

Saturday, October 5, 2024
Time of Issue: 0745 hours IST
(MORNING)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

On further Withdrawal of Southwest Monsoon

- ✓ The **line of withdrawal of Southwest Monsoon** continues to pass through 30.8°N/81.2°E, Lakhimpur Kheri, Shivpuri, Kota, Udaipur, Deesa, Surendranagar, Junagarh and 21°N/70°E.
- ✓ Conditions are favourable for further **withdrawal of Southwest Monsoon** from remaining parts of West Uttar Pradesh, some more parts Madhya Pradesh, remaining parts of East Rajasthan, some more parts of Gujarat and some parts of Maharashtra during next 2-3 days.

Weather Systems:

- ✓ A **low pressure area** lies over north Bay of Bengal & adjoining coastal areas of Bangladesh & West Bengal.
- ✓ A **cyclonic circulation** lies over north Bangladesh & adjoining Sub-Himalayan West Bengal extending upto middle tropospheric levels.
- ✓ The **cyclonic circulation** over southeast Arabian Sea in lower tropospheric levels persists.

Forecast & Warnings (upto 7 days):

East & Northeast India

- ✓ Fairly widespread to widespread light to moderate rainfall very likely over Northeast region during the week; Fairly widespread to widespread light to moderate rainfall very likely over Andaman & Nicobar Islands, West Bengal & Sikkim during next 2 days & Scattered to Fairly widespread light to moderate rainfall during the subsequent 5 days; Isolated to Scattered light to moderate rainfall over the remaining East India region during the week.
- ✓ **Isolated heavy rainfall** very likely over Nagaland, Manipur, Mizoram & Tripura on 05th October and over the remaining Northeast India during next 7 days.

South Peninsular India

- ✓ Fairly widespread to widespread light to moderate rainfall very likely over Kerala & Mahe, Lakshadweep, South Interior Karnataka; Scattered to Fairly widespread light to moderate rainfall very likely over Tamil Nadu, Puducherry & Karaikal, Coastal Karnataka, North Interior Karnataka, Coastal Andhra Pradesh & Yanam, Rayalaseema; Isolated to Scattered light to moderate rainfall very likely over Telangana during the week.
- ✓ **Isolated heavy rainfall** very likely over Rayalaseema on 05th; South Interior Karnataka during 05th-08th; Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe during 05th-09th October.

Northwest, West & Central India:

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

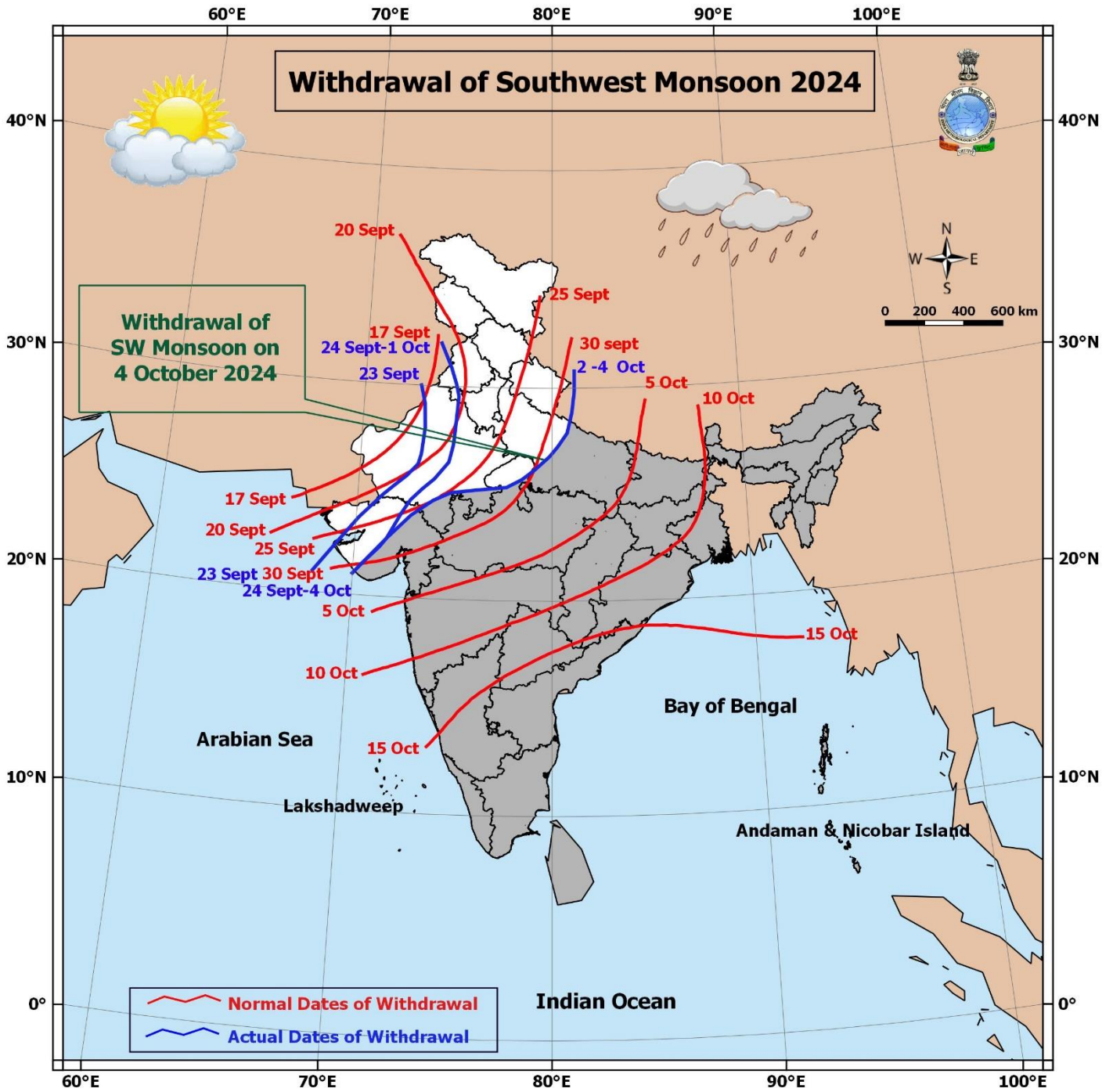
Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST to 1730 hours IST of yesterday): **at many places** over Assam & Meghalaya, Andaman & Nicobar Islands; **at a few places** over Arunachal Pradesh, West Bengal & Sikkim; **at isolated places** over Nagaland, Manipur, Mizoram & Tripura, Odisha, Chhattisgarh, Telangana, Coastal Andhra Pradesh & Yanam, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, North Interior Karnataka, Madhya Maharashtra, Konkan & Goa, Bihar, Jharkhand.
- ❖ **Heavy rainfall** recorded (from 0830 hours IST to 1730 hours IST of yesterday): **Heavy to very Heavy rainfall** at isolated places over Meghalaya.
- ❖ **Significant amount of rainfall** (from 0830 hours IST to 1730 hours IST of yesterday) (in cm): **Meghalaya:** Tura 18, Sohra 2; **Andaman & Nicobar Islands:** Port Blair 5, Long Island 3, Car Nicobar 2; **Kerala & Mahe:** Wayanad 5, Kannur 2, Idukki 2, Punalur 2, Karipur Airport 2; **Assam:** Majbat 3, Jorhat 2, Rangia 2, Guwahati 2; **Arunachal Pradesh:** Pasighat 3; Tamil Nadu: Madurai 3; **Odisha:** Paradip 2; **Chhattisgarh:** Mana 2; **Coastal Andhra Pradesh:** Nellore 2; **North Interior Karnataka:** Kalaburagi 2.
- ❖ **Minimum Temperature Departures (as on 04-10-2024):** Minimum temperatures were **appreciably above normal (3.0°C to 5.0°C)** at isolated places over Punjab, Haryana-Chandigarh-Delhi, Rajasthan, Madhya Pradesh; **above normal (1.6°C to 3.0°C)** at most place over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Uttarakhand, Uttar Pradesh, Bihar, Gujarat state, Jharkhand, Coastal Karnataka; at many places over Himachal Pradesh, Madhya Maharashtra, Marathwada, Vidarbha, South Interior Karnataka, Kerala & Mahe; at a few places over Sub-Himalayan West Bengal & Sikkim, Odisha, Tamil Nadu, Puducherry & Karaikal; at isolated places over Chhattisgarh, Telangana, Kerala & Mahe, North Interior Karnataka. Yesterday, the lowest minimum temperature of **19.3°C** was reported at **Nahan (Haryana)** over the plains of the country. **(Fig.4)**
- ❖ **Maximum Temperature Departures (as on 04-10-2024):** Maximum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at a few places over Coastal Andhra Pradesh & Yanam; at isolated places over Chhattisgarh, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Odisha; **above normal (1.6°C to 3.0°C)** at a few places over Uttar Pradesh; at isolated places over East Rajasthan, East Madhya Pradesh, Punjab, Haryana-Chandigarh-Delhi, Himachal Pradesh, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Konkan & Goa, Jharkhand, Telangana. These were **appreciably below normal (-3.1°C to -5.0°C)** at many places over Assam & Meghalaya; **below normal (-1.6°C to -3.0°C)** at isolated places over Gangetic West Bengal, West Madhya Pradesh, Gujarat state and **near normal** over rest parts of the country. Yesterday, **the highest Maximum Temperature** of **39.9°C** was reported at **Ganganagar (West Rajasthan)** over the country. **(Fig. 2)**

Meteorological Analysis (Based on 0530 hours IST)

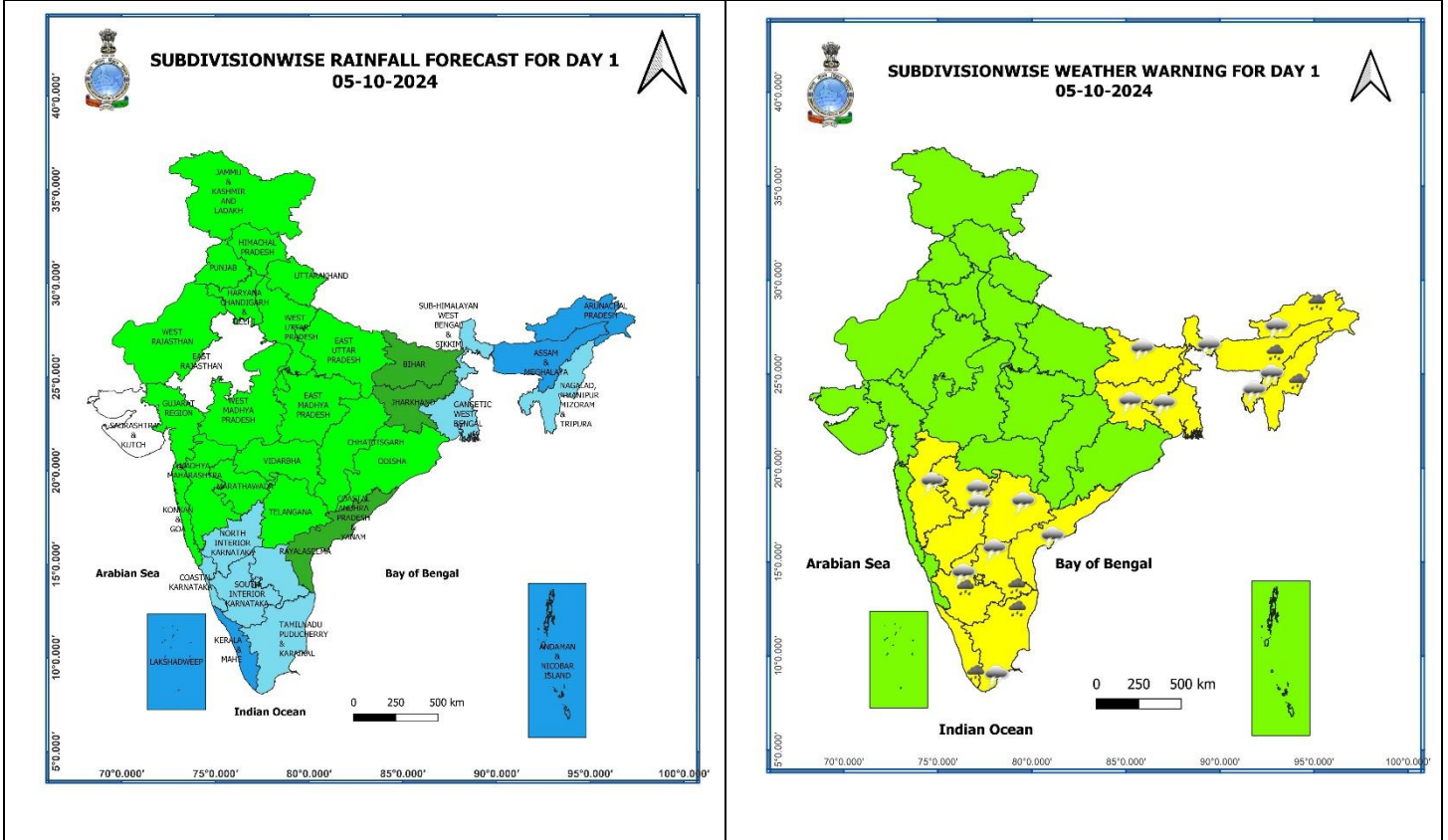
- ❖ The **line of withdrawal of Southwest Monsoon** continues to pass through 30.8°N/81.2°E, Lakhimpur Kheri, Shivpuri, Kota, Udaipur, Deesa, Surendranagar, Junagarh and 21°N/70°E.
- ❖ Conditions are favourable for further **withdrawal of Southwest Monsoon** from remaining parts of West Uttar Pradesh, some more parts Madhya Pradesh, remaining parts of East Rajasthan, some more parts of Gujarat and some parts of Maharashtra during next 2-3 days.
- ❖ The **upper air cyclonic circulation** over north Bangladesh & adjoining Sub-Himalayan West Bengal extending upto 5.8 km above mean sea level persists.
- ❖ The **trough** from northeast Uttar Pradesh to the above cyclonic circulation over north Bangladesh & adjoining Sub-Himalayan West Bengal across Bihar at 0.9 km above mean sea level persists.
- ❖ The **low pressure area** over north Bay of Bengal & adjoining coastal areas of Bangladesh & West Bengal with the associated cyclonic circulation extending upto 5.8 km above mean sea level tilting south-westwards with height persists.
- ❖ The upper air **cyclonic circulation** over westcentral and adjoining south Bay of Bengal extending upto 1.5 km above mean sea level persists.
- ❖ The **cyclonic circulation** over southeast Arabian Sea extending upto 1.5 km above mean sea level persists.
- ❖ The **trough** from the above **cyclonic circulation** over southeast Arabian Sea to south Kerala at 0.9 km above mean sea level persists.

Withdrawal of Southwest Monsoon 2024



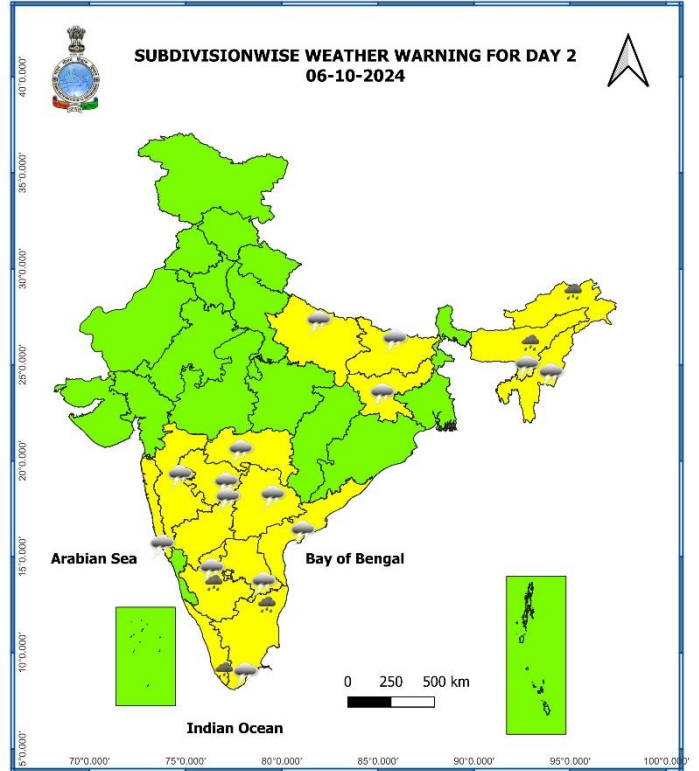
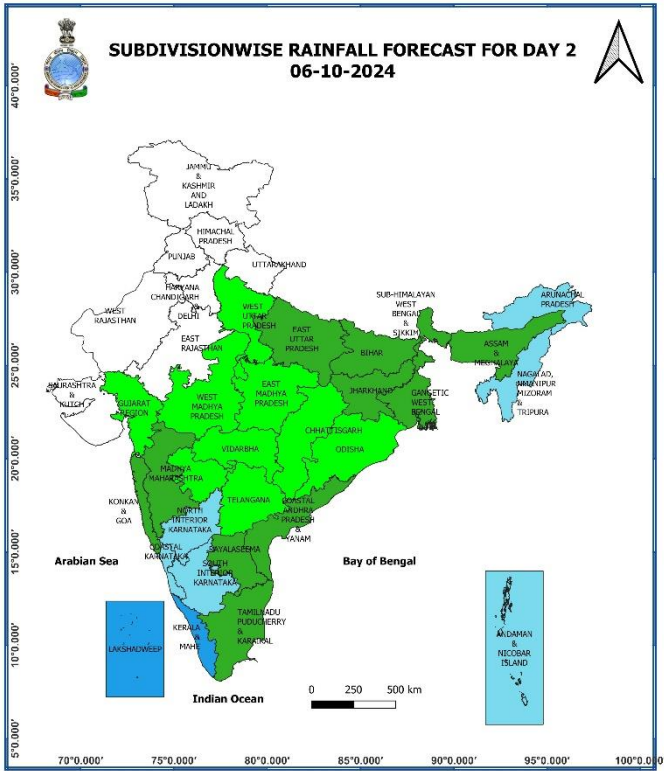
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Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 12th October, 2024)



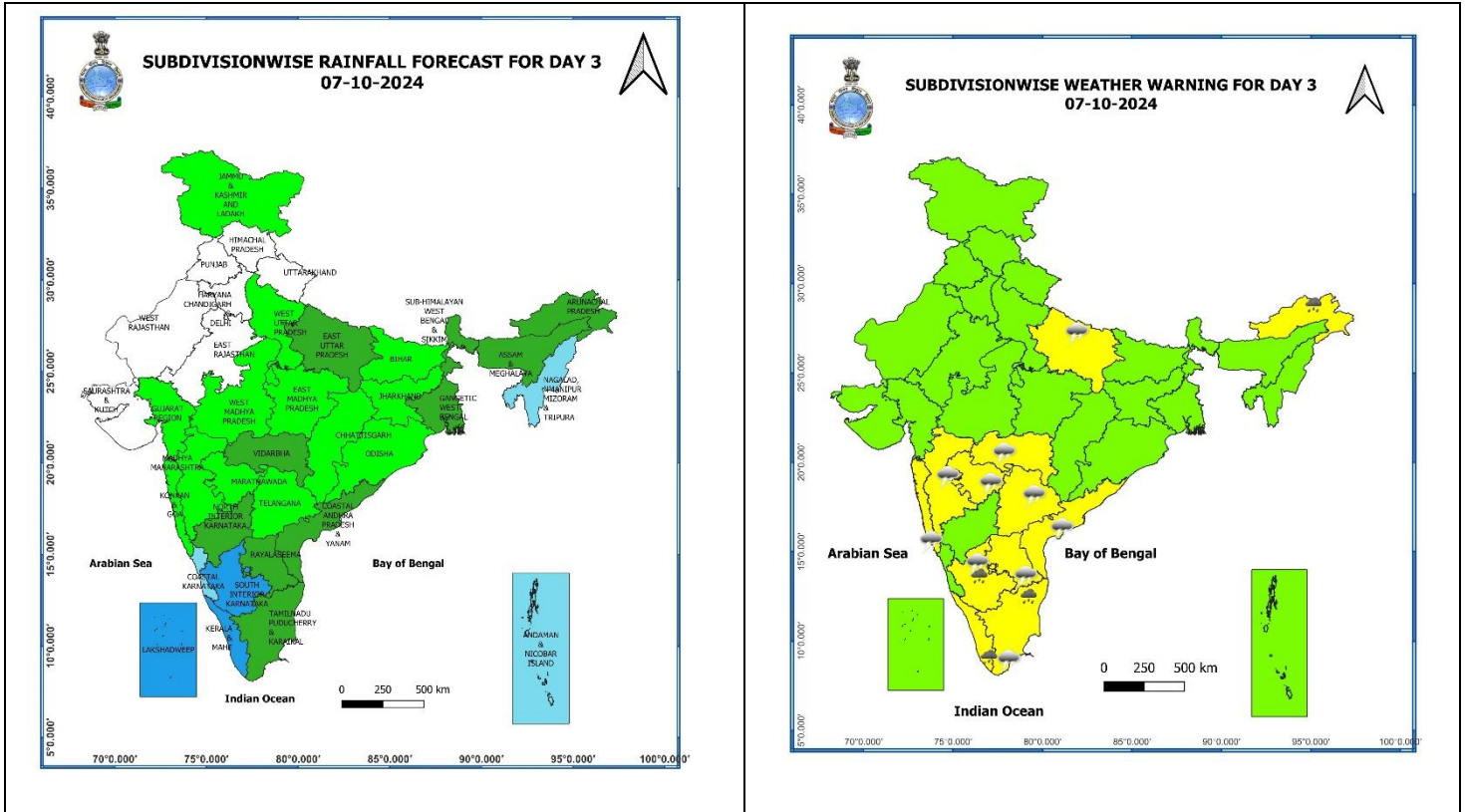
05 October (Day 1):

- ❖ **Heavy rainfall (≥ 7 cm)** very likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Rayalaseema and Interior Karnataka.
- ❖ **Thunderstorm with lightning** very likely at isolated places over West Bengal & Sikkim, Bihar, Jharkhand, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathwada, Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana and Interior Karnataka.



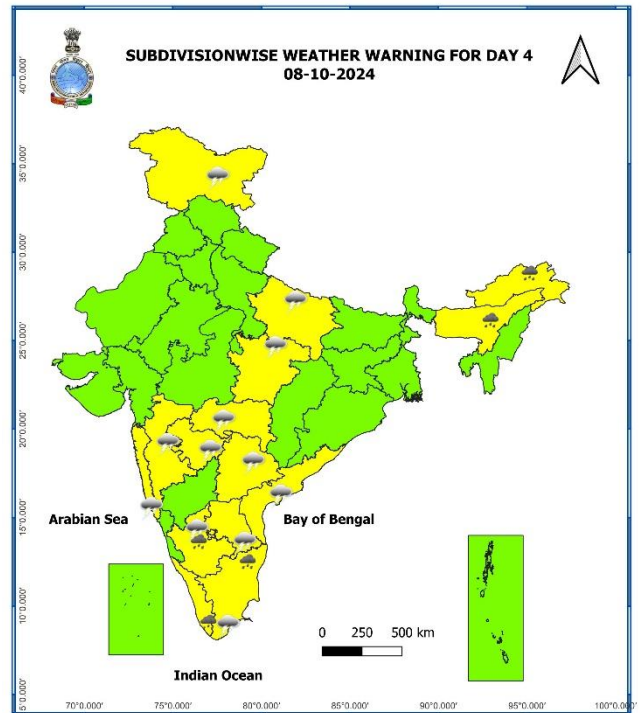
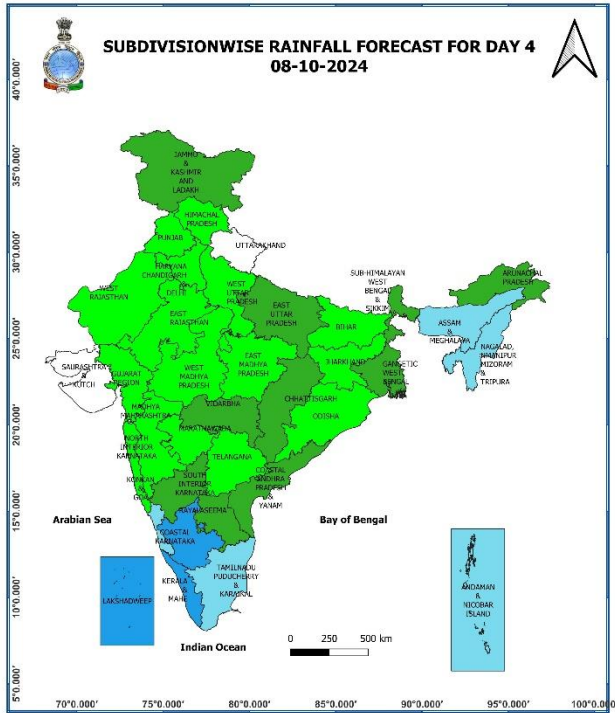
06 October (Day 2):

- ❖ **Heavy rainfall ($\geq 7\text{cm}$)** very likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe and South Interior Karnataka.
- ❖ **Thunderstorm with lightning** very likely at isolated places over East Uttar Pradesh, Vidarbha, Bihar, Jharkhand, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Madhya Maharashtra, Marathwada, Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana and Interior Karnataka.



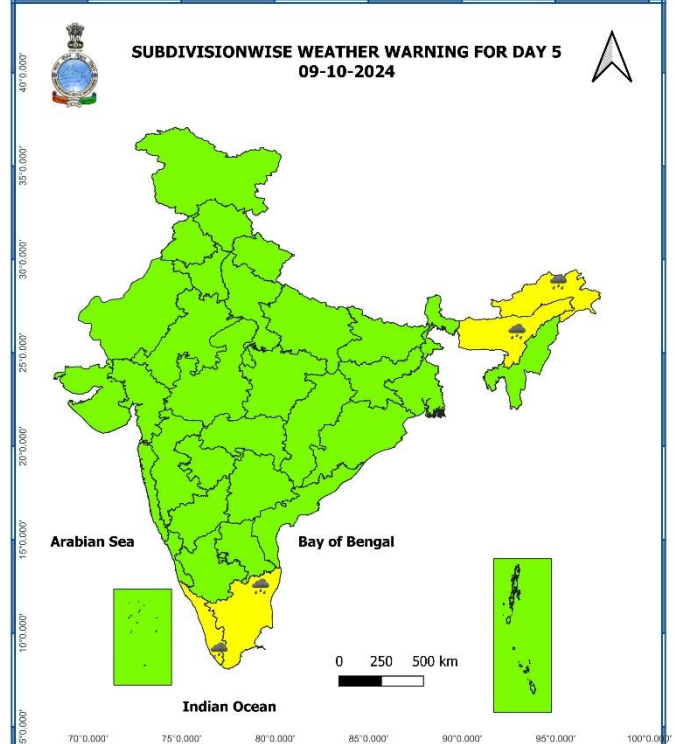
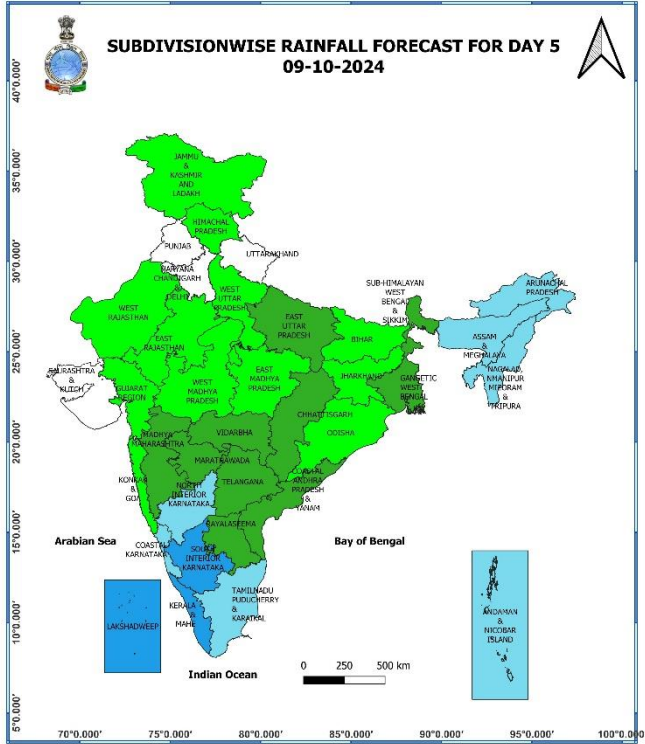
07 October (Day 3):

- ❖ **Heavy rainfall ($\geq 7\text{cm}$)** very likely at isolated places over Arunachal Pradesh, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe and South Interior Karnataka.
- ❖ **Thunderstorm with lightning** very likely at isolated places over East Uttar Pradesh, Vidarbha, Konkan & Goa, Madhya Maharashtra, Marathwada, Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana and South Interior Karnataka.



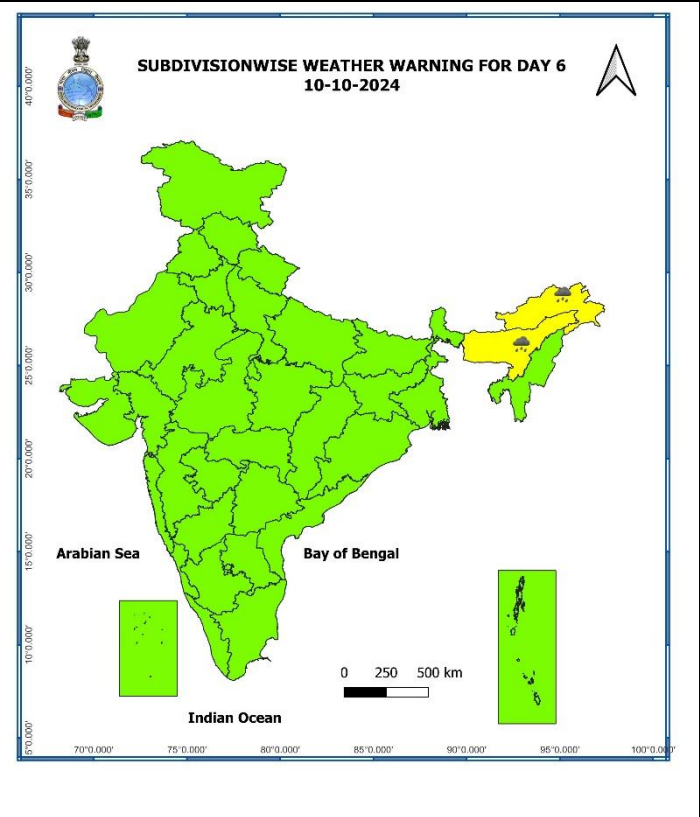
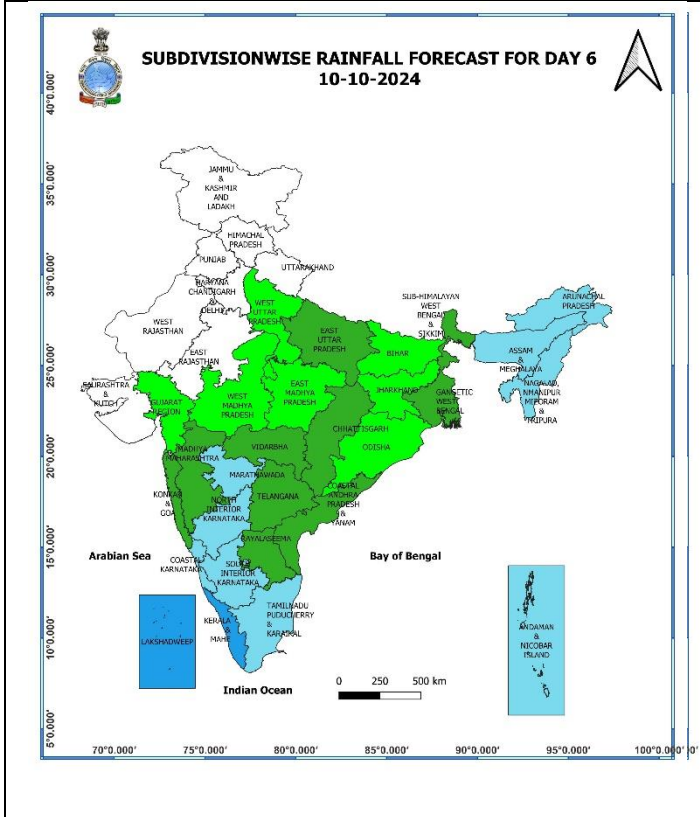
08 October (Day 4):

- ❖ **Heavy rainfall ($\geq 7\text{cm}$)** likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe and South Interior Karnataka.
- ❖ **Thunderstorm with lightning** likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, East Uttar Pradesh, East Madhya Pradesh, Vidarbha, Konkan & Goa, Madhya Maharashtra, Marathwada, Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana and South Interior Karnataka.



09 October (Day 5):

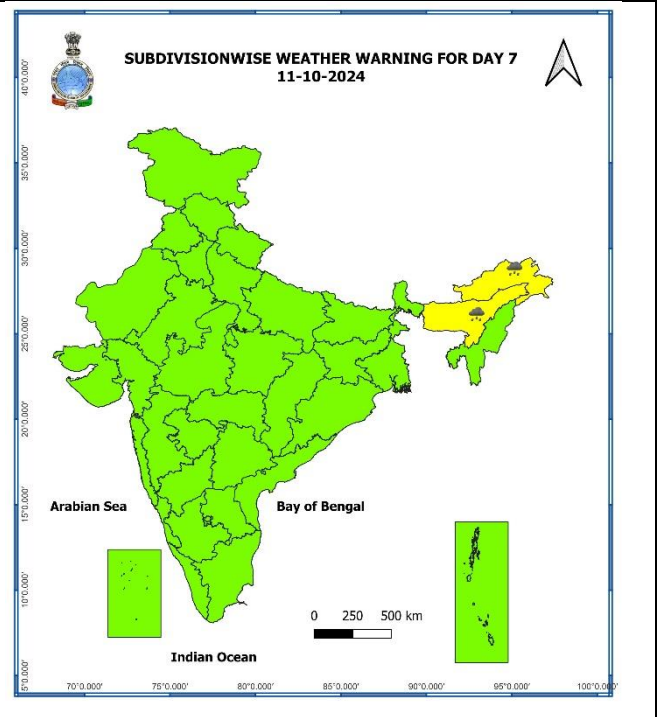
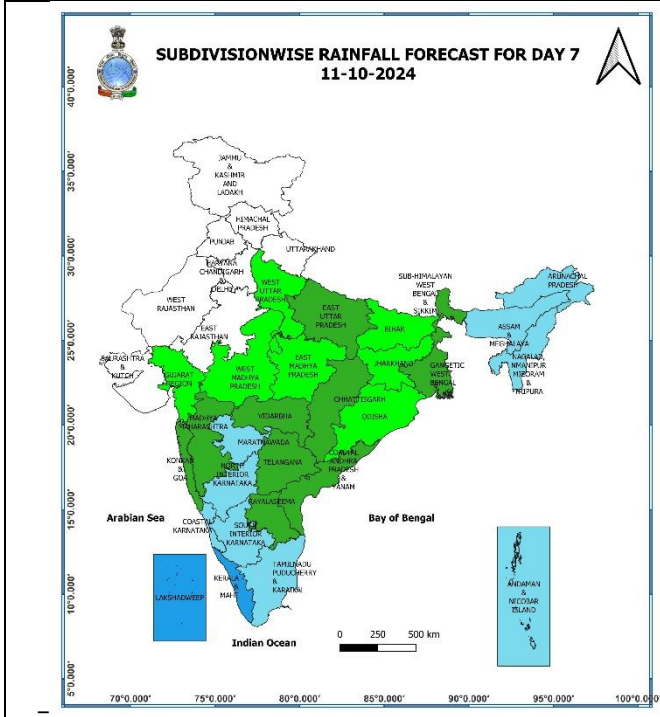
- ❖ **Heavy rainfall ($\geq 7\text{cm}$) likely** at isolated places over Arunachal Pradesh, Assam & Meghalaya, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.



10 October (Day 6):

❖ **Heavy rainfall ($\geq 7\text{cm}$) likely at isolated places over Arunachal Pradesh and Assam & Meghalaya.**

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11 October (Day 7):

- ❖ Heavy rainfall ($\geq 7\text{cm}$) likely at isolated places over Arunachal Pradesh and Assam & Meghalaya.

Weather Outlook for subsequent 3 days (During 12th October- 14th October, 2024)

- ❖ Fairly widespread to widespread rainfall likely over Peninsular and adjoining Central India, North East India and Islands.
- ❖ Scattered to fairly widespread rainfall over East 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.

Impact due to

- ✓ **Moderate flash flood risk** likely over few watersheds & neighbourhoods of Assam & Meghalaya on 05th & 06th 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 kutcha 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

- ✓ Drain out excess water from rice, millets, cowpea, French bean, vegetable crops and orchards in Meghalaya.
- ✓ Make provision for draining out excess water from standing crop fields and fruit orchards to avoid water stagnation in West Bengal & Sikkim, Tamil Nadu, Kerala, South Interior Karnataka, Rayalaseema and North Eastern States.
- ✓ Keep the harvested produce at safer places.
- ✓ Provide mechanical support to horticultural crops & staking to vegetables.

(Annexure I)

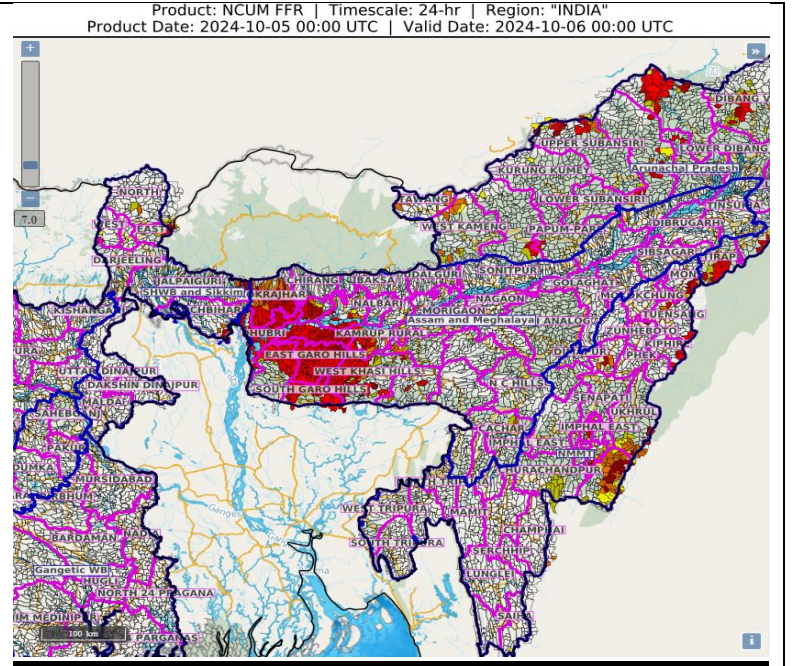
Flash Flood Guidance

24 hours Outlook for the Flash Flood Risk (FFR) till 0530 IST of 06-10-2024:

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

Assam & Meghalaya - Barpeta, Bongaigaon, Kamrup Rural, Kokrajhar, East Garo Hills, South Garo Hills, West Garo Hills, West Khasi Hills, Dhubri and Jaintia Hills districts.

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



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Fig. 1: Maximum Temperatures

Fig. 2: Departure of Maximum Temperatures

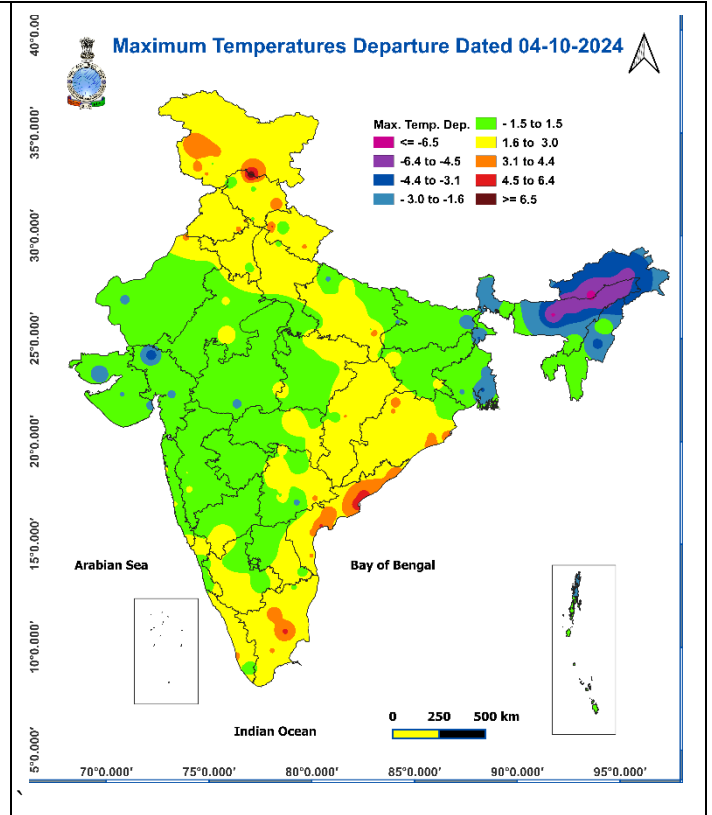
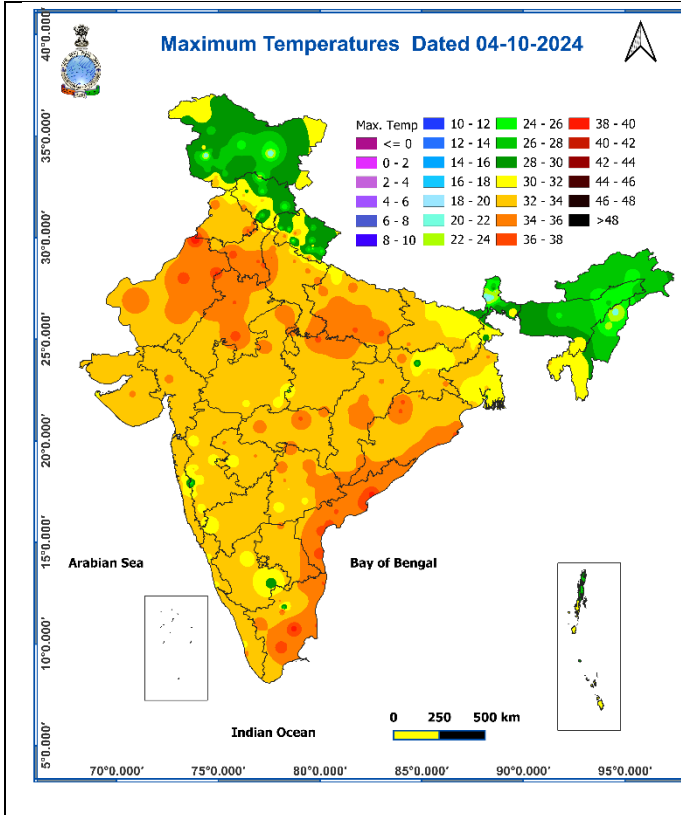


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures

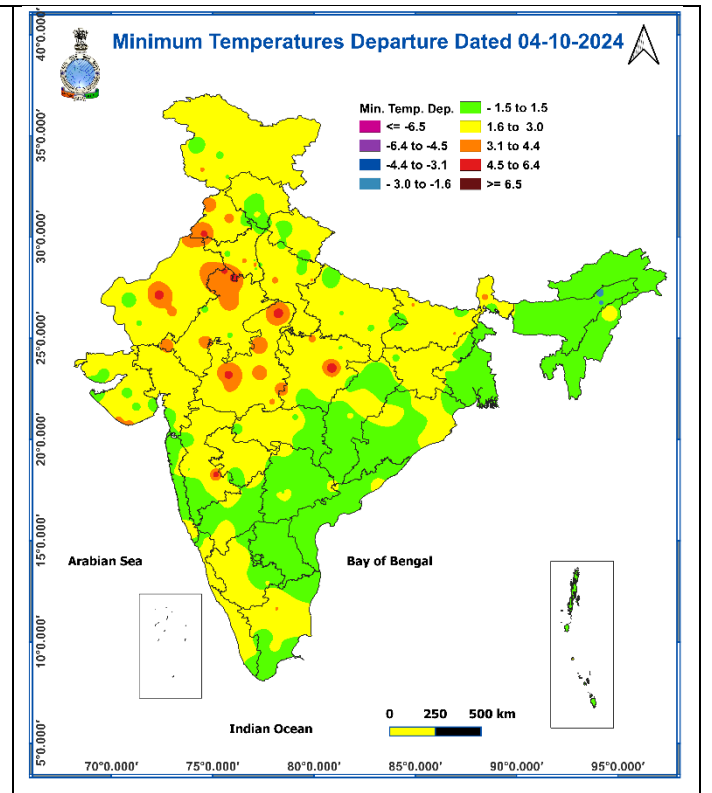
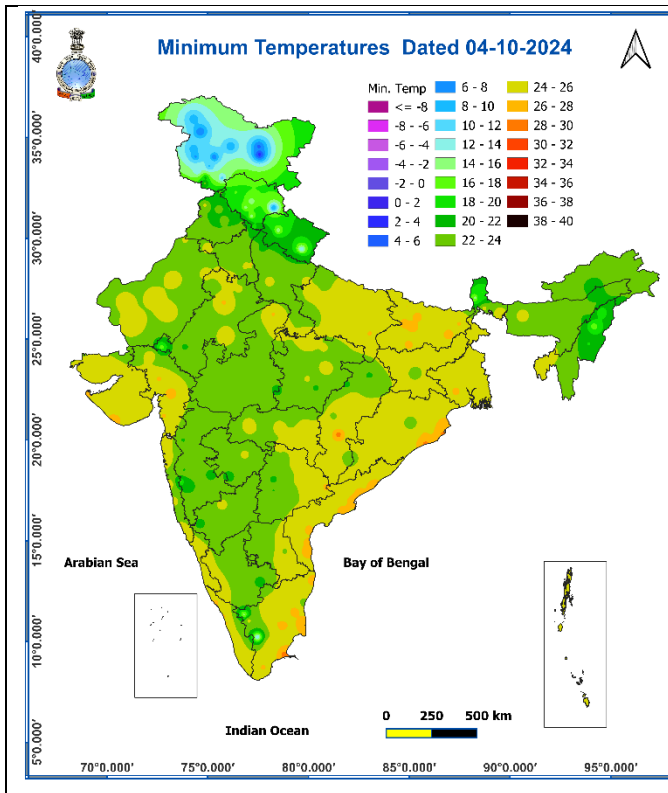
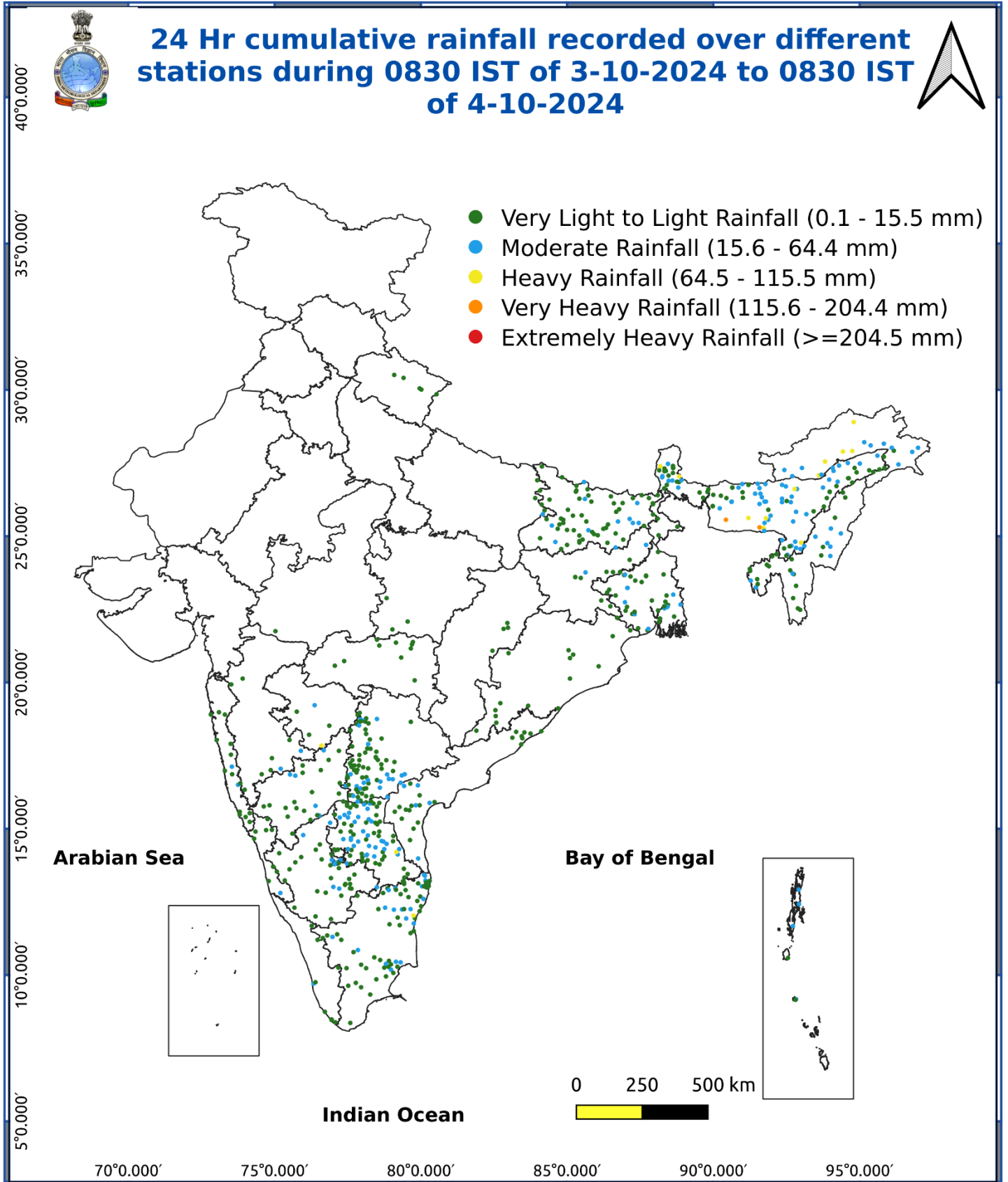


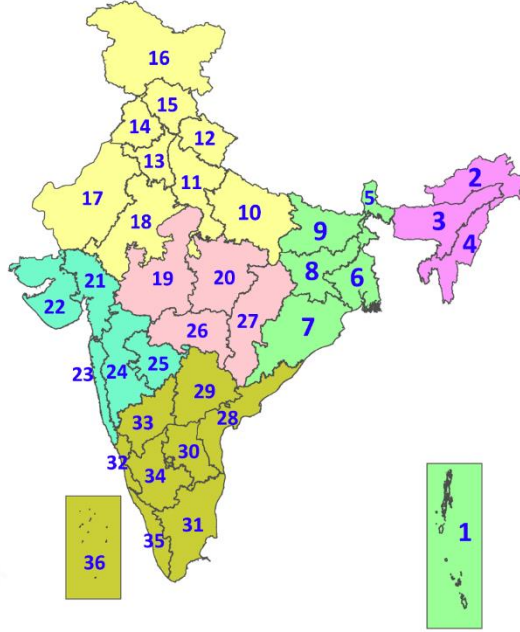
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



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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	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)