Friday, December 13, 2024
Time of Issue: 0845 hours IST
(MORNING)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

Weather Systems:

- The **well marked low pressure area** over Gulf of Mannar & neighbourhood now lies as a low pressure area over Gulf of Mannar & adjoining Comorin area. The associated upper air cyclonic circulation extends up to mid-tropospheric levels. It is likely to move westwards towards Maldives & adjoining Lakshadweep area across Comorin area and further weaken gradually during the next 24 hours.
- The **Western disturbance** is now seen as a cyclonic circulation over north Pakistan & neighbourhood with the trough aloft in middle tropospheric westerlies with its axis at 5.8 km above mean sea level runs roughly along Long. 73°E to the north of Lat. 30°N.

Forecast & Warnings (upto 7 days):

- **Tamil Nadu, Puducherry & Karaikal: Heavy to very heavy rainfall** at isolated places on 17th December. Isolated **heavy rainfall** is also very likely on 13th, 16th & 18th December.
- **Kerala & Mahe: Heavy to very heavy rainfall** at isolated places on 13th December. Isolated **heavy rainfall** is also very likely on 17th & 18th December.
- **Coastal Andhra Pradesh & Rayalaseema: Heavy rainfall** at isolated places very likely on 17th & 18th December.
- **South Interior Karnataka: Heavy rainfall** at isolated places very likely on 17th December.
- **Lakshadweep: Heavy rainfall** at isolated places very likely on 13thDecember.
- **Andaman & Nicobar Islands: Heavy rainfall** at isolated places very likely during 13th -15th December.

ii. Temperature, Cold Wave and Fog Forecast:

Forecast of temperature:

- No significant change in minimum temperatures likely over Northwest & Central India during next 5 days.
- Gradual fall in minimum temperatures by 2-3°C likely over East India during next 2 days and no significant change thereafter.
- Gradual rise in minimum temperatures by 2-3°C likely over West India (except Gujarat State) during next 5 days.

Cold Wave Warnings:

Cold wave conditions very likely in some parts of Punjab during 13th-15th and Uttar Pradesh on 15th; in isolated pockets over Haryana, Chandigarh during 13th-15th, Rajasthan, Chhattisgarh on 13th, Madhya Pradesh during 13th-16th, Gangetic West Bengal, Bihar and Jharkhand on 13th & 14th, Delhi on 13th & 14th, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad during 13th-16th, December.

Cold Day Warnings:

Cold Day conditions very likely in isolated pockets over Madhya Pradesh on 13th & 14th December.

Dense Fog Warnings:

Dense fog conditions very likely to prevail during late night/early morning hours in isolated pockets of Sub-Himalayan West Bengal & Sikkim, Bihar till 13th, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura till 17th December.

Ground Frost Warnings:

Ground Frost conditions very likely in isolated pockets over on Uttar Pradesh on 13th December.

Weather Realised (past 24 hours) & forecast (during 13th Dec. to 15th Dec. 2024) over Delhi/NCR

Past Weather: There has been a slight fall in minimum temperature over Delhi/NCR on 12th December. The Maximum and Minimum temperatures over Delhi were in the range of 20 to 24°C and 04 to 06°C respectively. The Minimum temperature was below normal upto 3 to 5°C and Maximum temperature was below normal upto 1 to 5°C over the most places.

Weather Forecast:

13.12.2024: Mainly clear sky with cold wave conditions at isolated places. The predominant surface wind is likely to be from northwest direction with speed less than 08 kmph during morning hours. Smog/mist is likely in the morning. The wind speed will increase thereafter becoming less than 14 kmph from northwest direction during afternoon. It will decrease thereafter becoming less than 08 kmph from northwest direction during evening and night. Smog/mist is likely in the evening/night.

14.12.2024: Mainly clear sky with cold wave conditions at isolated places. The predominant surface wind is likely to be from northwest direction with speed less than 08 kmph during morning hours. Smog/mist is likely in the morning. The wind speed will gradually increase becoming 10-12 kmph from northwest direction during afternoon. It will decrease thereafter becoming less than 08 kmph from northwest direction during evening and night. Smog/mist is likely in the evening/night.

15.12.2024: Mainly clear sky. The predominant surface wind is likely to be from northwest direction with wind speed less than 06 kmph during morning hours. Smog/mist is likely in the morning. The wind speed will increase thereafter becoming 08-10 kmph from northwest direction during afternoon. It will gradually decrease becoming less than 04 kmph from northwest direction during evening and night. Smog/mist is likely in the evening/night.

Main Weather Observations:

- **Rainfall distribution** (from 0830 hours IST to 1730 hours IST of yesterday): **at many places** over Tamil Nadu, Puducherry & Karaikal; **at a few places** over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Rayalaseema and Kerala & Mahe; **at isolated** places over Coastal Andhra Pradesh & Yanam, Rayalaseema.

- **Significant amount of rainfall** (from 0830 hours IST to 1730 hours IST of yesterday) (in cm): **Tamil Nadu, Puducherry & Karaikal:** Tiruttani, Atiramapattinam & Chennai-8 each; Nungambakkam & Karaikal-4 each; Vercaud-3; Nagapattinam, K. Paramathy, Tiruppattur -2 each; Dharmapuri, Kodaikanal, Madurai, Tiruchirappalli, Salem, Cuddalore, Parangipettai, Coimbatore -1 each; **Rayalaseema:** Tirupathi-7; Arogyaram-1; **Kerala & Mahe:** Punalur & Thiruvananthapuram -1 each; **South Interior Karnataka:** Bangalore -1.

- **Heavy rainfall observed** (from 0830 hours IST to 1730 hours IST of yesterday): **Heavy to very heavy rainfall** at isolated places over Tamil Nadu, Puducherry & Karaikal; **Heavy rainfall** at isolated places over Rayalaseema.

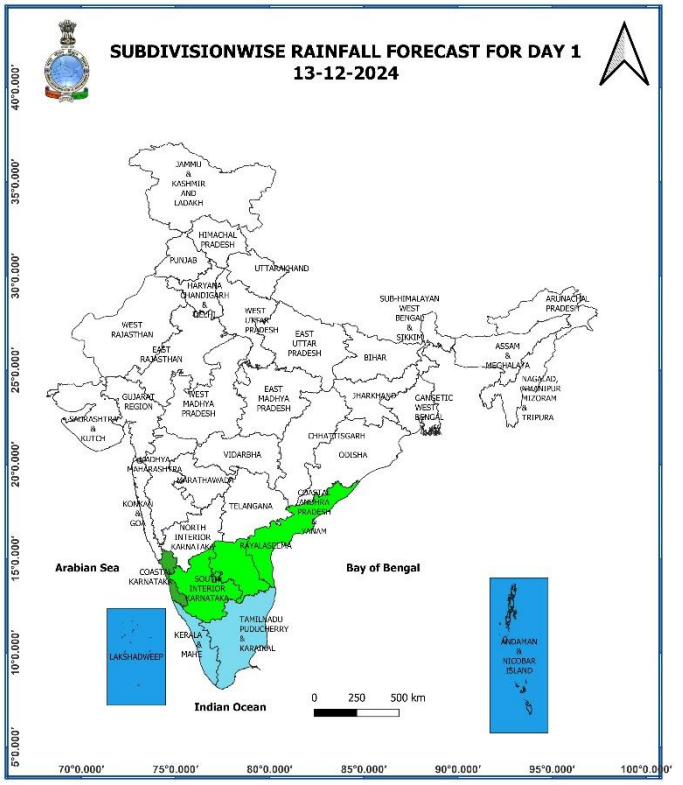
- **Minimum Temperatures Departures (as on 12-12-2024):** Minimum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at a few places over Coastal Andhra Pradesh & Yanam and Rayalaseema; at isolated places over Tamil Nadu, Puducherry & Karaikal; **above normal (1.6°C to 3.1°C)** at many places over Kerala & Mahe; at isolated places over South Interior Karnataka, Madhya Maharashtra, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad. These were **markedly below normal (-5.1°C or less)** at isolated places over Rajasthan; **appreciably below normal (-3.1°C to -5.0°C)** at a few places over East Uttar Pradesh, Madhya Pradesh; at isolated places over Punjab, Haryana-Chandigarh-Delhi, Gangetic West Bengal, Assam & Meghalaya; **below normal (-1.6°C to -3.0°C)** at a few places over Chhattisgarh, Vidarbha, Marathwada, Telangana, Jharkhand; at isolated places over Saurashtra & Kutch, Bihar and near normal over rest parts of the country. Yesterday, **the lowest minimum temperature** of **1.0°C** was reported at **Sikar (East Rajasthan)** over the plains of the country. **(Fig.4)**

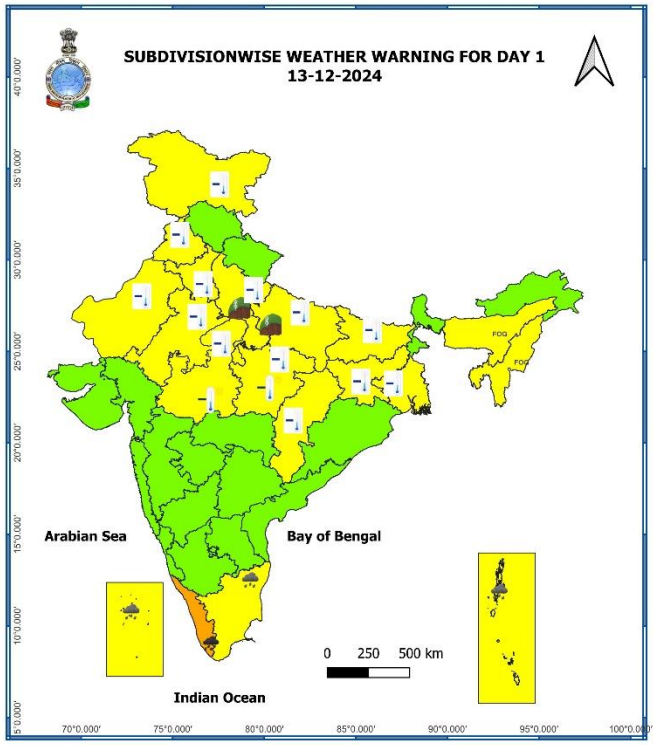
- **Maximum Temperature Departures (as on 12-12-2024):** Maximum temperatures were **above normal (1.6°C to 3.0°C)** at isolated places over Uttarakhand. These are **markedly below normal (-5.1°C or less)** at isolated places over Tamil Nadu, Puducherry & Karaikal, Rayalaseema and Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; **appreciably below normal (-3.1°C to -5.0°C)** at many places over South Interior Karnataka; **below normal (-1.6°C to -3.0°C)** at many places over Gangetic West Bengal; at a few places over Rajasthan, Gujarat state and West Madhya Pradesh; at isolated places over Haryana-Chandigarh-Delhi, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Vidarbha, Kerala & Mahe, Himachal Pradesh and Sub-Himalayan West Bengal & Sikkim near normal over rest parts of the country. Yesterday, **the highest maximum temperature** of **35.0°C** was reported at **Karwar (Coastal Karnataka)** over the plains of the country. **(Fig. 2)**

Meteorological Analysis (Based on 0530 hours IST)

- The **well marked low pressure area** over Gulf of Mannar & neighbourhood now lies as a **low pressure area** over Gulf of Mannar & adjoining Comorin area. The associated upper air cyclonic circulation extends up to mid-tropospheric levels. It is likely to move westwards towards Maldives & adjoining Lakshadweep area across Comorin area and further weaken gradually during the next 24 hours.
- The **Western disturbance** as a Cyclonic Circulation over north Pakistan & neighbourhood at 3.1 km above mean sea level persists. The trough aloft in middle tropospheric westerlies with its axis at 5.8 km above mean sea level roughly along Long. 73°E to the north of Lat. 30°N also persists.
- The **cyclonic circulation** over south Assam & neighbourhood at 1.5 km above mean sea level persists.
- **Subtropical westerly Jet Stream with core winds** of the order upto 150 knots at 12.6 km above mean sea level continue to prevail over Northwest India.

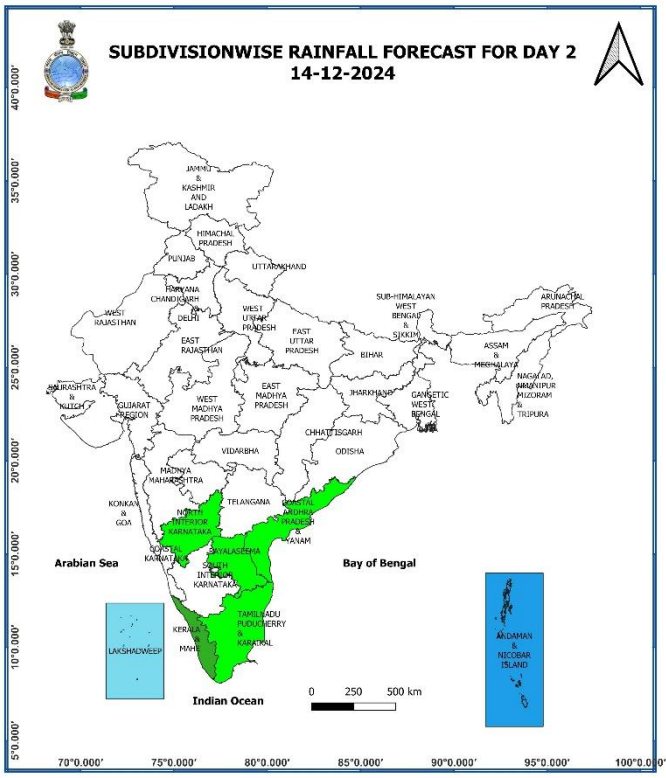
Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 20th December, 2024)

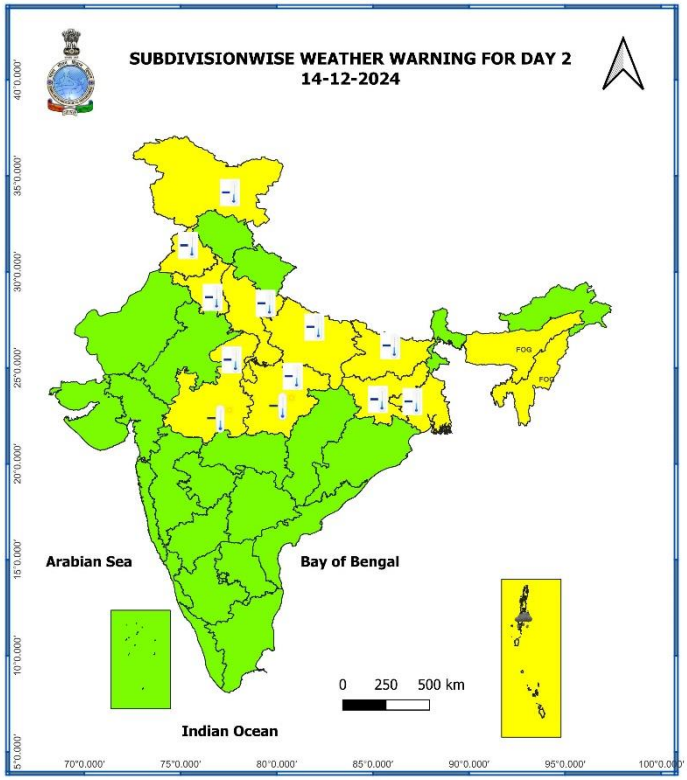




13 December (Day 1):

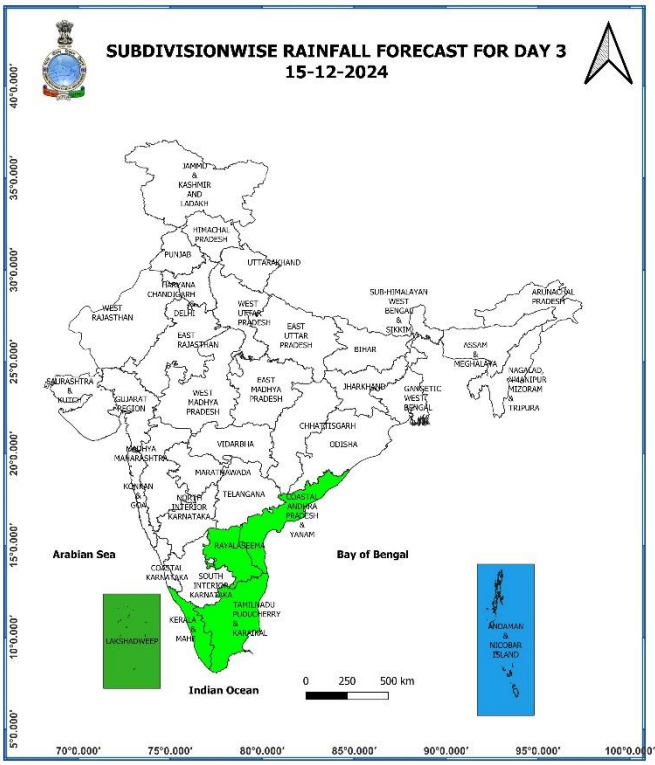
- **Heavy to very heavy rainfall (≥ 12 cm)** very likely at isolated places over Kerala & Mahe; **Heavy rainfall (≥7 cm)** very likely at isolated places over Andaman & Nicobar Islands, Tamil Nadu, Puducherry & Karaikal and Lakshadweep.
- **Dense fog** very likely in isolated pockets of Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura in night/morning hours.
- **Cold Wave Conditions** very likely in some parts of Punjab, Uttar Pradesh; in isolated pockets of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Haryana-Chandigarh-Delhi, Rajasthan, Chhattisgarh, Gangetic West Bengal, Bihar, Jharkhand and Madhya Pradesh.
- **Cold Day Conditions** very likely in isolated pockets of Madhya Pradesh.
- **Ground Frost Conditions** very likely at isolated places over Uttar Pradesh.
- **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail along and off Kerala coast, Lakshadweep area, Comorin areas, Gulf of Mannar, along and off Tamil Nadu coast. Fishermen are advised not to venture into these areas.

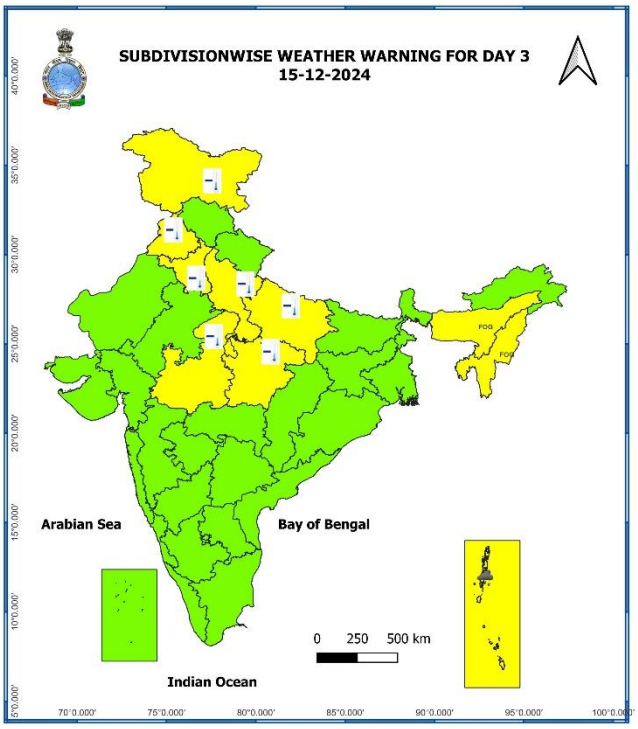




14 December (Day 2):

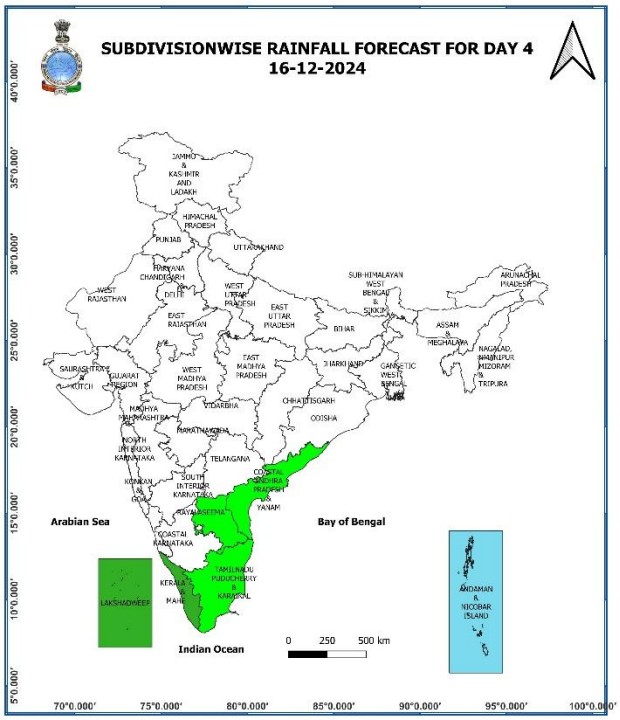
- **Heavy rainfall (≥7 cm)** very likely at isolated places over Andaman & Nicobar Islands.
- **Dense fog** very likely in isolated pockets of Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura in night/morning hours.
- **Cold Wave Conditions** very likely in some parts of Punjab; in isolated pockets of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Haryana-Chandigarh-Delhi, Uttar Pradesh, Gangetic West Bengal, Bihar, Jharkhand and Madhya Pradesh.
- **Cold Day Conditions** very likely in isolated pockets of Madhya Pradesh.
- **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over Lakshadweep area off Kerala coast, Comorin area, Gulf of Mannar and south Andaman sea. Fishermen are advised not to venture into these areas.

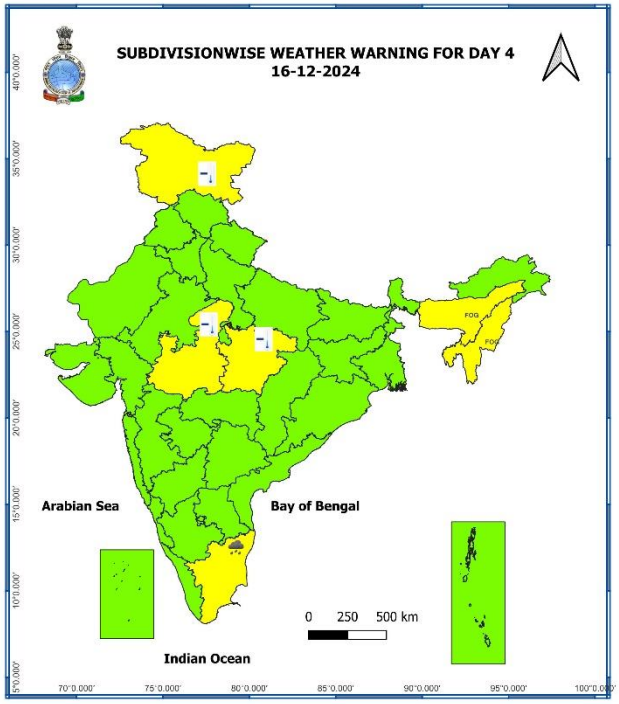




15 December (Day 3):

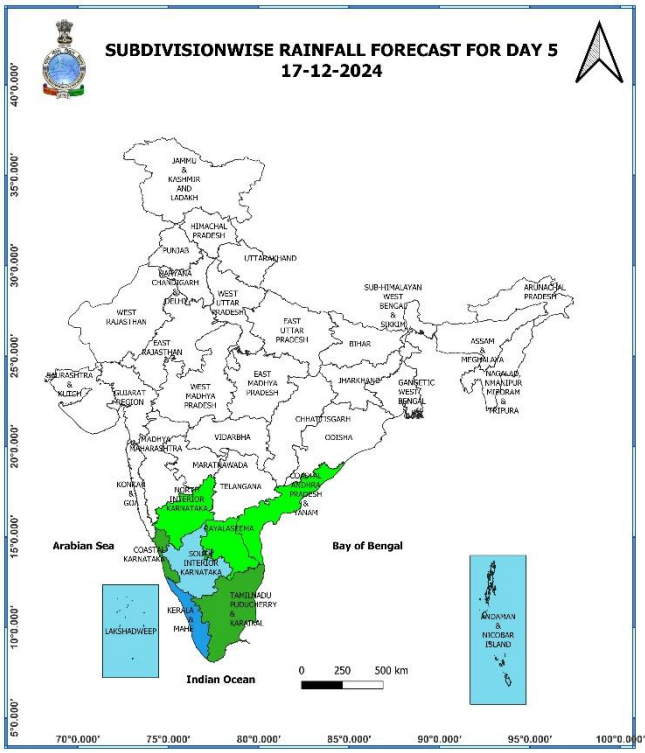
- **Heavy rainfall (≥7 cm)** likely at isolated places over Andaman & Nicobar Islands.
- **Dense fog** likely in isolated pockets of Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura in night/morning hours.
- **Cold Wave Conditions** likely in some parts of Punjab; in isolated pockets of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Haryana-Chandigarh, Uttar Pradesh and Madhya Pradesh**.**
- **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over most parts of southeast and adjoining southwest Arabian sea, most parts of southeast Bay of Bengal and adjoining areas and Andaman sea. Fishermen are advised not to venture into these areas.

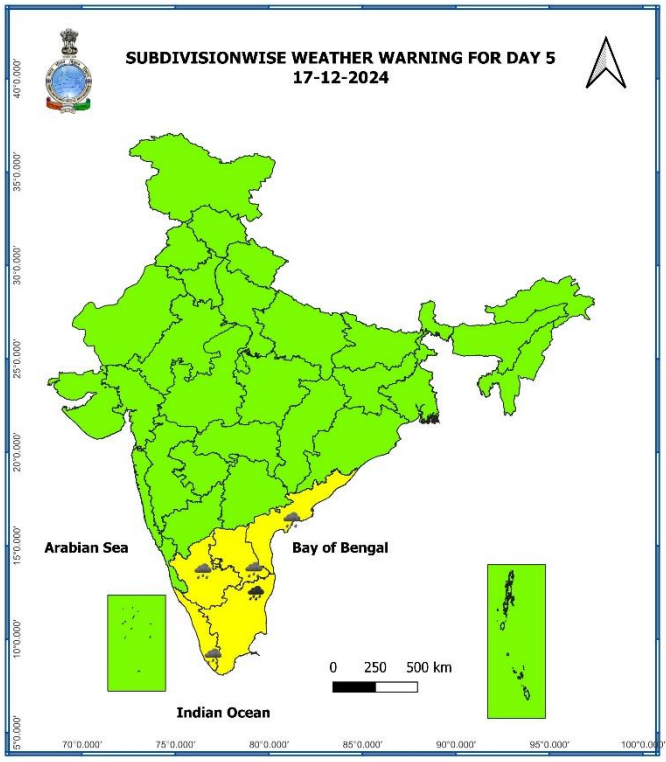




16 December (Day 4):

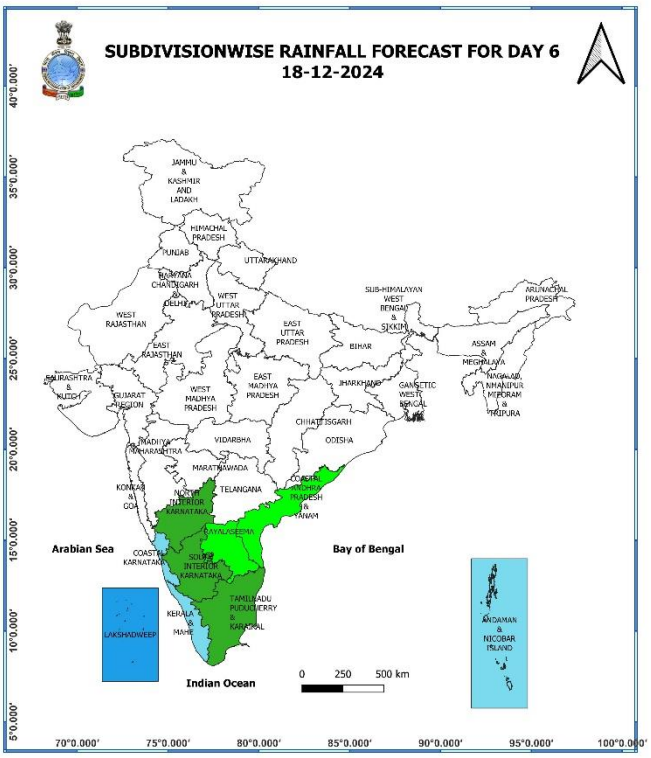
- **Heavy rainfall (≥7 cm)** likely at isolated places over Tamil Nadu, Puducherry & Karaikal.
- **Dense fog** very likely in isolated pockets of Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura in night/morning hours.
- **Cold Wave Conditions** likely in isolated pockets of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Madhya Pradesh.
- **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over most parts of southeast and parts of southwest Bay of Bengal and Andaman sea. Fishermen are advised not to venture into these areas.

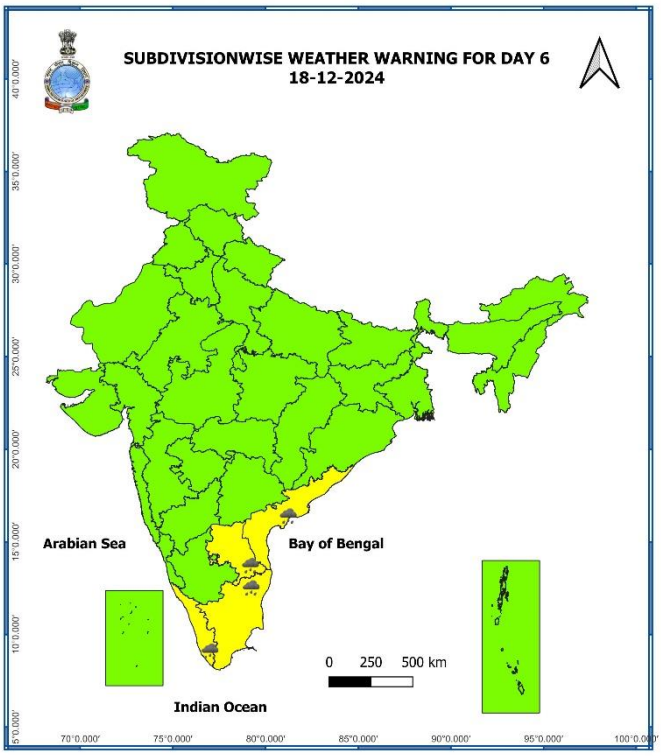




17 December (Day 5):

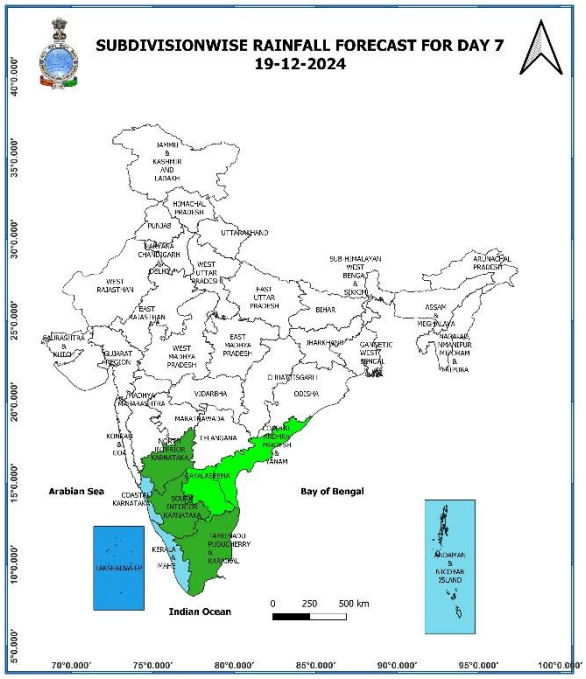
- **Heavy to very heavy rainfall (≥ 12 cm)** likely at isolated places over Tamil Nadu, Puducherry & Karaikal; **Heavy rainfall (≥7 cm)** at isolated places over Kerala & Mahe, South Interior Karnataka, Coastal Andhra Pradesh & Yanam, Rayalaseema.

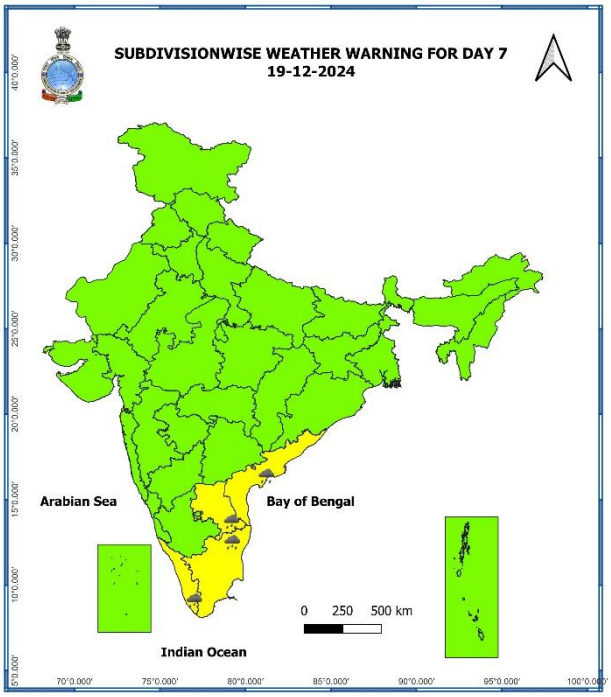




18 December (Day 6):

- **Heavy rainfall (≥7 cm)** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema.





19 December (Day 7):

❖ **Heavy rainfall (≥7 cm)** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema.

Weather Outlook for subsequent 3 days (During 20th December – 22nd December, 2024)

❖ Isolated to Scattered to light to moderate rainfall likely over some parts of south peninsular India and light rainfall over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad.

❖ 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 due to very heavy rainfall:

- **Isolated heavy to very heavy rainfall** very likely over Kerala & Mahe on 13th December.
- **Low to Moderate flash flood risk** likely over few watersheds & neighbourhoods of Kerala & Mahe and Tamil Nadu, Puducherry & Karaikal on 13th & 14th December. **(ANNEXURE I)**

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 and roadways 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/landslips/mud slips/land sinks/mud sinks.
- Damage to horticulture and standing crops in some areas due to inundation and wind.
- It may lead to riverine flooding in some river catchments (for riverine flooding please visit Web page of CWC).

Action Suggested

- Judicious regulation of surface transports including railways and roadways.
- 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 due to dense fog in the night /morning hour:

❖ 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:

- 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 woolen 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 woolen 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 likely over Tamil Nadu, Kerala, South Interior Karnataka, Andhra Pradesh, North-West India and Madhya Pradesh:

- In Tamil Nadu, Kerala, South Interior Karnataka and Andhra Pradesh, provide adequate drainage facilities for removal of excess water from standing crop fields and fruit orchards. 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.
- In North-West India and Madhya Pradesh, apply light and frequent irrigation to the standing crops in the evening to protect the crops 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 and provide balanced feed.
- Store the feed and fodder at safer place to avoid spoilage from rainfall.
- Construct an outlet with proper netting around the pond to drain out excess rain water, thereby preventing fishes/fingerlings from escaping in case of overflowing.
- Check and repair dykes around the ponds to avoid entry of runoff water from the catchment areas.
- Keep cattle inside the sheds during night and provide dry bedding to protect them from cold.
- Keep the chicks warm by providing artificial light in the poultry sheds.

Flash Flood Guidance: **ANNEXURE I**

24 hours Outlook for the Flash Flood Risk (FFR) till 0530 IST of 14-12-2024:

Low to Moderate Flash flood risk likely in few watersheds and neighbourhoods of following Met Sub-divisions during next 24 hours.

Tamil Nadu – Puducherry & Karaikal – Coimbatore, Tiruppur, Dindigul, Teni, Virudhunagar, Madurai, Tirunelveli, Kanyakumari, Tuticorin, Ramanathapuram, Sivaganga, Pudukkottai, Thanjavur, Thiruvarur, Nagapattinam, Karaikal, Ariyalur, Perambalur, Tiruchirapalli and Cuddalore districts.

Kerala & Mahe – Ernakulam, Idukki, Pattanmittia, Thiruvananthapuram, Trishur & Palakkad districts.

Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over Area of Concern (AoC) as shown in map due to expected rainfall occurrence in next 24 hours.

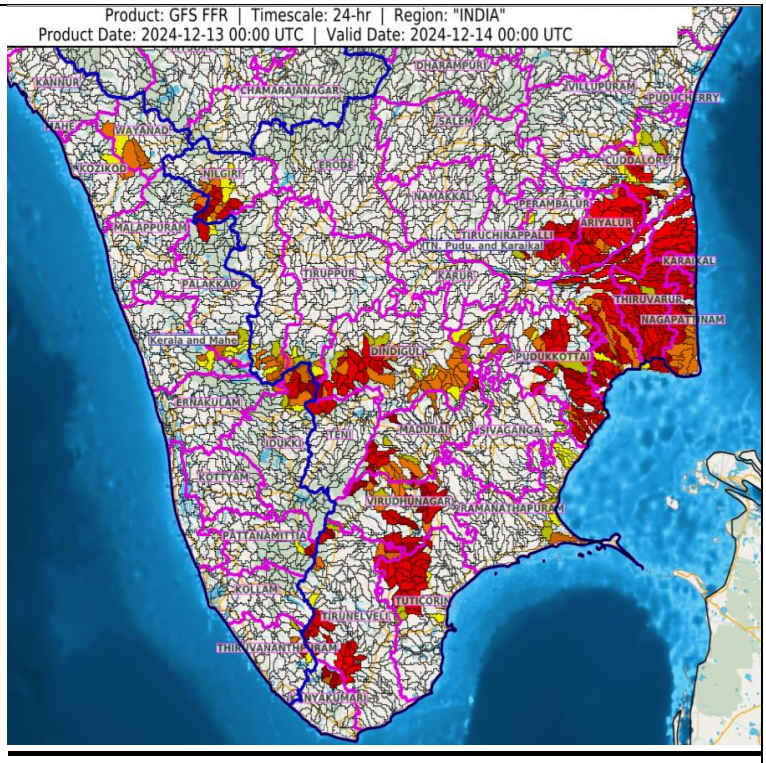


Fig. 1: Maximum Temperatures

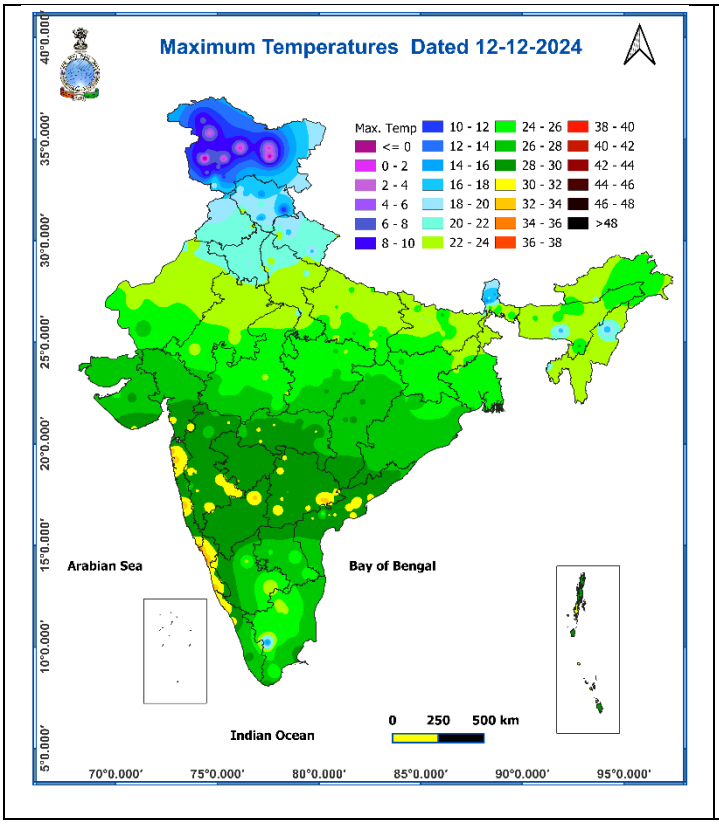


Fig. 2: Departure of Maximum Temperatures

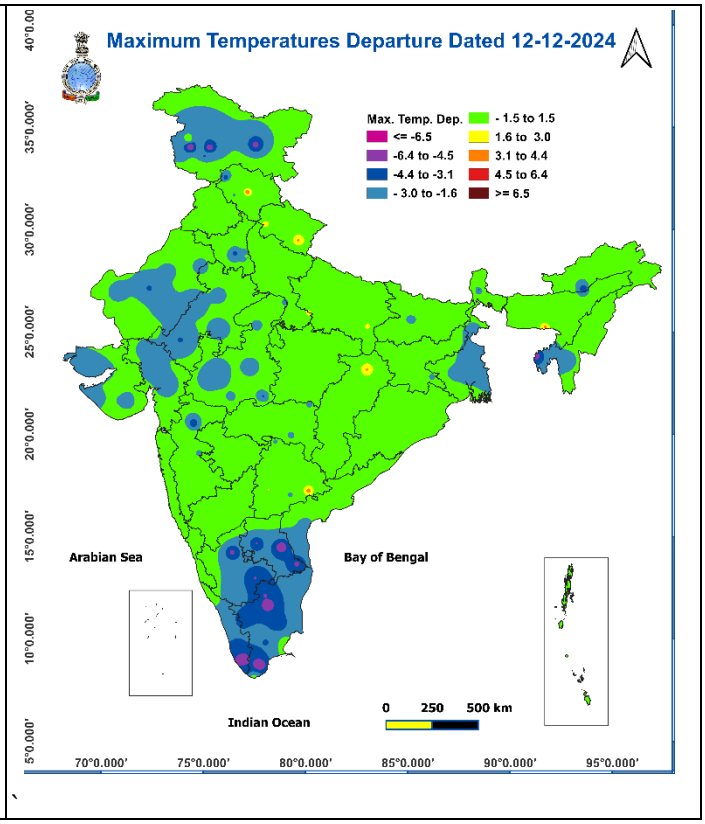


Fig. 3: Minimum Temperatures

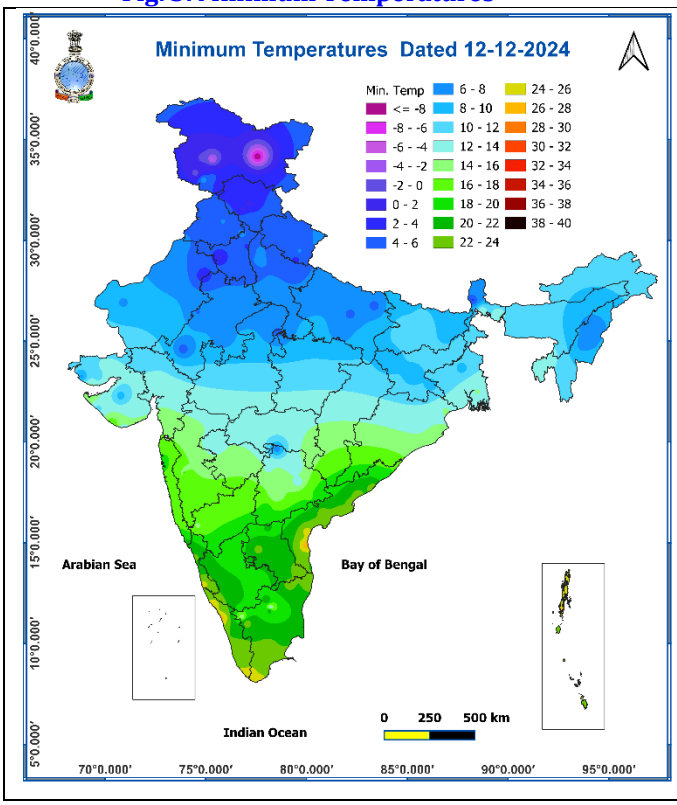
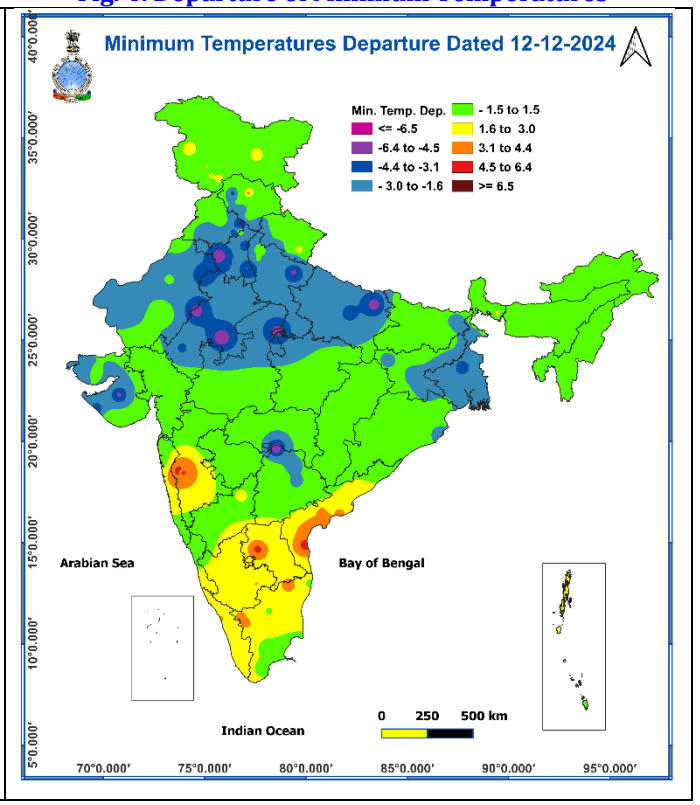
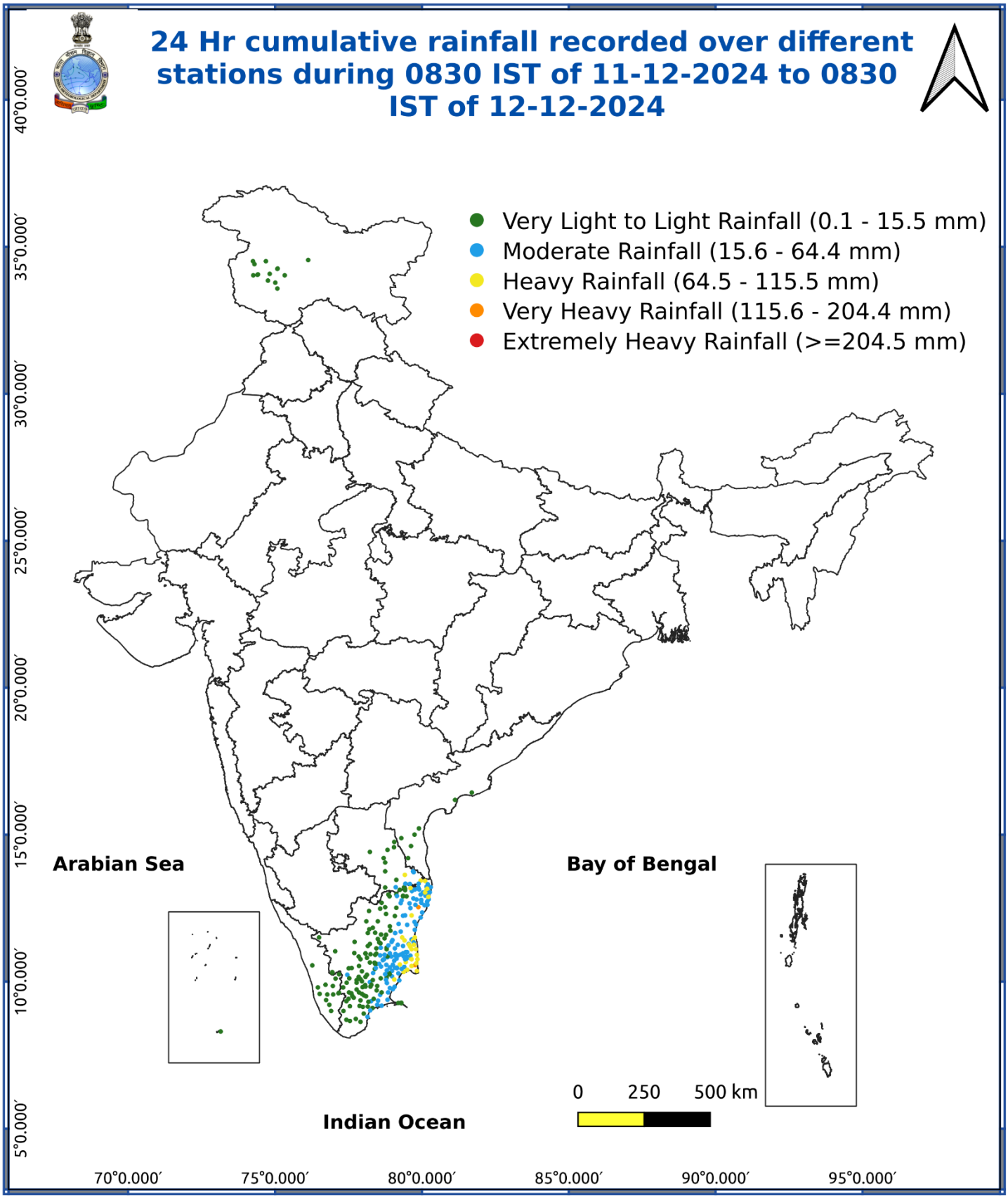


Fig. 4: Departure of Minimum Temperatures



* 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)

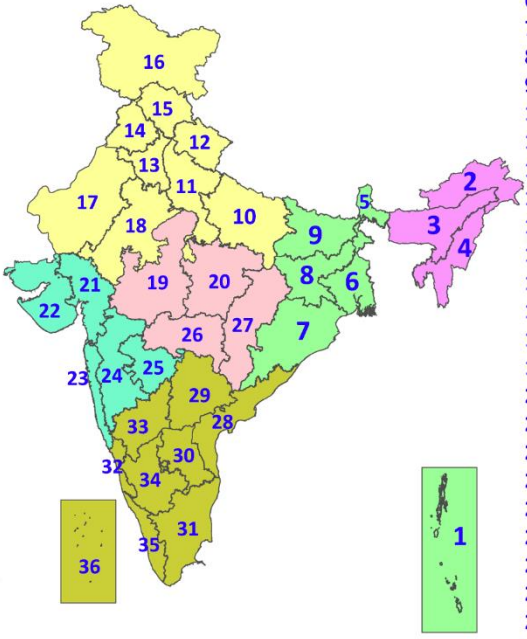
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



* 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 Rain
Very Heavy Rain
Extremely Heavy Rain
Thunder & Lightning
Hailstorm
Dust Raising Winds

Heavy Snow
Dust Storm
Heat Wave
Warm Night
Hot Day
Hot & Humid
Strong Surface Winds

Cold Wave
Cold Day
Ground Frost

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

* 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)

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 ≥40° C for plains and ≥30° 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 ≥6.5° C **(b). Based on Actual maximum temperature** **Heat Wave:** When actual maximum temperature ≥45°C. **Severe Heat Wave:** When actual maximum temperature ≥47°C **(c). Criteria for heat wave for coastal stations** When maximum temperature departure is >4.5°C from normal. Heat Wave may be described provided maximum temperature ≥37°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 °C.
Cold Wave	**When minimum temperature of a station ≤10°C for plains and ≤0°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 ≤ -6.5 °C **(b) Based on actual Minimum Temperature (for Plains only)** **Cold Wave :** When Minimum Temperature is ≤ 4.0 °C **Severe Cold Wave:** When Minimum Temperature is ≤ 2.0 °C **(c) For Coastal Stations** When Minimum Temperature departure is ≤-4.5 °C & actual Minimum Temperature is ≤ 15 °C
Cold Day	**When minimum temperature of a station ≤10°C for plains and ≤0°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 ≤ -6.5 °C
Fog	**Phenomenon of small droplets suspended in air and the horizontal visibility < 1km** **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 ≤4°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)

* 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)