

Saturday, October 19, 2024
Time of Issue: 0745 hours IST
(MORNING)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

Weather Systems:

- ✓ The **low pressure area** over eastcentral Arabian Sea with associated cyclonic circulation extending upto 5.8 km above mean sea level persists. It is likely to move west-northwestwards away from Indian coast and become more marked during next 2 days.
- ✓ The **trough** from the centre of above **low pressure area** over eastcentral Arabian Sea to south Andhra Pradesh coast across south Karnataka & Rayalaseema extending upto 3.1 km above mean sea level persists.
- ✓ A fresh **upper air cyclonic circulation** very likely to form over North Andaman Sea around 20th October. Under its influence, a low pressure area is likely to form over Central Bay of Bengal around 22nd October, thereafter, it is likely to move northwestwards and intensify further into a **depression** by 24th October.

Forecast & Warnings (upto 7 days):

South Peninsular India:

- ✓ Scattered to Fairly widespread light to moderate rainfall over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Lakshadweep, Karnataka; Isolated to scattered light to moderate rainfall over rest of the region during the week.
- ✓ **Isolated heavy rainfall** very likely over Tamil Nadu, Puducherry & Karaikal on 19th, 20th, 21st & 24th; South Interior Karnataka, North Interior Karnataka on 20th & 21st; Coastal Andhra Pradesh & Yanam on 24th October.

East India:

- ✓ Fairly widespread to widespread light to moderate rainfall over Andaman & Nicobar Islands; Isolated to Scattered light to moderate rainfall very likely over rest of the region during the week.
- ✓ **Isolated heavy rainfall** very likely over Andaman & Nicobar Islands on 20th & 21st; Gangetic West Bengal and Odisha on 23rd & 24th October.

Northwest, West, Central & Northeast India:

- ✓ No significant rainfall likely over these regions during the week.

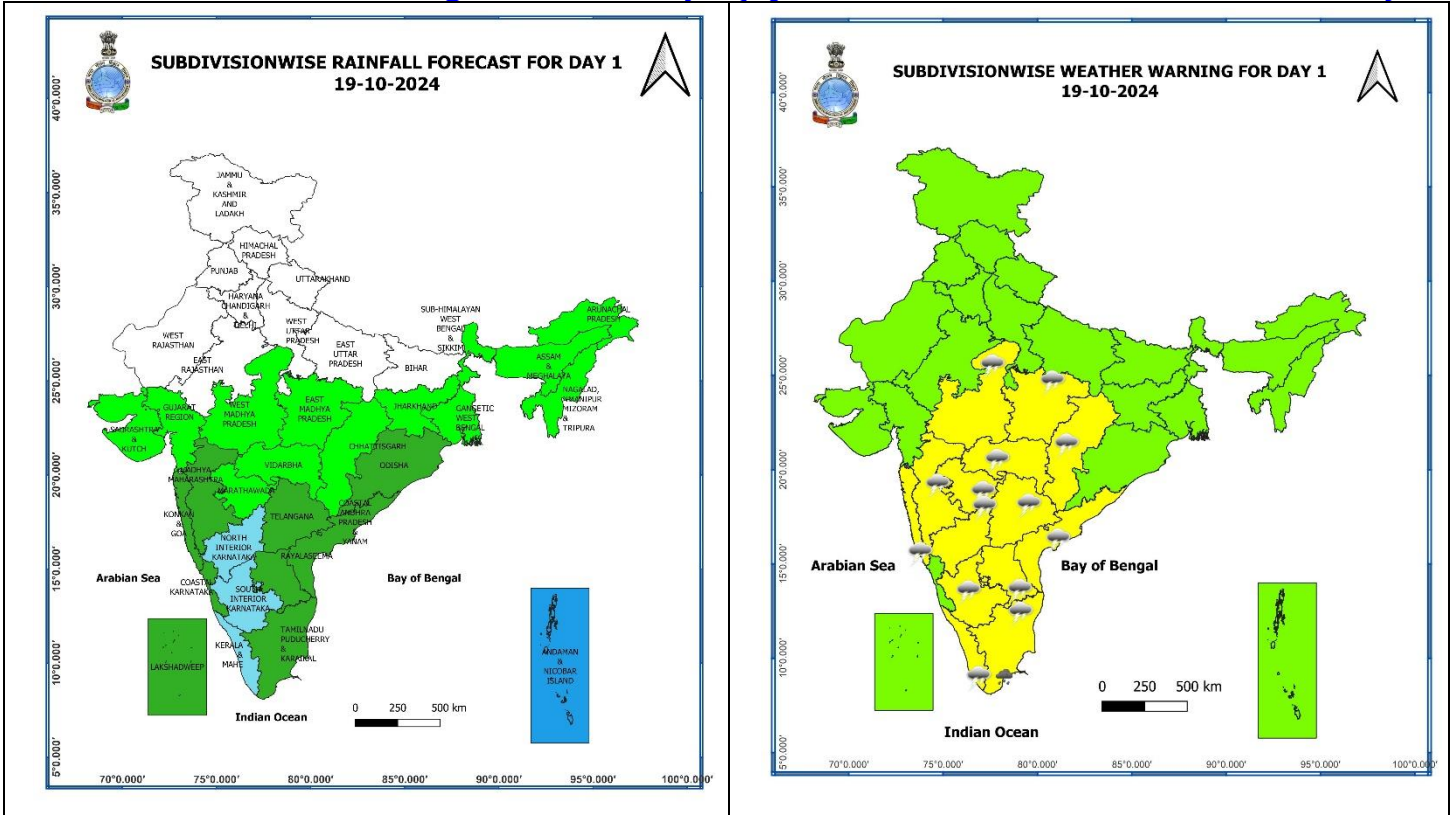
Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST to 1730 hours IST of yesterday): **at many places over Coastal Andhra Pradesh & Yanam; at a few places over Gangetic West Bengal, Kerala & Mahe, Madhya Maharashtra, Tamil Nadu, Puducherry & Karaikal; at isolated places over Madhya Pradesh, Meghalaya, Jharkhand, Odisha, Rayalaseema, Coastal Karnataka.**
- ❖ **Heavy rainfall recorded** (from 0830 hours IST to 1730 hours IST of yesterday): **Heavy rainfall at isolated places over East Madhya Pradesh.**
- ❖ **Significant amount of rainfall** (from 0830 hours IST to 1730 hours IST of yesterday) (in cm): **East Madhya Pradesh:** Chhindwara AMFU 7, Chhindwara 4, Seoni 2; **Konkan & Goa:** Dahanu 5; **Tamil Nadu, Puducherry & Karaikal:** Salem 4, Yercaud 3; **Madhya Maharashtra:** Kolhapur 3; **Gangetic West Bengal:** Canning 2.
- ❖ **Minimum Temperature Departures (as on 18-10-2024):** Minimum temperatures were **markedly above normal (5.1°C or more)** at isolated places over Saurashtra & Kutch, Madhya Maharashtra; **appreciably above normal (3.1°C to 5.0°C)** at most places over Gujarat Region; at many places over Marathwada; at a few places over Vidarbha & West Rajasthan; at isolated places over Bihar, Jharkhand, Chhattisgarh, Punjab, East Uttar Pradesh, West Madhya Pradesh, Konkan & Goa & Telangana; **above normal (1.6°C to 3.0°C)** at most place over Odisha; at many places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Haryana-Chandigarh-Delhi, West Uttar Pradesh, East Madhya Pradesh, East Rajasthan, West Bengal & Sikkim, Coastal Andhra Pradesh & Yanam, Rayalaseema **above normal (3.1°C to 5.0°C)** at isolated places over & North Interior Karnataka; at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, South Interior Karnataka, Kerala & Mahe & Tamil Nadu, Puducherry & Karaikal. Yesterday, **the lowest minimum temperature of 16.8°C** was reported at **Delhi ridge & Ayanagar (New Delhi)** over the plains of the country. (Fig.4)
- ❖ **Maximum Temperature Departures (as on 18-10-2024):** Maximum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Punjab, Haryana-Chandigarh-Delhi, Rajasthan, Odisha, Chhattisgarh; **above normal (1.6°C to 3.0°C)** at many places over Himachal Pradesh, West Uttar Pradesh; at a few places over East Uttar Pradesh, East Madhya Pradesh, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe; at isolated places over Uttarakhand, Bihar, Jharkhand, Gangetic West Bengal, Rayalaseema, Vidarbha, Marathwada, Telangana, Coastal Andhra Pradesh & Yanam. These were **appreciably below normal (-3.1°C to -5.0°C)** at isolated places over Madhya Maharashtra, North Interior Karnataka **below normal (-1.6°C to -3.0°C)** at isolated places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Saurashtra & Kutch, Konkan & Goa. Yesterday, **the highest Maximum Temperature of 39.9°C** was reported at **Pokharan_IAF (West Rajasthan)** over the country. (Fig. 2)

Meteorological Analysis (Based on 0530 hours IST)

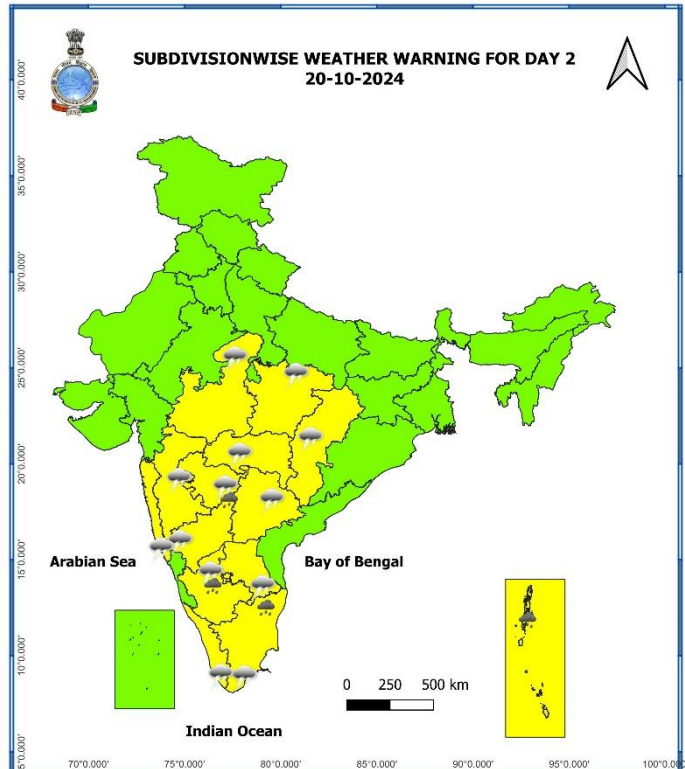
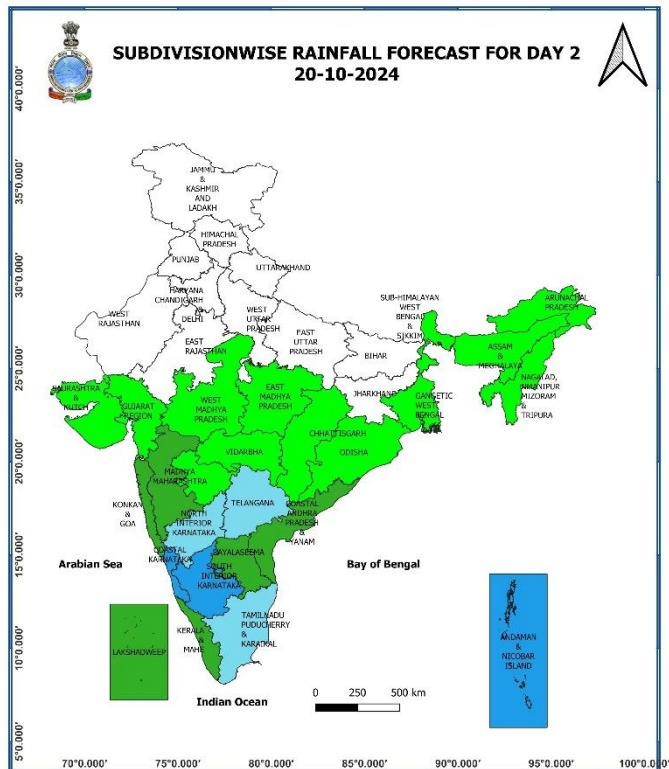
- ❖ The **low pressure area** over eastcentral Arabian Sea with associated cyclonic circulation extending upto 5.8 km above mean sea level persists. It is likely to move west-northwestwards away from Indian coast and become more marked during next 2 days.
- ❖ The **trough** from the centre of above **low pressure area** over eastcentral Arabian Sea to south Andhra Pradesh coast across south Karnataka & Rayalaseema extending upto 3.1 km above mean sea level persists.
- ❖ The **upper air cyclonic circulation** over northeast Assam and neighbourhood persists and now seen at 1.5 Km above mean sea level.
- ❖ A fresh **upper air cyclonic circulation** very likely to form over North Andaman Sea around 20th October. Under its influence, a low pressure area is likely to form over Central Bay of Bengal around 22nd October, thereafter, it is likely to move northwestwards and intensify further into a **depression** by 24th October.

Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 25th October, 2024)



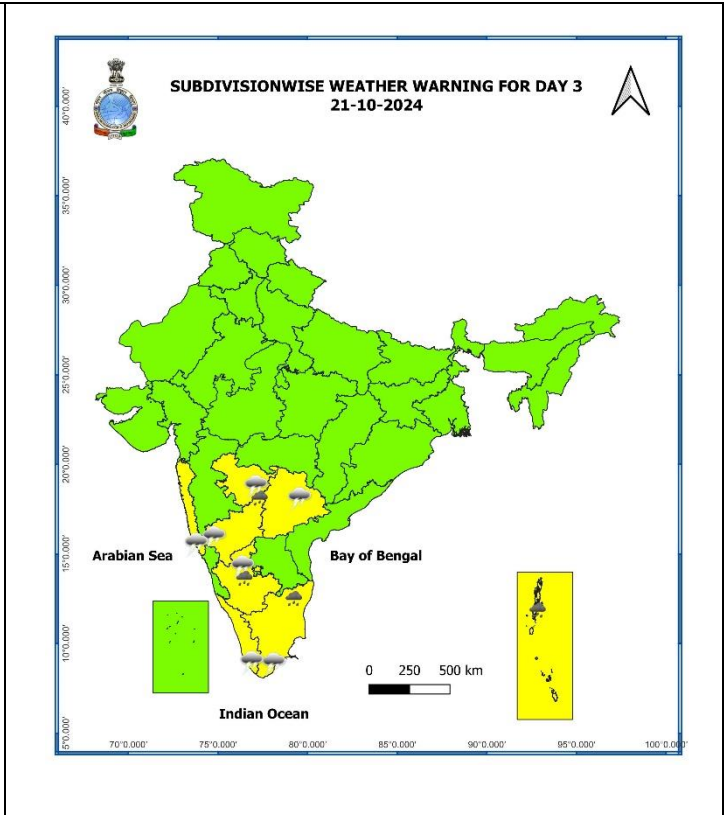
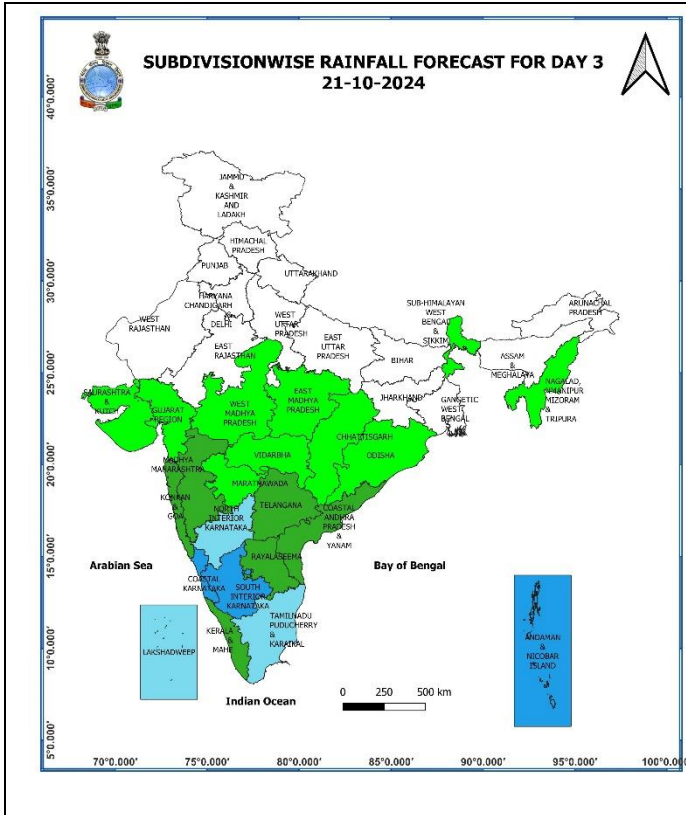
19 October (Day 1):

- ❖ **Heavy rainfall ($\geq 7\text{cm}$)** very likely at isolated places over Tamil Nadu, Puducherry & Karaikal.
- ❖ **Thunderstorm accompanied gusty winds (30-40 kmph)** very likely at isolated places over Telangana; **with lightning** very likely at isolated places over Odisha, Konkan & Goa, Madhya Maharashtra, Marathwada, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema, Interior Karnataka.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over along and off Kerala, Karnataka, Goa, Maharashtra, Adjoining South Gujrat Coasts, over Lakshadweep Area, over Eastcentral Arabian Sea and adjoining Westcentral, Northeast Arabian Sea. Fishermen are advised not to venture into these areas.



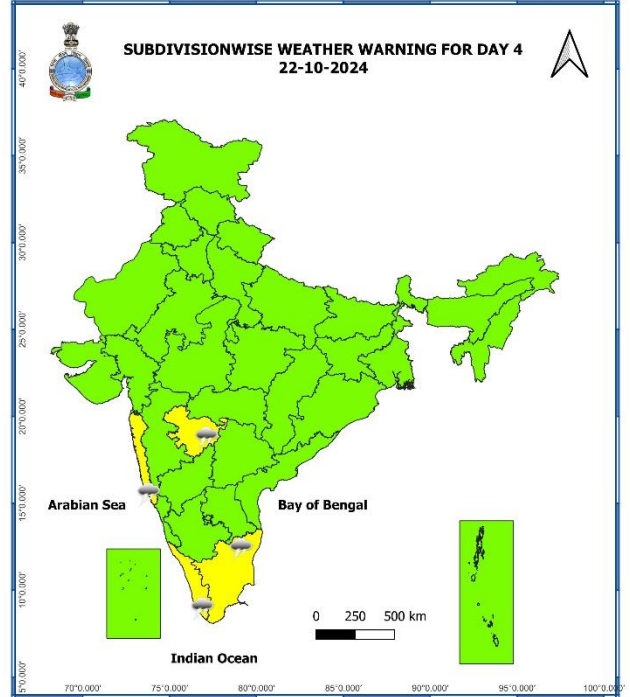
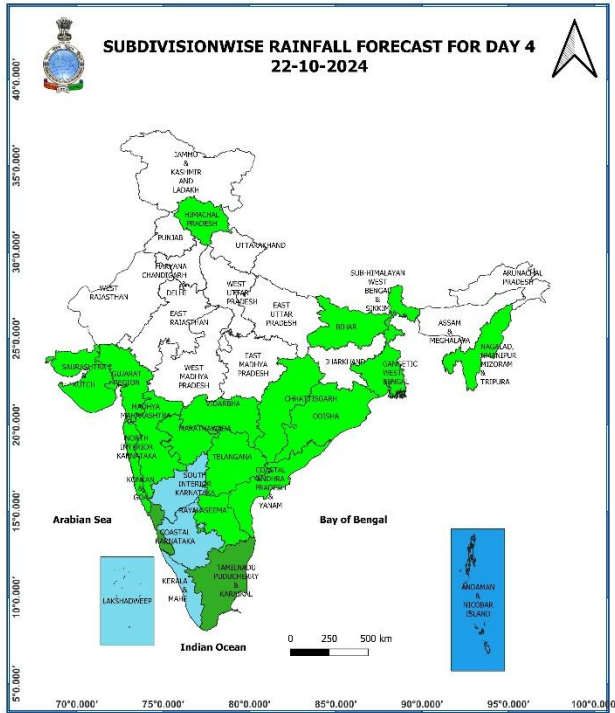
20 October (Day 2):

- ❖ **Heavy rainfall ($\geq 7\text{cm}$)** very likely at isolated places over Andaman & Nicobar Islands, Tamil Nadu, Puducherry & Karaikal, Interior Karnataka.
- ❖ **Thunderstorm accompanied gusty winds (30-40 kmph)** very likely at isolated places over Telangana; **with lightning** very likely at isolated places over Konkan & Goa, Madhya Maharashtra, Marathwada, Tamil Nadu, Kerala & Mahe, Rayalaseema, North Interior Karnataka, South Interior Karnataka.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over along and off Kerala, Karnataka, Goa, Maharashtra Coasts, over Lakshadweep area, over Eastcentral Arabian Sea and adjoining Westcentral, North Arabian Sea, over Andaman Sea. Fishermen are advised not to venture into these areas.



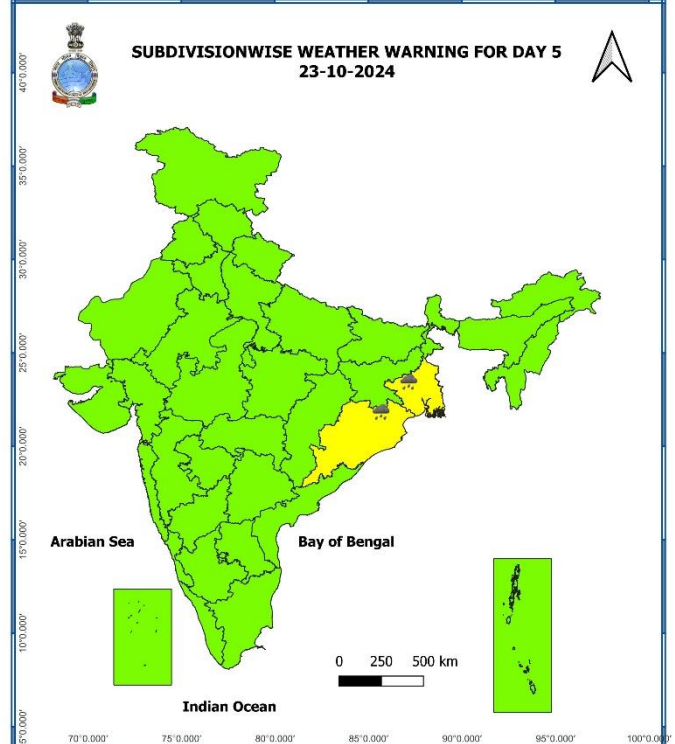
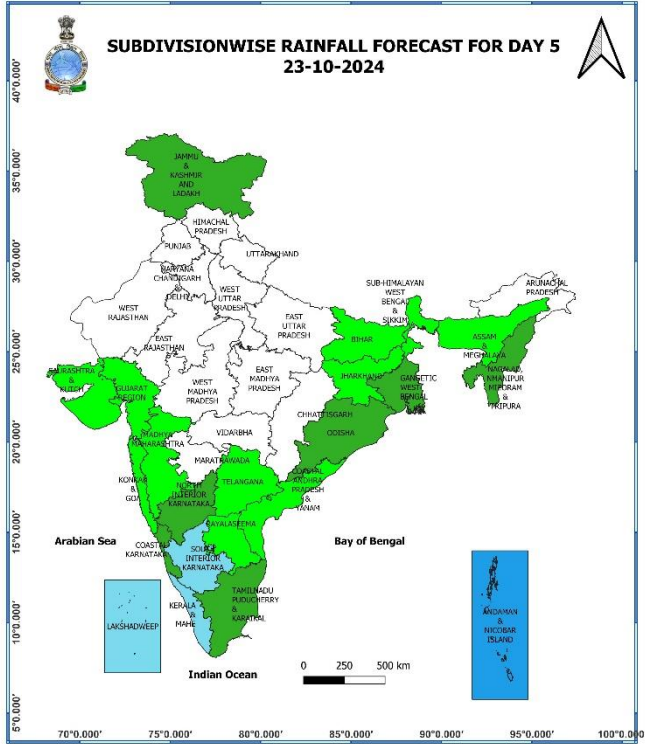
21 October (Day 3):

- ❖ **Heavy rainfall ($\geq 7\text{cm}$)** likely at isolated places over Andaman & Nicobar Islands, Tamil Nadu, Puducherry & Karaikal, Interior Karnataka.
- ❖ **Thunderstorm accompanied gusty winds (30-40 kmph)** likely at isolated places over Telangana; **with lightning** very likely at isolated places over Konkan & Goa, Marathwada, Tamil Nadu, Kerala & Mahe, Interior Karnataka.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over Eastcentral Arabian Sea and adjoining Westcentral, North Arabian Sea, over Andaman Sea & adjoining Eastcentral and Southeast Bay of Bengal. **Fishermen are advised not to venture into these areas.**



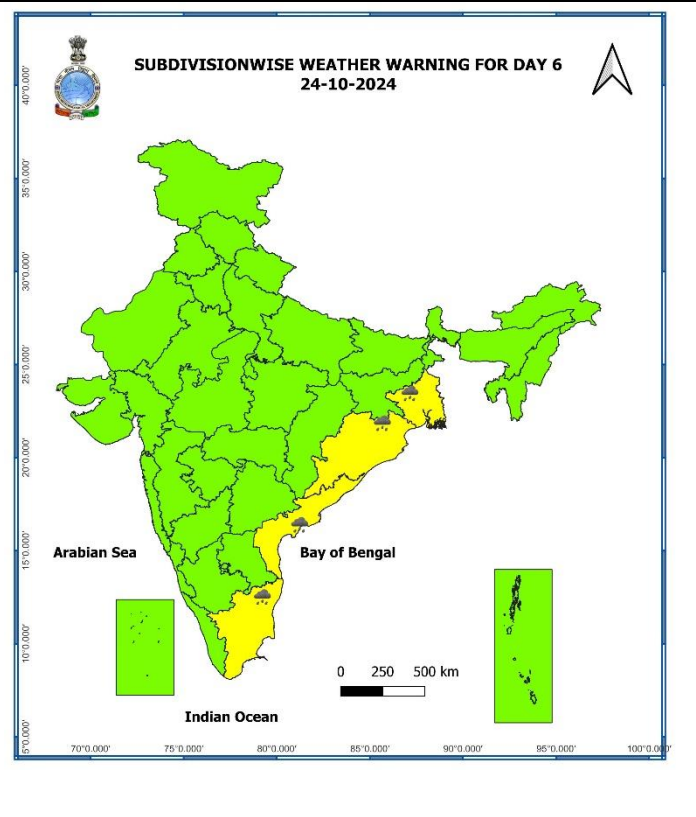
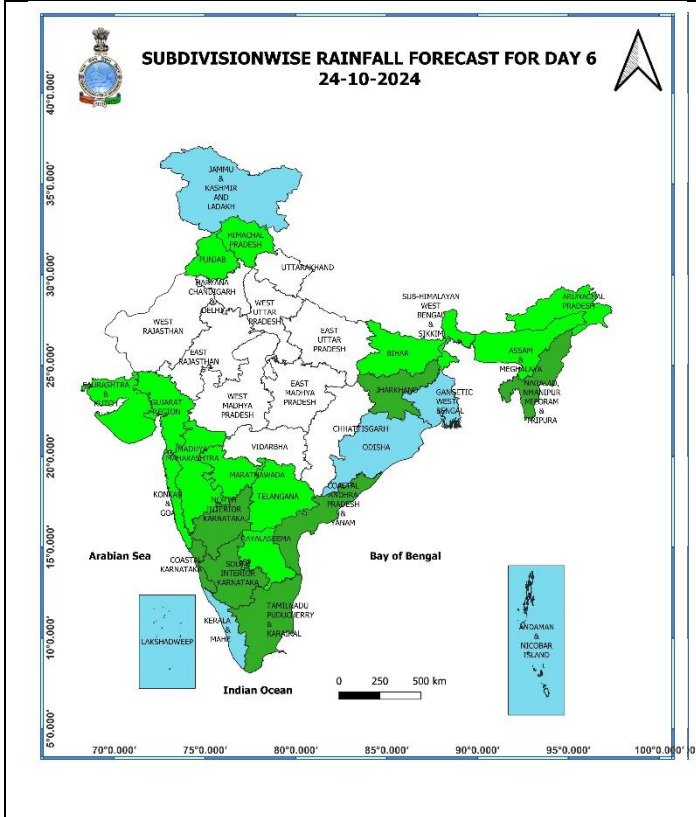
22 October (Day 4):

- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Konkan & Goa, Marathwada, Tamil Nadu, Kerala & Mahe.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over Andaman Sea, Central and adjoining South Bay of Bengal. Fishermen are advised not to venture into these areas.



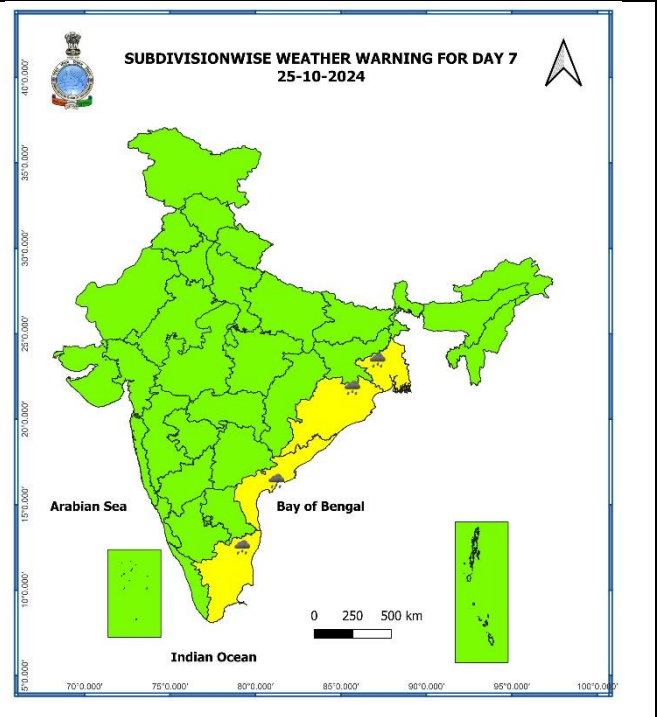
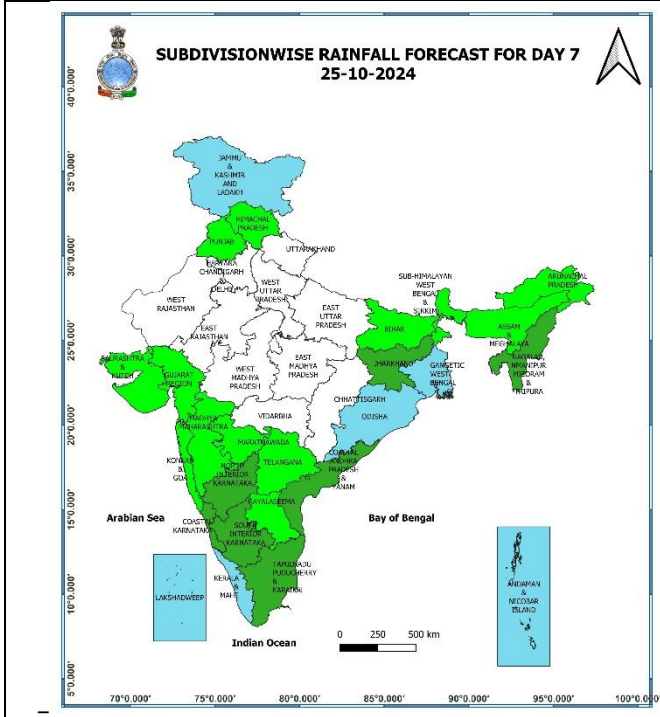
23 October (Day 5):

- ❖ Heavy rainfall (≥ 7 cm) likely at isolated places over Gangetic West Bengal, Odisha.



24 October (Day 6):

- ❖ **Heavy rainfall ($\geq 7\text{cm}$)** likely at isolated places over Gangetic West Bengal, Odisha, Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam.



25 October (Day 7):

- ❖ **Heavy rainfall ($\geq 7\text{cm}$)** likely at isolated places over Gangetic West Bengal, Odisha, Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam.

Weather Outlook for subsequent 3 days (During 25th October- 27th October, 2024)

- ❖ Fairly widespread to widespread rainfall likely over East India and Islands.
- ❖ Isolated to Scattered rainfall likely over some parts of South Peninsular, Northeast India and 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.

Fig. 1: Maximum Temperatures

Fig. 2: Departure of Maximum Temperatures

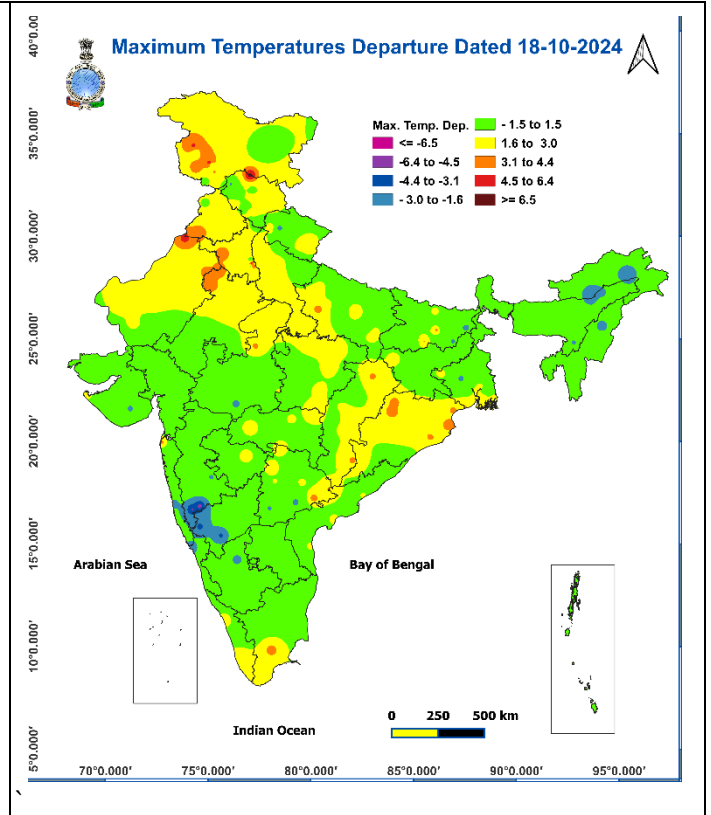
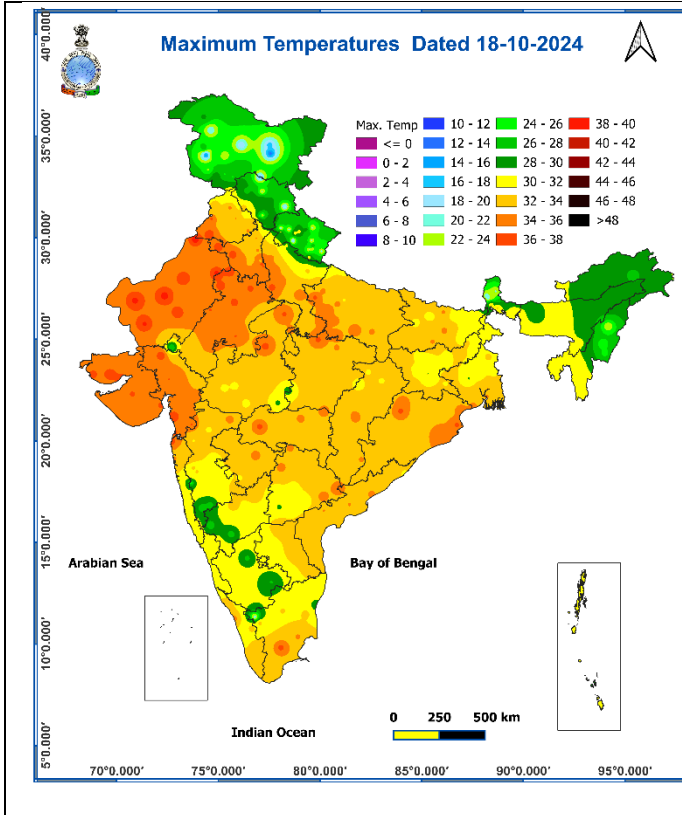


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures

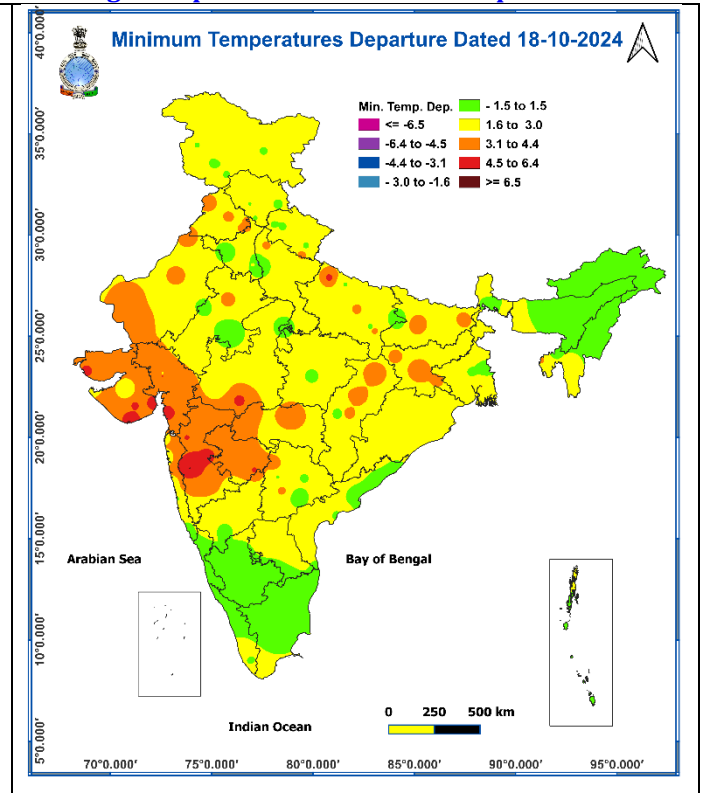
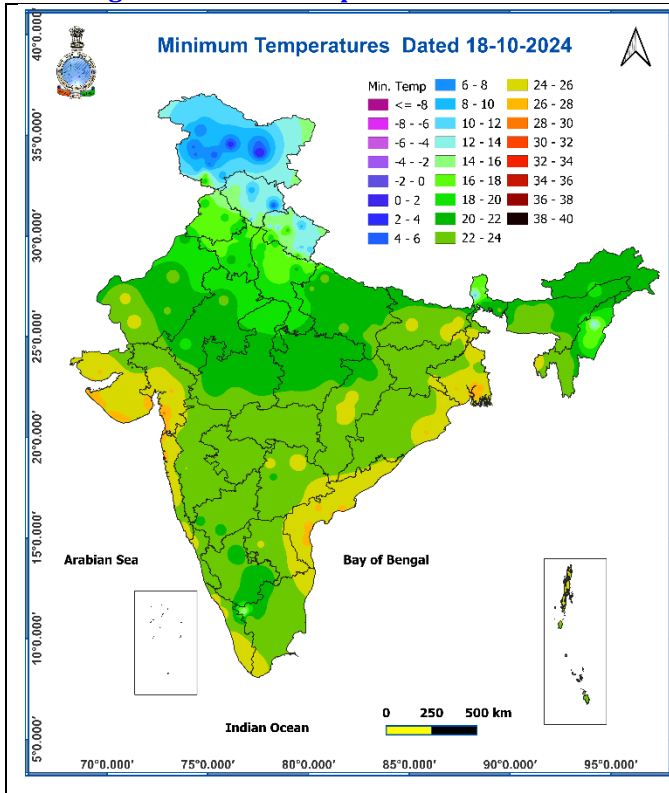
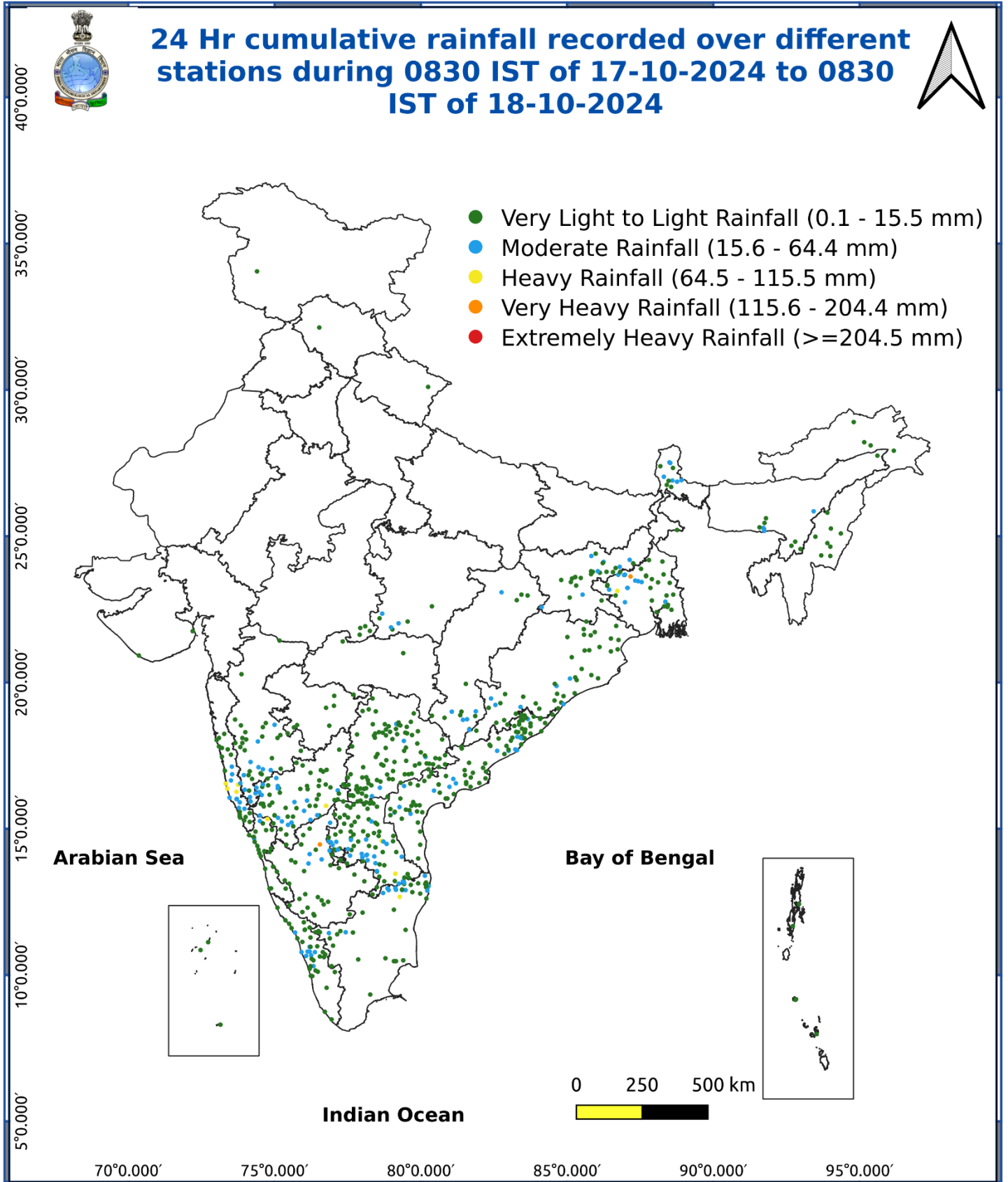


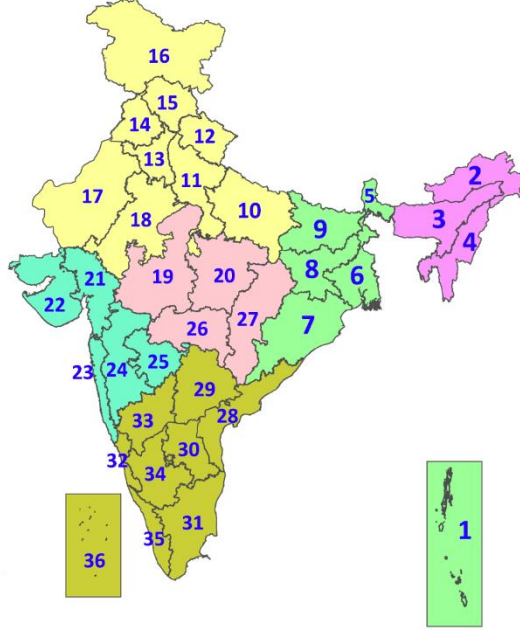
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



* 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)



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)