

Saturday, November 9, 2024
Time of Issue: 1315 hours IST
(MID-DAY)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

Weather Systems:

- ❖ The cyclonic circulation over southwest Bay of Bengal in lower tropospheric levels persisted over the same region at 0830 hours IST of today, the 09th November. Under its influence a low pressure area is likely to form over the same area during the next 36 hours. It is likely to move slowly nearly westwards towards Tamil Nadu/Sri Lanka coasts during subsequent two days.
- ❖ A trough runs from the above cyclonic circulation over southwest Bay of Bengal to eastcentral Bay of Bengal and extending upto middle tropospheric levels.

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

- ✓ Light to moderate rainfall at a few places accompanied with isolated thunderstorm and lightning very likely over Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe during 09th-15th November.
- ✓ **Isolated heavy rainfall** very likely over coastal Tamil Nadu during 09th-15th; Kerala & Mahe during 13th -15th; Coastal Andhra Pradesh & Yanam and Rayalaseema on 12th & 13th November.
- ✓ **Dense fog** conditions very likely to prevail in night/morning hours in isolated pockets of Himachal Pradesh during 10th -12th and over northwest Punjab on 10th & 11th November.
- ✓ Shallow to moderate fog likely over some pockets of East India for next 2-3 days; over some pockets of northeast and northwest India for next 4-5 days.

i. Temperature conditions and Forecast:

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

There is no significant change in Minimum temperature over the country. Minimum temperatures continue to be above normal by 3-5°C over many places of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Punjab, Haryana, Uttarakhand, Uttar Pradesh, Bihar, Jharkhand, Rajasthan, northern parts of Gujarat and by 2-3°C over Coastal Andhra Pradesh & Yanam, Kerala & Mahe, south Gujarat, interior Odisha and near normal over remaining parts of the country. Today, **the lowest minimum temperature of 13.8°C** is reported at Hindon_IAF (**West Uttar Pradesh**) over the plains of the country.

Forecast of temperature: Minimum temperature is likely to gradually fall by 2-3°C over Western Himalayan Region during next 4-5 days. No large change in Minimum temperature over remaining parts of the country during the week.

ii. Weather forecast over Delhi/NCR during 09th November to 12th November 2024

Past Weather:

There has been no significance change in maximum/minimum temperature over Delhi/NCR during past 24hr. The Maximum and Minimum temperature over Delhi is in the range of 30-32°C and 15 -20°C respectively. The maximum temperature was above normal by 1 - 2°C and minimum temperature was above normal by 4 -5°C over some places in the region. Mainly clear sky condition with predominant surface wind from variable directions with wind speed reaching 04-08 kmph prevailed during daytime and 02 - 06 kmph wind speed from east during night. Mist/Shallow fog reported at Safdarjung airport. Safdarjung airport recorded lowest visibility 600m at 0700 hours IST which improved thereafter becoming 0900m at 0830 hours IST. Palam airport recorded lowest visibility 1100m at 0730 hours IST. The mainly smog condition with wind speed upto 04 -10 kmph from east/southeast directions prevailed over the region in the forenoon today.

Weather Forecast:

- ❖ **09.11.2024:** Mainly clear sky. The predominant surface wind is likely to be from southeast direction with wind speed upto 06 - 10 kmph till evening. It would decrease thereafter becoming less than 06 kmph from variable directions during night. Smog/ mist is likely in the evening/night.
- ❖ **10.11.2024:** Mainly clear sky. The predominant surface wind is likely to be from Southeast direction with wind speed less than 08 kmph during morning hours. Smog/Shallow to moderate fog/mist in the morning. The wind speed will increase thereafter becoming less than 10 kmph from southeast direction during afternoon. It will decrease thereafter becoming less than 06 kmph from variable directions during evening and night. Smog/ mist is likely in the evening/night.
- ❖ **11.11.2024:** Mainly clear sky. The predominant surface wind is likely to be from variable directions with wind speed less than 04 kmph during morning hours. Smog/Shallow to moderate fog/mist in the morning. The wind speed will gradually increase becoming 06- 10 kmph from south/southeast direction during afternoon. It will decrease thereafter becoming less than 06 kmph from north/northeast directions during evening and night. Smog/ mist is likely in the evening/night.
- ❖ **12.11.2024:** Mainly clear sky. The predominant surface wind is likely to be from southwest direction with wind speed less than 06 kmph during morning hours. Smog/Shallow to moderate fog/mist in the morning. The wind speed will increase thereafter becoming 06 - 10 kmph from southeast/east directions during afternoon. It will gradually decrease becoming 04 - 06 kmph from southeast direction during evening and night. Smog/ mist is likely in the evening/night.

* 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)

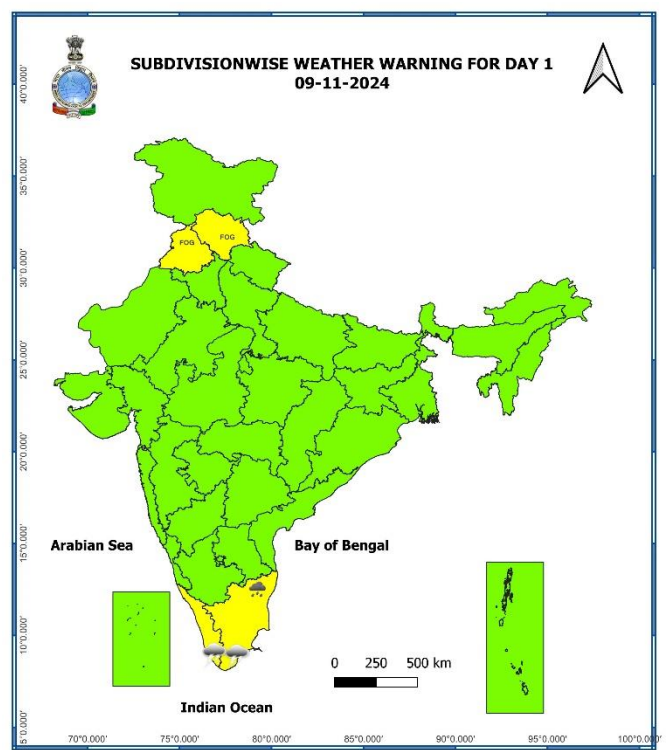
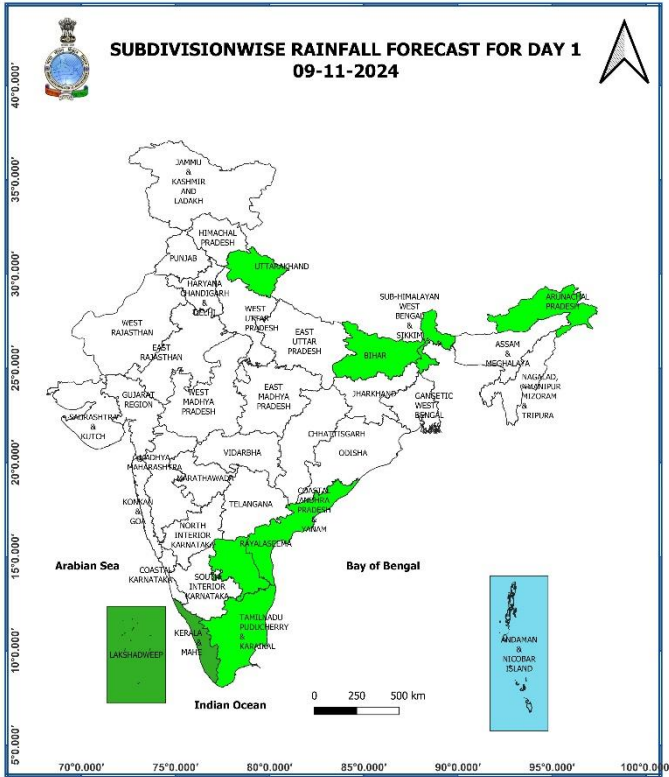
Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST of yesterday to 0830 hours IST of today): **at a few places** over Tamil Nadu, Kerala, Lakshadweep; **at isolated places** over Andaman & Nicobar Islands, Bihar, Arunachal Pradesh, Coastal Andhra Pradesh & Yanam, Rayalaseema and South Interior Karnataka.
- ❖ **Heavy rainfall recorded** (from 0830 hours IST of yesterday to 0830 hours IST of today): at isolated places over extreme south Tamil Nadu and Kerala.
- ❖ **Significant amount of rainfall** (from 0830 hours IST of yesterday to 0830 hours IST of today): (in cm): **Tamil Nadu:** Adayamadai (dist Kanniyakumari), Thuckalay (dist Kanniyakumari), Kozhiporvilai (dist Kanniyakumari) 9 each, Kodiayakarai (dist Nagapattinam) 8; **Kerala:** Kunnathanam(dist Pathanamthitta) 9.
- ❖ **Dense to very dense fog** at a few places in Punjab and Himachal Pradesh. Following stations reported visibility (< 50 metre) Amritsar, Bilaspur.
- ❖ **Minimum Temperature Departures (as on 09-11-2024):** Minimum temperatures are **markedly above normal (5.1°C or more)** at a few places over Punjab, Bihar; at isolated places Uttar Pradesh and Haryana-Chandigarh-Delhi; **appreciably above normal (3.1°C to 5.0°C)** at a few places over Himachal Pradesh, East Madhya Pradesh; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Gangetic West Bengal, Rajasthan, Gujarat state, Uttarakhand; **above normal (1.6°C to 3.0°C)** at many places over Odisha; at a few places over Coastal Andhra Pradesh & Yanam, Kerala & Mahe; at isolated places over West Madhya Pradesh, Chhattisgarh, Jharkhand, Sub-Himalayan West Bengal & Sikkim, Tamil Nadu, Puducherry & Karaikal, Madhya Maharashtra, Vidarbha. Today, **the lowest minimum temperature of 13.8°C** is reported at Hindon_IAF (**West Uttar Pradesh**) over the plains of the country. (Fig.4)
- ❖ **Maximum Temperature Departures (as on 08-11-2024):** Maximum temperatures were **markedly above normal (5.1°C or more)** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and West Rajasthan; **appreciably above normal (3.1°C to 5.0°C)** at isolated places over East Rajasthan; **above normal (1.6°C to 3.0°C)** at most places over Gujarat state, South Interior Karnataka, Rayalaseema, Coastal Andhra Pradesh & Yanam, Coastal Karnataka; at a few places over Uttarakhand, East Uttar Pradesh, Telangana; at isolated places over Himachal Pradesh, Punjab, Haryana-Chandigarh-Delhi, West Uttar Pradesh, Coastal Karnataka, Odisha, Bihar, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, North Interior Karnataka, Konkan & Goa, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal, Madhya Pradesh, Madhya Maharashtra. Yesterday, **the highest maximum temperature of 38.3°C** was reported at **Surendranagar (Saurashtra & Kutch)** over the country. (Fig. 2)

Meteorological Analysis (Based on 0830 hours IST)

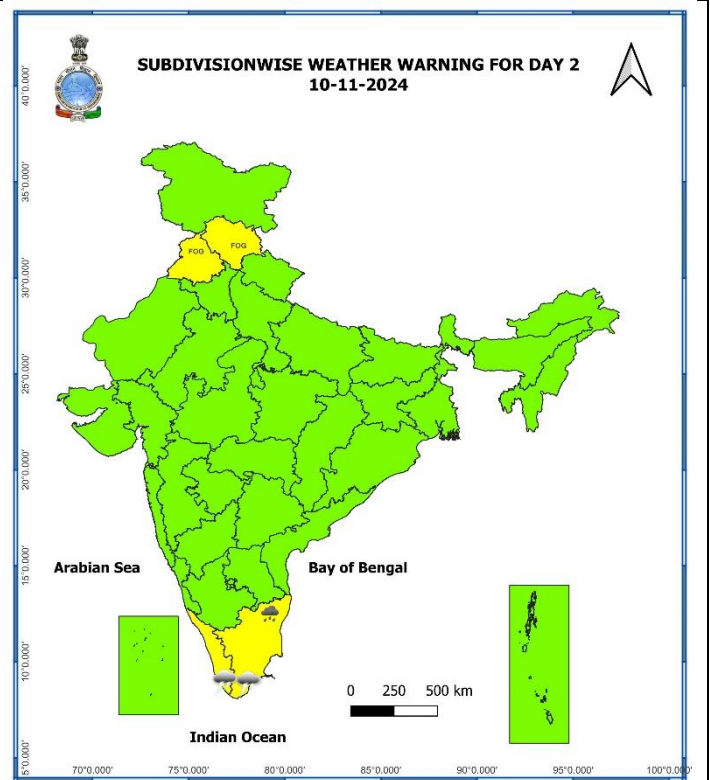
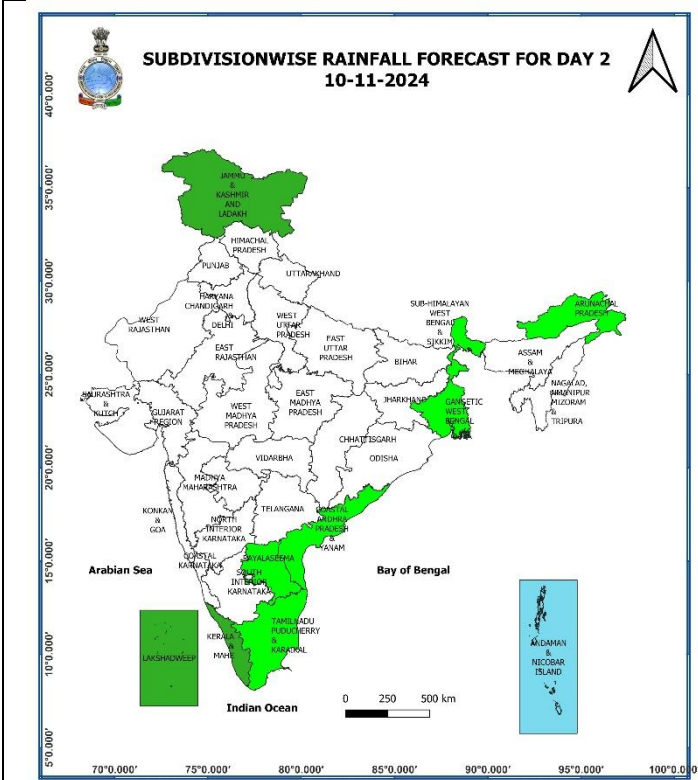
- ❖ The **cyclonic circulation** over southwest Bay of Bengal extending upto 3.6 km above mean sea level persisted over the same area at 0830 hrs IST of today, 09th November 2024. Under its influence a low pressure area is likely to form over the same area during next 36 hours. It is likely to move slowly nearly westwards towards Tamil Nadu/Sri Lanka coasts during subsequent 2-days.
- ❖ The **trough** from the above cyclonic circulation over southwest Bay of Bengal to eastcentral Bay of Bengal extending upto mid-tropospheric levels persists.
- ❖ The **cyclonic circulation** over southeast Arabian Sea & adjoining Lakshadweep area now lies over central parts of south Arabian sea at 3.1 km above mean sea level.

Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 16th November, 2024)



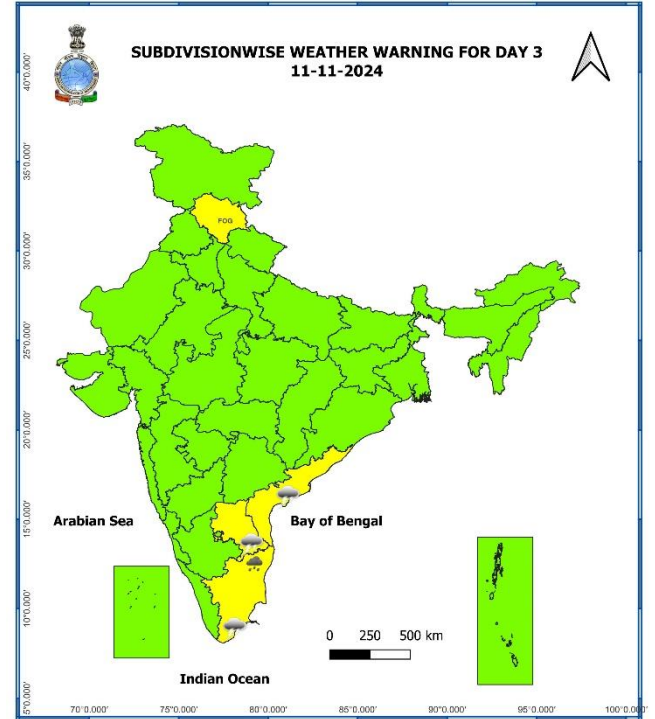
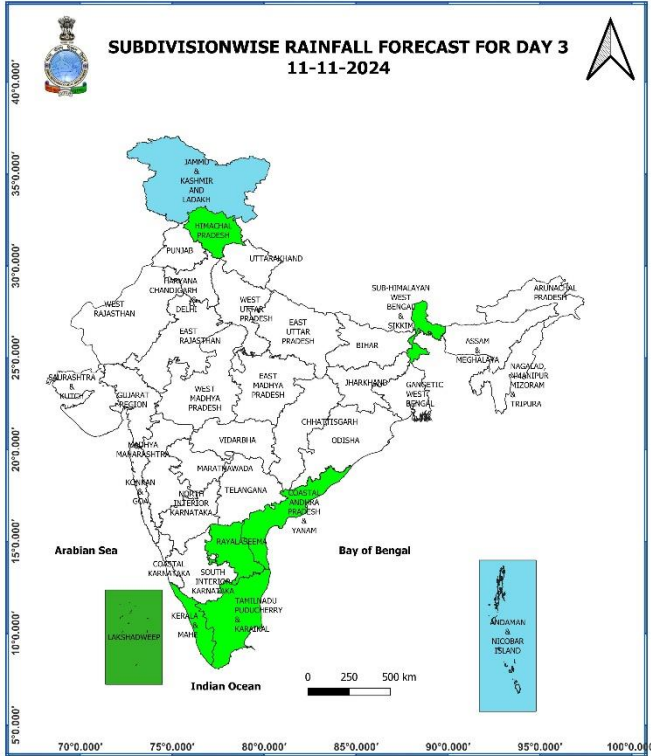
09 November (Day 1):

- ❖ **Heavy rainfall (≥ 7 cm)** very likely at isolated places over Tamil Nadu, Puducherry & Karaikal.
- ❖ **Dense fog conditions** very likely in isolated pockets of Himachal Pradesh and Northwest Punjab in the morning hours.
- ❖ **Thunderstorm accompanied with lightning** very likely at isolated places over Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- ❖ **Squally weather with wind speed 35-45 kmph gusting to 55 kmph** over many parts of southwest bay of Bengal, some parts of southeast bay of Bengal and adjoining parts of eastcentral bay of Bengal, gulf of Mannar and adjoining Comorin area. Fishermen are advised not to venture into these areas.



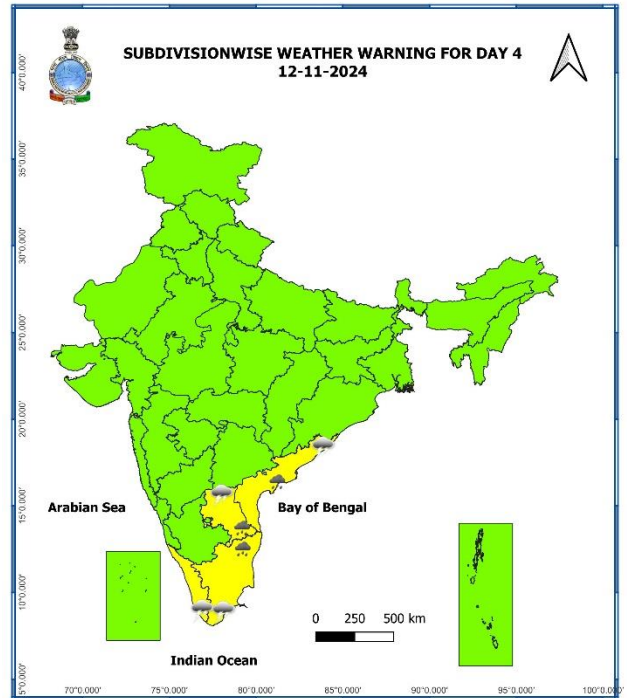
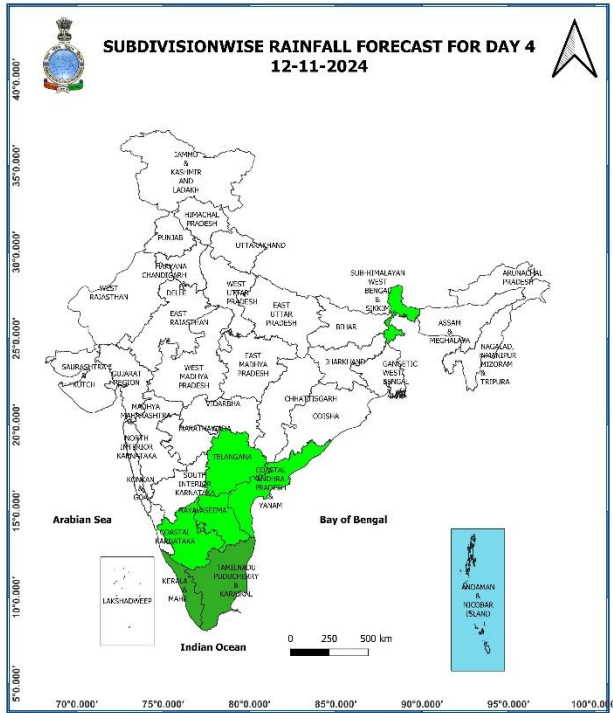
10 November (Day 2):

- ❖ **Heavy rainfall (≥ 7 cm)** very likely at isolated places over Tamil Nadu, Puducherry & Karaikal.
- ❖ **Dense fog conditions** very likely in isolated pockets of Himachal Pradesh and Northwest Punjab in the morning hours
- ❖ **Thunderstorm accompanied with lightning** very likely at isolated places over Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- ❖ **Squally weather with wind speed 35-45 kmph gusting to 55 kmph** over many parts of southwest Bay of Bengal and adjoining areas of southwest Bay of Bengal, off Sri Lanka coast, gulf of Mannar and adjoining Comorin area. Fishermen are advised not to venture into these areas.



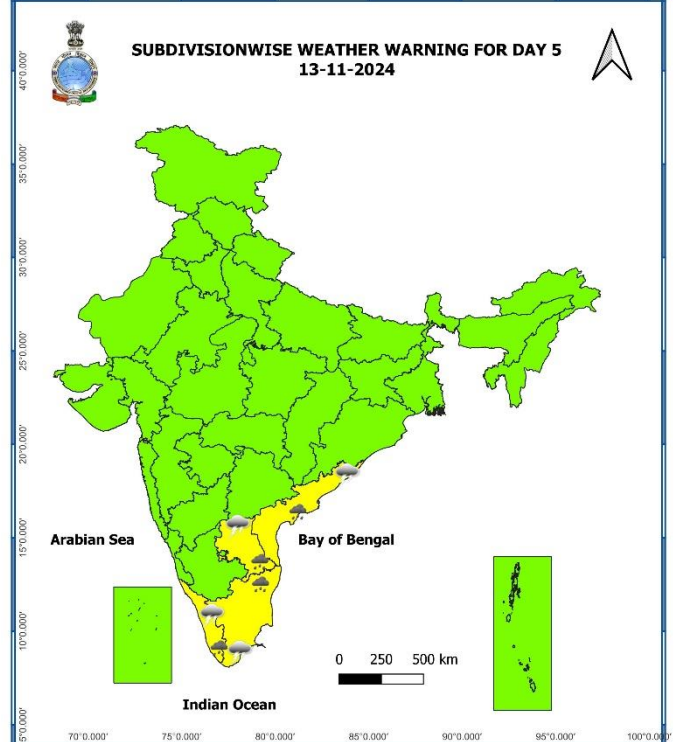
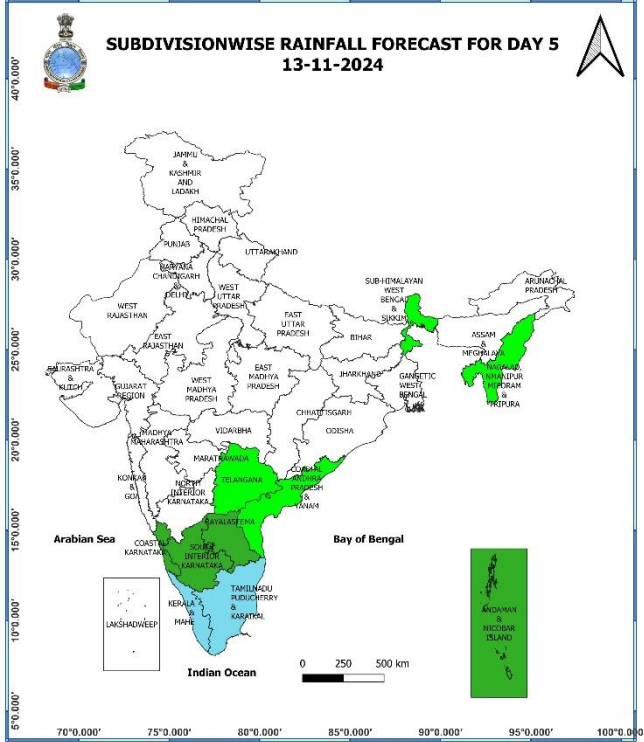
11 November (Day 3):

- ❖ **Heavy rainfall (≥ 7 cm)** likely at isolated places over Tamil Nadu, Puducherry & Karaikal.
- ❖ **Dense fog conditions** very likely in isolated pockets of Himachal Pradesh in the morning hours.
- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam and Rayalaseema.
- ❖ **Squally weather with wind speed 35-45 kmph gusting to 55 kmph** over many parts of southwest Bay of Bengal, along and off Sri Lanka, Tamil Nadu coasts & adjoining south Andhra Pradesh coast gulf of Mannar and adjoining Comorin area. Fishermen are advised not to venture into these areas.



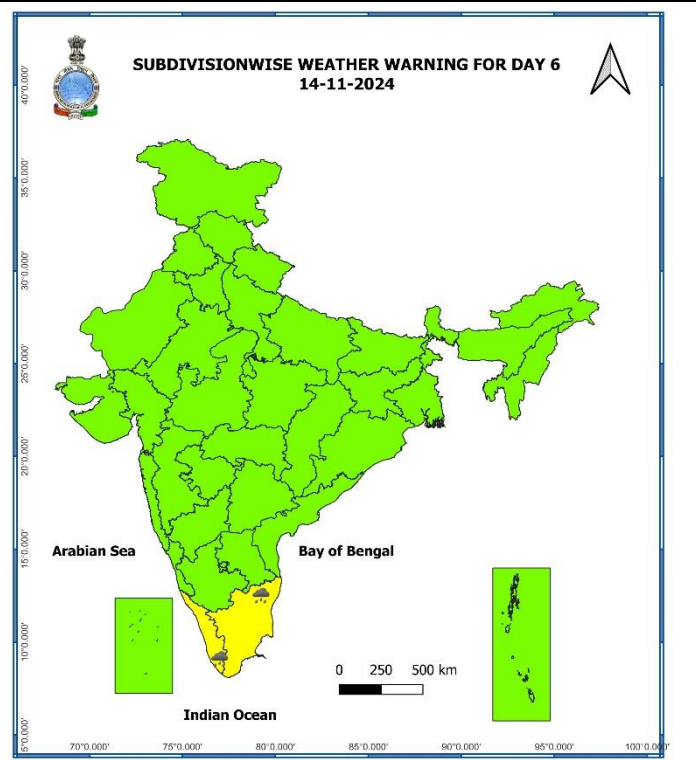
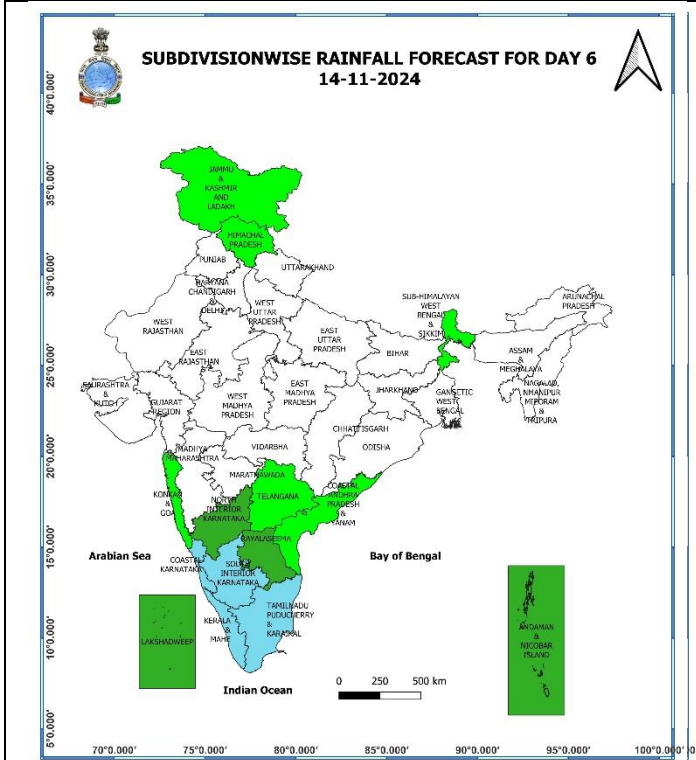
12 November (Day 4):

- ❖ **Heavy rainfall (≥ 7 cm)** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam and Rayalaseema.
- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam and Rayalaseema.
- ❖ **Squally weather with wind speed 35-45 kmph gusting to 55 kmph** over and off Tamil Nadu coast & adjoining south Andhra Pradesh coast, gulf of Mannar and adjoining Comorin area along. Fishermen are advised not to venture into these areas.



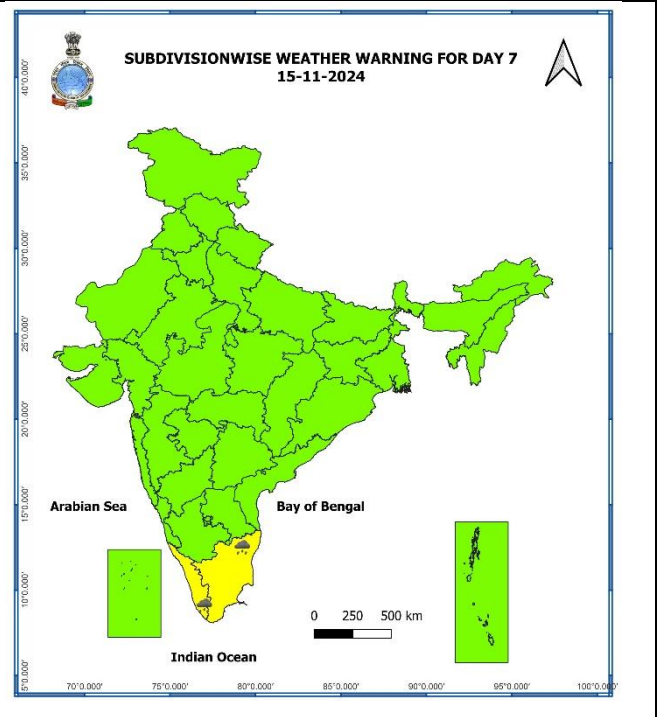
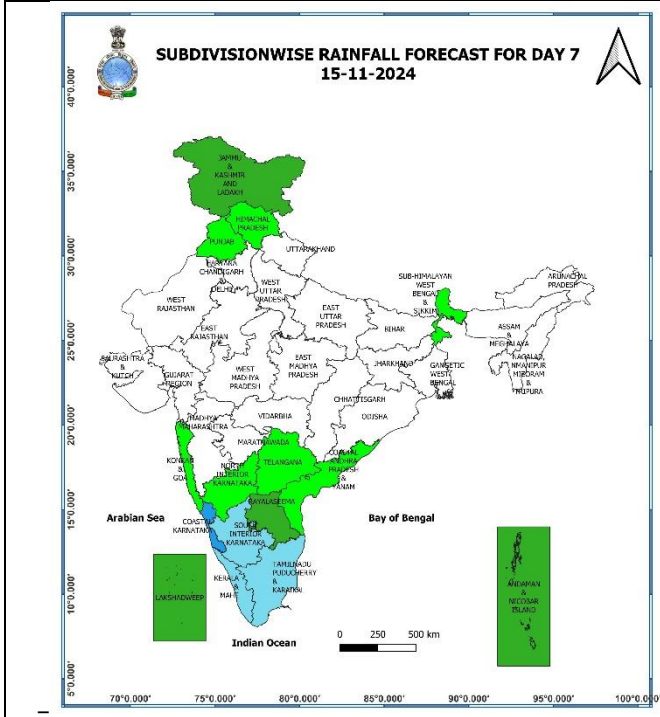
13 November (Day 5):

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



14 November (Day 6):

- ❖ **Heavy rainfall (≥ 7 cm)** likely at isolated places over Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.



15 November (Day 7):

- ❖ Heavy rainfall (≥ 7 cm) likely at isolated places over Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.

Weather Outlook for subsequent 3 days (During 16th November – 18th November, 2024)

- ❖ Isolated to Scattered light rainfall likely over some parts of western Himalayan region and south peninsular India.
- ❖ 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.

Agromet advisories for Heavy Rainfall likely over various parts of the country:

- ✓ In **Tamil Nadu**, drain out excess water from rice, cotton, sugarcane, turmeric & vegetable fields and coconut & banana orchards. Undertake propping in sugarcane and provide mechanical support to banana plantations to prevent lodging.
- ✓ Keep the harvested produce at safer places.
- ✓ Provide mechanical support to horticultural crops and staking to vegetables.

Fig. 1: Maximum Temperatures

Fig. 2: Departure of Maximum Temperatures

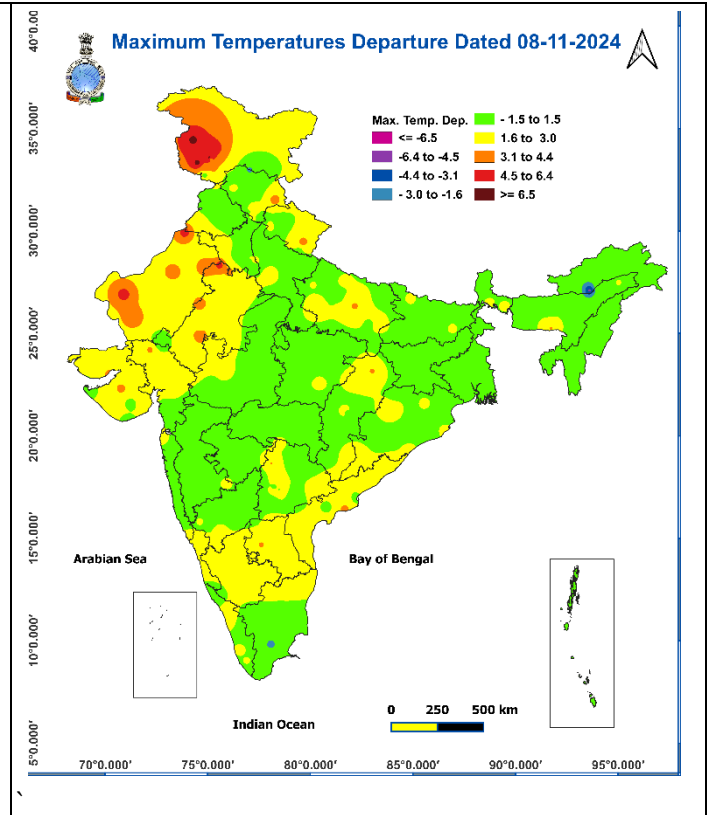
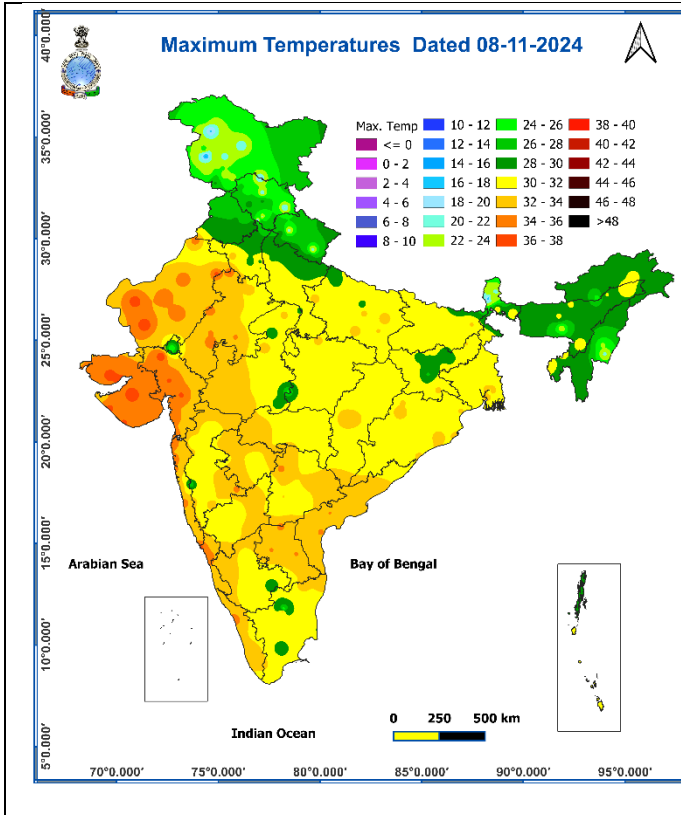


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures

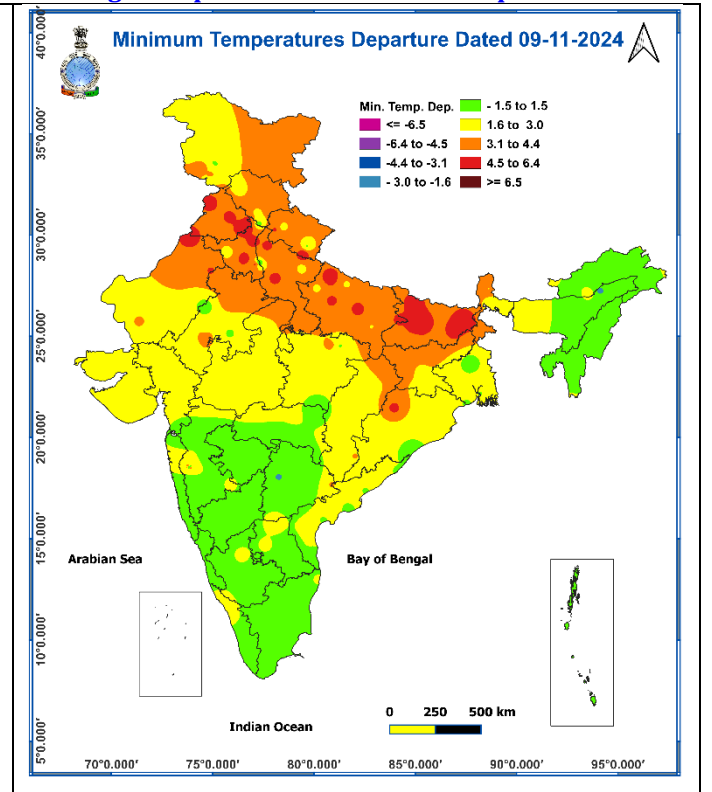
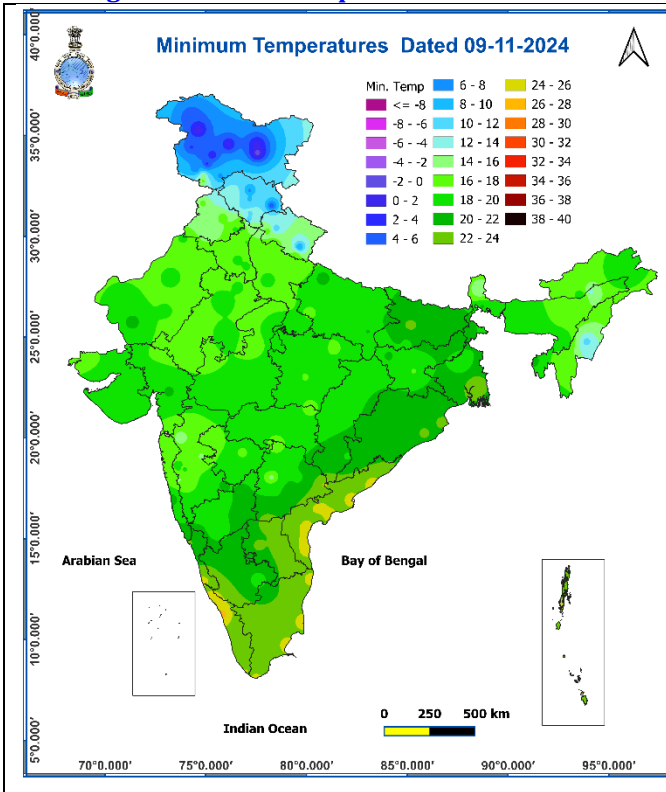
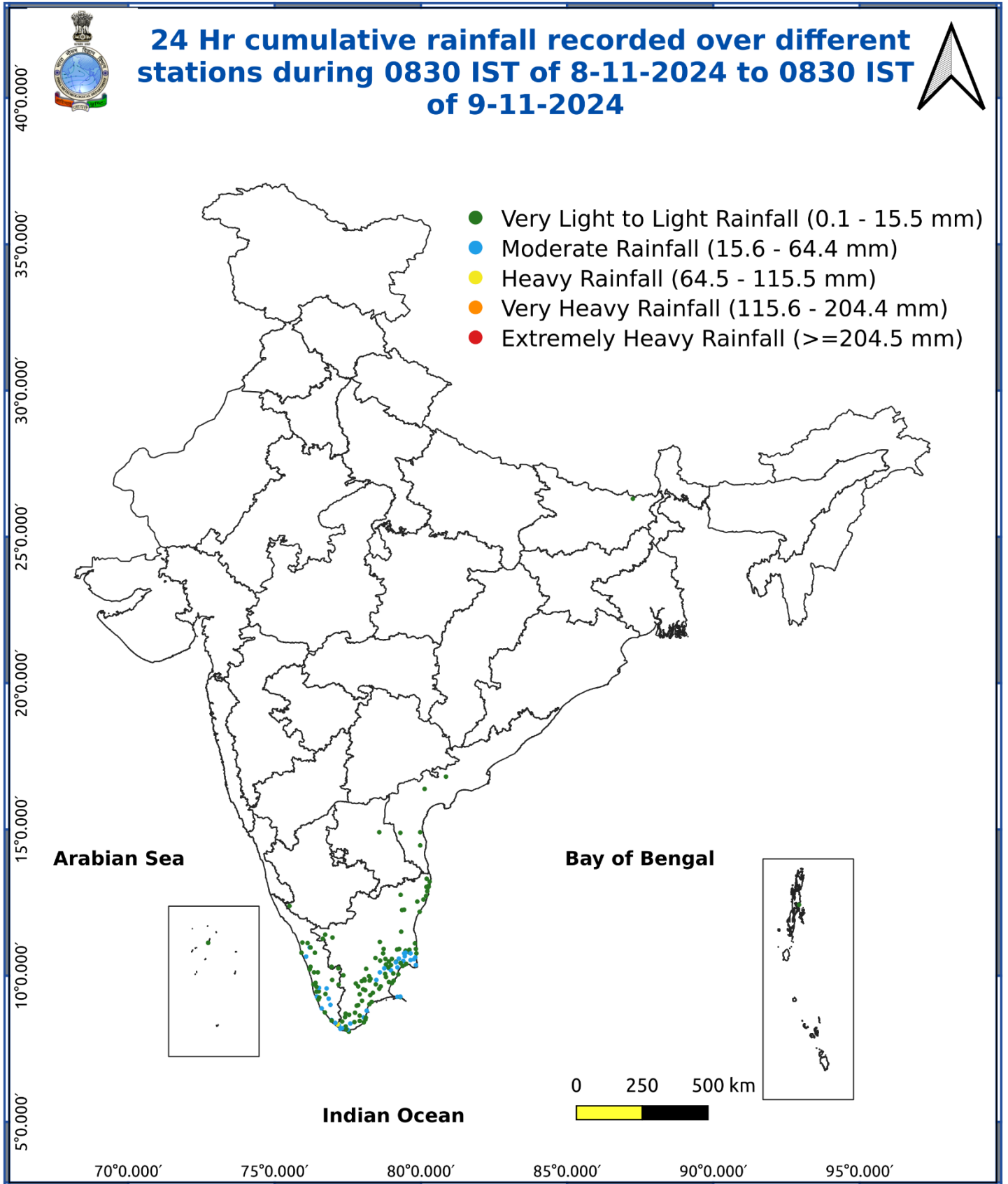


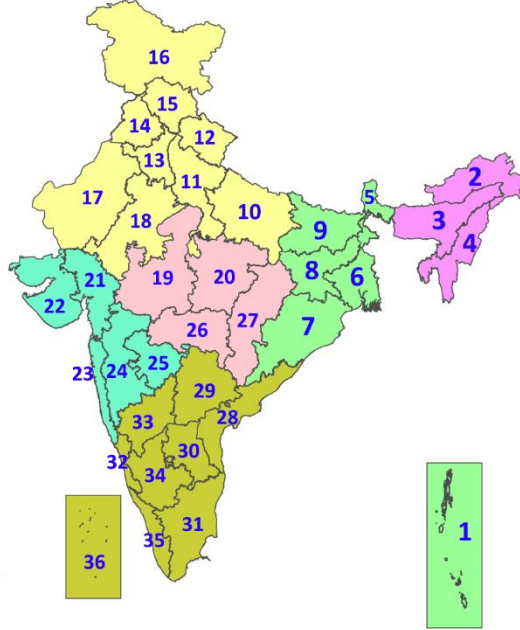
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



* 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 Snow | Cold Wave |
| Heavy Rain | Dust Storm | Cold Day |
| Very Heavy Rain | Heat Wave | Ground Frost |
| Extremely Heavy Rain | Warm Night | |
| Thunder & Lightning | Hot Day | |
| Hailstorm | Hot & Humid | |
| Dust Raising Winds | Strong Surface Winds | |

COLOUR CODED WARNING

No Warning (No Action)
Watch (Be Aware)
Alert (Be Prepared To Take Action)
Warning (Take Action)

Probabilistic Forecast

Terms	Probability of Occurrence (%)
Unlikely	< 25
Likely	25 - 50
Very Likely	50 - 75
Most Likely	> 75

DEFINITION/CRITERIA

Rain/ Snow *

Heavy: 64.5 to 115.5 mm/cm *
Very Heavy: 115.6 to 204.4 mm/cm*
Extremely Heavy: > 204.4 mm/cm *

Heat Wave

When maximum temperature of a station reaches $\geq 40^\circ\text{C}$ for plains and $\geq 30^\circ\text{C}$ for hilly regions
(a) Based on Departure from normal

Heat Wave: Maximum Temperature Departure from normal 4.5°C to 6.4°C .
Severe Heat Wave: Maximum Temperature Departure from normal $\geq 6.5^\circ\text{C}$

(b). Based on Actual maximum temperature

Heat Wave: When actual maximum temperature $\geq 45^\circ\text{C}$.
Severe Heat Wave: When actual maximum temperature $\geq 47^\circ\text{C}$

(c) Criteria for heat wave for coastal stations

When maximum temperature departure is $>4.5^\circ\text{C}$ from normal. Heat Wave may be described provided maximum temperature $\geq 37^\circ\text{C}$

Warm Night

When maximum temperature remains 40°C

Warm Night: When minimum temperature departure 4.5°C to 6.4°C .
Severe Warm Night: When minimum temperature departure $>6.4^\circ\text{C}$.

Cold Wave

When minimum temperature of a station $\leq 10^\circ\text{C}$ for plains and $\leq 0^\circ\text{C}$ for hilly regions.
(a). Based on departure

Cold Wave: Minimum Temperature Departure from normal -4.5°C to -6.4°C .
Severe Cold Wave: Minimum Temperature Departure from normal $\leq -6.5^\circ\text{C}$

(b) Based on actual Minimum Temperature (for Plains only)

Cold Wave : When Minimum Temperature is $\leq 4.0^\circ\text{C}$
Severe Cold Wave: When Minimum Temperature is $\leq 2.0^\circ\text{C}$

(c) For Coastal Stations

When Minimum Temperature departure is $\leq -4.5^\circ\text{C}$ & actual Minimum Temperature is $\leq 15^\circ\text{C}$

Cold Day

When minimum temperature of a station $\leq 10^\circ\text{C}$ for plains and $\leq 0^\circ\text{C}$ for hilly regions
Based on departure

Cold Day: Maximum Temperature Departure from normal -4.5°C to -6.4°C .
Severe Cold Day: Maximum Temperature Departure from normal $\leq -6.5^\circ\text{C}$

Fog

Phenomenon of small droplets suspended in air and the horizontal visibility $< 1\text{km}$

Moderate Fog: When the visibility between 500-200 metres
Dense Fog: when the visibility between 50- 200 metres
Very Dense Fog: when the visibility < 50 metres

Thunderstorm

Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)

Dust/Sand Storm

An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.

Frost

Ice deposits on ground

Air temperature $\leq 4^\circ\text{C}$ (over Plains)

Squall

A strong wind that rises suddenly, lasts for atleast 1 minute.

Moderate: Wind speed 52-61 kmph
Severe: Wind speed 62-87 kmph
Very Severe: Wind speed >87 kmph

Sea State

Effect of various waves in the sea over specific area

Rough to very rough: Wind speed 41-62 kmph (22-33 knots) & Wave height 2.5-6 metre
High to very high: Wind speed 63-117 kmph (34-63 knots) & Wave height 6-14 metre
Phenomenal: Wind speed >117 kmph (>63 knots) & Wave height >14 metre

Cyclone

Cyclonic Storm: Wind speed 62-87 kmph (34-47 knots)
Severe Cyclonic Storm: Wind speed 88-117 kmph (48-63 knots)
Very Severe Cyclonic Storm: Wind speed 118-165 kmph (64 - 89 knots)
Extremely Severe Cyclonic Storm: Wind speed 166-220 kmph (90 -119 knots)
Super Cyclone Strom: Wind speed >220 kmph (>119 knots)