

Wednesday, October 16, 2024

Time of Issue: 1330 hours IST

(MID-DAY)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

Weather Systems:

- ✓ Yesterday's well marked low pressure area the central part of south Bay of Bengal intensified into a **depression** at 1730 hrs IST of yesterday, the 15th October over southwest Bay of Bengal. It moved west-northwestwards with a speed of 15 kmph during past 6 hours and lay centered at 0830 hours IST of today, the 16th October 2024 over southwest and adjoining westcentral Bay of Bengal near latitude 12.3° N and longitude 83.0° E, about 320 km east-southeast of Chennai (Tamil Nadu), 350 km east-northeast of Puducherry and 400 km southeast of Nellore (Andhra Pradesh). **It is likely to move west-northwestwards and cross north Tamil Nadu - South Andhra Pradesh coasts between Puducherry and Nellore, close to Chennai during early morning of 17th October.**

Forecast & Warnings (upto 7 days):

South Peninsular India

- ✓ **Tamil Nadu & Puducherry:** Light to moderate rainfall over most places with heavy to very heavy rainfall at a few places with extremely heavy rainfall at isolated places is very likely over north Tamil Nadu & Puducherry on 16th October and isolated heavy to very heavy rainfall over north interior Tamil Nadu on 17th October. Light to moderate rainfall over most places with heavy rainfall at isolated places is very likely over south Tamil Nadu during 16th - 17th October.
- ✓ **South Andhra Pradesh & Rayalaseema:** Light to moderate rainfall over most places with heavy to very heavy rainfall at a few places with extremely heavy rainfall at isolated places is likely on 16th October and heavy rainfall at isolated places is likely on 17th October.
- ✓ **Kerala & south Interior Karnataka:** Light to moderate rainfall over most places with heavy to very heavy rainfall at isolated places is likely over Kerala and south Interior Karnataka during 16th - 17th October.

Fishermen Warning:

- ✓ Fishermen are advised not to venture into Southwest and adjoining westcentral Bay of Bengal till 17th October. Fishermen out at sea are advised to return to coasts.

West India

- ✓ Scattered to Fairly widespread light to moderate rainfall very likely over Konkan & Goa, Madhya Maharashtra, Marathwada during next 5 days and isolated to scattered light to moderate rainfall during subsequent 2 days over the same region; Isolated light to moderate rainfall over Gujarat Region during the week; Isolated light to moderate rainfall over Saurashtra & Kutch during next 2 days and dry weather likely during the subsequent 5 days.
- ✓ **Isolated heavy rainfall** very likely Konkan & Goa and Madhya Maharashtra on 16th & 17th October.

East India

- ✓ Fairly widespread to widespread light to moderate rainfall very likely over Andaman & Nicobar Islands; isolated light to moderate rainfall likely over the remaining region during the week.
- ✓ **Isolated heavy rainfall** very likely Andaman & Nicobar Islands during 19th-21st October.

Northwest, Central & Northeast India:

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

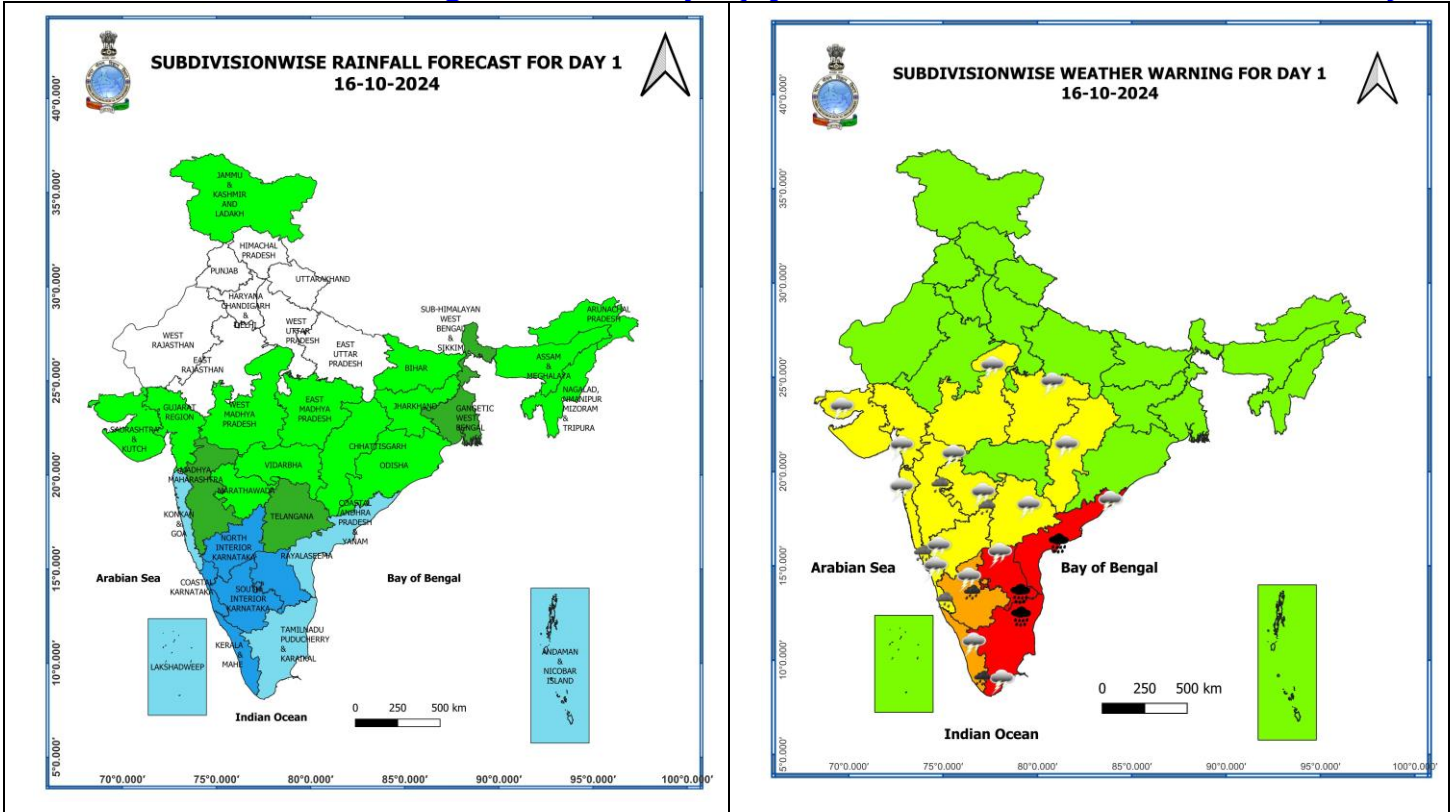
Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST of yesterday to 0830 hours IST of today): **at most places** over Konkan & Goa, Kerala & Mahe, Rayalaseema, South Interior Karnataka, Andaman & Nicobar Islands; **at many places** over Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Tamil Nadu, Puducherry & Karaikal, Lakshadweep, Coastal Andhra Pradesh & Yanam, Coastal & North Interior Karnataka; **at a few places** over Assam & Meghalaya, Madhya Maharashtra; **at isolated places** over East Uttar Pradesh, Madhya Pradesh, Vidarbha, Chhattisgarh, Gangetic West Bengal, Bihar, Jharkhand, Odisha, Nagaland, Manipur, Mizoram & Tripura, Marathwada, Gujarat state, Telangana.
- ❖ **Heavy rainfall recorded** (from 0830 hours IST of yesterday to 0830 hours IST of today): **Heavy to very Heavy rainfall** at a few places with isolated **extremely rainfall** over Tamil Nadu, Puducherry & Karaikal and Rayalaseema; **Heavy to very Heavy rainfall** at isolated places over south Coastal Andhra Pradesh; **Heavy rainfall** at isolated places over Karnataka, south Gujarat Region, Konkan, West Madhya Pradesh and Assam.
- ❖ **Significant amount of rainfall** (from 0830 hours IST of yesterday to 0830 hours IST of today) (in cm): **Tamil Nadu, Puducherry & Karaikal:** Cholavaram (dist Tiruvallur) 30, Red Hills (dist Tiruvallur) 28, Avadi (dist Tiruvallur) 25, Zone 01 Kathivakkam (dist Chennai) 23, Zone 02 D15 Manali (dist Chennai) 21; Zone 06 T.V.K Nagar (dist Chennai) 19, Zone 06 D65 Kolathur (dist Chennai), Zone 13 U39 Adyar (dist Chennai), Puzhal ARG (dist Tiruvallur), Zone 07 Ambattur (dist Chennai) 18 each, Zone 01 Thiruvottiyur (dist Chennai), Perungudi (dist Chennai), Zone 02 Manali (dist Chennai), Hindustan_University (dist Kancheepuram), Ennore AWS (dist Chennai) 17 each, Perambur (dist Chennai), Zone 08 Malar Colony (dist Chennai), Good Will School Villivakkam ARG (dist Tiruvallur), Zone 03 Puzhal (dist Chennai), Ayanavaram Taluk Office (dist Chennai), Anna University ARG (dist Chennai), Ponneri (dist Tiruvallur), Thamaraiakkam (dist Tiruvallur) 16 each, Ambathur (dist Chennai), Anna University (dist Chennai), MGR Nagar (dist Chennai), Sholinganallur (dist Chennai), Thiru-Vi-Ka Nagar (Chennai), Tondiarpet (dist Chennai), Zone 05 Royapuram (dist Chennai), Adayar (dist Chennai) 15 each; **Rayalaseema:** Sullurpeta (dist Tirupati) 22, Tada (dist Tirupati) 12, Tirupati Aero (dist Tirupati) 11; **Coastal Andhra Pradesh:** Kavali (dist Spsr Nellore) 18, Nellore (dist Spsr Nellore) 13, Kandukur (dist Spsr Nellore) 10, Seetharamapuram (dist Spsr Nellore) 10; **Coastal Karnataka:** Kundapur (dist Udupi) 9; **South Interior Karnataka:** Bengaluru Hal Ap Obsy (dist Bengaluru Urban) 9; **Gujarat Region:** Kaprada (dist Valsad) 9; **Konkan & Goa:** Sawantwadi (dist Sindhudurg) 9, Wakwali_agri (dist Ratnagiri) 8; **West Madhya Pradesh:** Pithampur (dist Dhar) 7; **North Interior Karnataka:** Yedwad (dist Belagavi) 7; **Assam & Meghalaya:** Dhubri_ Cwc (dist Dhubri) 7.
- ❖ **Minimum Temperature Departures (as on 16-10-2024):** Minimum temperatures are **markedly above normal (5.1°C or above)** at isolated places over East Madhya Pradesh and West Rajasthan; **appreciably above normal (3.1°C to 5.0°C)** at many places over Saurashtra & Kutch; at a few places over Gujarat Region, Madhya Maharashtra and West Madhya Pradesh; at isolated places over East Uttar Pradesh, Madhya Maharashtra, Vidarbha and Odisha; **above normal (1.6°C to 3.0°C)** at isolated places over Punjab, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Bihar, Jharkhand, Chhattisgarh, West Bengal & Sikkim, Konkan & Goa, Marathwada, Telangana and Coastal Andhra Pradesh & Yanam. These are **appreciably below normal (-3.1°C to -5.0°C)** at isolated places over Tamil Nadu, Puducherry & Karaikal; **below normal (-1.6°C to -3.0°C)** at isolated places over East Rajasthan, Haryana-Delhi and Assam & Meghalaya. Today, **the lowest minimum temperature of 15.6°C** is reported at **Delhi ridge (New Delhi)** over the plains of the country. **(Fig.4)**
- ❖ **Maximum Temperature Departures (as on 15-10-2024):** Maximum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Odisha; **above normal (1.6°C to 3.0°C)** at a few places over Vidarbha; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Chhattisgarh and Gangetic West Bengal. These were **markedly below normal (-5.1°C or less)** at isolated places over Tamil Nadu, Puducherry & Karaikal, Rayalaseema and Coastal Andhra Pradesh & Yanam; **appreciably below normal (-3.1°C to -5.0°C)** at isolated places over West Madhya Pradesh, Telangana and Coastal & South Interior Karnataka; **below normal (-1.6°C to -3.0°C)** at isolated places over North Interior Karnataka, Andaman & Nicobar Islands, Saurashtra & Kutch, Madhya Maharashtra, East Rajasthan, Bihar and Assam & Meghalaya. Yesterday, **the highest Maximum Temperature of 39.2°C** was reported at **Sri Ganganagar (West Rajasthan)** over the country. **(Fig. 2)**

Meteorological Analysis (Based on 0830 hours IST)

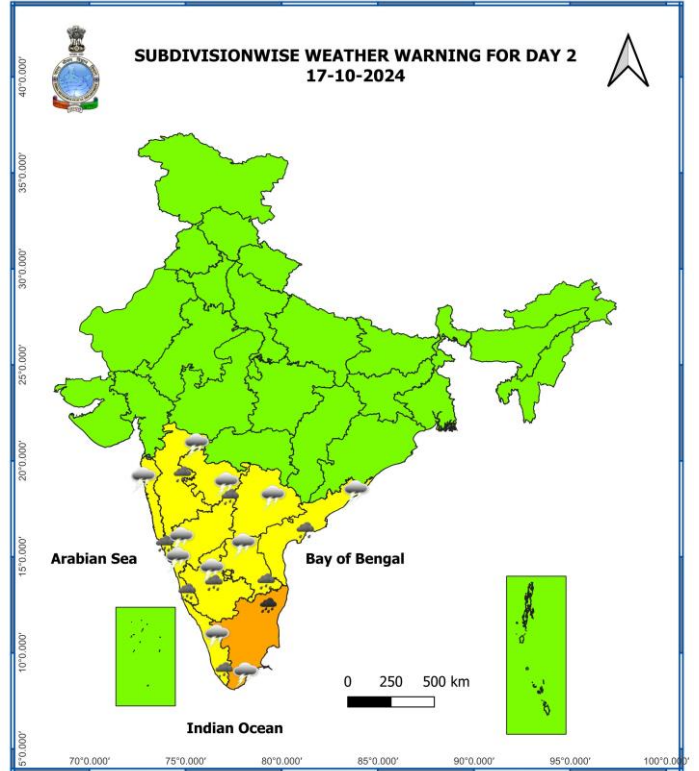
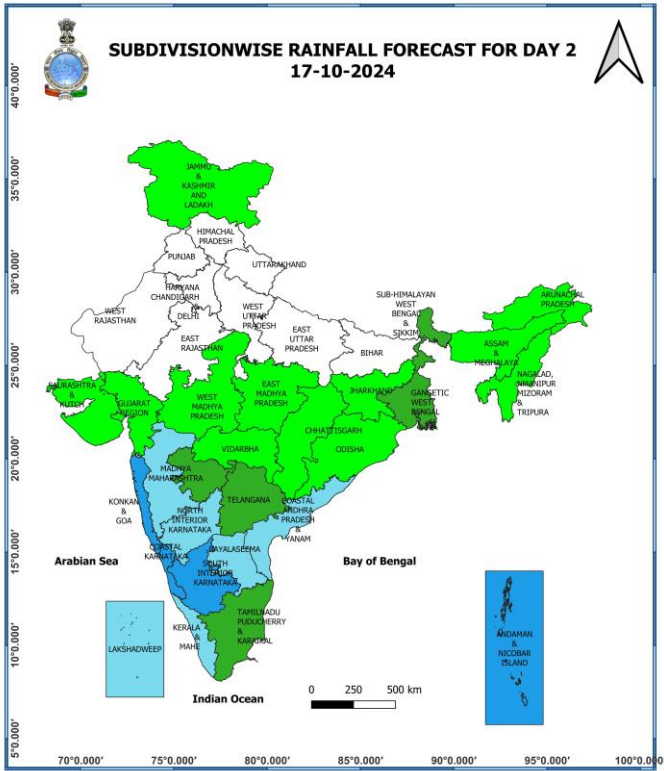
- ❖ The **Depression** over southwest Bay of Bengal moved west-northwestwards with a speed of 15 kmph during past 6 hours and lay centered at 0830 hours IST of today, the 16th October 2024 over the same region near latitude 12.3° N and longitude 83.0° E, about 320 km east-southeast of Chennai (Tamil Nadu), 350 km east-northeast of Puducherry and 400 km southeast of Nellore (Andhra Pradesh). It is likely to move west-northwestwards and cross north Tamil Nadu - South Andhra Pradesh coasts between Puducherry and Nellore, close to Chennai during early morning of 17th October.
- ❖ The **cyclonic circulation** over Sub-Himalayan West Bengal lay over north Bangladesh and adjoining Sub-Himalayan West Bengal at 0.9 km above mean sea level.
- ❖ The **cyclonic circulation** over northeast Bangladesh & neighbourhood at 0.9 km above mean sea level merged with the above **cyclonic circulation**.
- ❖ A **cyclonic circulation** lay over east Assam & neighbourhood at 1.5 km above mean sea level.
- ❖ The **Well Marked Low Pressure Area** over coastal Oman has become unimportant for Indian region.

Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 23rd October, 2024)



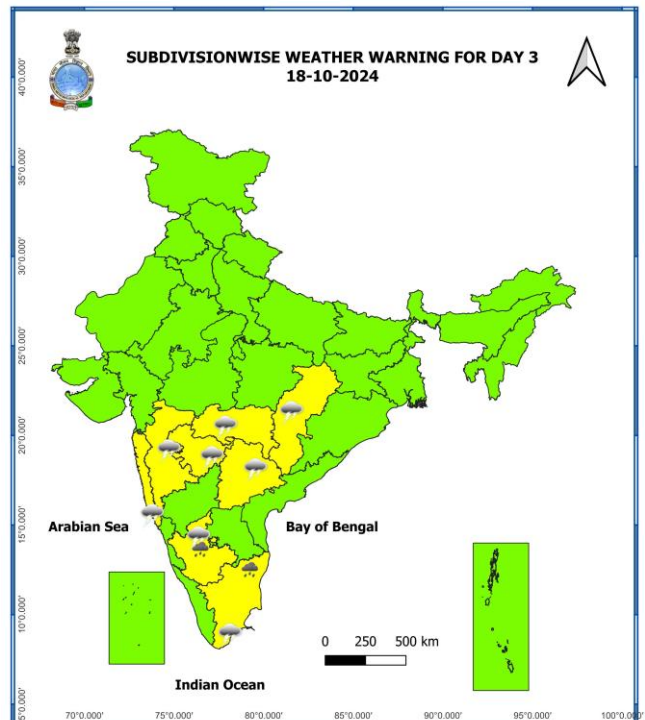
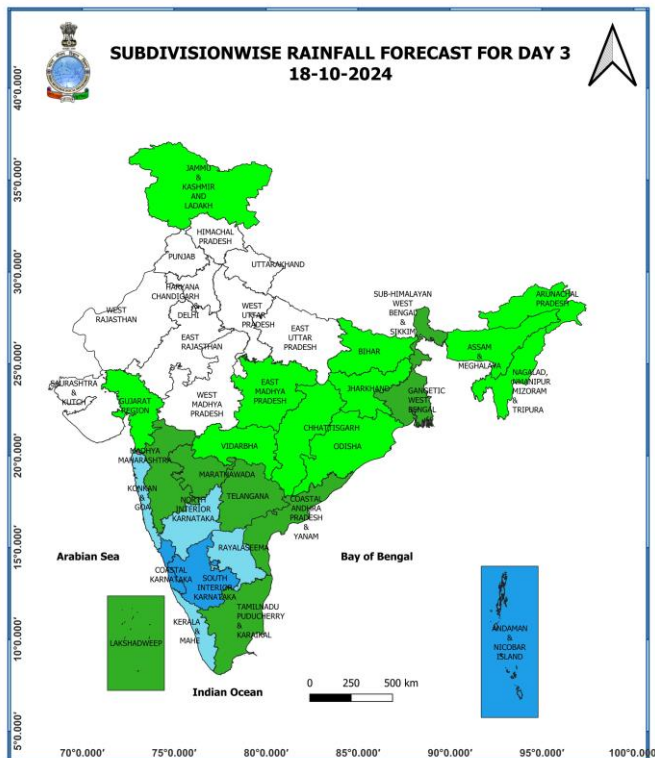
16 October (Day 1):

- ❖ **Heavy to very heavy rainfall with extremely heavy falls (> 20 cm)** very likely at isolated places over Coastal Andhra Pradesh & Yanam, Tamil Nadu, Puducherry & Karaikal, Rayalaseema; **Heavy to very Heavy rainfall (≥12 cm)** likely at isolated places over Kerala & Mahe, South Interior Karnataka; **Heavy rainfall (≥7cm)** likely at isolated places over Konkan & Goa, Madhya Maharashtra, Coastal & North Interior Karnataka.
- ❖ **Thunderstorm with lightning & gusty winds (30-40 kmph)** very likely at isolated places over Telangana, Coastal Andhra Pradesh & Yanam, Rayalaseema; **accompanied with lightning** very likely at isolated places over Madhya Pradesh, Chhattisgarh, Konkan & Goa, Madhya Maharashtra, Marathwada, Gujarat state, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, 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 coasts and adjoining Lakshadweep area, over Comorin area, gulf of Mannar, along and off Sri Lanka coast, along and off Tamil Nadu, Andhra Pradesh coasts, southwest Bay of Bengal adjoining southeast Bay of Bengal, many parts of westcentral Bay of Bengal. **Squally weather with wind speed 40 kmph to 50 kmph gusting to 60 kmph** is likely to prevail over northern parts of southwest Bay of Bengal, southern parts of westcentral Bay of Bengal, along and off north Sri Lanka coast, north Tamil Nadu and adjoining south Andhra Pradesh coasts. Fishermen are advised not to venture into these areas.



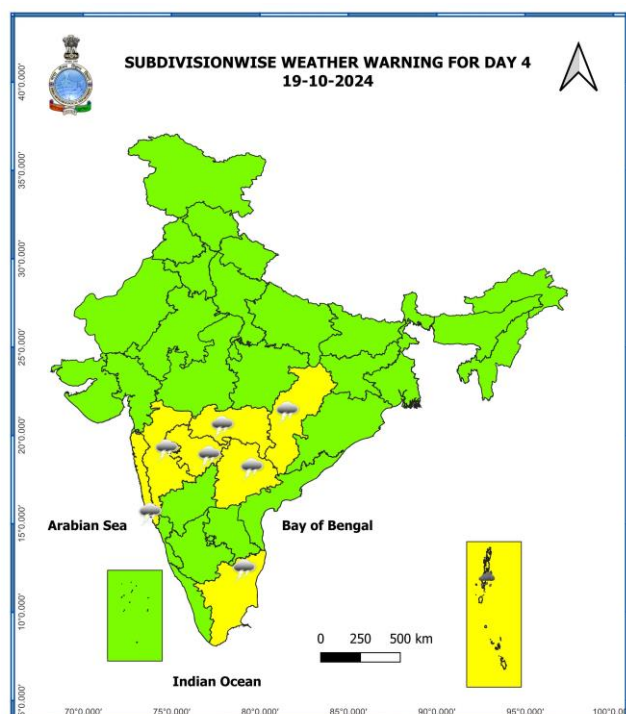
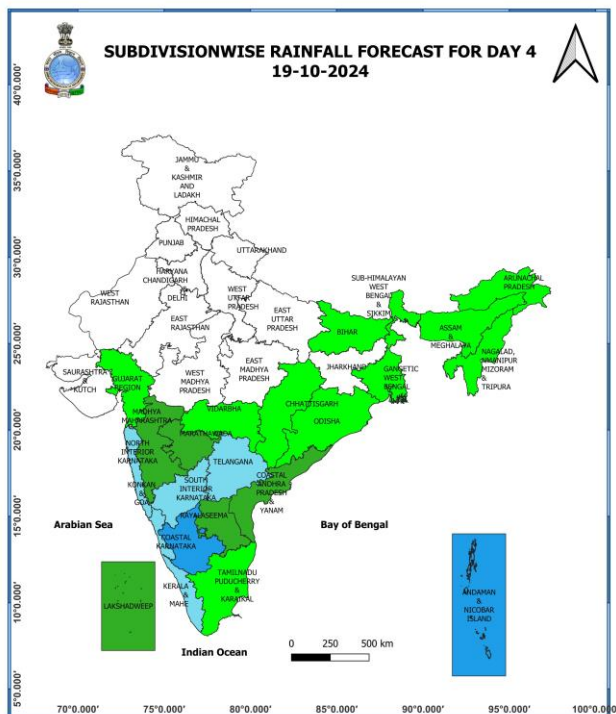
17 October (Day 2):

- ❖ **Heavy to very Heavy rainfall (≥ 12 cm)** very likely at isolated places over Tamil Nadu, Puducherry & Karaikal; **Heavy rainfall (≥ 7 cm)** likely at isolated places over Konkan & Goa, Madhya Maharashtra, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema, Karnataka.
- ❖ **Thunderstorm with lightning & gusty winds (30-40 kmph)** very likely at isolated places over Telangana, Coastal Andhra Pradesh & Yanam, Rayalaseema; **accompanied with lightning** very likely at isolated places over 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** very likely to prevail over along and off Kerala, Karnataka coasts and adjoining Lakshadweep area, over Comorin area, gulf of Mannar, along and off Sri Lanka coast, along and off Tamil Nadu, Andhra Pradesh coasts, many parts of southwest Bay of Bengal and westcentral Bay of Bengal. **Squally weather with wind speed 40 kmph to 50 kmph gusting to 60 kmph** is likely to prevail over along and off north Tamil Nadu and adjoining south Andhra Pradesh coasts and parts of southwest and westcentral Bay of Bengal. Fishermen are advised not to venture into these areas.



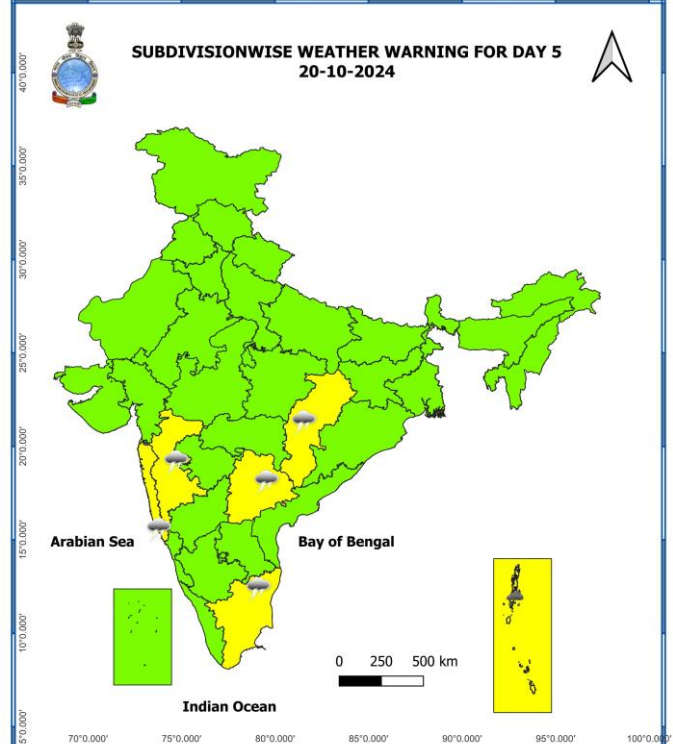
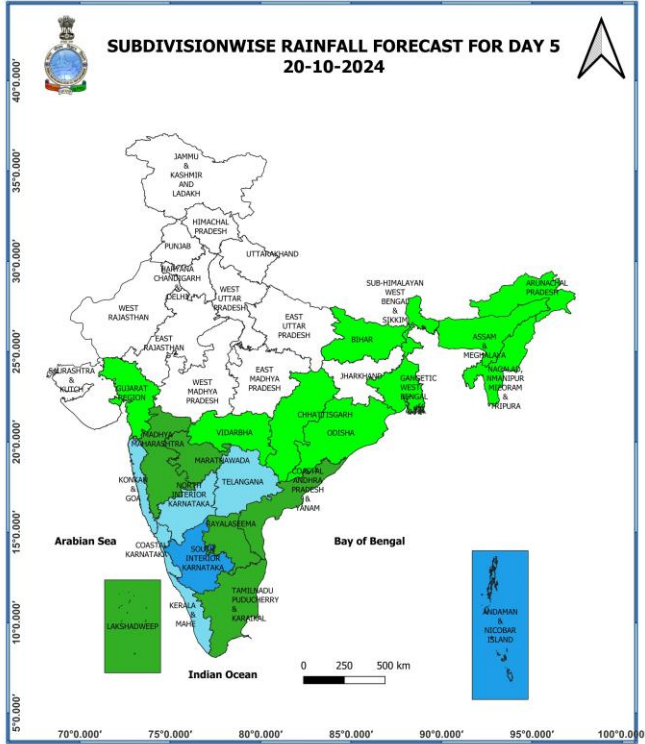
18 October (Day 3):

- ❖ **Heavy rainfall (≥7cm)** very likely at isolated places over Tamil Nadu, Puducherry & Karaikal, South Interior Karnataka.
- ❖ **Thunderstorm with lightning & gusty winds (30-40 kmph)** very likely at isolated places over Telangana; **accompanied with lightning** very likely at isolated places over Vidarbha, Chhattisgarh, Konkan & Goa, Madhya Maharashtra, Marathwada, Tamil Nadu, Puducherry & Karaikal, South Interior Karnataka.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over gulf of Mannar. Fishermen are advised not to venture into this area.



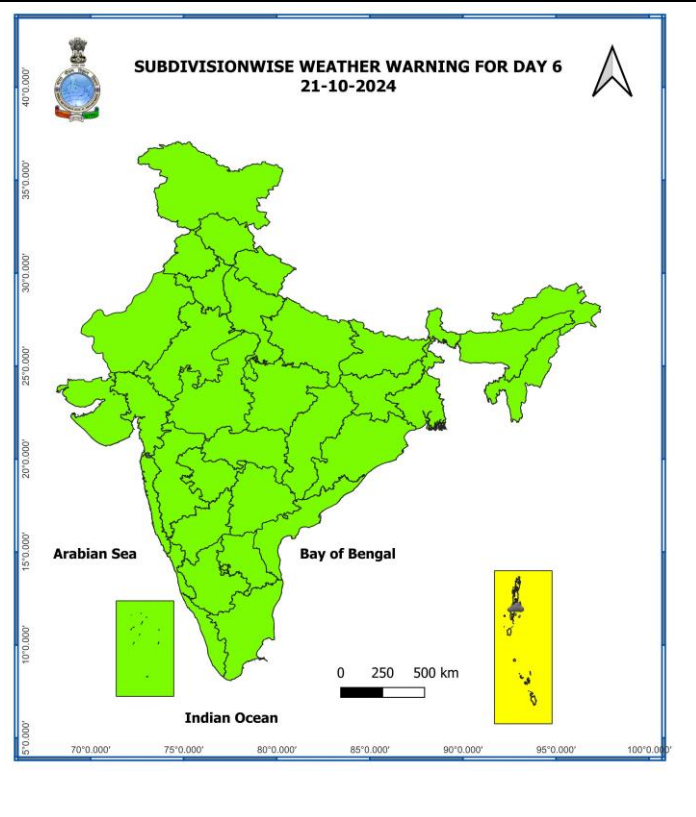
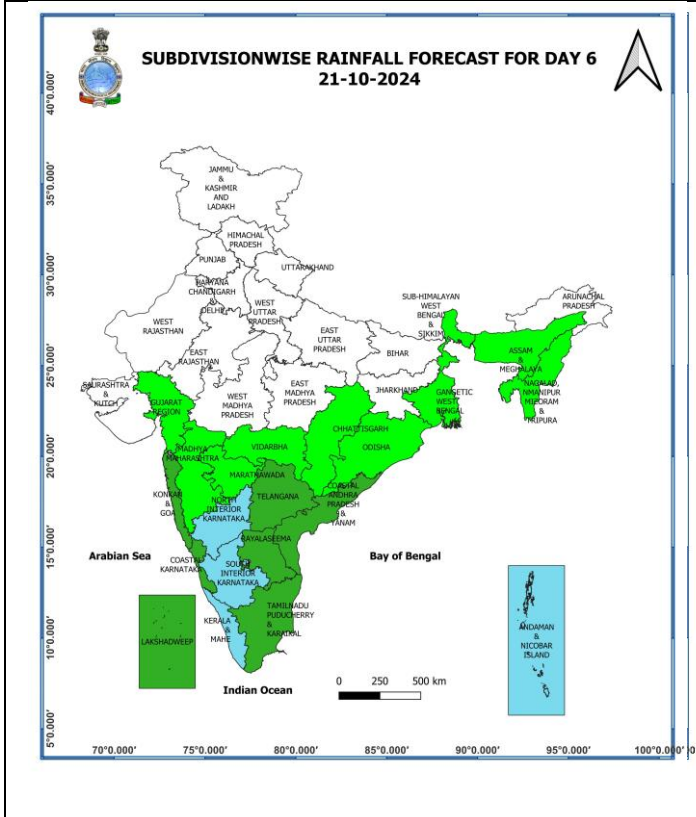
19 October (Day 4):

- ❖ **Heavy rainfall (≥7cm)** likely at isolated places over Andaman & Nicobar Islands.
- ❖ **Thunderstorm with lightning & gusty winds (30-40 kmph)** likely at isolated places over Telangana; **accompanied with lightning** very likely at isolated places over Vidarbha, Chhattisgarh, Konkan & Goa, Madhya Maharashtra, Marathwada, Tamil Nadu, Puducherry & Karaikal.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over gulf of Mannar. Fishermen are advised not to venture into this area.



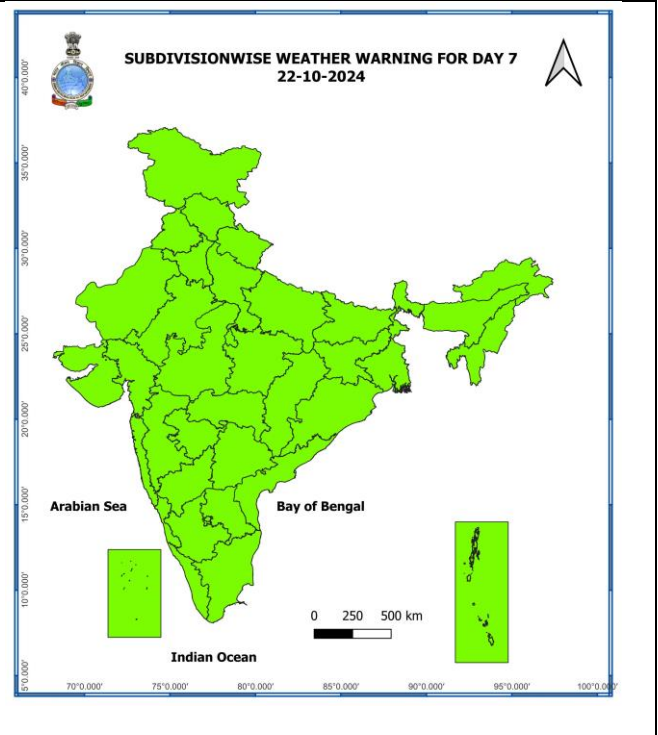
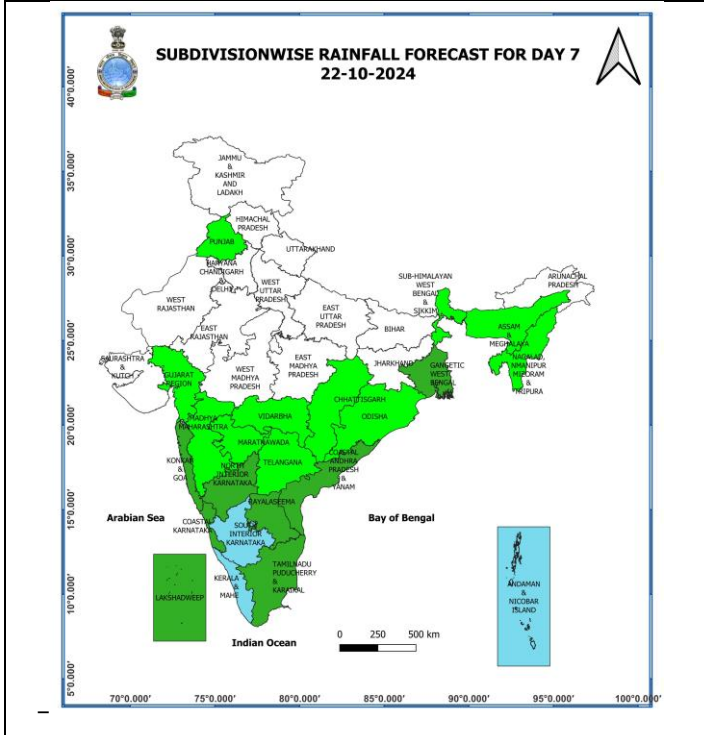
20 October (Day 5):

- ❖ **Heavy rainfall ($\geq 7\text{cm}$)** likely at isolated places over Andaman & Nicobar Islands.
- ❖ **Thunderstorm with lightning & gusty winds (30-40 kmph)** likely at isolated places over Telangana; **accompanied with lightning** very likely at isolated places over Chhattisgarh, Konkan & Goa, Madhya Maharashtra, Tamil Nadu, Puducherry & Karaikal.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over gulf of Mannar. Fishermen are advised not to venture into this area.



21 October (Day 6):

- ❖ Heavy rainfall (≥ 7 cm) likely at isolated places over Andaman & Nicobar Islands.



22 October (Day 7):

❖ No weather warning.

Weather Outlook for subsequent 3 days (During 23rd October- 25th October, 2024)

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

* 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.
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Impact due to

- ✓ **Isolated extremely heavy rainfall** very likely over Tamil Nadu, Puducherry & Karaikal, Rayalaseema, Coastal Andhra Pradesh on 16th October.
- ✓ **Isolated very heavy rainfall** very likely over Kerala & Mahe and South Interior Karnataka on 16th; Tamil Nadu, Puducherry & Karaikal on 17th October.
- ✓ **Low to Moderate flash flood likely over** few watersheds & neighbourhoods of Coastal Andhra Pradesh, Rayalaseema and Tamil Nadu, Puducherry & Karaikal on 16th & 17th October. **(Annexure I)**

Impact Expected

- ✓ Localized Flooding of roads, water logging in low lying areas and closure of underpasses mainly in urban areas of the above region.
- ✓ Occasional reduction in visibility due to heavy rainfall.
- ✓ Disruption of traffic in major cities and roadways due to water logging in roads leading to increased travel time.
- ✓ Minor damage to kutch 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 **south Coastal Andhra Pradesh**, drain out excess water from cotton, pulses, maize and rice fields and postpone sowing of *rabi* pulses. Shift the harvested rice at safer places. In **north Coastal Andhra Pradesh**, postpone harvesting of groundnut and maize.
- ✓ In **Rayalaseema**, protect the harvested groundnut produce. Withhold sowing of *rabi* Bengal gram and groundnut.
- ✓ Drain out excess water from rice nurseries and fields of rice, maize, pepper, and newly planted turmeric in **Tamil Nadu** as well as from rice and other standing crops and vegetable fields in **Kerala**.
- ✓ Keep the harvested produce at safer places.
- ✓ Provide mechanical support to horticultural crops & staking to vegetables.

Flash Flood Risk

Annexure I

24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 17-10-2024:

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

Coastal AP & Yanam - Prakasam and Nellore districts.

Rayalaseema - Chittoor and Kadapa districts.

Tamil Nadu - Pudu & Karaikal - Chennai and Tiruvallur 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.

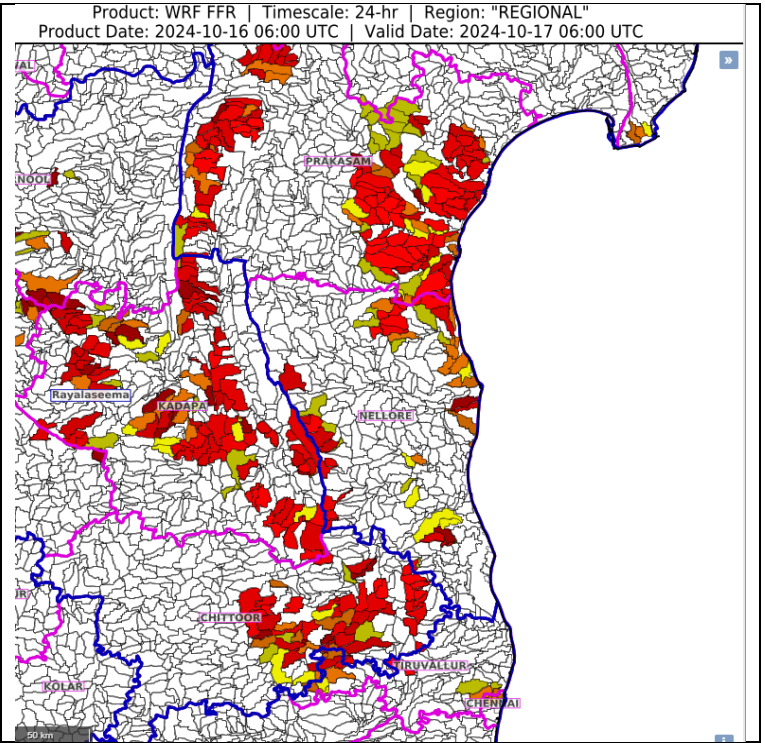


Fig. 1: Maximum Temperatures

Fig. 2: Departure of Maximum Temperatures

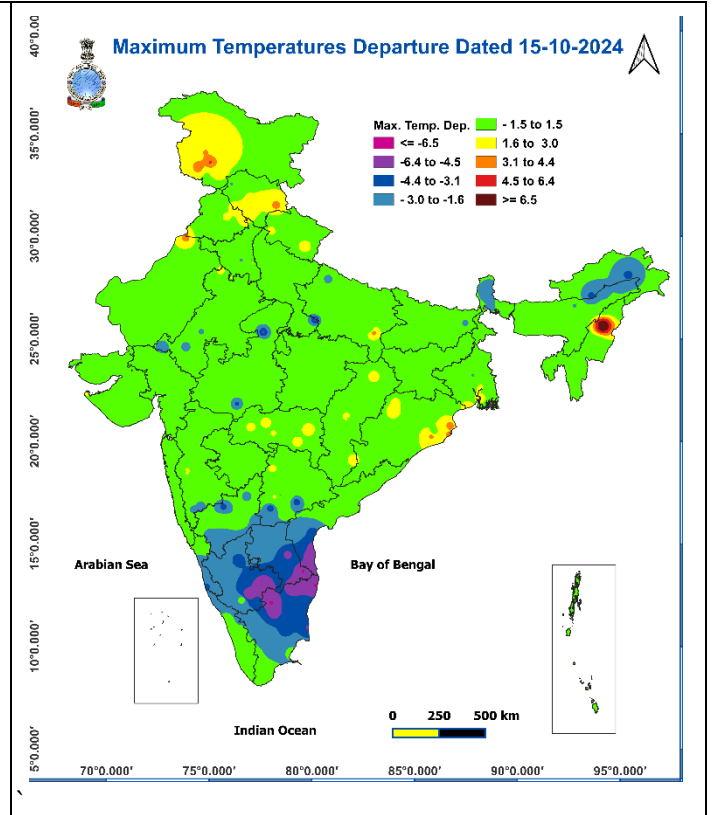
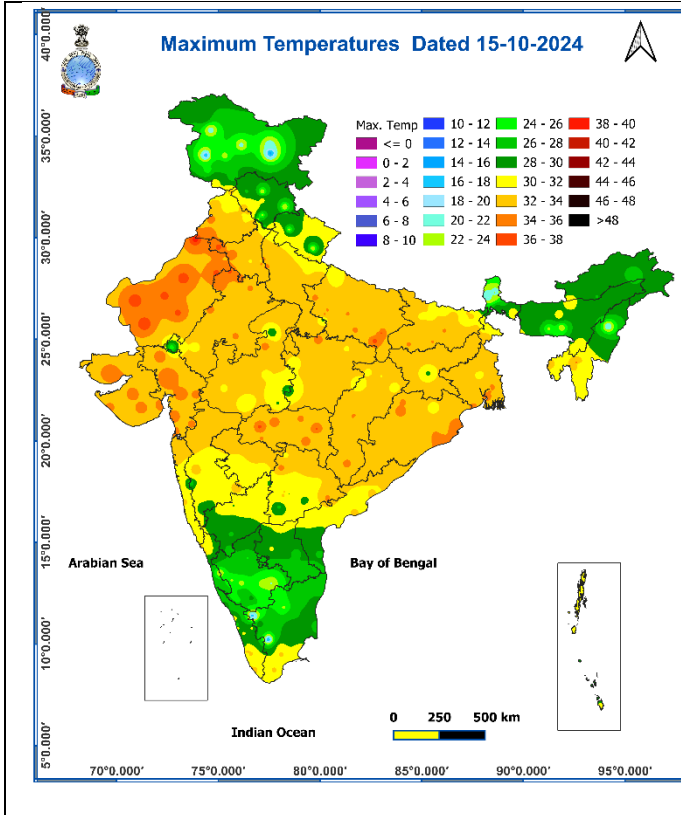


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures

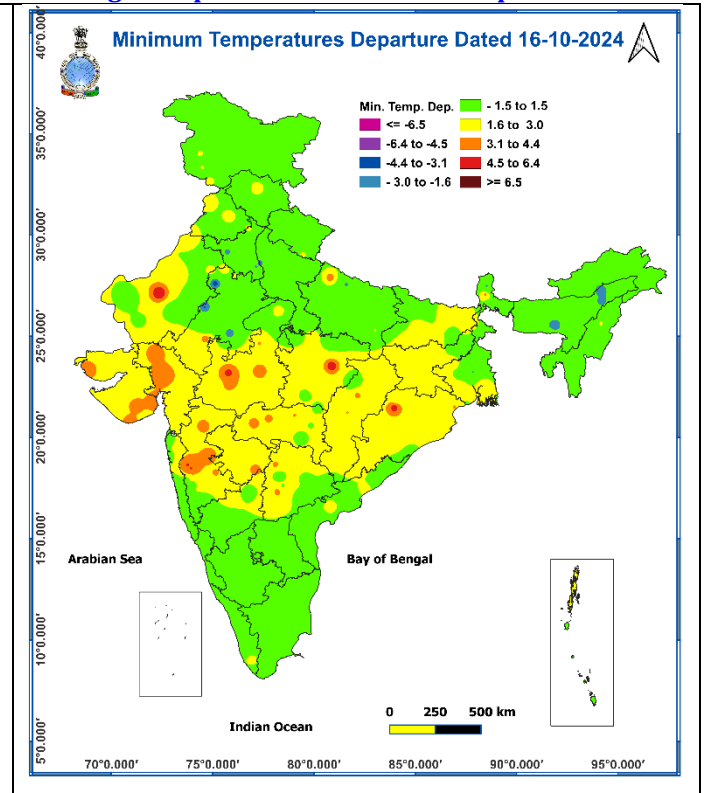
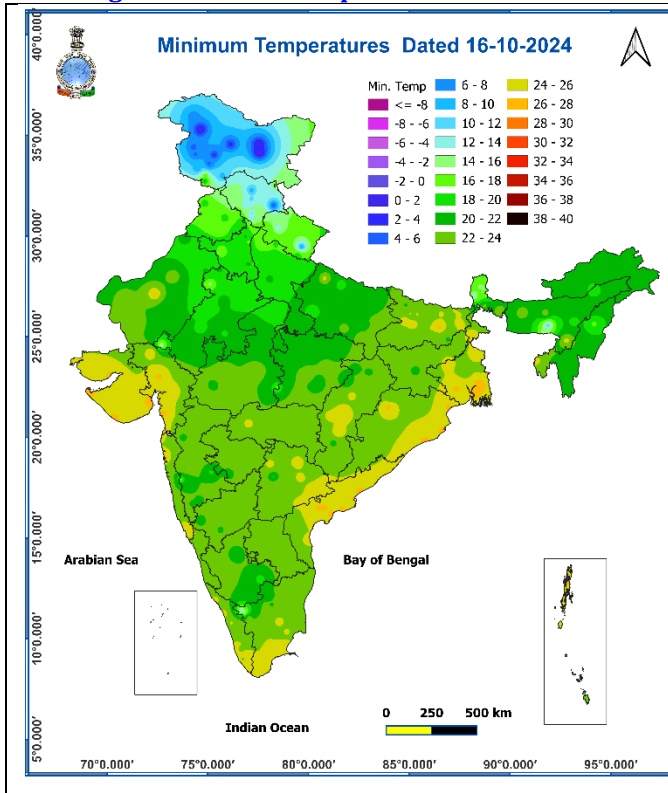
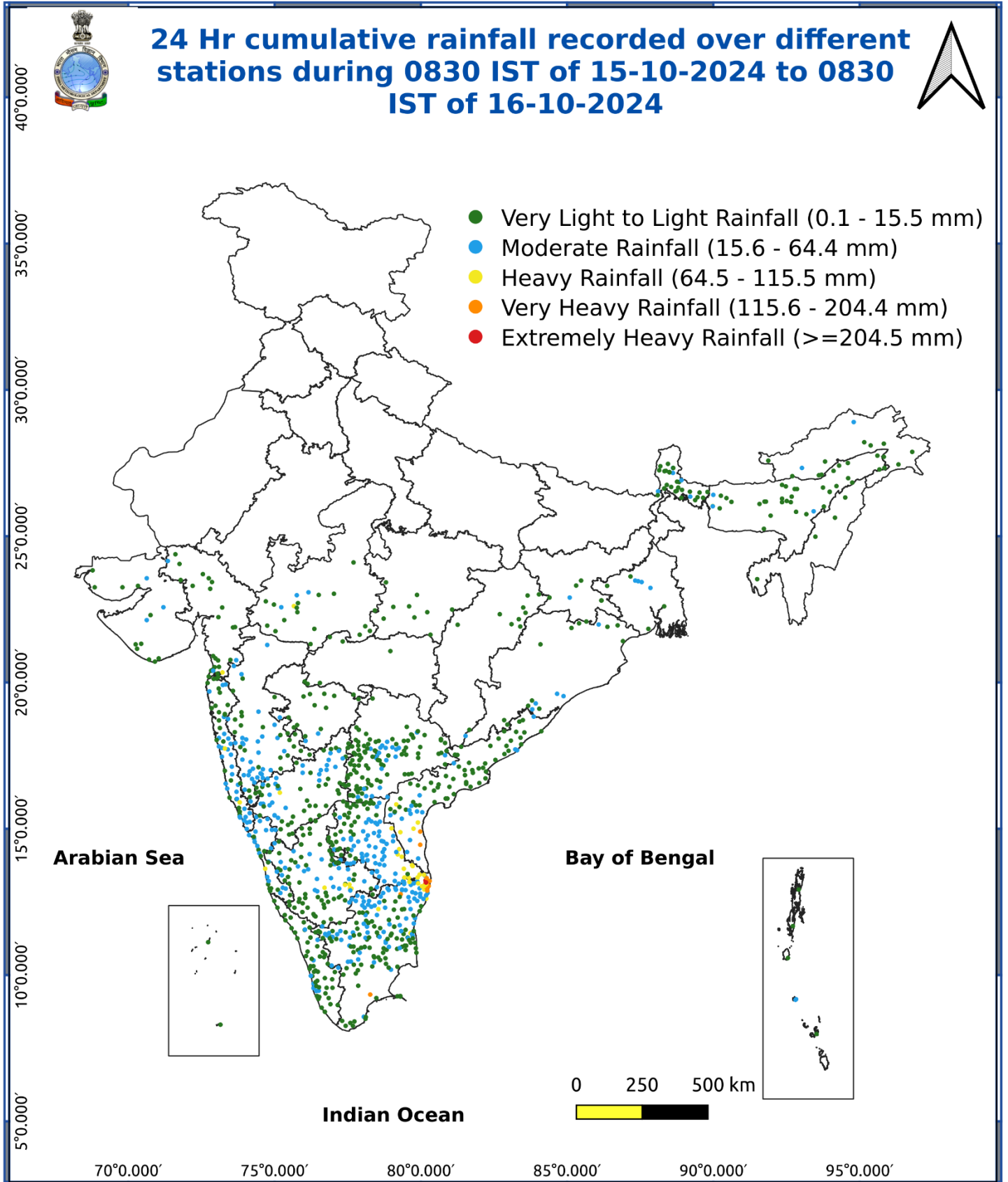


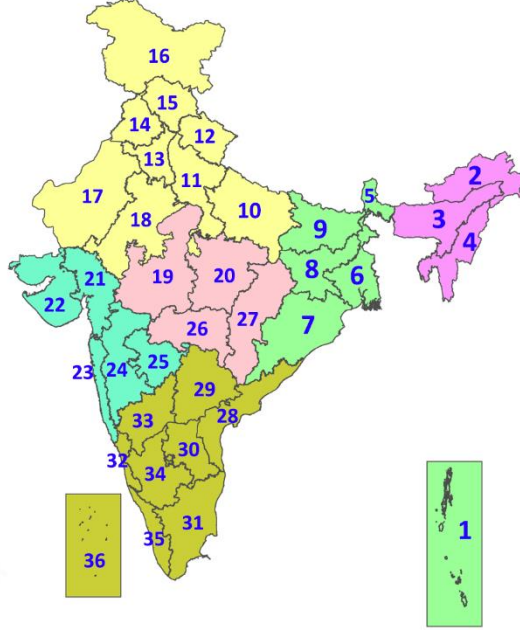
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



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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 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	<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>