

Saturday, October 19, 2024
Time of Issue: 1415 hours IST
(MID-DAY)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

Weather Systems:

- ✓ Yesterday's **cyclonic circulation** over north Lakshadweep area & neighbourhood now lies over eastcentral Arabian Sea at 0830 hours IST of today and extends upto 5.8 km above mean sea level. Under its influence, a **low pressure area** likely to form over the same region during next 12 hours. It is likely to become more marked and move west-northwestwards away from Indian coasts during subsequent 3 days.
- ✓ A **trough** runs from the above **cyclonic circulation** over eastcentral Arabian Sea to South Andhra Pradesh coast across Karnataka & Rayalaseema and extends upto 3.1 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 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 very likely over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Lakshadweep, Coastal Karnataka, South Interior Karnataka, Rayalaseema; Isolated to scattered light to moderate rainfall very likely over rest of the region during the week.
- ✓ **Isolated heavy rainfall** very likely over Tamil Nadu, Puducherry & Karaikal during 19th -21st & 24th; North Interior Karnataka during 19th -22nd; South Interior Karnataka during 19th -23rd; Rayalaseema on 19th; Kerala & Mahe during 20th -24th; Coastal Andhra Pradesh & Yanam during 19th, 20th & 24, 25th; Coastal Karnataka on 22nd & 23rd 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 very heavy rainfall** very likely over Andaman & Nicobar Islands on 20th & 21st; Odisha on 24th & 25th October.
- ✓ **Isolated heavy rainfall** very likely over Andaman & Nicobar Islands during 19th -21st; Gangetic West Bengal during 23rd -25th; Odisha on 19th, 23rd, 24th & 25th October.

West India

- ✓ Scattered to Fairly widespread light to moderate rainfall very likely over Konkan & Goa, Madhya Maharashtra; Isolated to Scattered light to moderate rainfall very likely over rest of the region during the week except Saurashtra & Kutch where dry weather is likely to prevail from 22nd -25th October.
- ✓ **Isolated heavy rainfall** very likely over Konkan & Goa, Madhya Maharashtra, Saurashtra & Kutch, Gujarat Region on 19th & 20th October.
- ✓ **Isolated Hailstorm** very likely over Madhya Maharashtra & Marathwada on 19th & 20th October.

Northwest, Central & Northeast India:

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

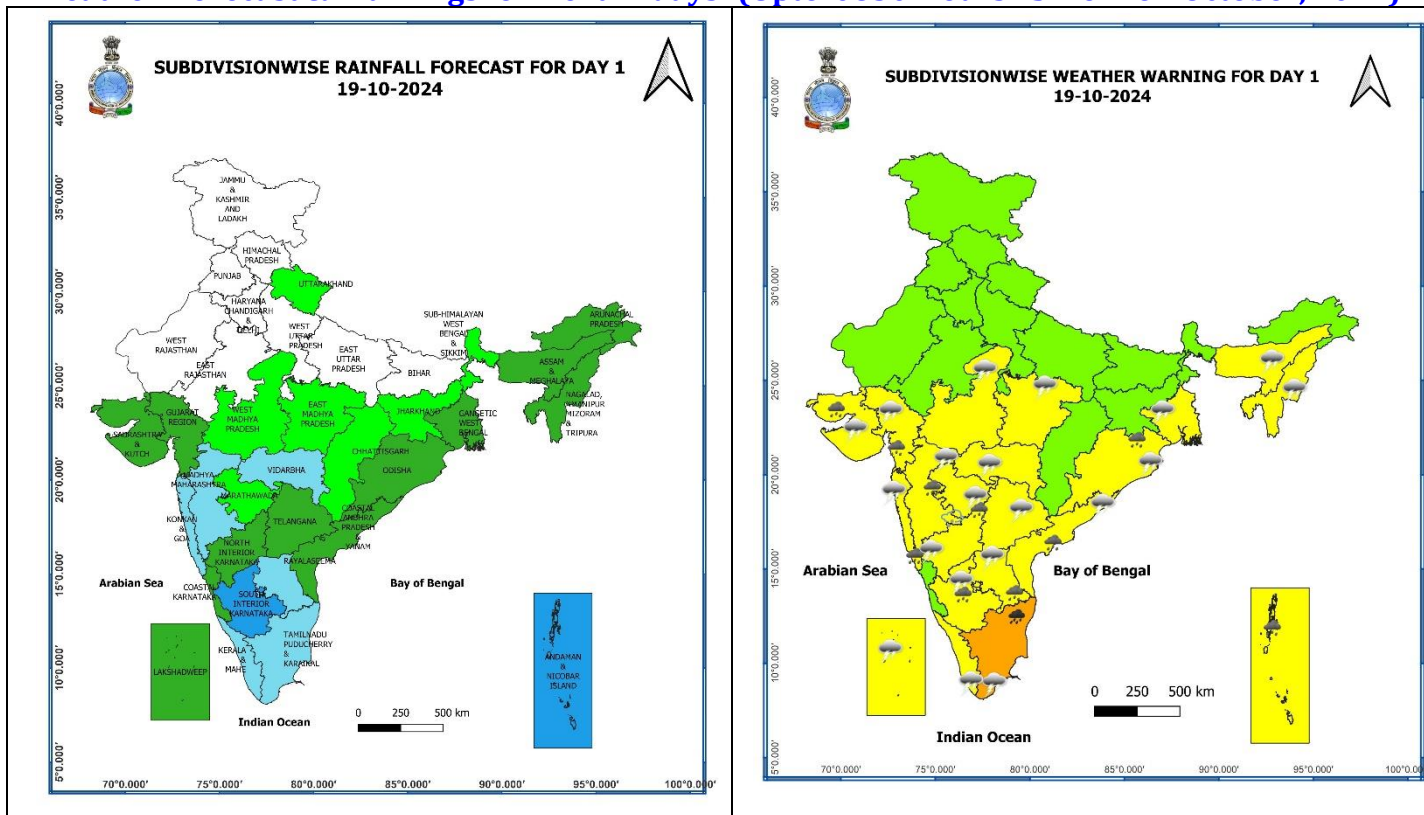
Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST of yesterday to 0830 hours IST of today): at most places over Konkan & Goa, Rayalaseema; **at many places over** Vidarbha, Madhya Maharashtra, Coastal Andhra Pradesh & Yanam, Interior Karnataka; **at a few places over** Andaman & Nicobar Islands, West Bengal & Sikkim, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Gujarat Region, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Lakshadweep, Coastal Karnataka; **at isolated places over** Uttarakhand, Madhya Pradesh, Chhattisgarh, Jharkhand, Odisha, Assam & Meghalaya, Marathwada, Saurashtra & Kutch, Telangana.
- ❖ **Heavy rainfall recorded** (from 0830 hours IST of yesterday to 0830 hours IST of today): **Heavy to very Heavy rainfall** at isolated places over Odisha, Tamil Nadu, Puducherry & Karaikal; **Heavy rainfall** at isolated places over Gujarat Region, Madhya Maharashtra, Marathwada, Rayalaseema, Coastal Andhra Pradesh & Yanam.
- ❖ **Hailstorm** observed at isolated places over Madhya Maharashtra.
- ❖ **Significant amount of rainfall** (from 0830 hours IST of yesterday to 0830 hours IST of today) (in cm): **Tamil Nadu, Puducherry & Karaikal:** Kalasapakkam (dist Tiruvannamalai) 17, Arantangi (dist Pudukkottai) 10, Usilampatti (dist Madurai) 9, RSCL-3 Avalurpettai (dist Villupuram), Peravurani (dist Thanjavur) 8 each, Ponneri (dist Tiruvallur), Viralimalai (dist Pudukkottai), Adiramapattinam (dist Thanjavur), Thuvakudi AWS (dist Thiruchirappalli), Thuvakudi Imti (dist Thiruchirappalli) 7 each; **Odisha:** Baripada (dist Mayurbhanj) 14, Suliapada (dist Mayurbhanj) 7; **Madhya Maharashtra:** Bhadgaon (dist Jalgaon) 11, Pachora (dist Jalgaon) 7, Satna Baglan (dist Nashik) 7; **Rayalaseema:** Thottambedu (dist Tirupati) 8, Srikalahasti (dist Tirupati) 7; **Coastal Andhra Pradesh & Yanam:** Vinjamur (dist Spsr Nellore) 7; **Gujarat Region:** Songadh (dist Tapi) 7; **Marathwada:** Soegaon (dist Chh. Sambhajinagar) 7,
- ❖ **Minimum Temperature Departures (as on 19-10-2024):** Minimum temperatures are **markedly above normal (5.1°C or more)** at isolated places over Madhya Maharashtra; **appreciably above normal (3.1°C to 5.0°C)** at most places over Gujarat State; at many places over Marathwada; at a few places over Vidarbha; at isolated places over Rajasthan, Bihar, Jharkhand, Chhattisgarh, Punjab, East Uttar Pradesh, West Madhya Pradesh and 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, West Bengal & Sikkim, Konkan & Goa, Coastal Andhra Pradesh & Yanam, Andaman & Nicobar Islands; at isolated places over Nagaland, Manipur, Mizoram & Tripura, Assam & Meghalaya Rayalaseema and Interior Karnataka. Today, **the lowest minimum temperature of 16.2°C** is reported at **Sikar (East Rajasthan)** 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 0830 hours IST)

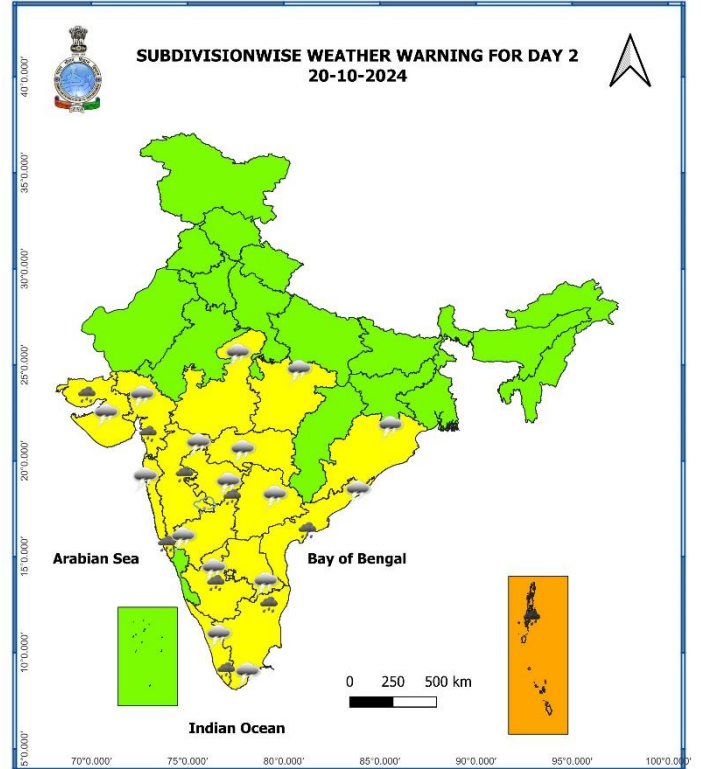
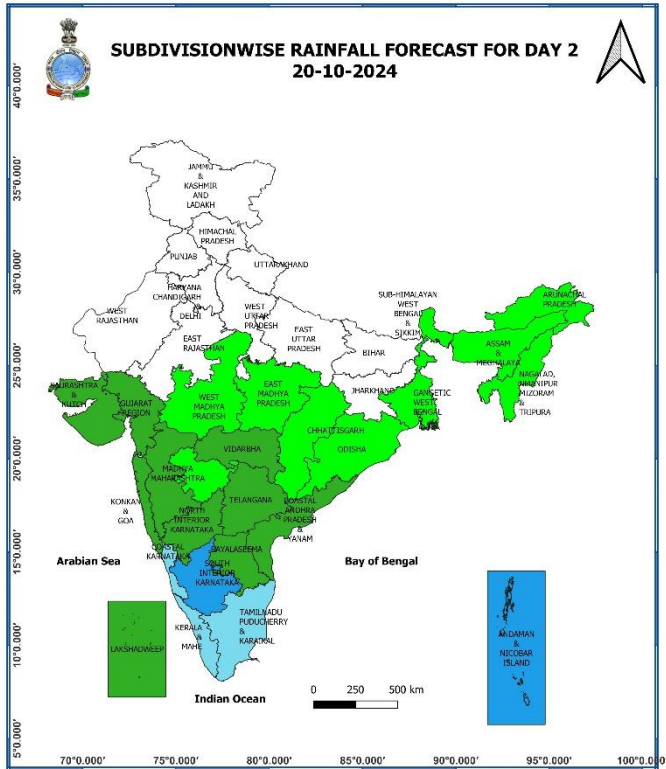
- ❖ The **low pressure area** over eastcentral Arabian Sea lay as a **well marked low pressure area** over eastcentral & adjoining westcentral Arabian Sea with associated cyclonic circulation extending upto 5.8 km above mean sea level at 0830 IST of Today. It is likely to move west-northwestwards away from Indian coast during next 2 days.
- ❖ A **cyclonic circulation** lies over southwest and adjoining westcentral Bay of Bengal off north Tamil Nadu and south Andhra Pradesh coast and extends upto 5.8 km above mean sea level tilting southwestwards with height.
- ❖ A cyclonic **circulation** lies over central Andaman Sea and extends upto 5.8 km above mean sea level. Under its influence, a **low pressure area** is likely to form over Eastcentral Bay of Bengal and adjoining north Andaman Sea around 21st October. Thereafter, it is likely to move northwestwards and intensify further into a **depression** around 23rd October.
- ❖ Another cyclonic **circulation** lies over Gulf of Thailand and extends upto 5.8 km above mean sea level.
- ❖ A **cyclonic circulation** lies over central Assam and neighbourhood at 0.9 Km above mean sea level, with a trough aloft at 3.1 km mean sea level roughly along Long. 91°E & north of Lat. 23°N.
- ❖ The **trough** from eastcentral Arabian Sea to south Andhra Pradesh coast across has become less marked.
- ❖ The **upper air cyclonic circulation** over northeast Assam and neighbourhood has become less marked.

Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 26th October, 2024)



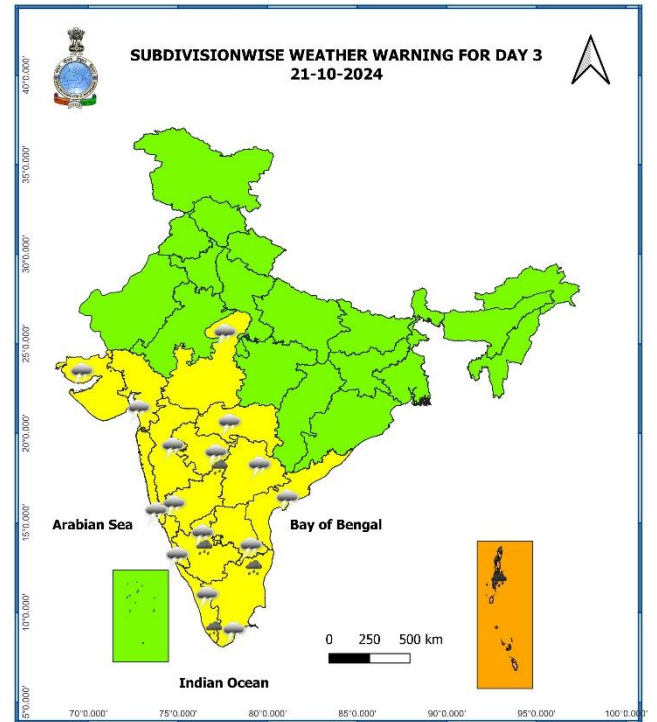
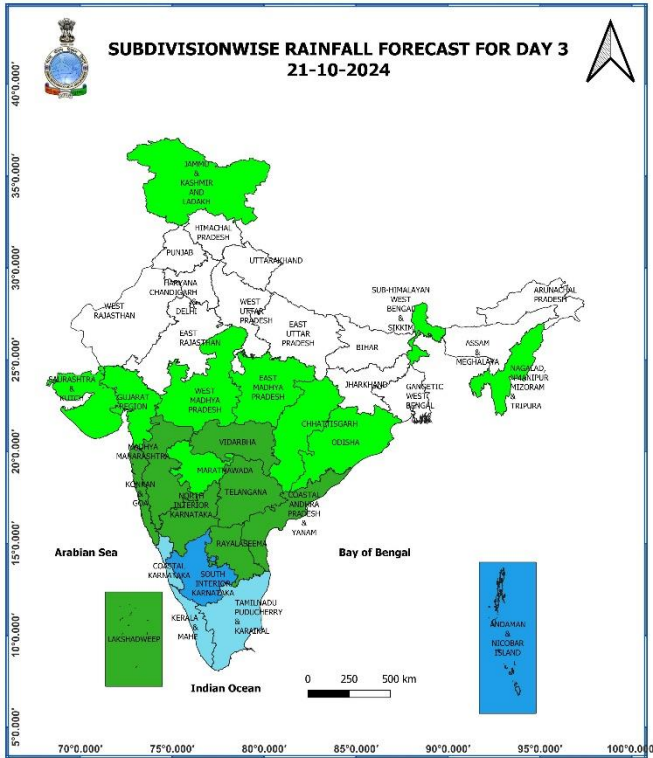
19 October (Day 1):

- ❖ **Heavy to very rainfall ($\geq 12\text{cm}$)** very likely at isolated places over Tamil Nadu, Puducherry & Karaikal; **Heavy rainfall ($\geq 7\text{cm}$)** very likely at isolated places over Andaman & Nicobar Islands, Odisha, Konkan & Goa, Madhya Maharashtra, south Gujarat state, Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Rayalaseema, Interior Karnataka.
- ❖ **Thunderstorm accompanied with lightning & hail** very likely at isolated places over Madhya Maharashtra; **Thunderstorm accompanied gusty winds (30-40 kmph)** very likely at isolated places over Telangana; **with lightning** very likely at isolated places over Madhya Pradesh, Marathwada, Vidarbha, Chhattisgarh, Gangetic West Bengal, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Gujarat state, Tamil Nadu, Puducherry & Karaikal, Lakshadweep, 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 off Maharashtra coast, over eastcentral Arabian sea and adjoining westcentral, northeast Arabian sea, over Andaman Sea. Fishermen are advised not to venture into these areas.



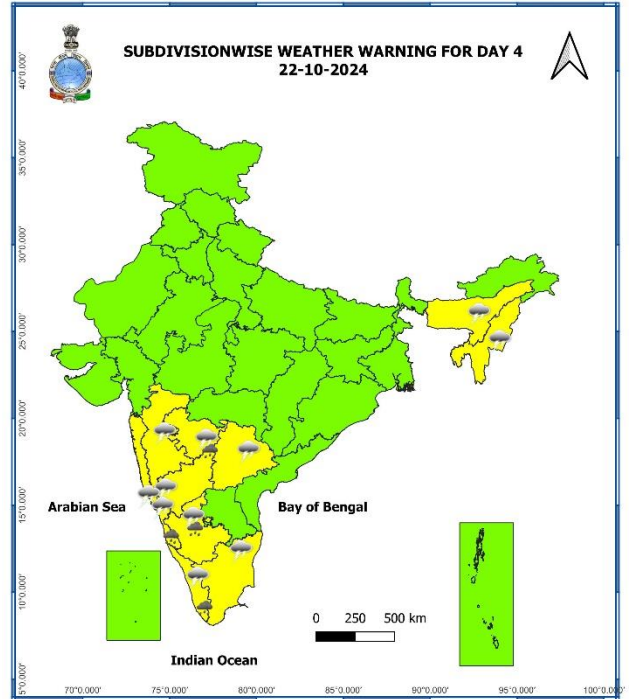
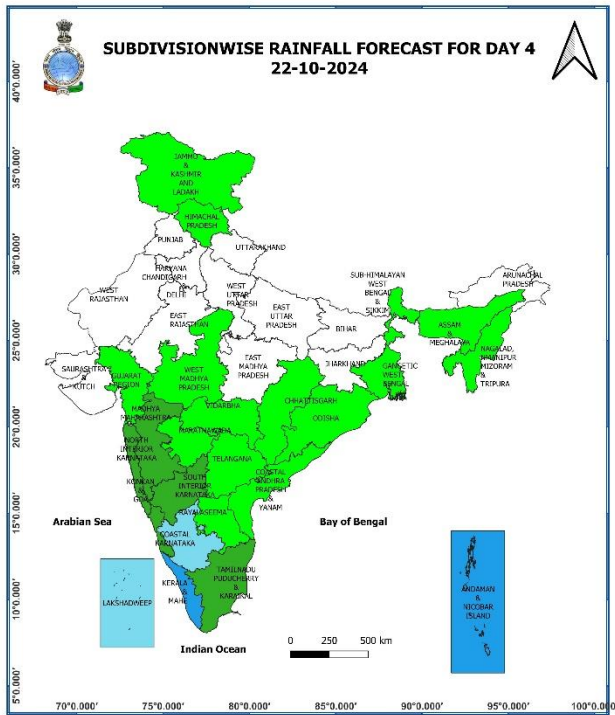
20 October (Day 2):

- ❖ **Heavy to very rainfall ($\geq 12\text{cm}$)** very likely at isolated places over Andaman & Nicobar Islands; **Heavy rainfall ($\geq 7\text{cm}$)** very likely at isolated places over Konkan & Goa, Madhya Maharashtra, south Gujarat state, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Interior Karnataka.
- ❖ **Thunderstorm accompanied with lightning & hail** very likely at isolated places over Madhya Maharashtra; **Thunderstorm accompanied gusty winds (30-40 kmph)** very likely at isolated places over Telangana; **with lightning** very likely at isolated places over Madhya Pradesh, Marathwada, Vidarbha, Chhattisgarh, Odisha, Konkan & Goa, Gujarat state, 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 most parts of eastcentral Arabian sea and eastern parts of westcentral Arabian sea, adjoining parts of north Arabian sea, over Andaman Sea. Fishermen are advised not to venture into these areas.



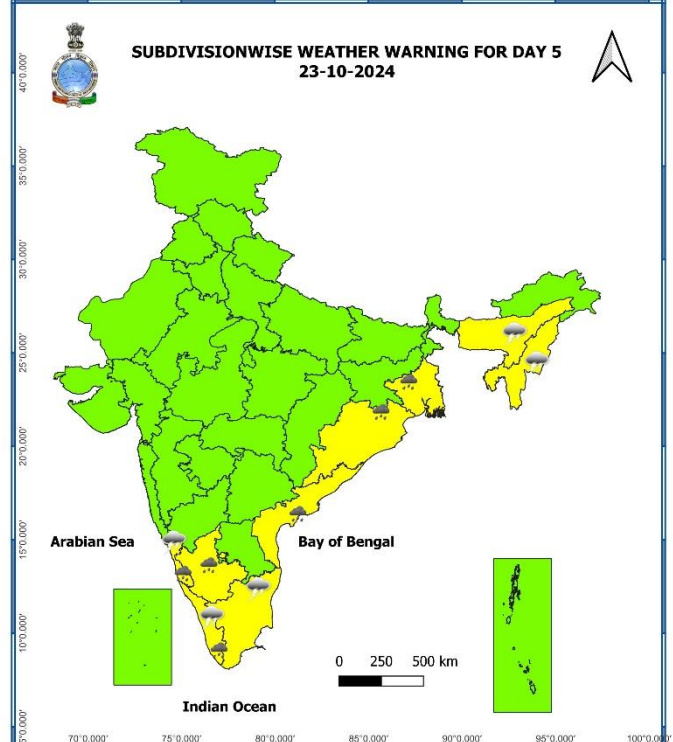
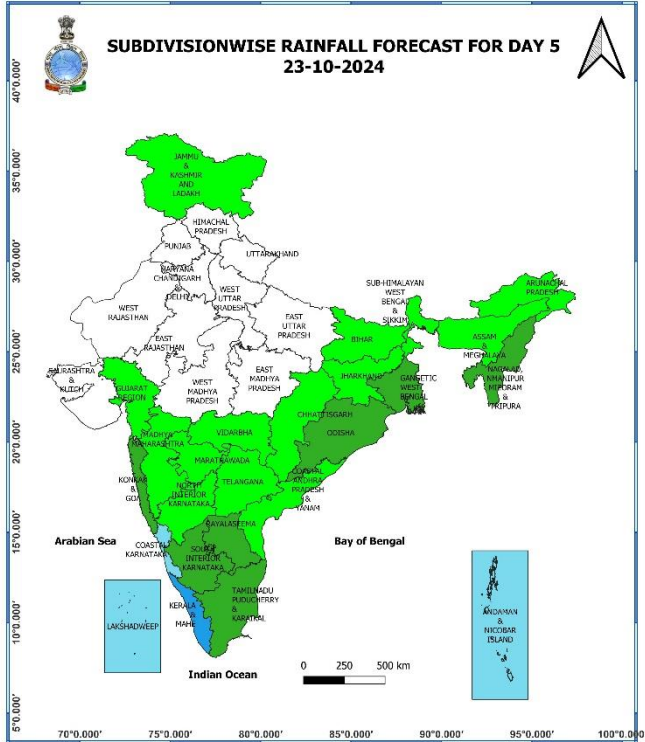
21 October (Day 3):

- ❖ **Heavy to very rainfall (≥12cm)** very likely at isolated places over Andaman & Nicobar Islands; **Heavy rainfall (≥7cm)** very likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Interior Karnataka.
- ❖ **Thunderstorm accompanied gusty winds (30-40 kmph)** very likely at isolated places over Telangana; **with lightning** very likely at isolated places over West Madhya Pradesh, Vidarbha, Konkan & Goa Madhya Maharashtra, Marathwada, Gujarat state, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema, Karnataka.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over central parts of central Arabian sea and adjoining north Arabian sea, over Andaman Sea & adjoining eastcentral and southeast Bay of Bengal. Fishermen are advised not to venture into these areas.



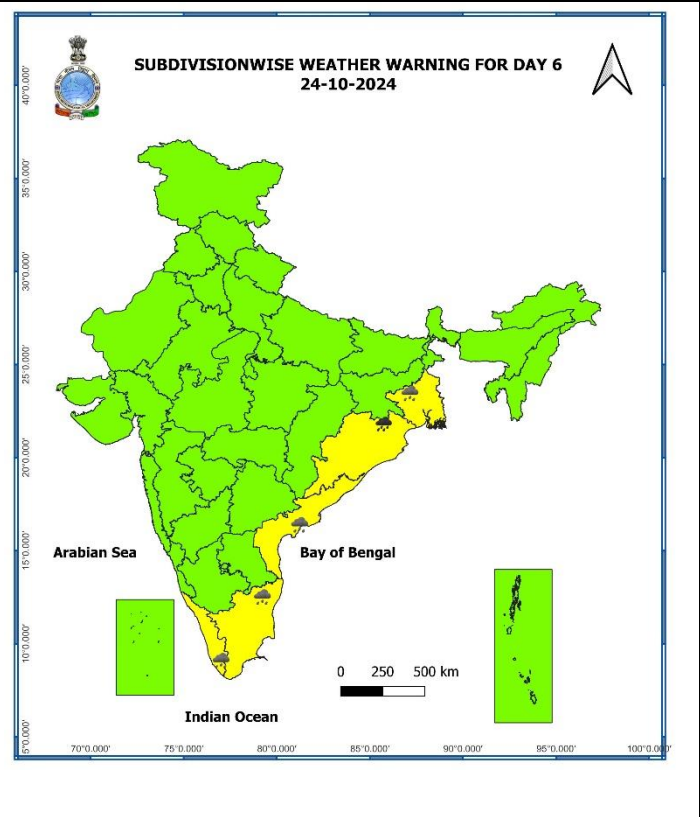
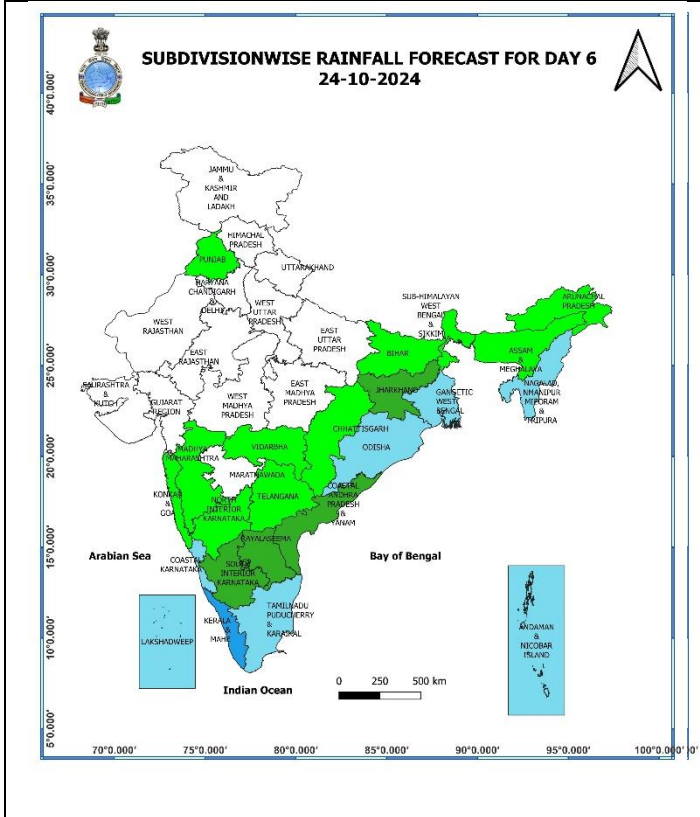
22 October (Day 4):

- ❖ **Heavy rainfall ($\geq 7\text{cm}$)** likely at isolated places over Kerala & Mahe, Karnataka.
- ❖ **Thunderstorm accompanied gusty winds (30-40 kmph)** likely at isolated places over Telangana; **with lightning** likely at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Madhya Maharashtra, Marathwada, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Karnataka.
- ❖ **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.



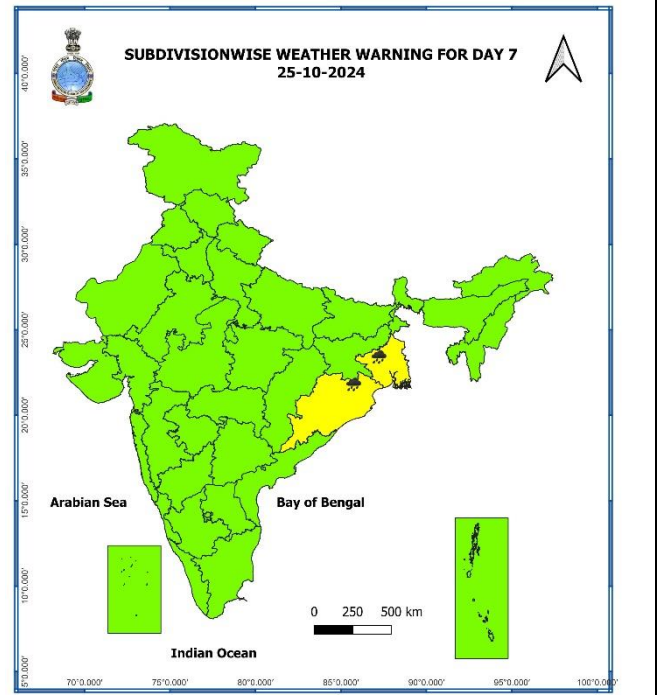
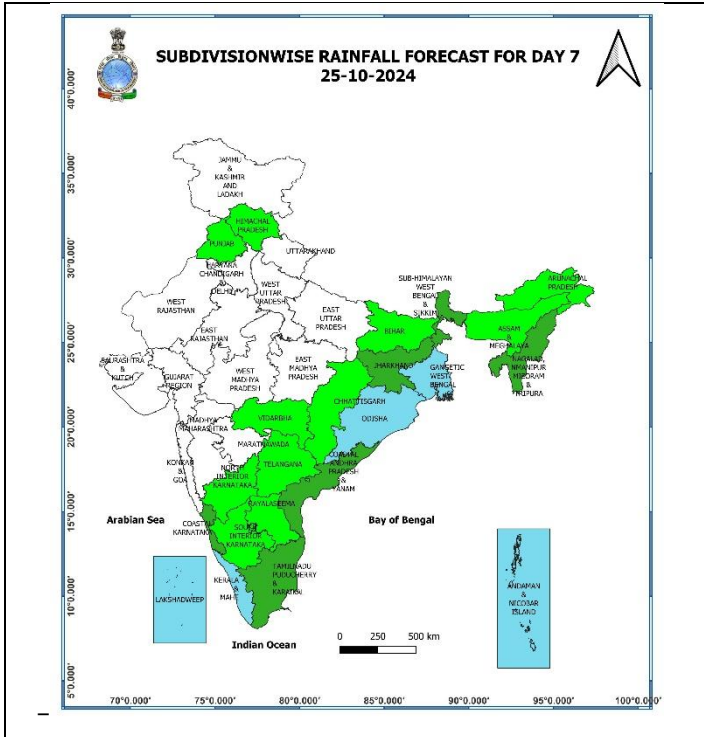
23 October (Day 5):

- ❖ **Heavy rainfall ($\geq 7\text{cm}$)** likely at isolated places over Gangetic West Bengal, Odisha, Kerala & Mahe, Coastal Karnataka, South Interior Karnataka and Coastal Andhra Pradesh & Yanam.
- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Karnataka.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over Andaman Sea, most parts of central Bay of Bengal and southern parts of north Bay of Bengal. **Squally weather with wind speed 40 kmph to 50 kmph gusting to 60 kmph** is likely to prevail over many parts of eastcentral bay of Bengal. Fishermen are advised not to venture into these areas.



24 October (Day 6):

- ❖ **Heavy to very rainfall ($\geq 12\text{cm}$)** likely at isolated places over Odisha; **Heavy rainfall ($\geq 7\text{cm}$)** likely at isolated places over Gangetic West Bengal, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam.



25 October (Day 7):

- ❖ Heavy to very heavy rainfall ($\geq 12\text{cm}$) likely at isolated places over Odisha and Gangetic West Bengal.

Weather Outlook for subsequent 3 days (During 26th October- 28th 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.

Impact due to

- ✓ **Isolated heavy to very heavy rainfall** very likely over Tamil Nadu, Puducherry & Karaikal on 19th; Andaman & Nicobar Islands on 20th & 21st; Odisha on 24th & 25th; Gangetic West Bengal on 25th October.

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 kutchha 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

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

- ✓ In **Tamil Nadu**, drain out excess water from rice nurseries and fields of rice, maize, pepper and newly planted turmeric. Undertake detrashing and propping of five-month-old sugarcane to avoid lodging. Provide support to banana plantations.
- ✓ In Andaman and Nicobar Islands, carry out harvesting of matured rice to avoid shattering loss and keep the harvested produce in safe place. Provide adequate drainage in the rice fields (near physiological maturity) to avoid water stagnation.
- ✓ In North Madhya Maharashtra, continue picking of fully opened and matured bolls of cotton and harvesting of matured soybean, maize, pearl millet, groundnut, papaya and banana and keep the harvested produce at safer places.
- ✓ Make necessary arrangements for draining out excess water from standing crop fields and fruit orchards to avoid water stagnation in Kerala, Interior Karnataka, Andhra Pradesh and Odisha.
- ✓ Keep the harvested produce at safer places.
- ✓ Provide mechanical support to horticultural crops & staking to vegetables.

Fig. 1: Maximum Temperatures

Fig. 2: Departure of Maximum Temperatures

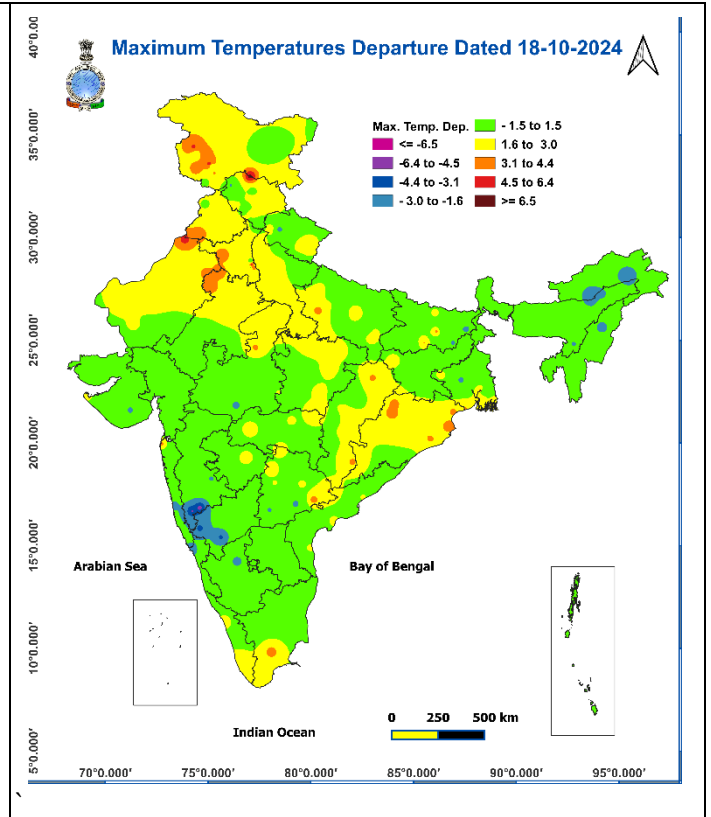
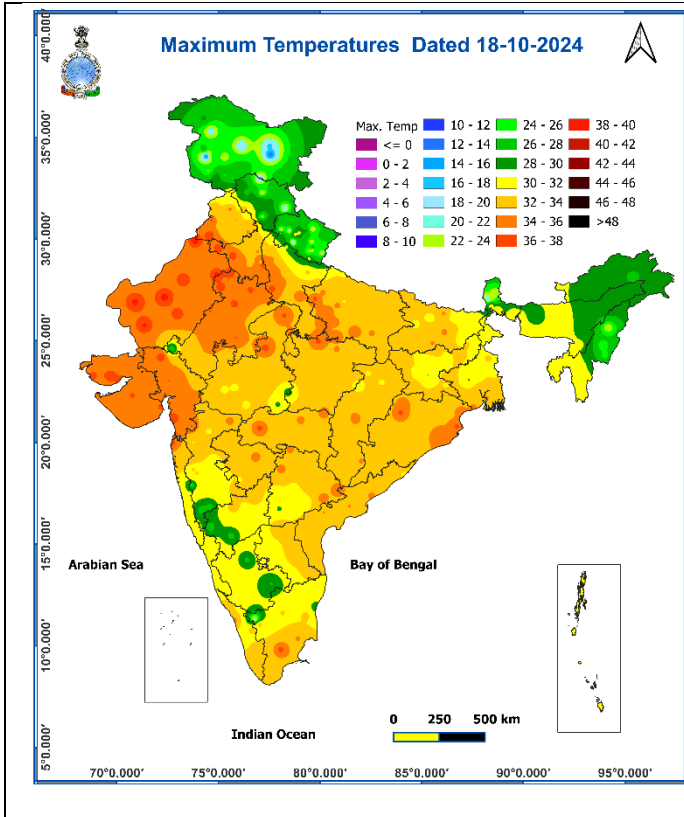


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures

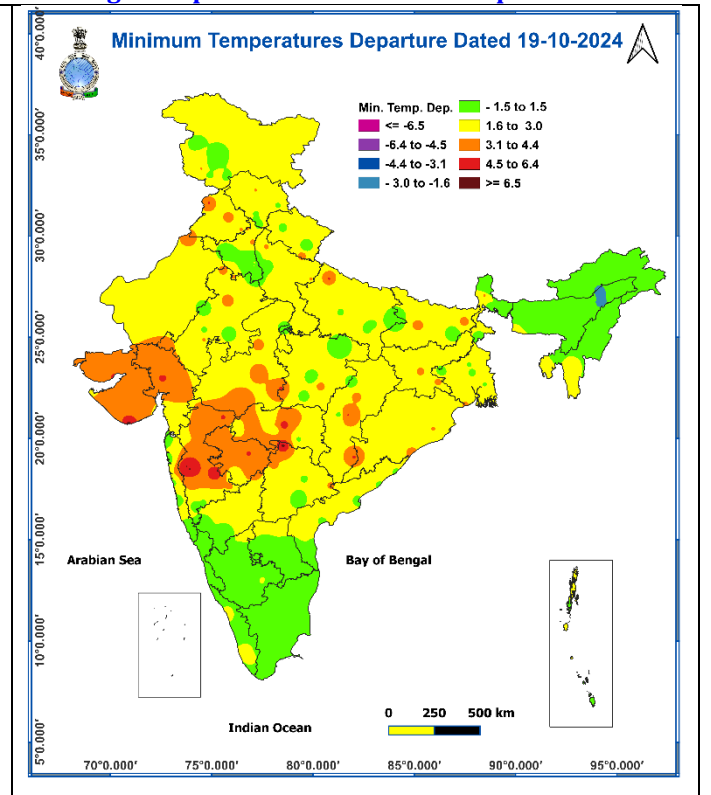
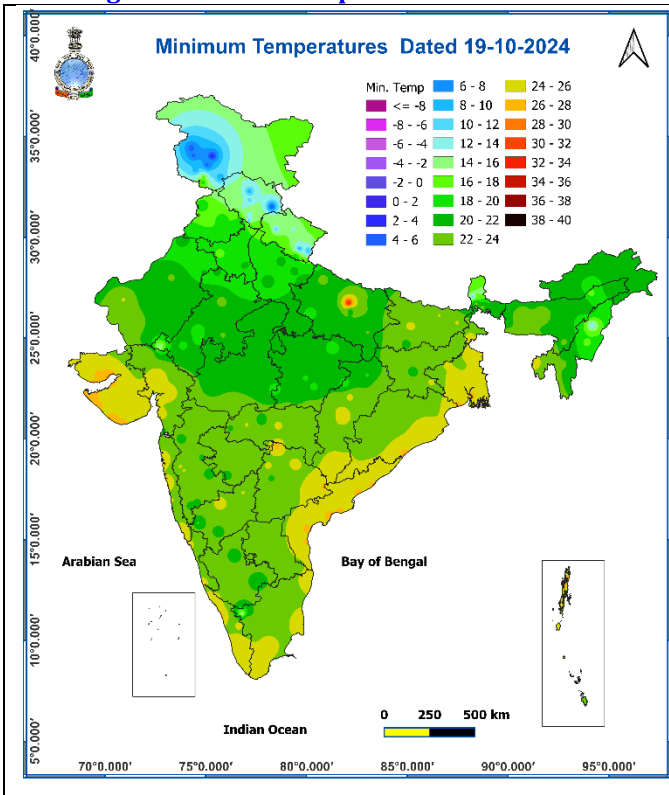
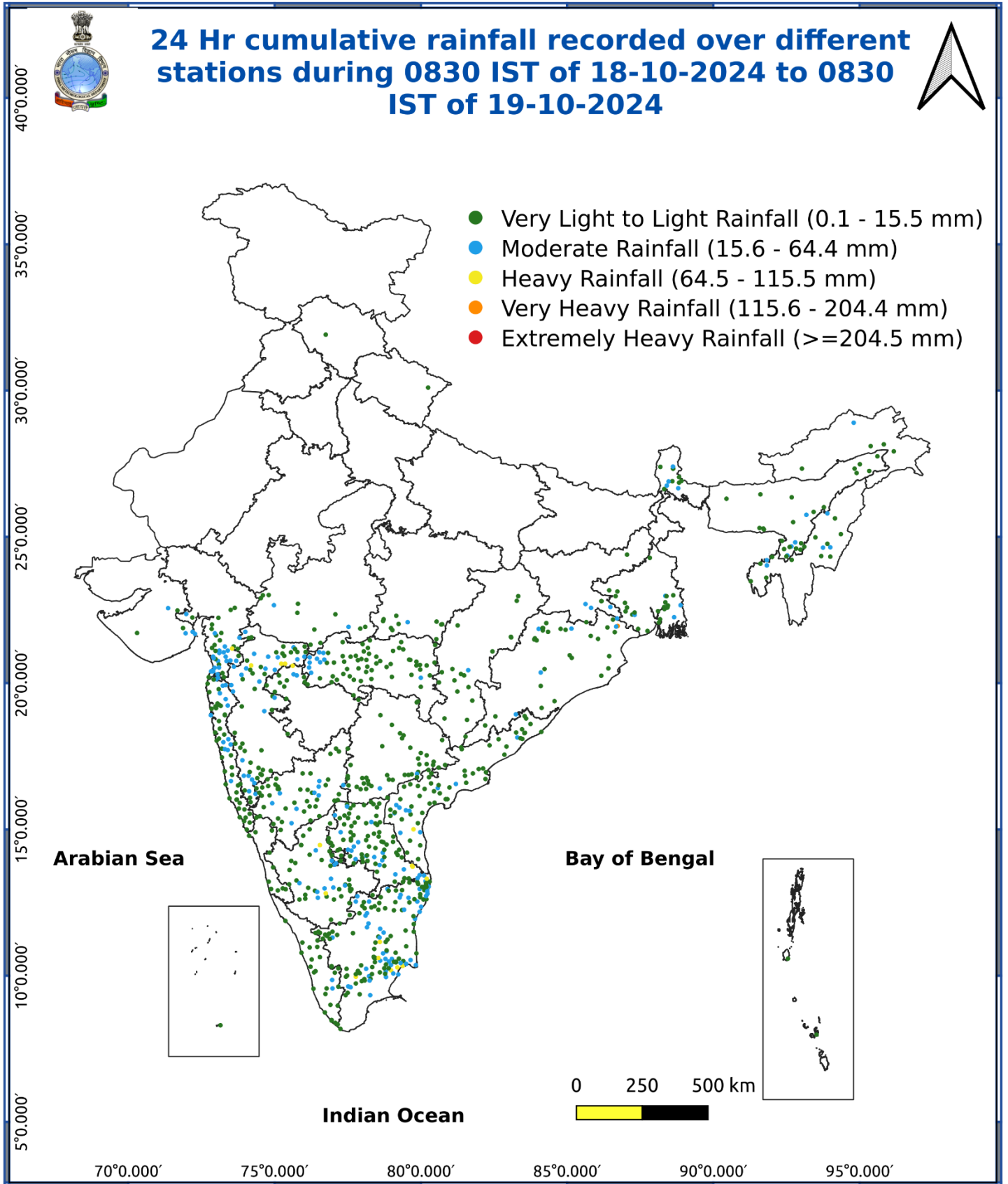


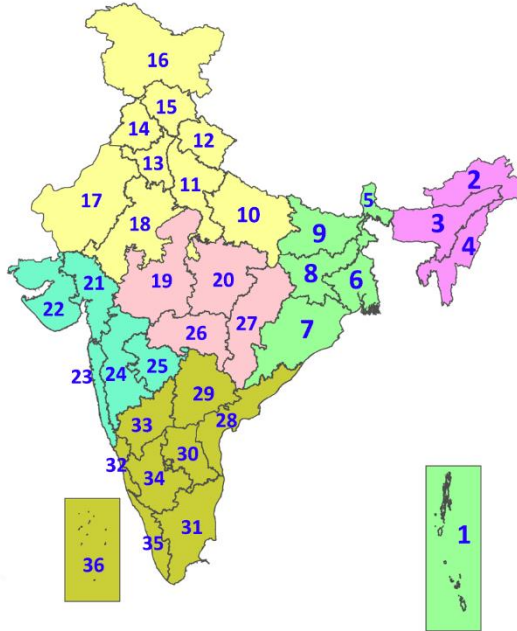
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



* 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 *	<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	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)