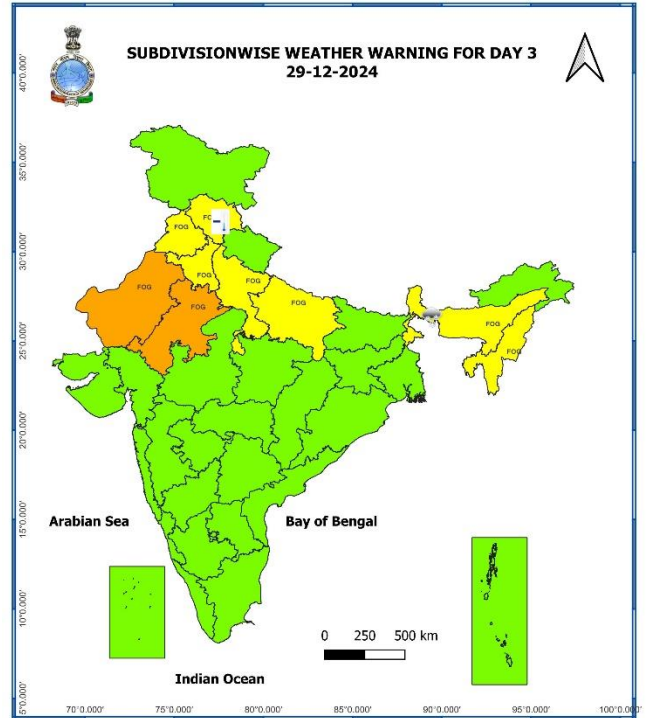
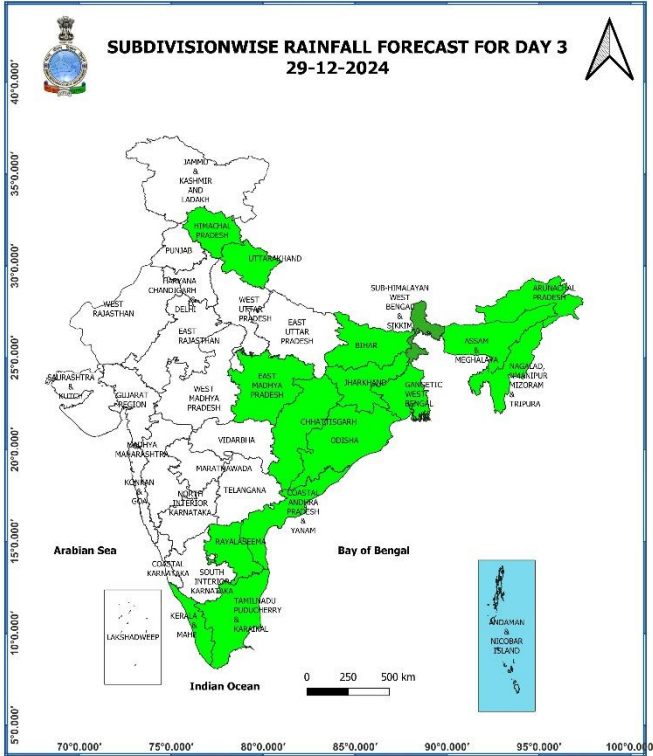
- ❖ **Heavy rainfall (≥ 7 cm) / snowfall (≥ 70 cm)** very likely at isolated places over Himachal Pradesh and Uttarakhand; **Heavy rainfall (≥ 7 cm)** at isolated places over Haryana-Chandigarh-Delhi, West Uttar Pradesh, West Madhya Pradesh and East Rajasthan.
- ❖ **Thunderstorm accompanied with hailstorm, gusty winds (30-40 kmph) & lightning** very likely at isolated places over Punjab, Haryana-Chandigarh-Delhi and East Rajasthan; **with hailstorm & lightning** at isolated places over southeast Himachal Pradesh, Uttarakhand, West Uttar Pradesh and Madhya Pradesh, Vidarbha, Madhya Maharashtra, Marathwada and Gujarat Region; **with lightning** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, East Uttar Pradesh, West Rajasthan, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- ❖ **Dense fog to very dense fog** very likely in isolated pockets of Rajasthan; **Dense fog** in isolated pockets of Punjab, Odisha, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura in night/morning hours.
- ❖ **Cold day conditions** very likely in isolated pockets of Himachal Pradesh and Haryana-Chandigarh-Delhi.
- ❖ **Ground frost conditions** very likely in isolated pockets of Arunachal Pradesh and Nagaland, Manipur, Mizoram & Tripura.

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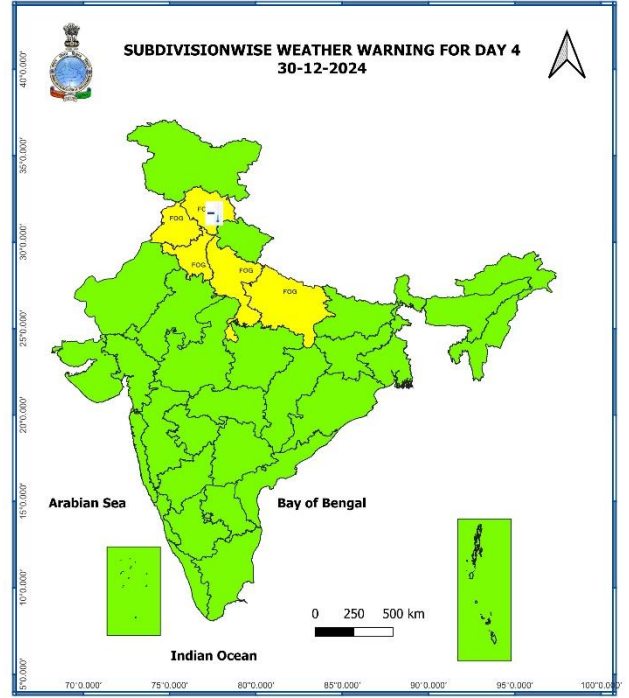
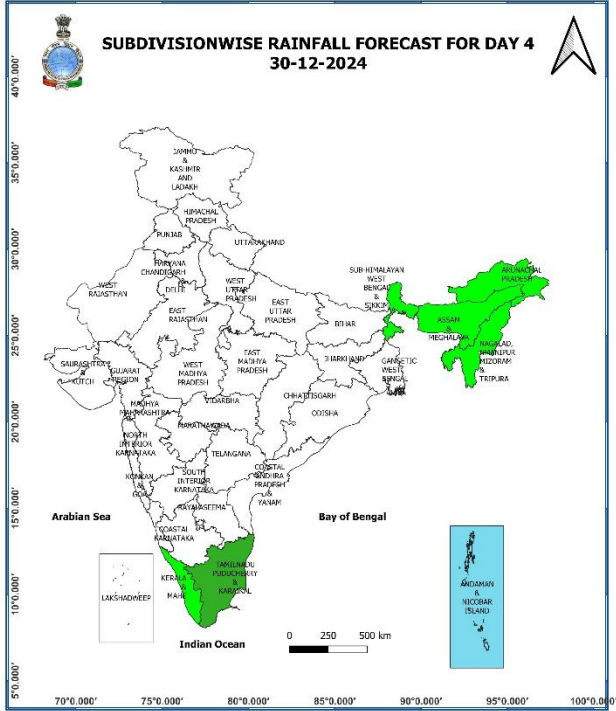
28 December (Day 2):

- ❖ **Thunderstorm accompanied with hailstorm & lightning** at isolated places over Madhya Pradesh and Sikkim; **with lightning** at isolated places over Uttar Pradesh, Vidarbha, Chhattisgarh, Bihar, Madhya Maharashtra and Marathwada.
- ❖ **Dense fog to very dense fog** very likely in isolated pockets of Rajasthan; **Dense fog** in some parts of Punjab; in isolated pockets of Haryana-Chandigarh-Delhi, Jharkhand, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura in night/morning hours.
- ❖ **Cold Day to severe cold day conditions** very likely in some parts of Himachal Pradesh; **cold day conditions** in isolated pockets of Uttarakhand and Haryana-Chandigarh-Delhi.
- ❖ **Heavy snowfall activity** very likely in isolated pockets of Uttarakhand.



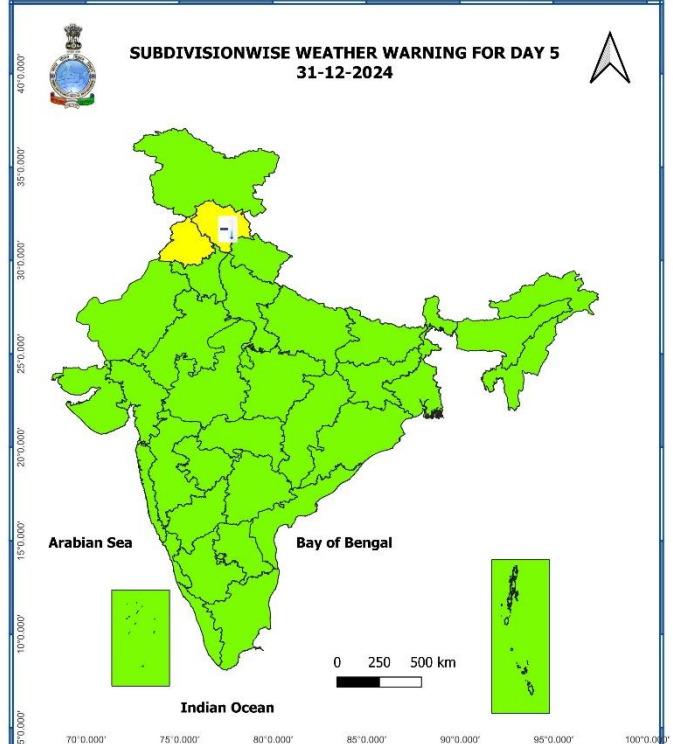
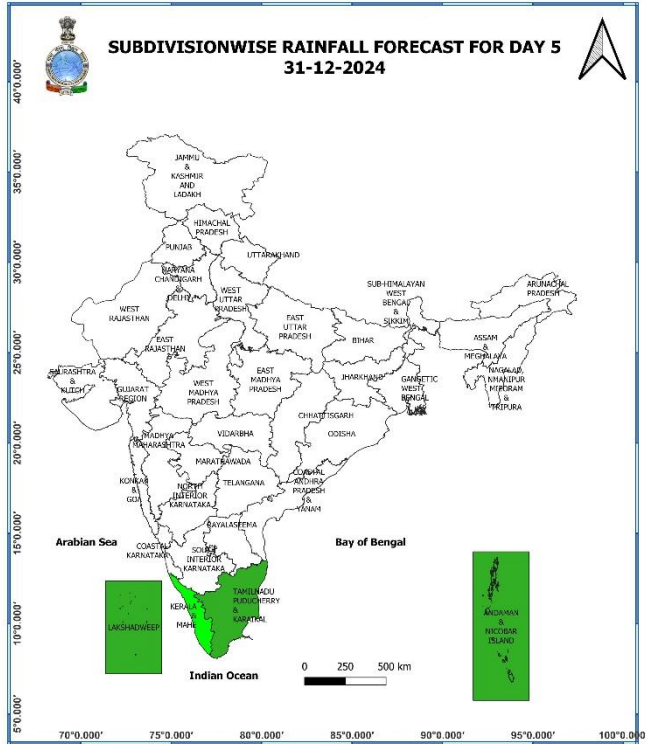
29 December (Day 3):

- ❖ **Dense fog to very dense fog** very likely in isolated pockets of Rajasthan; **Dense fog** in isolated pockets of Himachal Pradesh, Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura in night/morning hours.
- ❖ **Cold wave conditions** very likely in isolated pockets of Himachal Pradesh.
- ❖ **Heavy snowfall** activity very likely in isolated pockets of Sikkim.



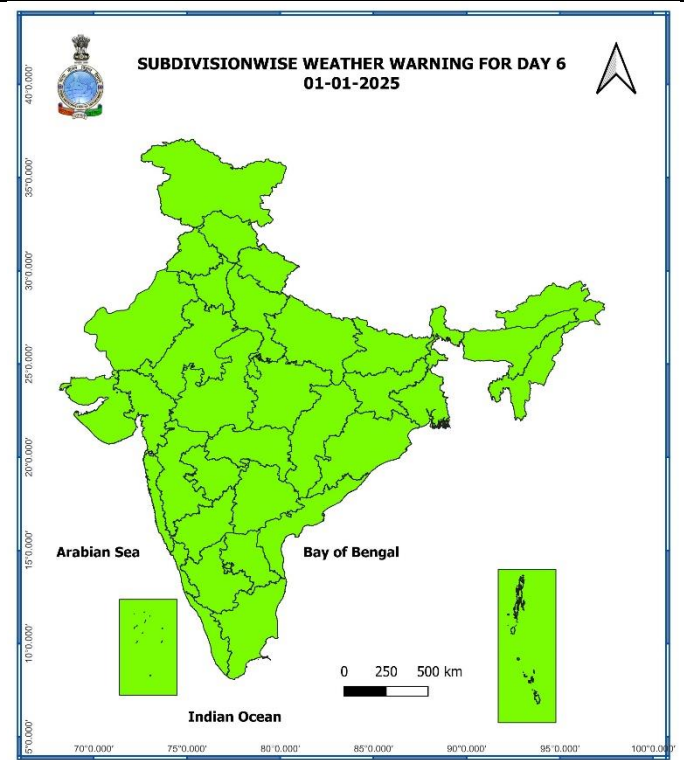
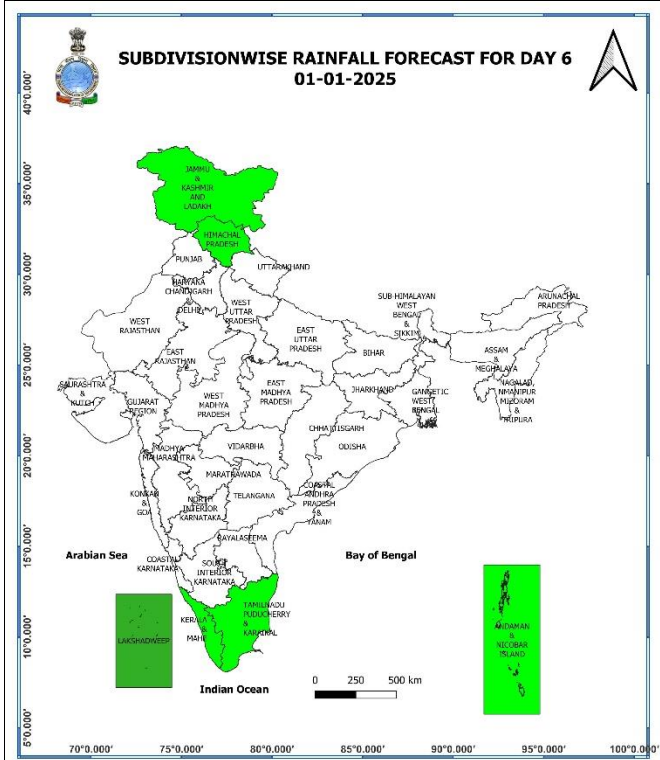
30 December (Day 4):

- ❖ **Dense fog** in isolated pockets of Himachal Pradesh, Punjab, Haryana-Chandigarh-Delhi and Uttar Pradesh, in night/morning hours.
- ❖ **Cold wave conditions** likely in isolated pockets of Himachal Pradesh.



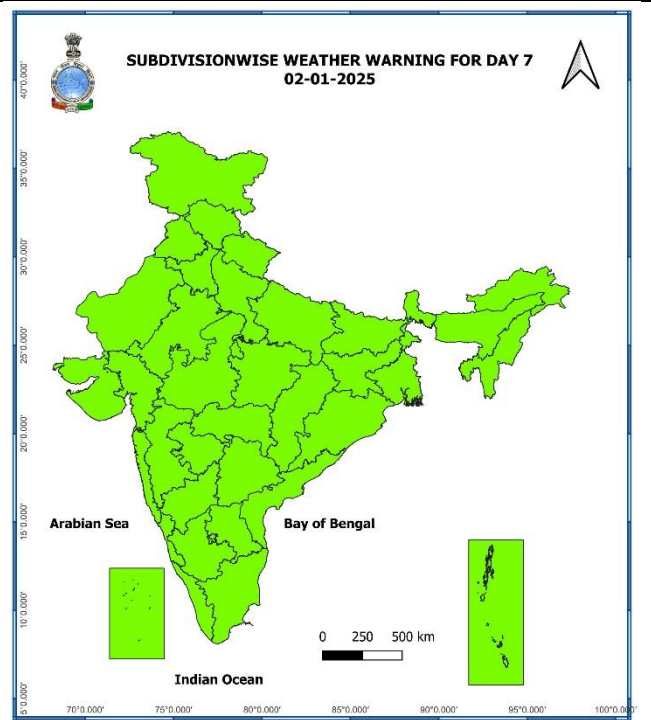
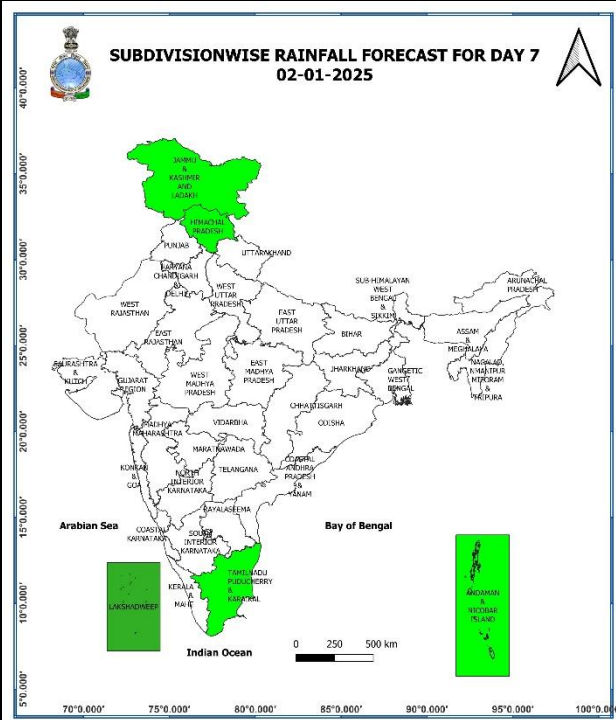
31st December (Day 5):

- ❖ Cold wave conditions likely in isolated pockets of Himachal Pradesh.



01 January (Day 6):

❖ **No weather warning.**



02 January (Day 7):

❖ No weather warning.

Weather Outlook for subsequent 3 days (During 03rd January, 2025– 05th January, 2025)

- ❖ Isolated to scattered light to moderate rainfall over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Andaman & Nicobar Islands.
- ❖ Mainly dry weather will prevail over rest parts of country.

- 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.

Impact & Action Suggested due to heavy rainfall/ snowfall over Himachal Pradesh, Uttarakhand, Haryana-Chandigarh-Delhi, West Uttar Pradesh, West Madhya Pradesh and East Rajasthan on 27th December.

A. Impact Expected

- ❖ Localized Flooding of roads, water logging in low lying areas and closure of underpasses mainly in urban areas of the above region.
- ❖ Occasional reduction in visibility due to heavy rainfall.
- ❖ Disruption of traffic in major cities due to water logging in roads leading to increased travel time.
- ❖ Minor damage to kutcha roads.
- ❖ Possibilities of damage to vulnerable structure.
- ❖ Localized Landslides/Mudslides
- ❖ Damage to horticulture and standing crops in some areas due to inundation.
- ❖ It may lead to riverine flooding in some river catchments (for riverine flooding please visit Web page of CWC).

B. Action Suggested

- ❖ Check for traffic congestion on your route before leaving for your destination.
- ❖ Follow any traffic advisories that are issued in this regard.
- ❖ Avoid going to areas that face the water logging problems often.
- ❖ Avoid staying in vulnerable structure

Impact expected and action suggested due to thunderstorm with lightning & Hailstorm over northwest & central India.

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.

Impact expected due to dense fog in the night /morning hour over northwest India:

❖ Transport and Aviation:

- May affect some airports, highways and railway routes in the areas of met- sub-division.
- Difficult driving conditions with slower journey times.
- Unless taken precautionary measures, it may lead to some road traffic collisions.

❖ Power Sector:

- Chances of Tripping of Power lines in the very dense fog routes.

❖ Human Health:

- Lung related health impacts: Dense fog contains particulate matter and other pollutants and in case exposed it gets lodged in the lungs, clogging them and decreasing their functional capacity which increases episodes of wheezing, coughing and shortness of breath.
- Impact on people having asthma bronchitis: Long time exposure to dense fog may cause respiratory problem for people having asthma bronchitis and other lung related health problems.
- Eye Irritation: Dense fog contains pollutions of various types and these Pollutants in the air if exposed may tend to irritate the membranes of the eye causing various infections leading to redness or swelling of the eye.

Action suggested:

❖ Transport and Aviation:

- Be careful while driving or outing through any transport.
- Use fog lights during driving.
- Be in touch with airlines, railways and state transport for schedule of your journey.

❖ Power Sector:

- To keep ready Maintenance Team
- Human Health: To avoid outing until unless emergency and to cover the face.

Impact expected due to cold wave/severe cold wave conditions over Himachal Pradesh:

- An increased likelihood of various illnesses like flu, running/ stuffy nose or nosebleed, which usually set in or get aggravated due to prolonged exposure to cold.
- Do not ignore shivering. It is the first sign that the body is losing heat. Get Indoors.
- Frostbite can occur due to prolonged exposure to cold. The skin turns pale, hard and numb and eventually black blisters appear on exposed body parts such as fingers, toes, nose and or earlobes. Severe frostbite needs immediate medical attention and treatment.
- Impact on agriculture, crop, livestock, water supply, transport and power sector at some places.

Action suggested:

- Wear several layers of loose fitting, light weight; warm woollen clothing.
- Cover your head, neck, hands and toes adequately as majority of heat loss occurs through these body parts. Wear several layers of loose fitting, light weight; warm woollen clothing rather than one layer of heavy cloth.
- Eat vitamin-C rich fruits & vegetable and drink sufficient fluids preferably warm fluids to maintain adequate immunity.
- Avoid or limit outdoor activities.
- Keep dry, if wet, change cloths immediately to prevent loss of body heat. Wear insulated/waterproof shoes.
- Warm the affected area of the body slowly with lukewarm water; do not rub the skin vigorously.
- If the affected skin area turns black, immediately consult a doctor.
- Maintain ventilation while using Heaters to avoid inhaling toxic fumes.
- Take safety measures while using electrical and gas heating devices.
- Extreme care needed for vulnerable people.
- Seek medical attention as soon as possible for someone suffering from frostbite/ Hypothermia.
- Protect livestock from cold weather.

Agromet advisories for Heavy Rainfall/ Cold Wave/ Ground Frost likely over various parts of the country

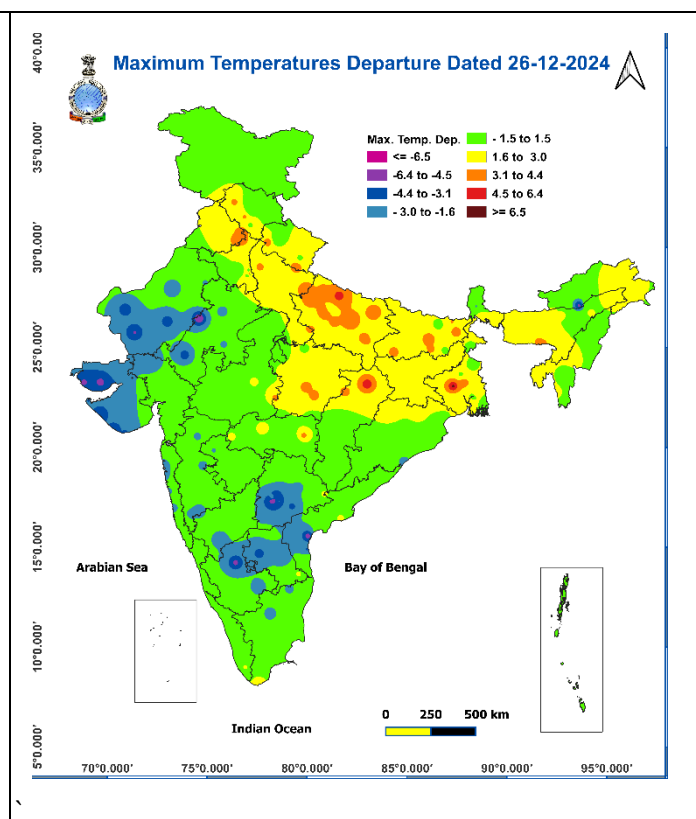
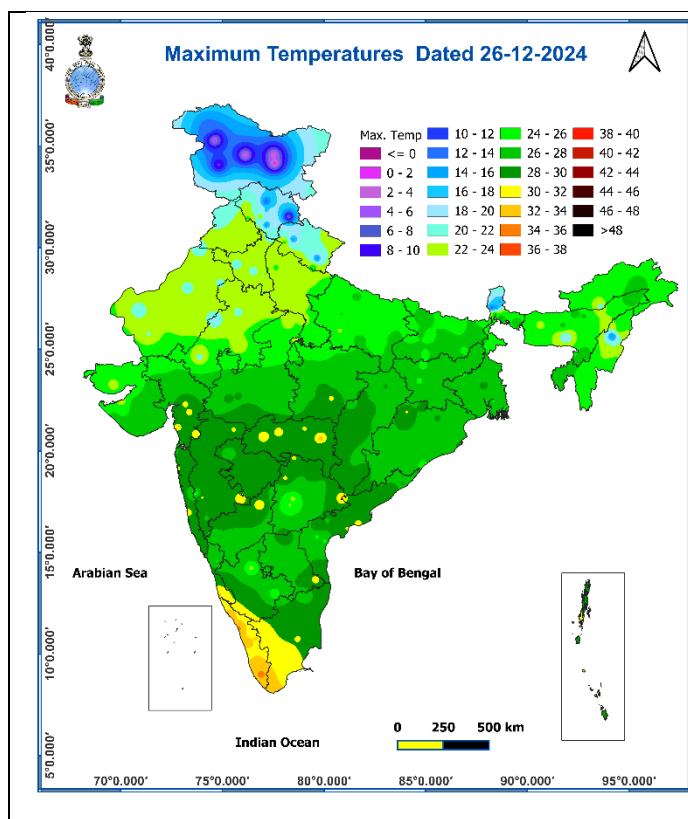
- Keep the harvested produce in safer places or cover the produce with tarpaulin sheets in the fields.
- Use hail nets to protect orchards and vegetable plants in **Himachal Pradesh, Uttarakhand, Punjab, Haryana, West Uttar Pradesh, East Rajasthan, Madhya Pradesh, Vidarbha, Madhya Maharashtra, Marathwada and Gujrat region.**
- In **Himachal Pradesh** and **Uttarakhand**, in case of heavy snowfall, shake the trees to remove snow immediately from the branches.
- Make necessary arrangements to drain out excess water from standing crop fields and vegetables in **Haryana, West Uttar Pradesh, West Madhya Pradesh, Tamil Nadu; Coastal Andhra Pradesh and Rayalaseema.**
- Provide mechanical support to horticultural crops and staking to vegetables.
- In **Arunachal Pradesh, Meghalaya, Nagaland** and **Manipur**, 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 and Fishery

- Keep the animals inside the shed during heavy rainfall/ hailstorms and provide them with balanced feed.
- Store feed and fodder in a safe place to prevent spoilage.
- Remove excess water from fish ponds to avoid losses of fish (if feasible).
- 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.

Fig. 1: Maximum Temperatures

Fig. 2: Departure of Maximum Temperatures



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Fig. 3: Minimum Temperatures

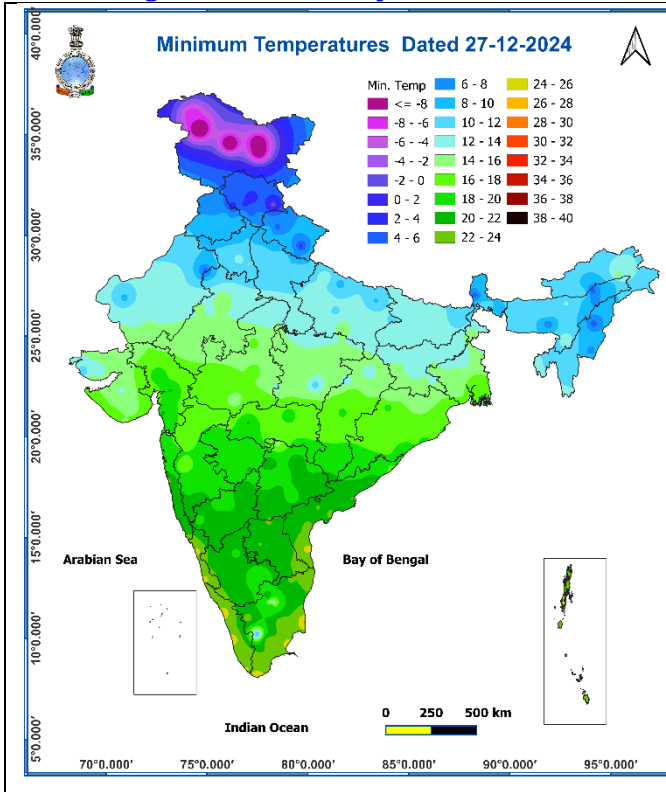


Fig. 4: Departure of Minimum Temperatures

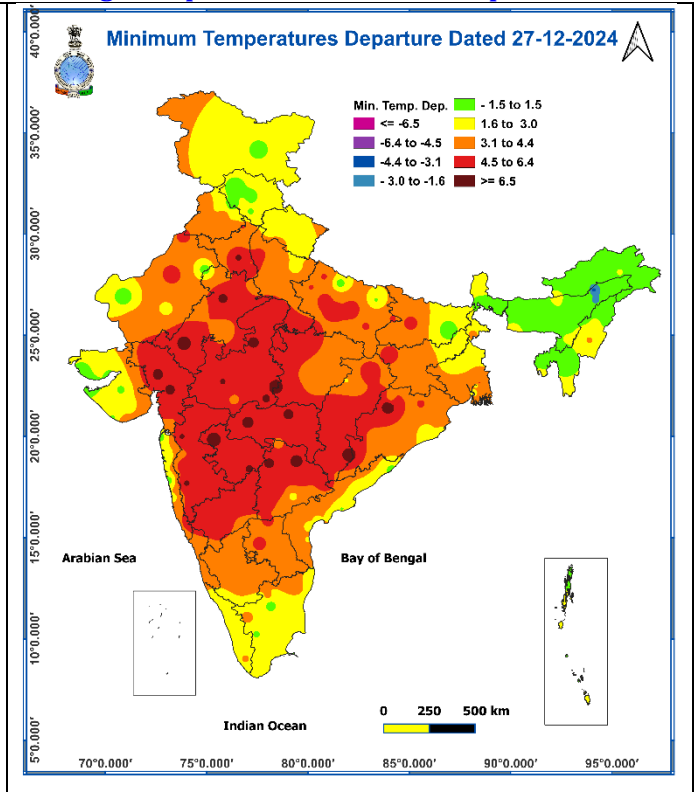
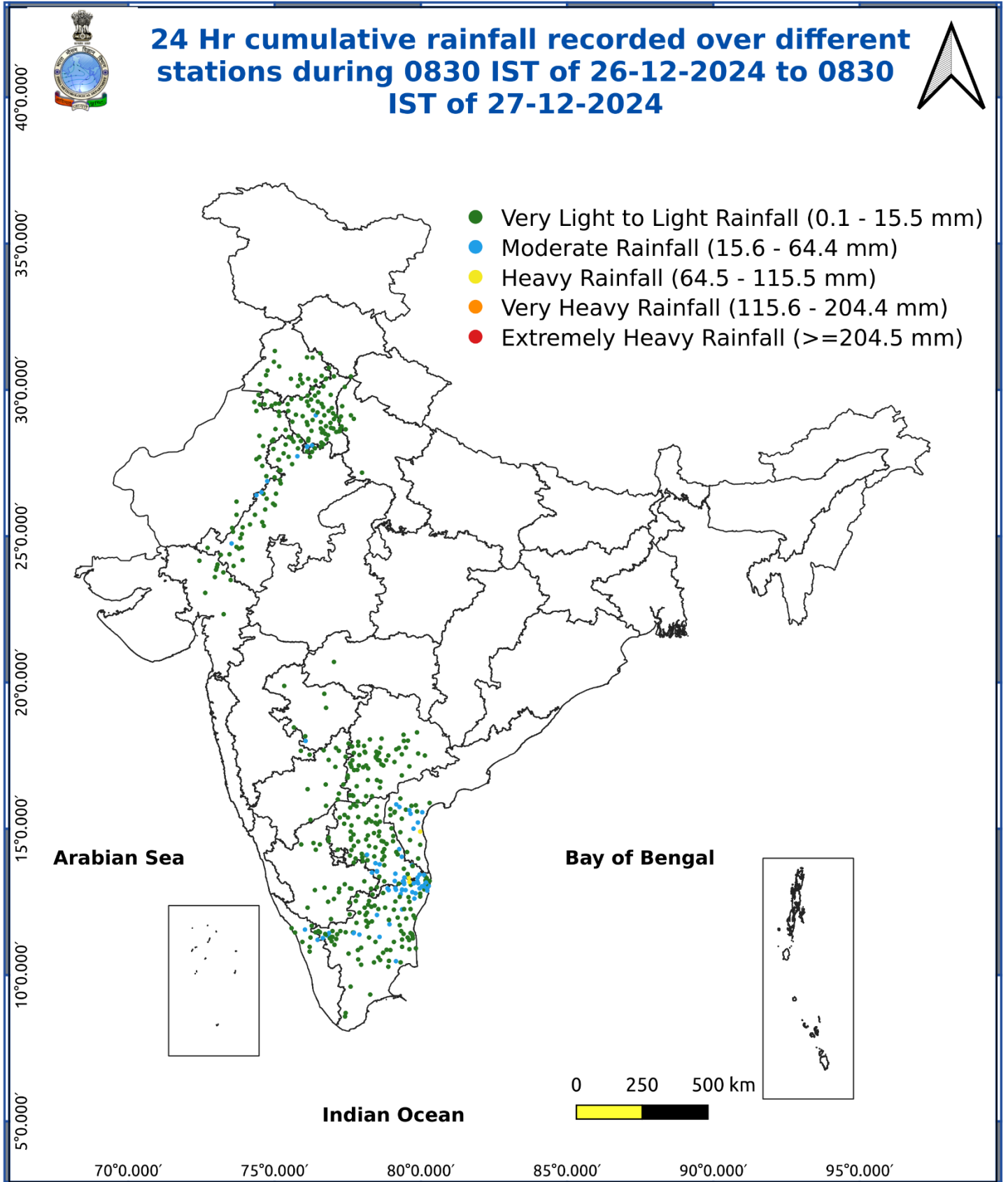


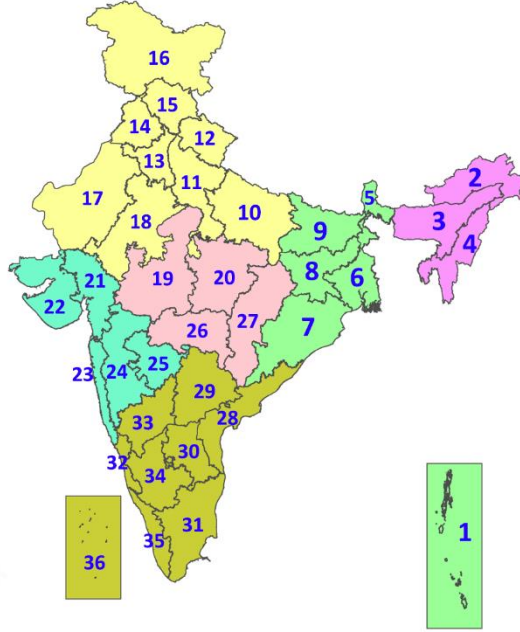
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



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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)



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	<p>Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)</p>
Dust/Sand Storm	<p>An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.</p>
Frost	<p>Ice deposits on ground</p> <p>Air temperature $\leq 4^\circ\text{C}$ (over Plains)</p>
Squall	<p>A strong wind that rises suddenly, lasts for atleast 1 minute.</p> <p>Moderate: Wind speed 52-61 kmph</p> <p>Severe: Wind speed 62-87 kmph</p> <p>Very Severe: Wind speed >87 kmph</p>
Sea State	<p>Effect of various waves in the sea over specific area</p> <p>Rough to very rough: Wind speed 41-62 kmph (22-33 knots) & Wave height 2.5-6 metre</p> <p>High to very high: Wind speed 63-117 kmph (34-63 knots) & Wave height 6-14 metre</p> <p>Phenomenal: Wind speed >117 kmph (>63 knots) & Wave height >14 metre</p>
Cyclone	<p>Cyclonic Storm: Wind speed 62-87 kmph (34-47 knots)</p> <p>Severe Cyclonic Storm: Wind speed 88-117 kmph (48-63 knots)</p> <p>Very Severe Cyclonic Storm: Wind speed 118-165 kmph (64 - 89 knots)</p> <p>Extremely Severe Cyclonic Storm: Wind speed 166-220 kmph (90 -119 knots)</p> <p>Super Cyclone Strom: Wind speed >220 kmph (>119 knots)</p>