

Monday, December 2, 2024
Time of Issue: 1340 hours IST
(MID-DAY)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

Weather Systems:

- ❖ The **Cyclonic Storm "FENGAL" [pronounced as FEINJAL]** over north coastal Tamil Nadu & Puducherry weakened into a **deep depression** over the same region at 1130 hrs IST of yesterday, into a depression at 1730 hrs IST and into a well marked low pressure area over north interior Tamil Nadu at 0530 hrs IST of today, the 02nd December and persisted over the same region at 0830 hrs IST. The remnant low pressure area is likely to emerge into southeast & adjoining eastcentral Arabian Sea off north Kerala-Karnataka coasts around 03rd December 2024.
- ❖ A **Western disturbance** lies as a trough in middle tropospheric westerlies roughly running along Long. 65°E to the north of Lat. 30°N.

Forecast & Warnings (upto 7 days) (Annexure II & III):

- ✓ **North interior Tamil Nadu: Heavy to very heavy rainfall at a few places with extremely heavy falls** at isolated places very likely over ghat districts of Tamil Nadu adjoining to Kerala on 02nd December. It will decrease becoming isolated heavy rainfall on 03rd December.
- ✓ **Kerala: Heavy to very heavy rainfall at a few places with extremely heavy falls at isolated places** very likely over Kerala on 02nd December and **Heavy to very heavy rainfall** at isolated places very likely on 03rd December.
- ✓ **South Interior Karnataka: Heavy to very heavy rainfall with extremely heavy falls at isolated places** very likely over **South Interior Karnataka** on 02nd and isolated heavy rainfall on 03rd December.
- ✓ **Coastal Karnataka: Heavy to very heavy rainfall** at isolated places very likely on 02nd and isolated heavy rainfall on 03rd December.
- ✓ **Royalaseema: Isolated heavy rainfall** on very likely over Royalaseema on 02nd December.
- ✓ **Lakshadweep: Isolated heavy rainfall** on very likely over Lakshadweep on 03rd & 04th December.

ii. Temperature conditions and Forecast:

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

There was no significant change in minimum temperature over most parts of the country during past 24 hours. Minimum temperatures are **markedly above normal (5°C or more)** at a few places over Telangana and Odisha; **appreciably above normal (3°C to 5°C)** at a few places over Gangetic West Bengal and Coastal Andhra Pradesh & Yanam; at isolated places over Punjab, Bihar, Maharashtra, Nagaland, Manipur, Mizoram & Tripura; **above normal (1°C to 3°C)** at many places over Rajasthan, Tamil Nadu, Puducherry & Karaikal; at a few places over Kerala & Mahe; at isolated places over Haryana-Chandigarh-Delhi, Uttar Pradesh, Chhattisgarh, East Madhya Pradesh and Andaman & Nicobar Islands. These are **appreciably below normal (-5°C to -3°C)** at isolated places over Assam & Meghalaya; **below normal (-3°C to -1°C)** at isolated places over West Madhya Pradesh, Saurashtra & Kutch and near normal over rest parts of the country. Today, **the lowest minimum temperature** of 7.8°C is reported at **Nowgong (East Madhya Pradesh)** over the plains of the country.

Forecast of temperature:

- ❖ No significant change in minimum temperatures likely over Northwest, Central & East India during next 2-3 days and gradual fall by 2-4°C thereafter.
- ❖ No significant change in minimum temperatures likely over West India during next 4-5 days.

Weather Realised (past 24 hours) & forecast (during 02nd Dec. to 05th Dec. 2024) over Delhi/NCR

Past Weather:

There has been a slight fall in minimum temperature and slight rise in maximum temperature over Delhi/NCR during past 24hr. The Maximum and Minimum temperature over Delhi is in the range of 24 to 27°C and 10 to 13°C respectively. The maximum and minimum temperature were above normal by 01 to 02 °C over most places. Mainly smog/ shallow fog condition with predominant surface wind from northwest direction with wind speed reaching 04 to 12 kmph prevailed during day time and calm wind during night time on 01.12.2024. Shallow fog reported at Safdarjung airport during early morning today. Safdarjung airport recorded lowest visibility 600 m during 0700 hours to 0730 hours IST which improved thereafter becoming 1200m at 0800 hours IST. Mainly clear sky condition with wind speed less than 08 kmph west direction prevailed over the region in the forenoon today.

Weather Forecast:

02.12.2024: Mainly clear sky. The predominant surface wind is likely to be northwest direction with wind speed less than 08 kmph till evening. It would decrease thereafter becoming less than 06 kmph from northwest direction during night. Smog/mist fog is likely in the evening/night.

03.12.2024: Mainly clear sky. The predominant surface wind is likely to be from northwest direction with speed less than 08 kmph during morning hours. Smog/shallow fog is likely in the morning. The wind speed will increase thereafter becoming less than 12 kmph from northwest direction during afternoon. It will decrease thereafter becoming less than 10 kmph from northwest direction during evening and night. Smog/mist is likely in the evening/night.

04.12.2024: Mainly clear sky. The predominant surface wind is likely to be from northwest direction with speed less than 08 kmph during morning hours. Smog/shallow fog is likely in the morning. The wind speed will gradually increase becoming 12-16 kmph from northwest direction during afternoon. It will decrease thereafter becoming less than 10 kmph from northwest direction during evening and night. Smog/mist is likely in the evening/night.

05.12.2024: Mainly clear sky. The predominant surface wind is likely to be from northwest direction with wind speed less than 08 kmph during morning hours. Smog/shallow fog in the morning. The wind speed will increase thereafter becoming 10-12 kmph from northwest direction during afternoon. It will gradually decrease becoming less than 08 kmph from northwest direction during evening and night. Smog/ mist is likely in the evening/night.

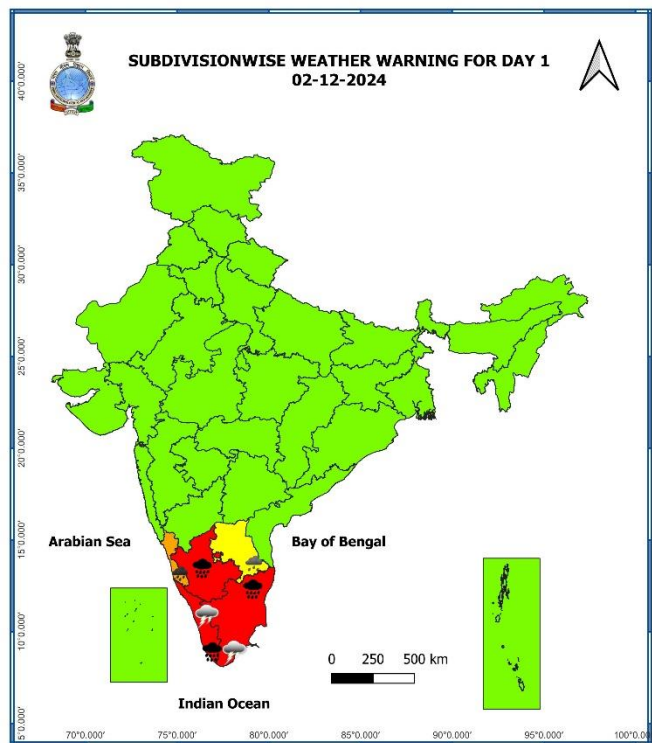
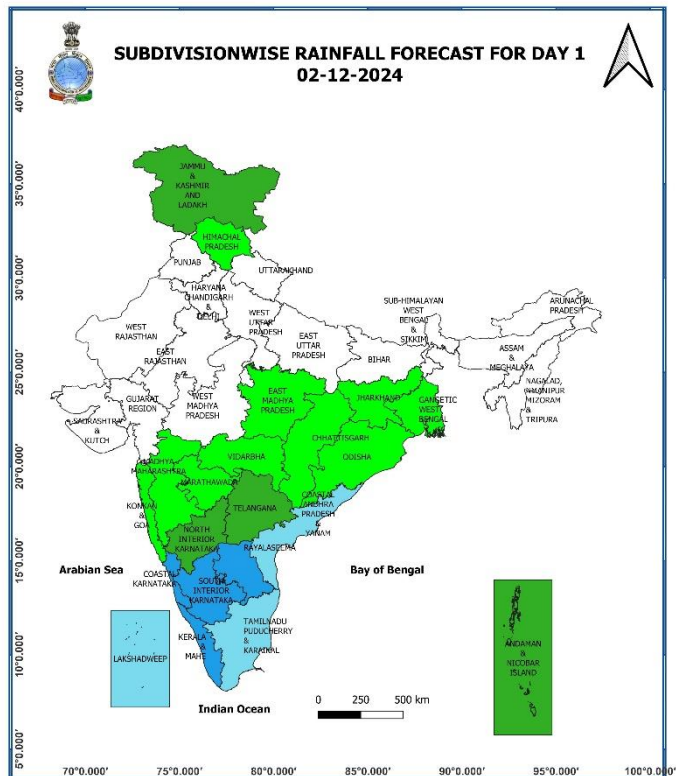
Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST of yesterday to 0830 hours IST of today): **at most places** over Kerala & Mahe, Coastal Andhra Pradesh & Yanam; **at many places** Tamil Nadu, Puducherry & Karaikal, Rayalaseema; **at a few places** over Andaman & Nicobar Islands, Odisha, Telangana, South Interior Karnataka; **at isolated places** over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Chhattisgarh, Gangetic West Bengal, Interior Karnataka.
- ❖ **Heavy rainfall recorded** (from 0830 hours IST of yesterday to 0830 hours IST of today): **Heavy to very heavy rainfall** occurred at many places with **extremely heavy rainfall** at isolated places over North interior Tamil Nadu and **Heavy to very heavy rainfall** at a few places over North coastal Tamil Nadu and Puducherry. **Exceptionally heavy rainfall** also occurred at isolated places over the districts of Krishnagiri & Villupuram of North Tamil Nadu (Uthangarai 50 cm and RSCL-2 Kedar 42 cm); **Heavy to very heavy rainfall** at isolated places over Kerala and **heavy rainfall** at isolated places over south Coastal Andhra Pradesh.
- ❖ **Significant amount of rainfall** (from 0830 hours IST of yesterday to 0830 hours IST of today) (in cm): **Tamil Nadu:** Uthangarai (dist Krishnagiri) 50, RSCL-2 Kedar (dist Villupuram) 42, RSCL-2 Soorapattu (dist Villupuram) 38, Vilupuram (dist Villupuram) 35, Harur (dist Dharmapuri) 33, RSCL-2 Mundiampakkam (dist Villupuram), RSCL-2 Koliyanur (dist Villupuram), DSCL Thirupalapandal (dist Kallakurichi) 32 each, DSCL Madampoondi (dist Kallakurichi) 31, BASL Mugaiyur (dist Villupuram), RSCL-2 Valavanur (dist Villupuram) 30 each, RSCL-2 Nemoor (dist Villupuram), BASL Manampoondi (dist Villupuram), RSCL-2 Kanjanur (dist Villupuram) 29 each, BASL Vengur (dist Kallakurichi) 27, Tirukoilur (dist Kallakurichi) 26, Jambukuttapatti (dist Krishnagiri), Pochampalli ARG (dist Krishnagiri) 25 each, Yercaud (dist Salem) 24, DSCL Eraiyur (dist Kallakurichi), Jamunamarathur (dist Tiruvannamalai) 23 each, Pambar Dam (dist Krishnagiri), BASL Manalurpet (dist Kallakurichi) 21 each, Thandarampettai (dist Tiruvannamalai), Barur (dist Krishnagiri), Pappireddipatti (dist Dharmapuri) 20 each, Penucondapuram (dist Krishnagiri), Sankarapuram (dist Kallakurichi) 19 each, Kallakurichi (dist Kallakurichi) 18, RSCL-3 Anandhapuram (dist Villupuram), DSCL Kalayanallur (dist Kallakurichi) 17 each; **Kerala:** Kodungallur (dist Thrissur) 19, Kottayam (dist Kottayam) 18, Kurudamannil (dist Pathanamthitta) 17, Kanjirappally (dist Kottayam) 16, Ranni (dist Pathanamthitta) 16, Konni (dist Pathanamthitta) 16, Hari pad (dist Alapuzha) 15, Kochi C.i.a.l. (dist Ernakulam) 15, Peermade To (dist Idukki) 15, Perumpavur (dist Ernakulam) 14, Alwaye (dist Ernakulam) 13, Aluva (dist Ernakulam) 13, Laha (dist Pathanamthitta) 13, Kunnathanam (dist Pathanamthitta) 12, Thycauttussery (dist Alapuzha) 12, Cherthala (dist Alapuzha) 12, Kalamassery (dist Ernakulam) 11, Konni (dist Pathanamthitta) 8, Kumarakam (dist Kottayam) 8, Vaikom (dist Kottayam) 7, Kozhikode (dist Kozhikode) 7, Piravam (dist Ernakulam) 7; **Coastal Andhra Pradesh & Yanam:** Yanam (dist Yanam) 8;
- ❖ **Minimum Temperature Departures (as on 02-12-2024):** Minimum temperatures are **markedly above normal (5.1°C or more)** at a few places over Telangana and Odisha; **appreciably above normal (3.1°C to 5.0°C)** at a few places over Gangetic West Bengal and Coastal Andhra Pradesh & Yanam; at isolated places over Punjab, Bihar, Maharashtra, Nagaland, Manipur, Mizoram & Tripura; **above normal (1.6°C to 3.0°C)** at many places over Rajasthan, Tamil Nadu, Puducherry & Karaikal; at a few places over Kerala & Mahe; at isolated places over Haryana-Chandigarh-Delhi, Uttar Pradesh, Chhattisgarh, East Madhya Pradesh and Andaman & Nicobar Islands. These are **appreciably below normal (-5.0°C to -3.1°C)** at isolated places over Assam & Meghalaya; **below normal (-3.0°C to -1.6°C)** at isolated places over West Madhya Pradesh, Saurashtra & Kutch and near normal over rest parts of the country. Today, **the lowest minimum temperature of 7.8°C** is reported at **Nowgong (East Madhya Pradesh)** over the plains of the country. **(Fig.4)**
- ❖ **Maximum Temperature Departures (as on 01-12-2024):** Maximum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Uttarakhand; **above normal (1.6°C to 3.0°C)** at many places over Himachal Pradesh; at isolated places over Punjab, Assam & Meghalaya, Telangana, Nagaland, Manipur, Mizoram & Tripura. These were **markedly below normal (-5.1°C or less)** at a few places over Odisha, Tamil Nadu, Puducherry & Karaikal; at isolated places over Chhattisgarh, Madhya Maharashtra, Kerala & Mahe; **appreciably below normal (-5.0°C to -3.1°C)** at isolated places over West Madhya Pradesh, South Interior Karnataka, Rayalaseema, Coastal Andhra Pradesh & Yanam, Telangana; **below normal (-1.6°C to -3.0°C)** at most places over Gujarat Region; at many places Marathwada; at a few places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, East Rajasthan; at isolated places over East Madhya Pradesh, Vidarbha, Gangetic West Bengal, Jharkhand. Yesterday, **the highest maximum temperature of 34.6°C** was reported at **Karwar (Coastal Karnataka)** over the country. **(Fig. 2)**

Meteorological Analysis (Based on 0830 hours IST)

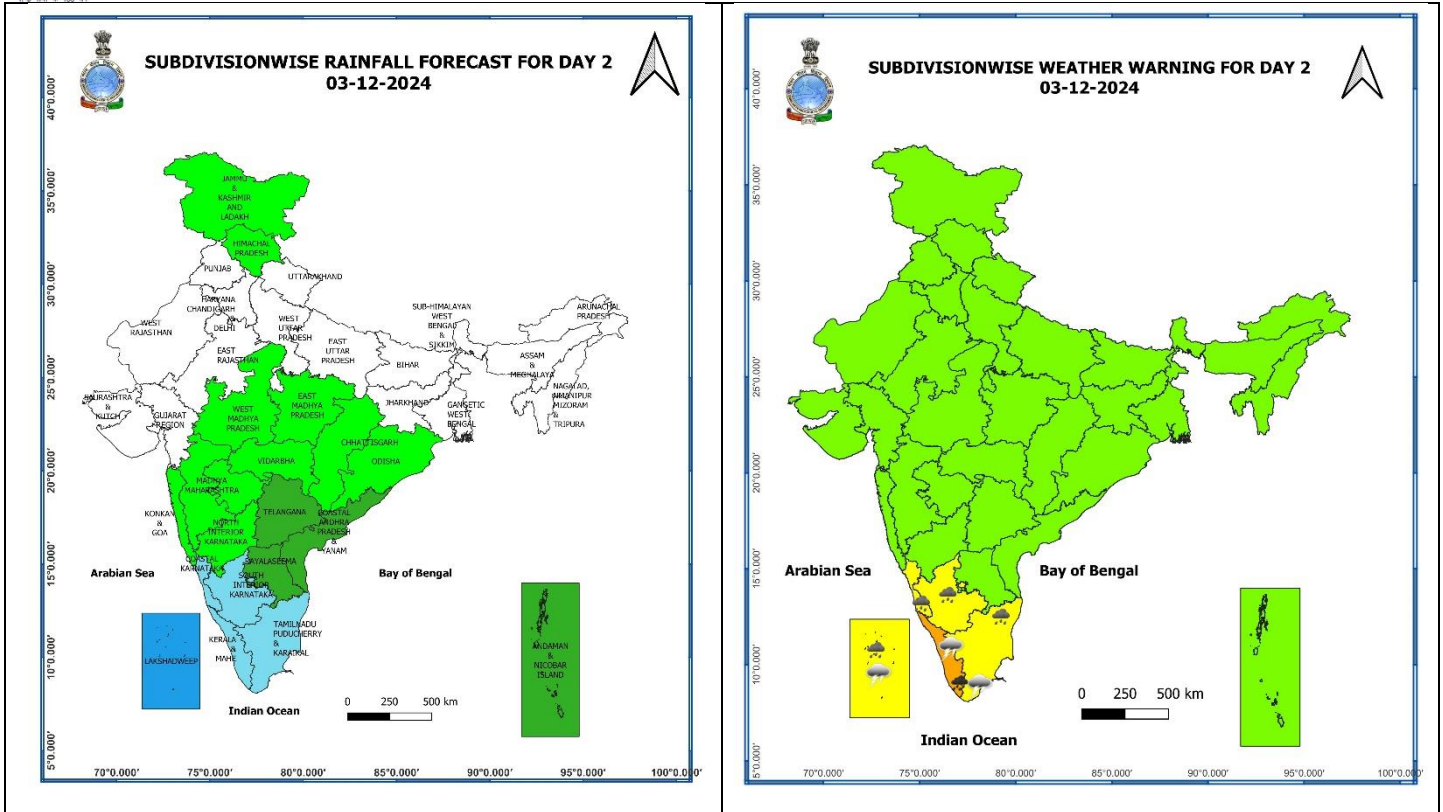
- ❖ **The Well Marked Low pressure Area (Remnant of Cyclonic Storm “FENGAL”)** over North Interior Tamil Nadu persisted over the same area at 0830 hours IST of today, the 02nd December, 2024. The remnant low pressure area is likely to emerge into southeast & adjoining east-central Arabian Sea off north Kerala-Karnataka coasts around 3rd December 2024.
- ❖ The **Western disturbance** as a trough in middle tropospheric westerlies with its axis at 5.8 km above mean sea level roughly along Long. 65°E to the north of Lat. 30°N persists.
- ❖ A **Cyclonic circulation** lies over East Bangladesh & neighbourhood at 1.5 km above men sea level.
- ❖ A **Cyclonic circulation** lies over northeast Assam at 3.1 km above men sea level.
- ❖ **Jet Stream Winds** of the order upto 120 knots at 12.6 km above mean sea level continue to prevail over North India.

Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 09th December, 2024)



02 December (Day 1):

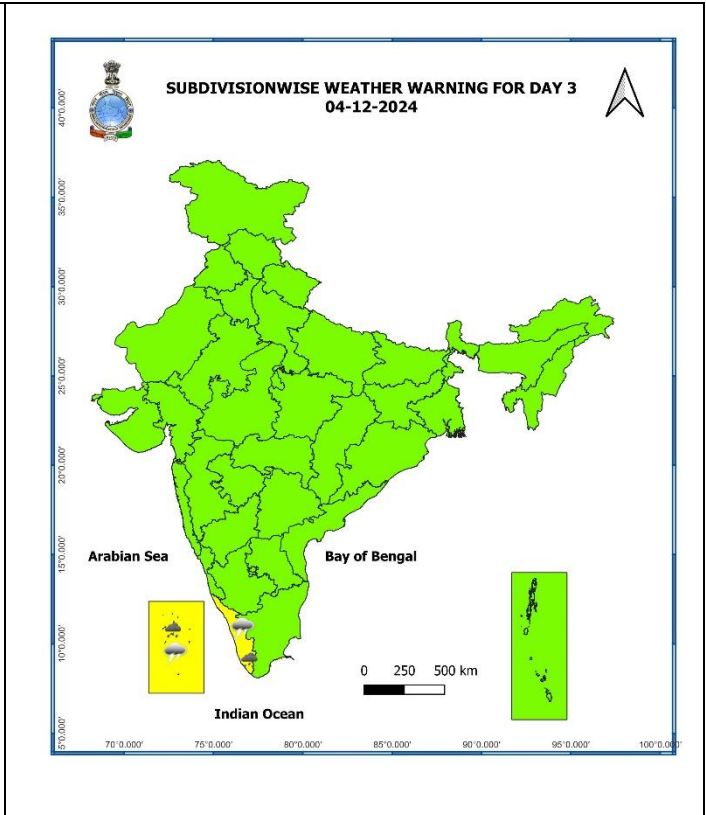
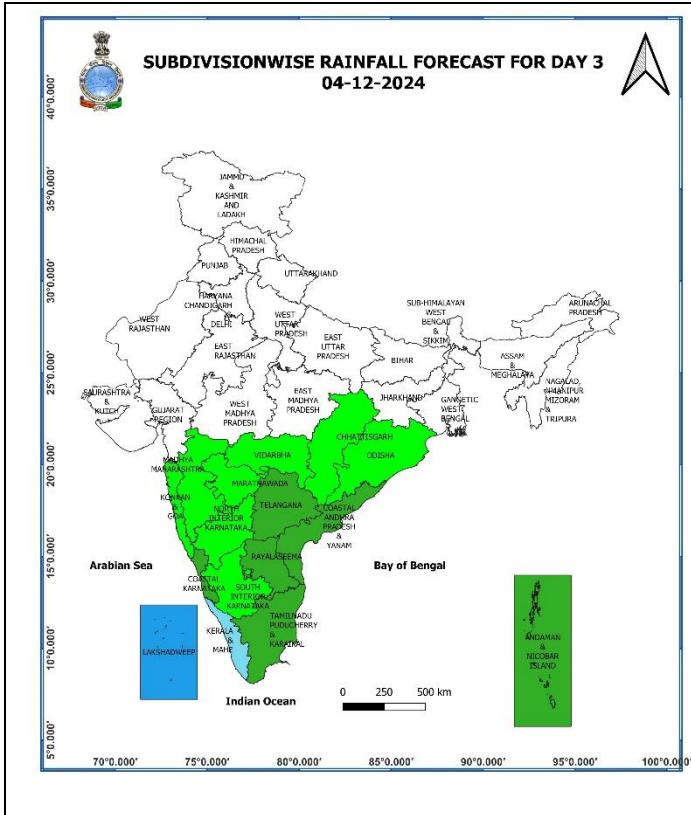
- ❖ **Light to moderate rainfall** at most places with **heavy to very heavy rainfall** at a few places & **extremely heavy rainfall** at isolated places over South Interior Karnataka, ghat districts of Nadu, Kerala & Mahe; **Heavy to very heavy rainfall** at isolated places is very likely over Coastal Karnataka; **Light to moderate rainfall** at many places with **heavy rainfall** at isolated places is very likely over Rayalaseema.
- ❖ **Thunderstorm accompanied lightning & gusty winds (speed 30-40 kmph)** very likely at isolated places over Kerala & Mahe; **Thunderstorm with lightning** likely at isolated places over Tamil Nadu, Puducherry & Karaikal.
- ❖ **Squally wind speed reaching 35-45 kmph gusting to 55 kmph** very likely to prevail along and off Kerala, south Karnataka coasts, over gulf of Mannar & adjoining parts of Comorin area. Fishermen are advised not to venture into these areas.



03 December (Day 2):

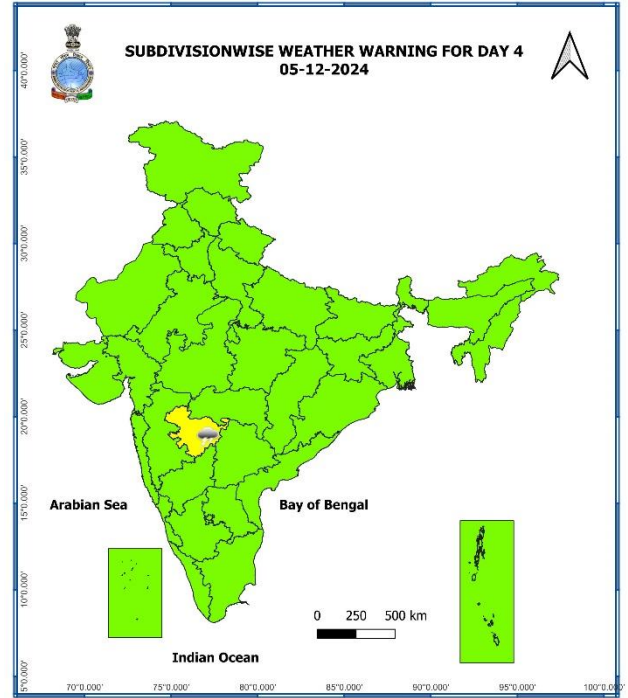
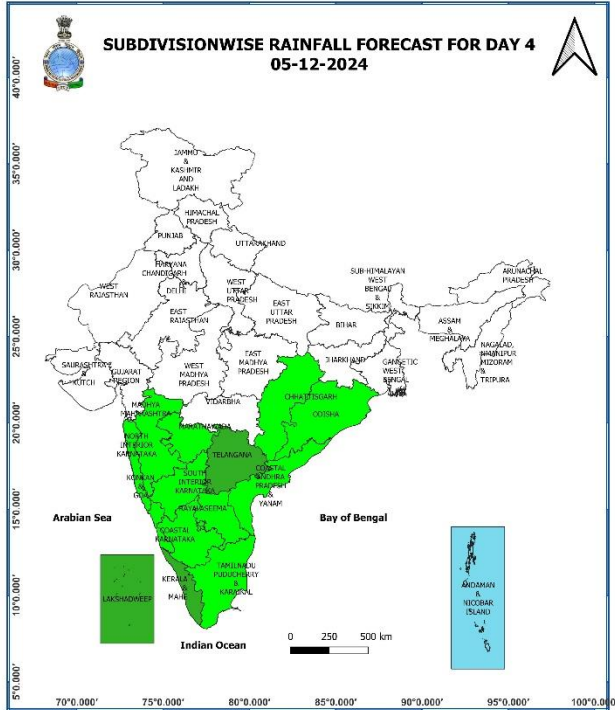
- ❖ **Heavy to very heavy rainfall** at isolated places is very likely over north Kerala; **Light to moderate rainfall** at many places with **heavy rainfall** at isolated places over north interior Tamil Nadu, Puducherry & Karaikal, Lakshadweep, Coastal Karnataka, South Interior Karnataka.
- ❖ **Thunderstorm accompanied lightning & gusty winds (speed 30-40 kmph)** very likely at isolated places over Kerala & Mahe; **Thunderstorm with lightning** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Lakshadweep.
- ❖ **Squally wind speed reaching 35-45 kmph gusting to 55 kmph** very likely to prevail over along and off Kerala, Karnataka, goa coasts, over Lakshadweep area, over gulf of Mannar & adjoining parts of Comorin area. Fishermen are advised not to venture into these areas.

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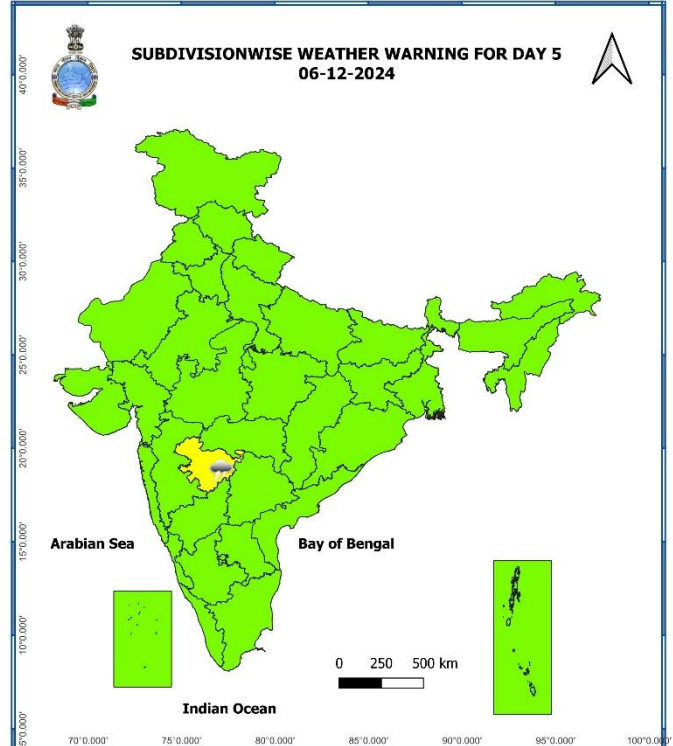
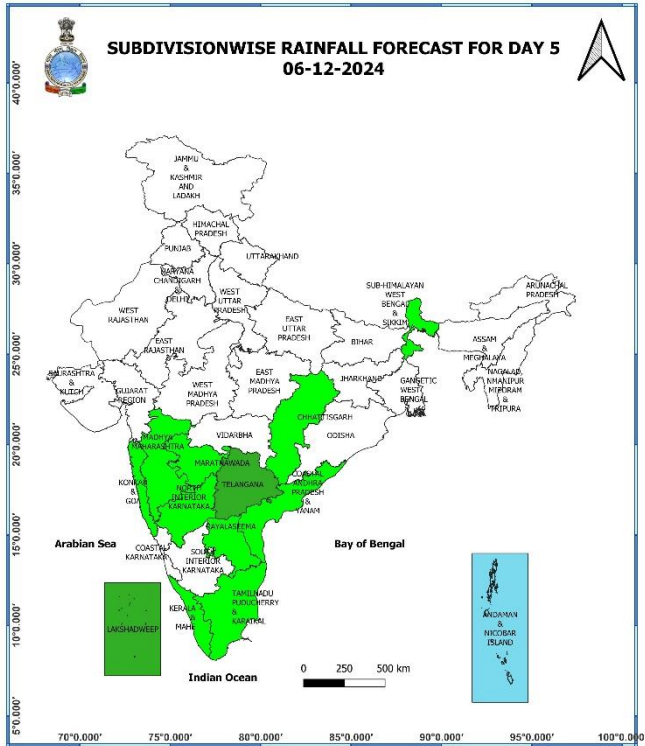
04 December (Day 3):

- ❖ **Heavy rainfall (≥ 7 cm)** at isolated places over Kerala & Mahe and Lakshadweep.
- ❖ **Thunderstorm accompanied lightning & gusty winds (speed 30-40 kmph)** very likely at isolated places over Kerala & Mahe; **Thunderstorm with lightning** likely at isolated places over Lakshadweep.
- ❖ **Squally wind speed reaching 35-45 kmph gusting to 55 kmph** likely to prevail over Lakshadweep area, adjoining southeast Arabian sea, southern parts of eastcentral Arabian sea. Fishermen are advised not to venture into these areas.



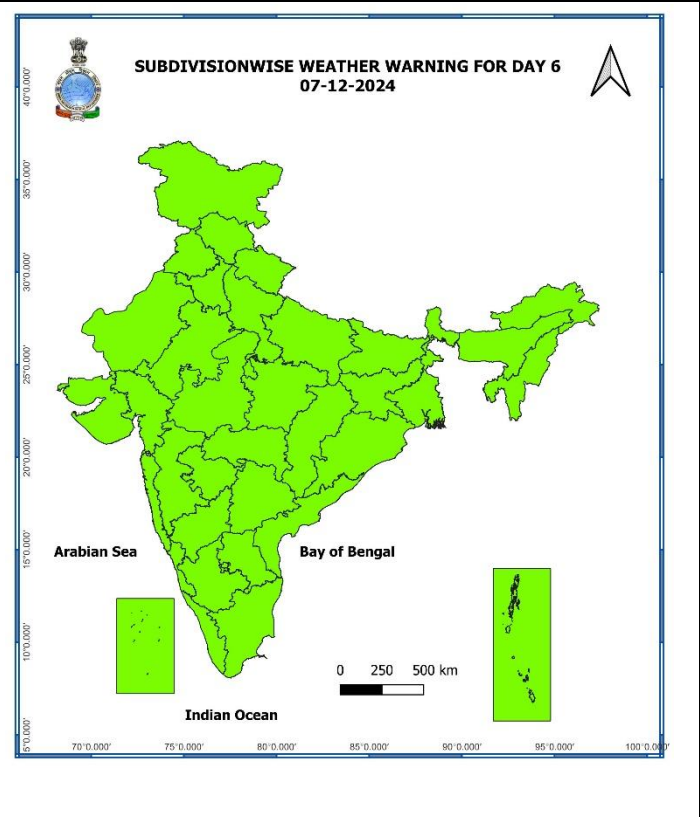
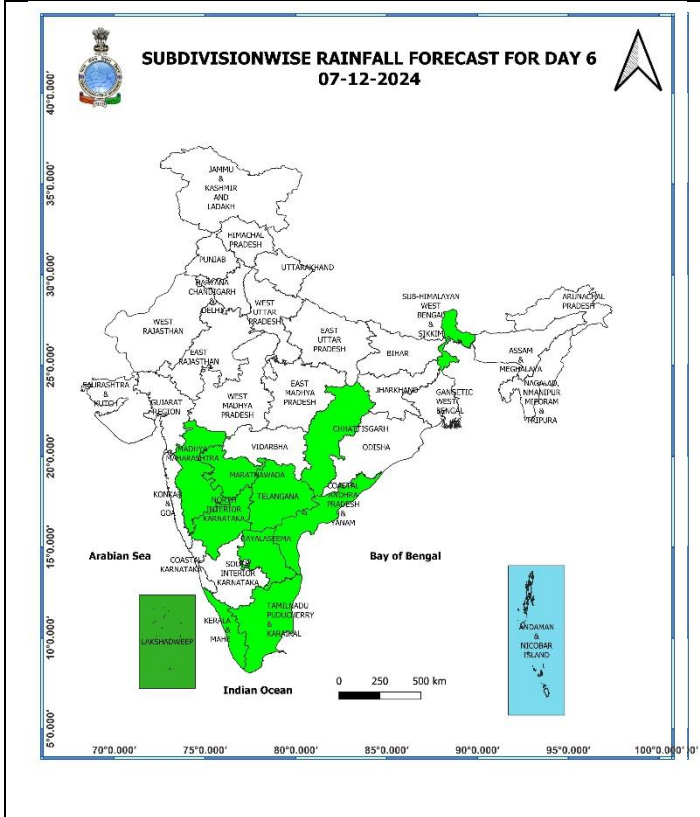
05 December (Day 4):

- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Marathwada.
- ❖ **Squally wind speed reaching 35-45 kmph gusting to 55 kmph** likely to prevail over southcentral parts of central Arabian sea, adjoining parts of south Arabian sea and adjoining Lakshadweep area. Fishermen are advised not to venture into these areas.



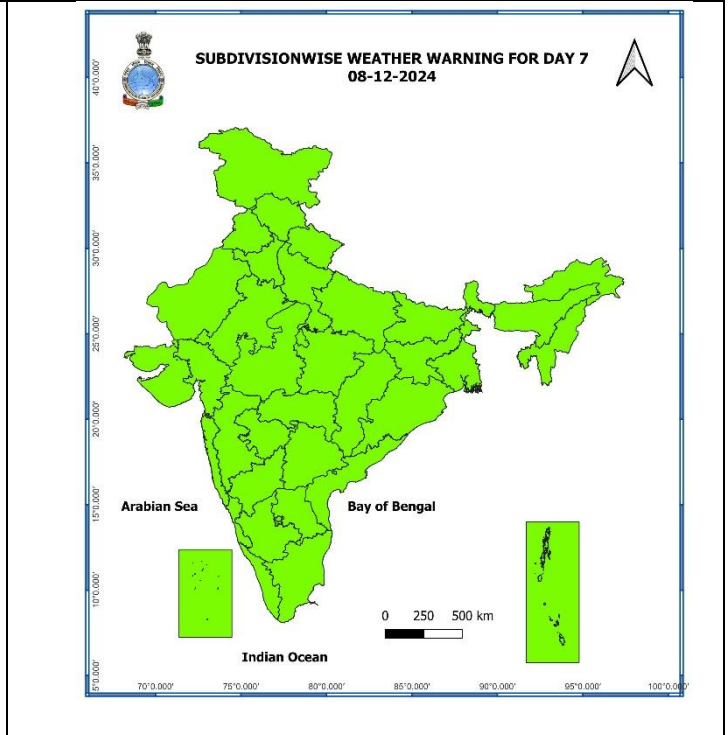
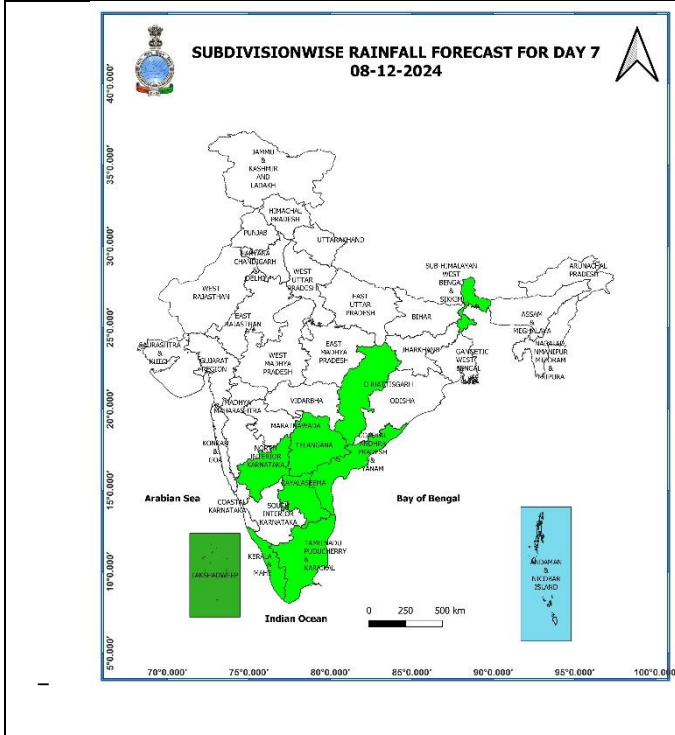
06 December (Day 5):

- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Marathwada.
- ❖ **Squally wind speed reaching 35-45 kmph gusting to 55 kmph** likely to prevail over central parts of south Arabian sea, adjoining parts of central Arabian sea areas. Fishermen are advised not to venture into these areas.



07 December (Day 6):

❖ **No Warning.**



08 December (Day 7):

❖ **No Warning.**

Weather Outlook for subsequent 3 days (During 09th December – 11th 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.

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Impact expected due to Heavy Rainfall

- ✓ **Heavy to very Heavy rainfall with extremely heavy falls** at isolated places over South Interior Karnataka, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe on 02nd December;
- ✓ **Isolated heavy to very heavy rainfall** over Coastal Karnataka on 02nd; Kerala & Mahe on 03rd December.
- ✓ **Low to Moderate flash flood risk** likely over few watersheds & neighbourhoods of Coastal Karnataka, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal on 02nd & 03rd December, 2024. **(Annexure I)**

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.

Agromet advisories for Heavy Rainfall likely over Tamil Nadu, Kerala, South Interior Karnataka Coastal Andhra Pradesh and Rayalaseema:

- Drain out excess water from rice, sugarcane, cotton, turmeric, vegetables, and other standing crop fields, as well as coconut and banana orchards in **Tamil Nadu**; from rice, coffee, banana, coconut, arecanut, ginger, pepper, cardamom and other standing crops in **Kerala** and from cotton, rice, maize, groundnut, finger millet, pigeon pea, arecanut, fruits and vegetables in **South Interior Karnataka**.
- Keep the harvested produce in safer places or cover the produce with tarpaulin sheets in the fields.
- Provide adequate drainage facilities for the removal of excess water from standing crop fields and fruit orchards in Coastal Karnataka.
- Provide mechanical support to horticultural crops and staking to vegetables.

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.
- Hang gunny bags all around poultry sheds.

- 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.

FLASH FLOOD GUIDANCE:

(Annexure I)

24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 03-12-2024:

Low to Moderate flash flood risk likely over few watersheds & neighbourhoods of following Meteorological Sub-divisions during next 24 hours.

Kerala – Kasargod, Kannur, Mahe, Wayand, Kozhikode, Malapuram and Pallakad districts
Tamil Nadu, Puducherry and Karaikal – Niligiri district.

Coastal Karnataka – Udupi, Dakshin, Kannada districts.

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

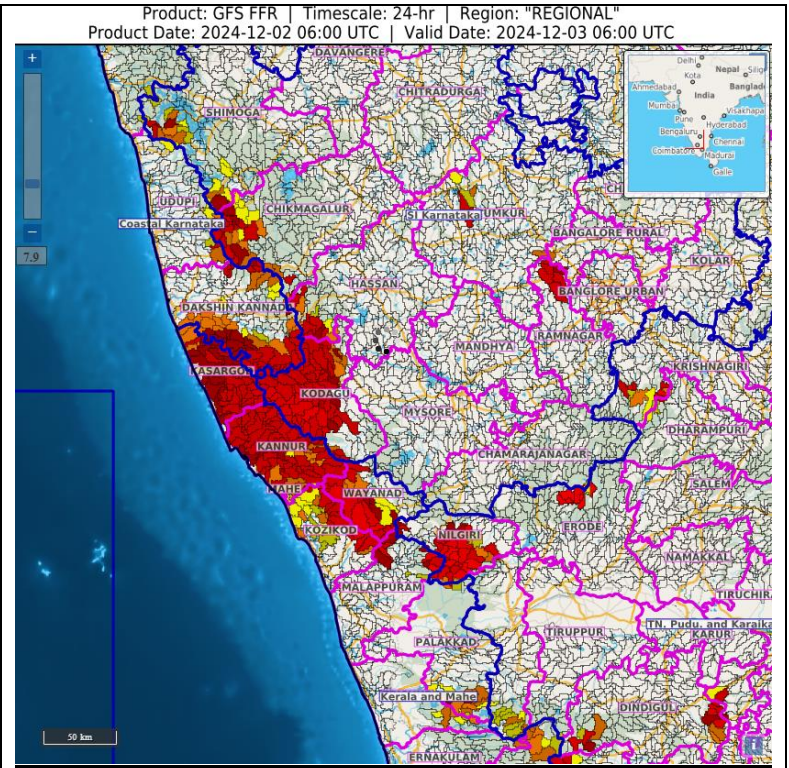


Fig. 1: Maximum Temperatures

Fig. 2: Departure of Maximum Temperatures

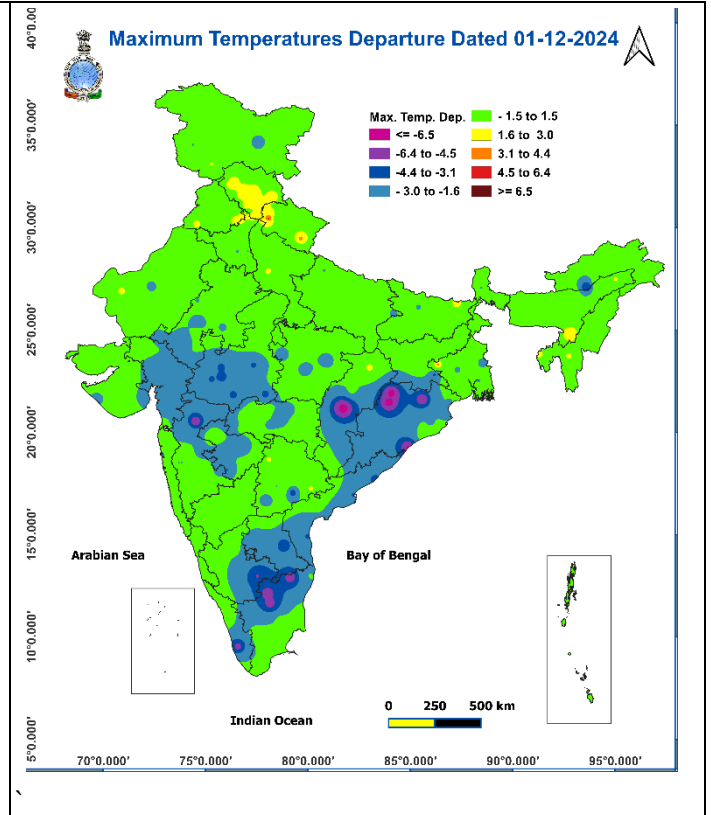
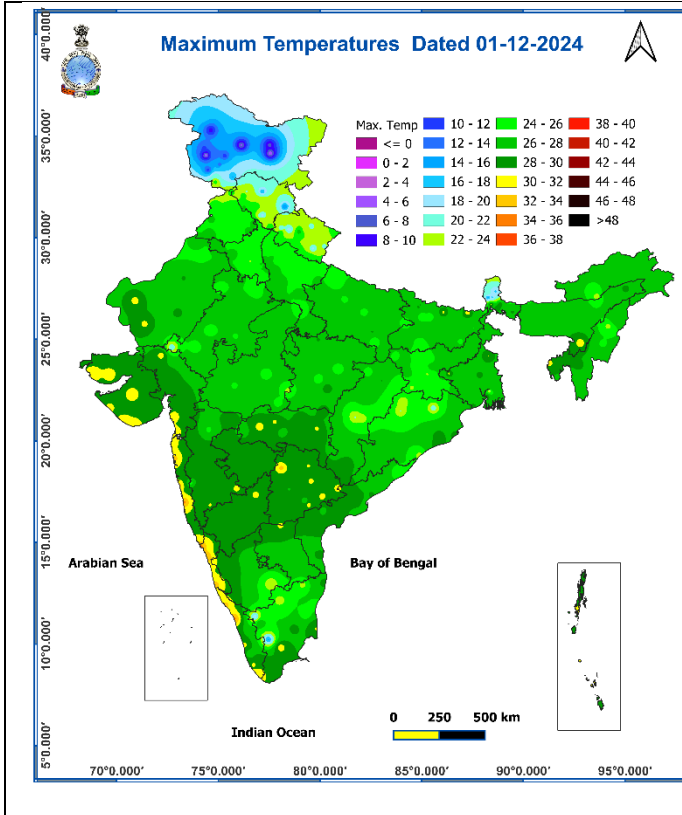
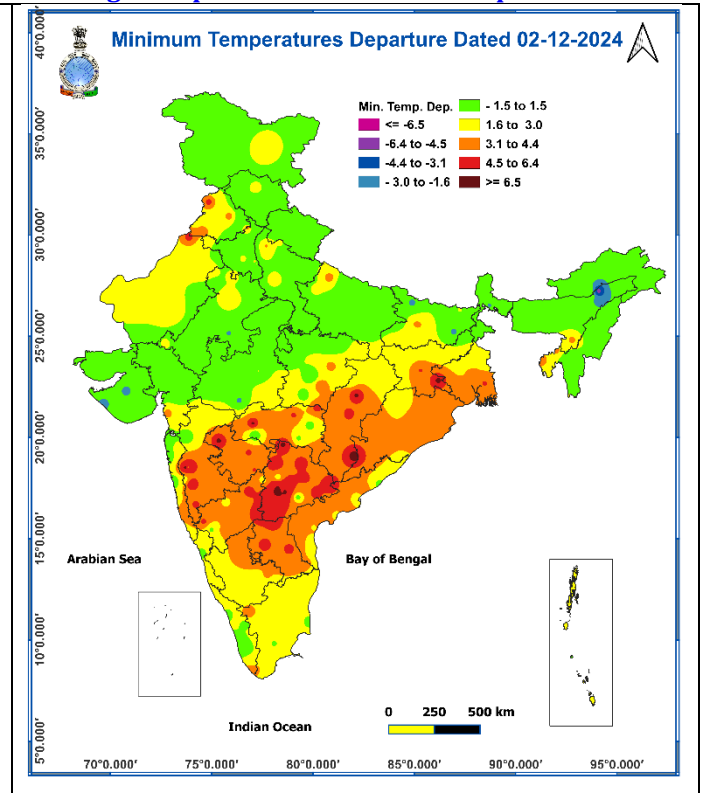
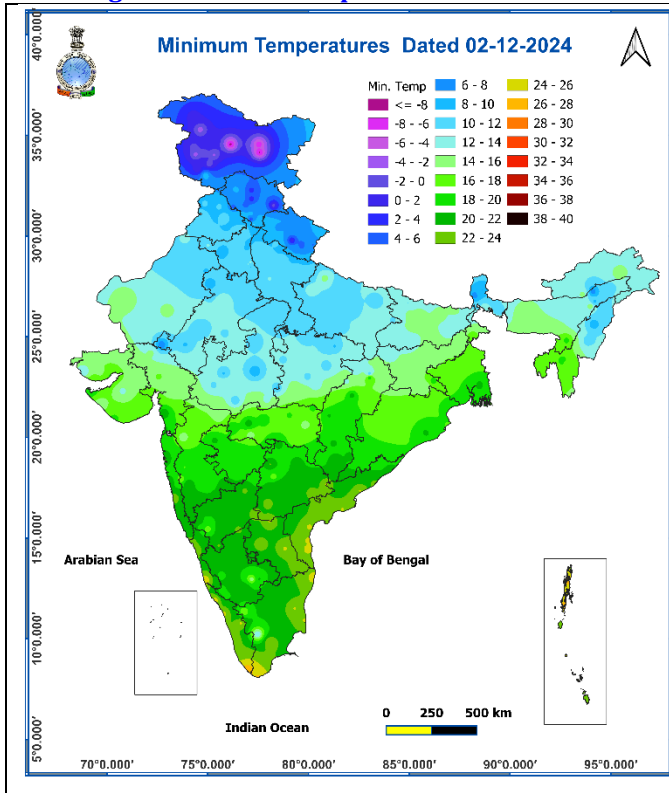


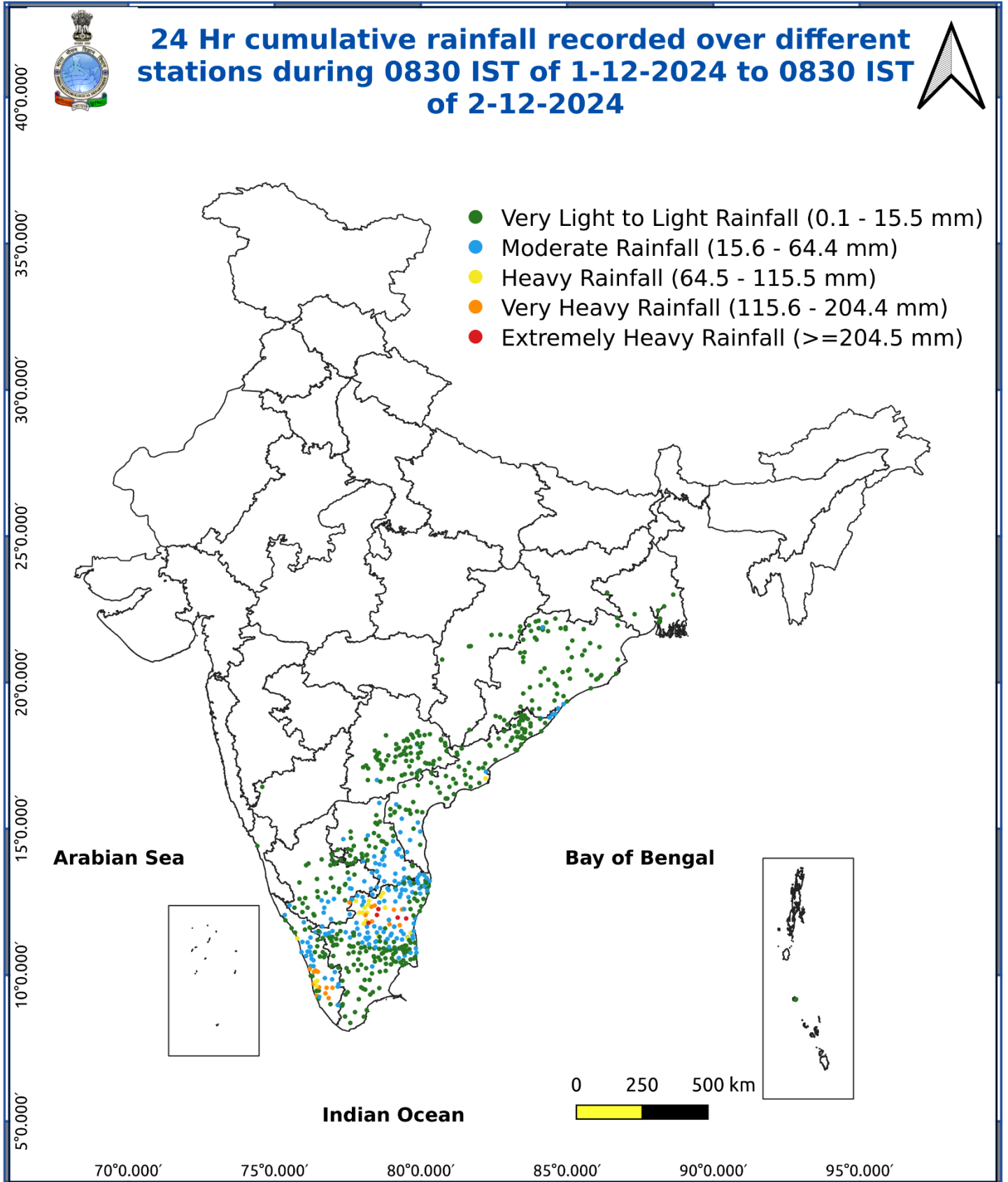
Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures



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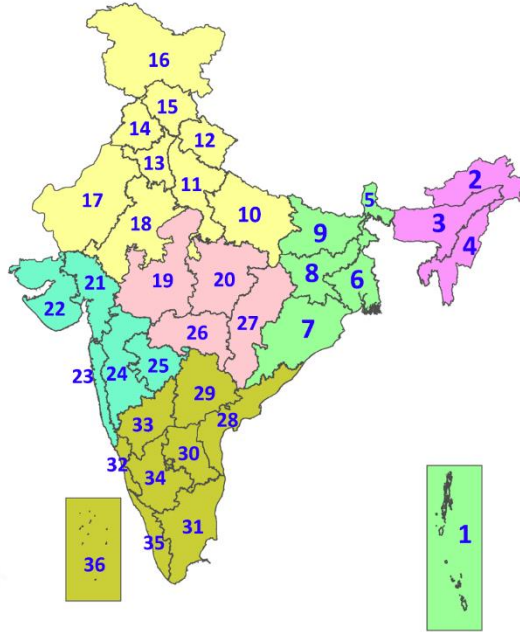
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



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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 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

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>