

Wednesday, October 9, 2024
Time of Issue: 1330 hours IST
(MID-DAY)

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 29°N/84°E, Nautanwa, Sultanpur, Panna, Narmadapuram, Khargone, Nandurbar, Navsari and 20°N/70°E.
- ✓ Conditions are favourable for further **withdrawal of Southwest Monsoon** from remaining parts of Gujarat, Madhya Pradesh, Uttar Pradesh, some more parts of Maharashtra and some parts of Bihar during next 2-3 days.

Weather Systems:

- ✓ Under the influence of **upper air cyclonic circulation** over Lakshadweep and adjoining southeast Arabian Sea, a **low pressure area** has formed over Lakshadweep and adjoining Southeast & eastcentral Arabian Sea. It is likely to move northwestwards and intensify into a **Depression** over central Arabian Sea during next 3-4 days.
- ✓ A **trough** runs from Comorin area to north Konkan coast across the cyclonic circulation associated with Low Pressure area over Lakshadweep and adjoining Southeast & eastcentral Arabian Sea in lower tropospheric levels.
- ✓ Another **cyclonic circulation** lies over Sri Lanka & neighbourhood in lower & middle tropospheric levels.
- ✓ A **cyclonic circulation** lies over east Assam & neighbourhood in lower tropospheric levels.

Forecast & Warnings (upto 7 days):

South Peninsular India

- ✓ Fairly widespread to widespread light to moderate rainfall very likely over Lakshadweep, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal, Coastal & South Interior Karnataka; Isolated to Scattered light to moderate rainfall very likely over North Interior Karnataka, Rayalaseema, Telangana, Coastal Andhra Pradesh & Yanam during the week.
- ✓ **Isolated heavy to very heavy rainfall** very likely over Tamil Nadu during 12th-14th; Kerala & Mahe on 12th & 13th October.
- ✓ **Isolated heavy rainfall** very likely over Tamil Nadu, Puducherry & Karaikal during the week; over Lakshadweep 09th & 10th; Coastal Karnataka on 09th, 10th & 13th; South Interior Karnataka during 09th-13th and over South Interior Karnataka on 11th October.

Northeast India

- ✓ Scattered to Fairly widespread light to moderate rainfall very likely over North East India during next 5 days; Isolated to scattered light rainfall over the region subsequent next 2 days.
- ✓ **Isolated heavy rainfall** very likely over Arunachal Pradesh and Assam & Meghalaya during 09th -11th and over Nagaland, Manipur, Mizoram & Tripura on 09th October.

West India

- ✓ Scattered to Fairly widespread light to moderate rainfall very likely over Konkan & Goa during the week; Isolated to scattered light to moderate rainfall over remaining region during the week.
- ✓ **Isolated heavy rainfall** very likely over Konkan & Goa & Madhya Maharashtra during 09th-12th October.

Northwest, East & Central India:

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

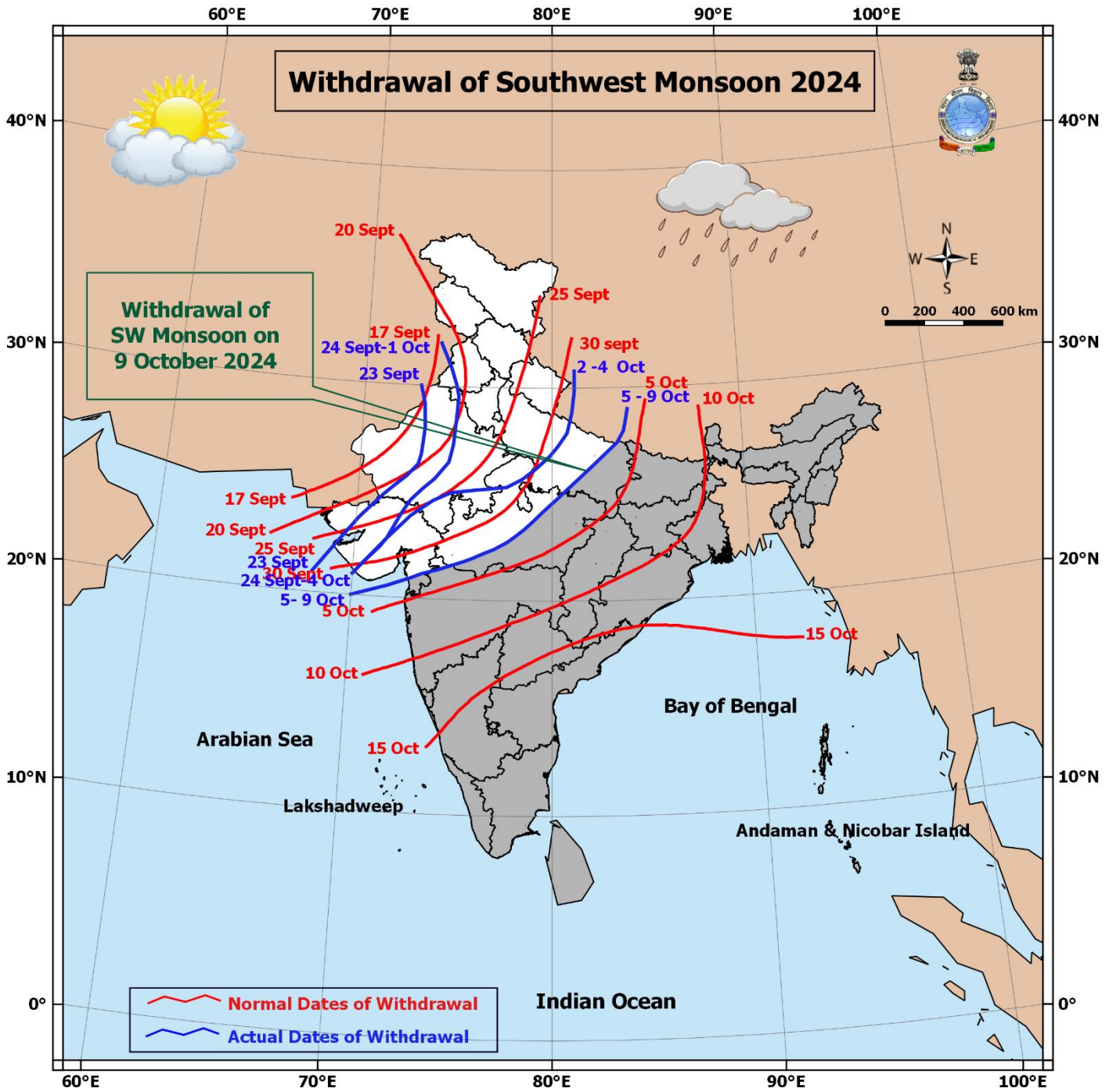
Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST of yesterday to 0830 hours IST of today): **at most places** Lakshadweep, Coastal Karnataka; **at many places** Gangetic West Bengal, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Tamil Nadu, Puducherry & Karaikal; **at a few places** over Vidarbha, Andaman & Nicobar Islands, Jharkhand, Kerala & Mahe, Coastal Andhra Pradesh & Yanam and South Interior Karnataka; **at isolated places over** Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Haryana-Chandigarh-Delhi, East Uttar Pradesh, Rajasthan, Madhya Pradesh, Chhattisgarh, Bihar, Odisha, Madhya Maharashtra, Marathwada, Gujarat Region, Rayalaseema, Telangana and North Interior Karnataka.
- ❖ **Heavy to very Heavy rainfall** at isolated places over Konkan & Goa, Coastal Karnataka & Arunachal Pradesh; **Heavy rainfall** at isolated places over Tamil Nadu, South Interior Karnataka, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Sub-Himalayan West Bengal & Sikkim.
- ❖ **Significant amount of rainfall** (from 0830 hours IST of yesterday to 0830 hours IST of today) (in cm): **Konkan & Goa:** Ponda (dist North Goa) 13, Rameshwar_agri (dist Sindhudurg) 13, Sanguem (dist South Goa) 13, Dabolim N.a.s.- Navy (dist South Goa) 12, Valpoi (dist North Goa) 11, Quepem (dist South Goa) 11, Margao (dist South Goa) 11, Panjim - Imd Obsy (dist North Goa) 10, Mapusa (dist North Goa) 9, Mormugao - Pmo Imd (dist South Goa) 8, Kankavli (dist Sindhudurg) 7; **Coastal Karnataka:** Kiravatti (dist Uttara Kannada) 13, Mundgod (dist Uttara Kannada) 8, Kadra (dist Uttara Kannada) 8, Siddapura (dist Udupi) 8, Jagalbet (dist Uttara Kannada) 7; **Arunachal Pradesh:** Huri (AWS) (dist Kurung Kumey) 12, Daporijo (CWC) (dist Upper Subansiri) 9, Sejosa (dist Pakke Kessang) 8, Yingkiong (CWC) (dist Upper Siang) 7, Itanagar (dist Papumpara) 7; **Sub-Himalayan West Bengal & Sikkim:** Alipurduar (pto) (dist Alipurduar) 9, Khanitar (dist Pakyong) 9, Majitar (dist Pakyong) 8, Kumargram (dist Alipurduar) 7; **South Interior Karnataka:** Hunchadakatte (dist Shivamogga) 9; **Tamil Nadu:** Karur AWS (dist Karur), Mayanur (dist Karur) 8 each; **Assam & Meghalaya:** Chauldhowaghat (dist Lakhimpur) 7; **Nagaland, Manipur, Mizoram & Tripura:** Kamalpur (dist Dhalai) 7.
- ❖ **Minimum Temperature Departures (as on 09-10-2024):** Minimum temperatures are **appreciably above normal (3.1°C to 5.0°C)** at isolated places over East Uttar Pradesh, Madhya Pradesh, Madhya Maharashtra and Vidarbha; **above normal (1.6°C to 3.0°C)** at a few places over Rajasthan, Gujarat state and West Uttar Pradesh; at isolated places over Himachal Pradesh, Haryana-Chandigarh-Delhi, Bihar, Assam & Meghalaya, Sub-Himalayan West Bengal & Sikkim, Jharkhand, Odisha, Telangana, Coastal Andhra Pradesh & Yanam, Kerala & Mahe, Marathwada and Chhattisgarh. These are **below normal (-1.6°C to -3.0°C)** at isolated places over Coastal Karnataka, Tamil Nadu, Puducherry & Karaikal, Lakshadweep. Today, **the lowest minimum temperature** of 17.6°C is reported at **Delhi Ridge (New Delhi)** over the plains of the country. (Fig.4)
- ❖ **Maximum Temperature Departures (as on 08-10-2024):** Maximum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Saurashtra & Kutch; **above normal (1.6°C to 3.0°C)** at a few places over Odisha; at isolated places over Himachal Pradesh, East Uttar Pradesh, East Rajasthan, Gujarat Region, Jharkhand, Gangetic West Bengal and Konkan & Goa. These were **below normal (-1.6°C to -3.0°C)** at isolated places over Telangana and Madhya Pradesh. Yesterday, **the highest Maximum Temperature** of 39.8°C was reported at **Bhuj (Saurashtra & Kutch)** over the country. (Fig. 2)

Meteorological Analysis (Based on 0830 hours IST)

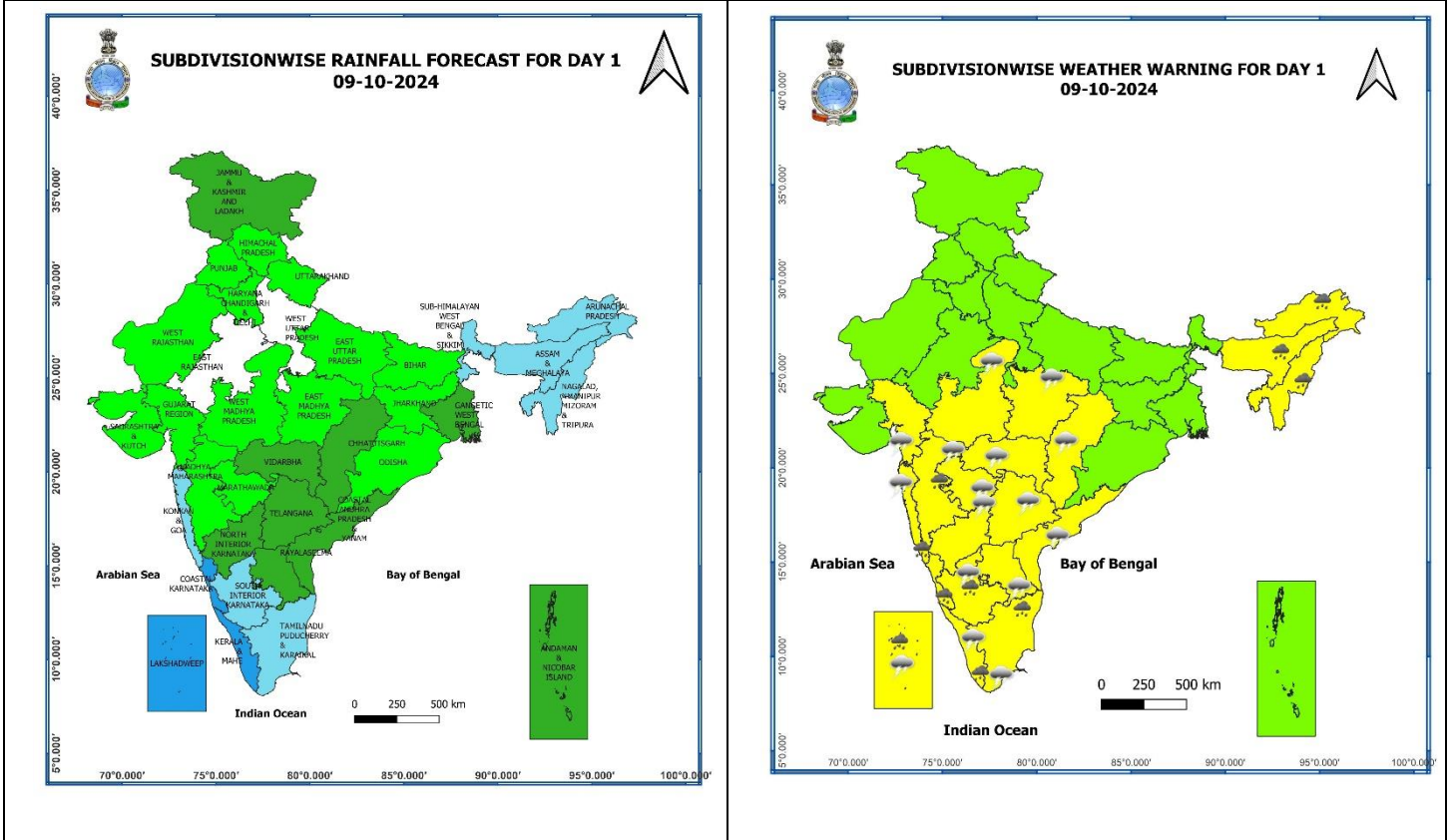
- ❖ The **line of withdrawal of Southwest Monsoon** continues to pass through 29°N/84°E, Nautanwa, Sultanpur, Panna, Narmadapuram, Khargaon, Nandurbar, Navsari and 20°N/70°E.
- ❖ Conditions are favourable for further **withdrawal of Southwest Monsoon** from remaining parts of Gujarat, Madhya Pradesh, Uttar Pradesh, some more parts of Maharashtra and some parts of Bihar during next 2-3 days.
- ❖ Under the influence of **upper air cyclonic circulation** over Lakshadweep and adjoining southeast Arabian Sea, a **low pressure area** has formed over Lakshadweep and adjoining Southeast & eastcentral Arabian Sea. The associated cyclonic circulation extends upto 5.8 km above mean sea level. It is likely to move northwestwards and intensify into a **Depression** over central Arabian Sea during next 3-4 days.
- ❖ A **trough** runs from Comorin area to north Konkan coast across the cyclonic circulation associated with Low Pressure area over Lakshadweep and adjoining Southeast & eastcentral Arabian Sea and extends upto 1.5 km above mean sea level.
- ❖ Another **cyclonic circulation** lies over Sri Lanka & neighbourhood and extends upto 5.8 Km above mean sea level.
- ❖ The **Western Disturbance** as a **cyclonic circulation** now lies over east Afghanistan & neighbourhood between 3.1 and 7.6 km above mean sea level.
- ❖ A **cyclonic circulation** lies over east Assam & neighbourhood and extends upto 1.5 km above mean sea level with trough aloft roughly along Long. 93°E to the north of Lat. 25°N.
- ❖ The **trough** from the cyclonic circulation over Lakshadweep & adjoining southeast Arabian Sea to North coastal Tamil Nadu across Kerala extending upto 1.5 km above mean sea level has become less marked.

Withdrawal of Southwest Monsoon 2024



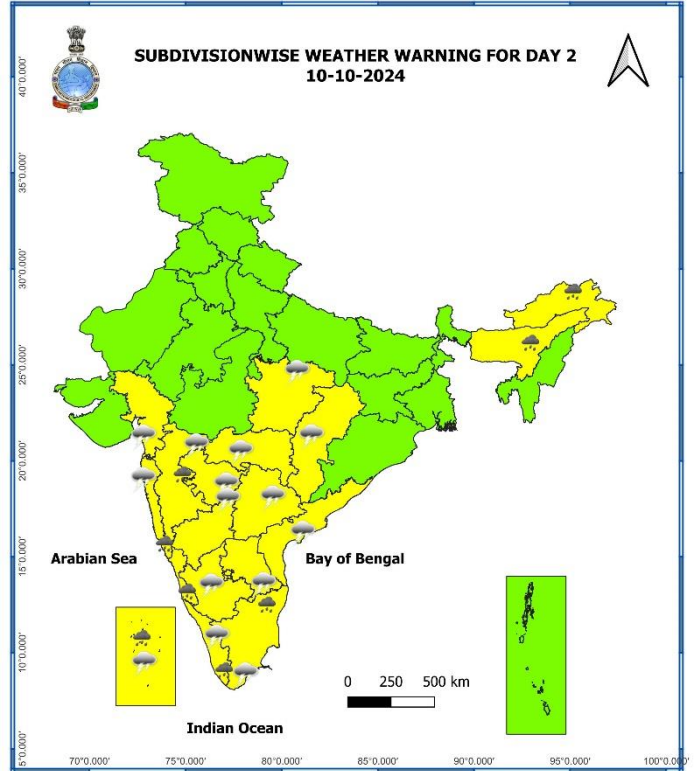
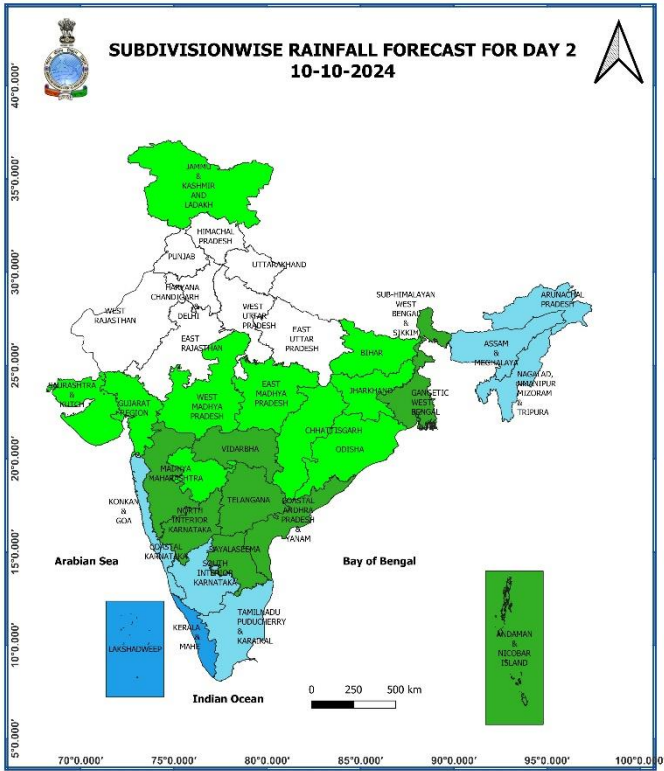
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Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 16th October, 2024)



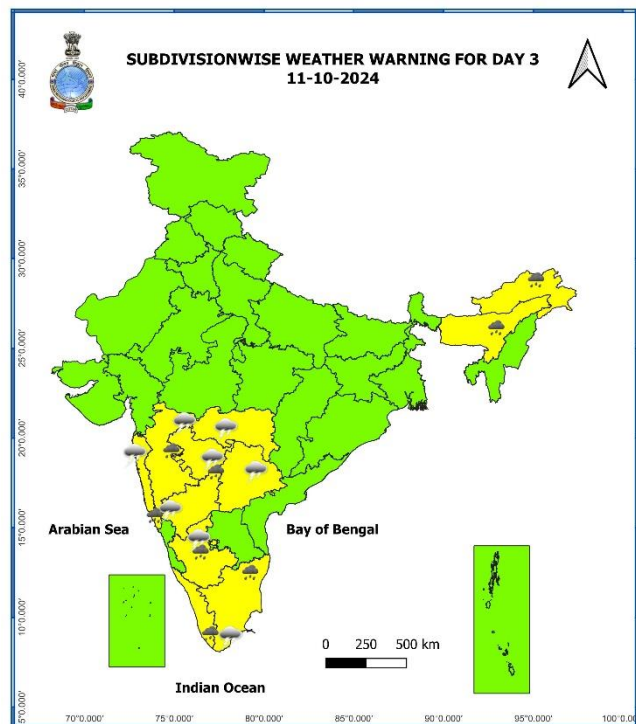
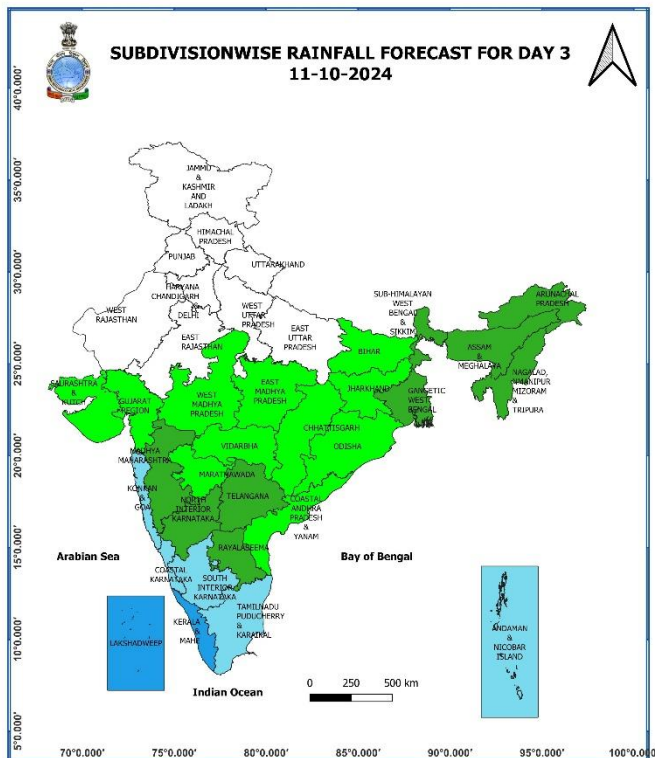
09 October (Day 1):

- ❖ **Heavy rainfall ($\geq 7\text{cm}$)** very likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Madhya Maharashtra, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Lakshadweep, Coastal and South Interior Karnataka.
- ❖ **Thunderstorm accompanied gusty winds (speed reaching 30-40 kmph)** very likely at isolated places over Madhya Pradesh, Telangana; **with lightning** very likely at isolated places over Vidarbha, Chhattisgarh, Konkan & Goa, Madhya Maharashtra, Marathwada, Gujarat Region, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Lakshadweep, Coastal Andhra Pradesh & Yanam, Rayalaseema and Interior Karnataka.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over Maldives, Lakshadweep Comorin areas, southeast Arabian sea and adjoin southwest Arabian sea, along and off Kerala, Karnataka, Konkan, Goa, off north Maharashtra coasts and adjoining east central Arabian sea and gulf of Mannar. Fishermen are advised not to venture into these areas.



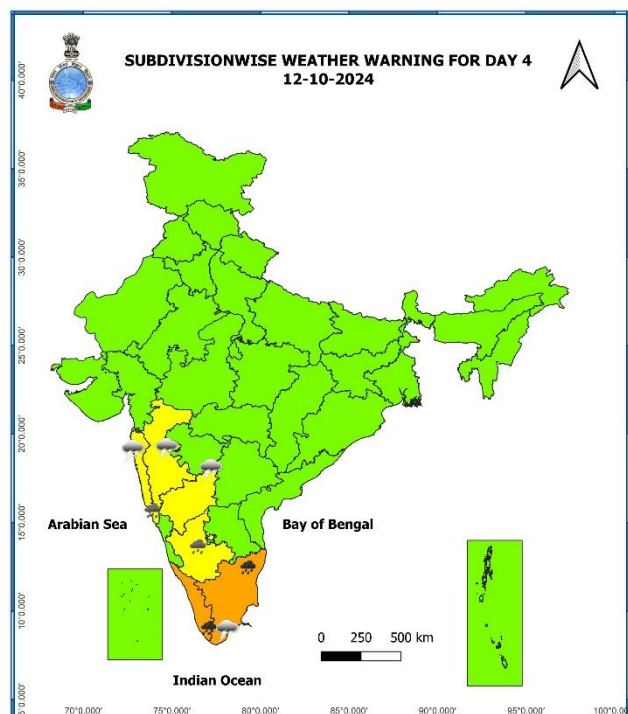
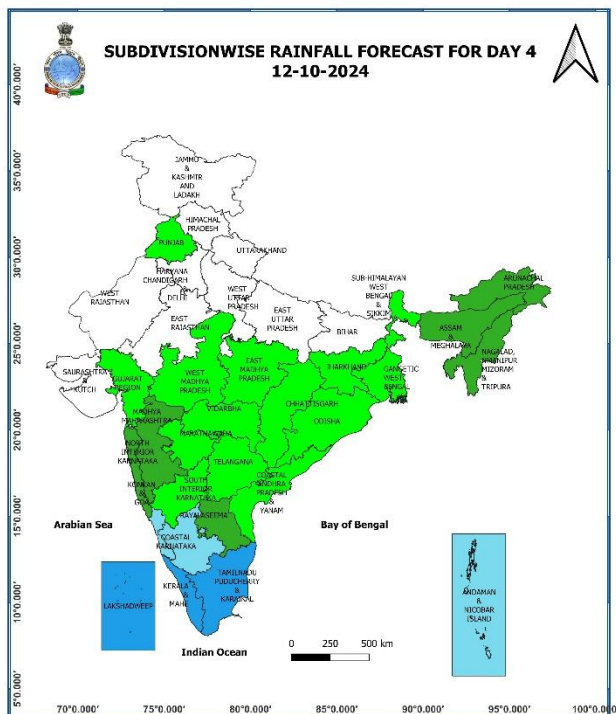
10 October (Day 2):

- ❖ **Heavy rainfall ($\geq 7\text{cm}$) very likely** at isolated places over Arunachal Pradesh, Assam & Meghalaya, Konkan & Goa, Madhya Maharashtra, Kerala & Mahe and Tamil Nadu, Puducherry & Karaikal, Lakshadweep and Coastal Karnataka.
- ❖ **Thunderstorm accompanied gusty winds (speed reaching 30-40 kmph) very likely** at isolated places over Telangana; with lightning very likely at isolated places over East Madhya Pradesh, Vidarbha, Chhattisgarh, Konkan & Goa, Madhya Maharashtra, Marathwada, Gujarat Region, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Lakshadweep, Coastal Andhra Pradesh & Yanam, Rayalaseema and Interior Karnataka.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over Maldives, Lakshadweep Comorin areas, southeast Arabian sea and adjoin southwest Arabian sea, along and off Kerala, Karnataka, Goa, off Maharashtra coasts and adjoining east central Arabian sea and gulf of Mannar. Fishermen are advised not to venture into these areas.



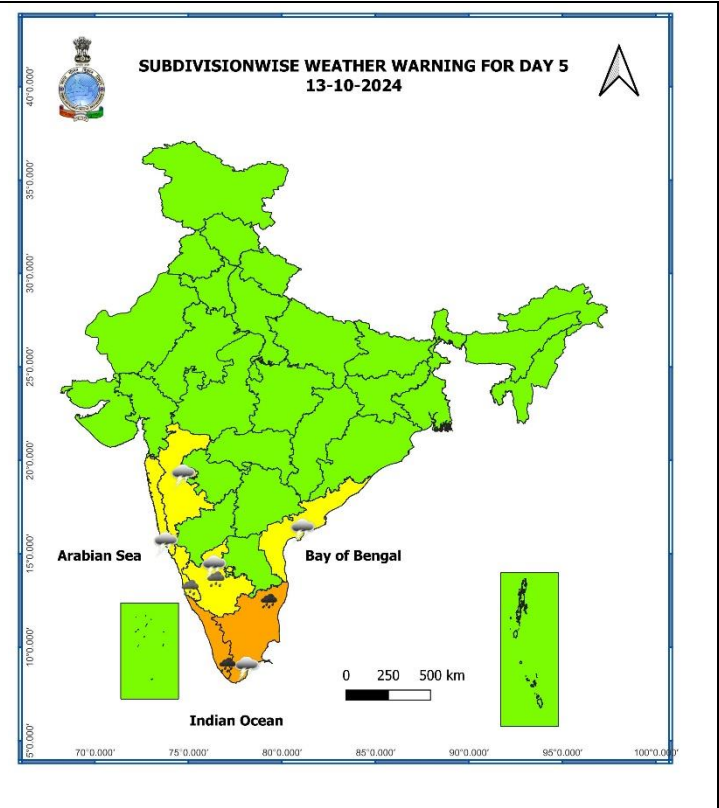
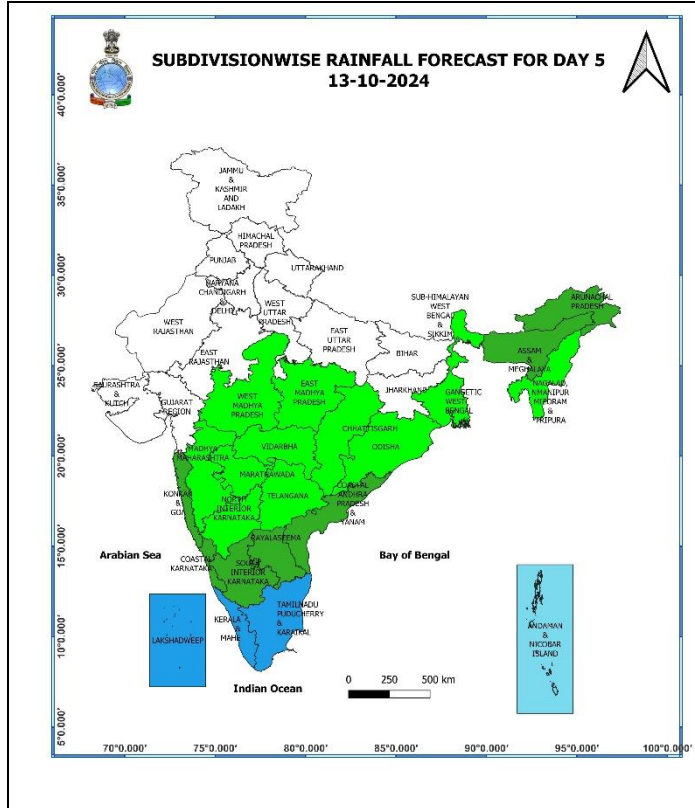
11 October (Day 3):

- ❖ **Heavy rainfall ($\geq 7\text{cm}$)** very likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Konkan & Goa, Madhya Maharashtra, Kerala & Mahe and Tamil Nadu, Puducherry & Karaikal and Interior Karnataka.
- ❖ **Thunderstorm accompanied gusty winds (speed reaching 30-40 kmph)** very likely at isolated places over Telangana; **with lightning** very likely at isolated places over Vidarbha, Konkan & Goa, Madhya Maharashtra, Marathwada, Tamil Nadu, Puducherry & Karaikal and Interior Karnataka.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over Maldives, Lakshadweep Comorin areas, southeast Arabian sea and adjoin southwest Arabian sea, along and off Kerala, Karnataka, Goa, off Maharashtra coasts and adjoining east central Arabian sea and gulf of Mannar. Fishermen are advised not to venture into these areas.



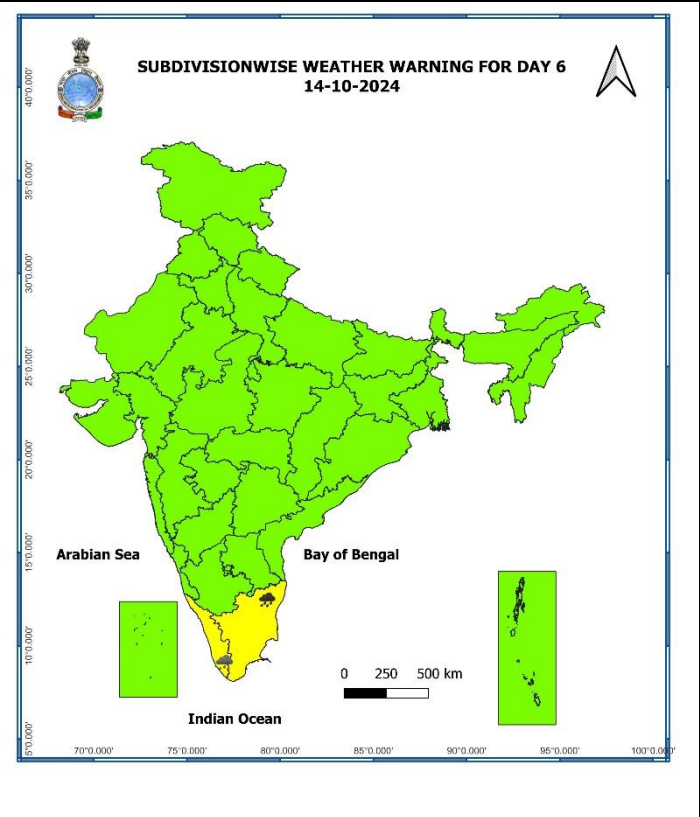
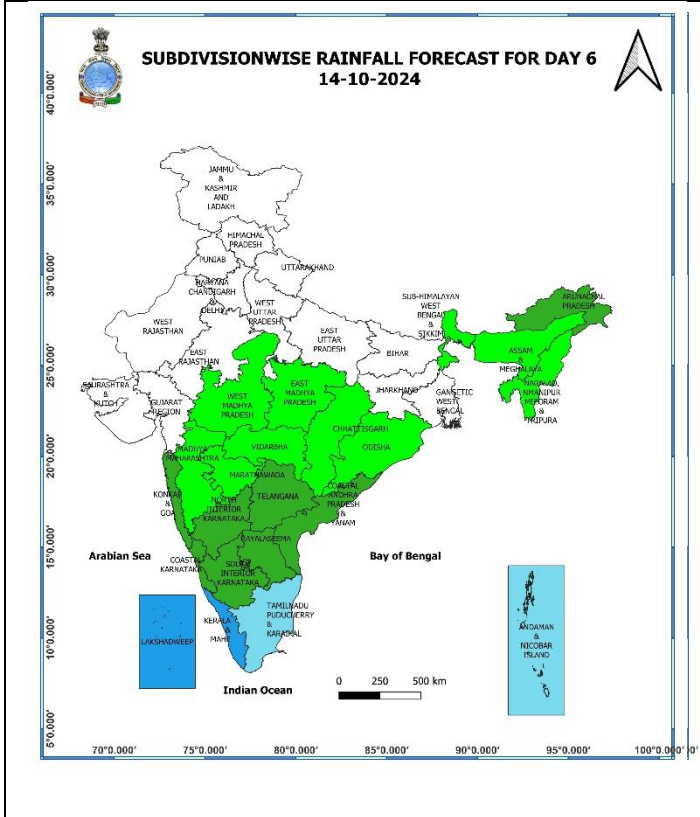
12 October (Day 4):

- ❖ **Heavy to very Heavy rainfall (≥ 12 cm)** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe; **Heavy rainfall (≥ 7 cm)** likely at isolated places over Konkan & Goa and South Interior Karnataka
- ❖ **Thunderstorm with lightning** likely at isolated places over Konkan & Goa, Madhya Maharashtra, Tamil Nadu, Puducherry & Karaikal and North Interior Karnataka.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over Maldives, Lakshadweep Comorin areas, southeast Arabian sea and adjoin southwest Arabian sea, along and off Kerala, Karnataka, east central Arabian sea and adjoining west central and north Arabian sea and gulf of Mannar, along and off south Sri Lanka coast, some parts of southwest bay of Bengal and adjoining southeast bay of Bengal. Fishermen are advised not to venture into these areas.



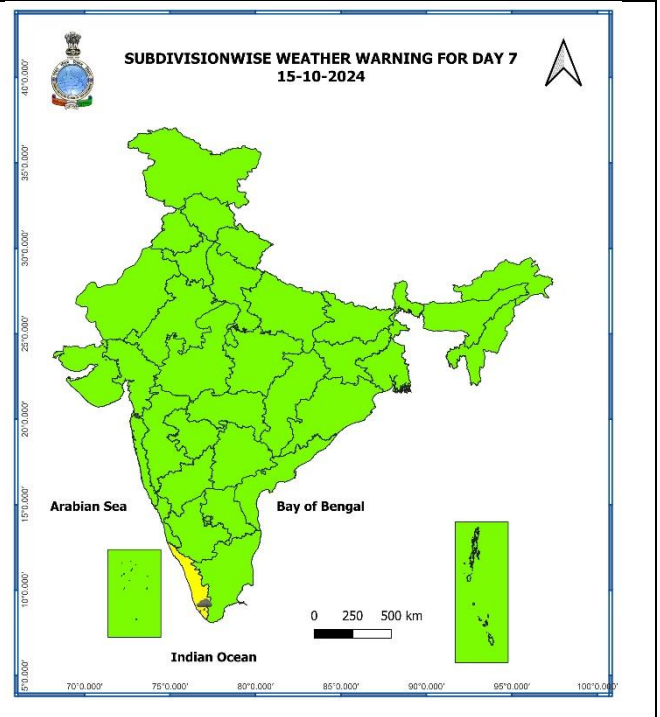
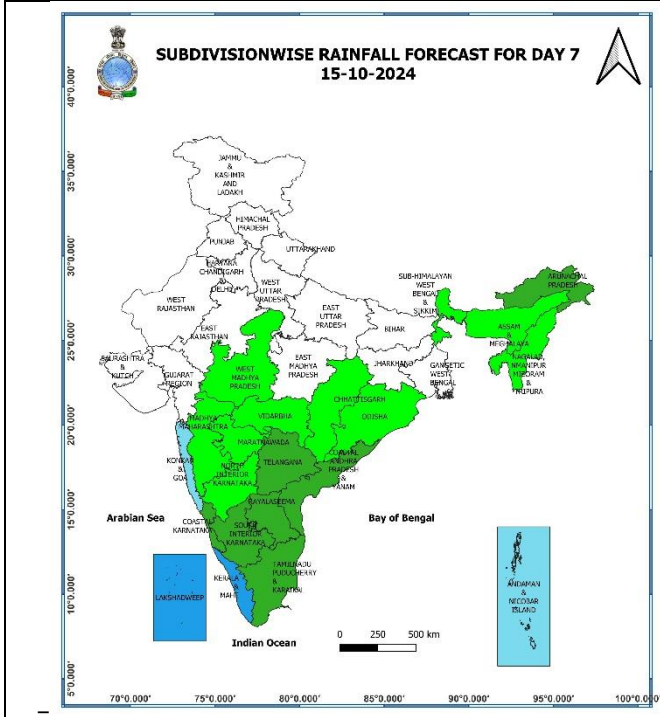
13 October (Day 5):

- ❖ **Heavy to very Heavy rainfall (≥ 12 cm)** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe; **Heavy rainfall (≥ 7 cm)** likely at isolated places over Coastal and South Interior Karnataka.
- ❖ **Thunderstorm with lightning** likely at isolated places over Konkan & Goa, Madhya Maharashtra, Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam and South Interior Karnataka.
- ❖ **Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over many parts of west central Arabian sea and adjoining east central and north Arabian sea and eastern parts of southwest Arabian sea, along and off south Sri Lanka coast and adjoining southwest Bay of Bengal. Fishermen are advised not to venture into these areas.



14 October (Day 6):

- ❖ **Heavy to very Heavy rainfall (≥ 12 cm)** likely at isolated places over Tamil Nadu, Puducherry;
Heavy rainfall (≥ 7 cm) likely at isolated places over Kerala & Mahe.



15 October (Day 7):

- ❖ Heavy rainfall ($\geq 7\text{cm}$) likely at isolated places over Kerala & Mahe.

Weather Outlook for subsequent 3 days (During 16th October- 18th October, 2024)

- ❖ Fairly widespread to widespread rainfall likely over Peninsular and adjoining Central India and Islands.
- ❖ Isolated to Scattered rainfall likely over 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.

Impact due to

- ✓ **Isolated heavy to very heavy rainfall** very likely over Tamil Nadu during 12th-14th; Kerala & Mahe on 12th & 13th 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 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

- ✓ In **Tamil Nadu**, drain out excess water from rice nurseries and recently transplanted rice fields; postpone harvesting of matured millet crops.
- ✓ Make necessary arrangements for draining out excess water from standing crop fields and fruit orchards to avoid water stagnation in Konkan & Goa, Madhya Maharashtra, Kerala, Lakshadweep, Coastal and South Interior Karnataka and North Eastern States.
- ✓ 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

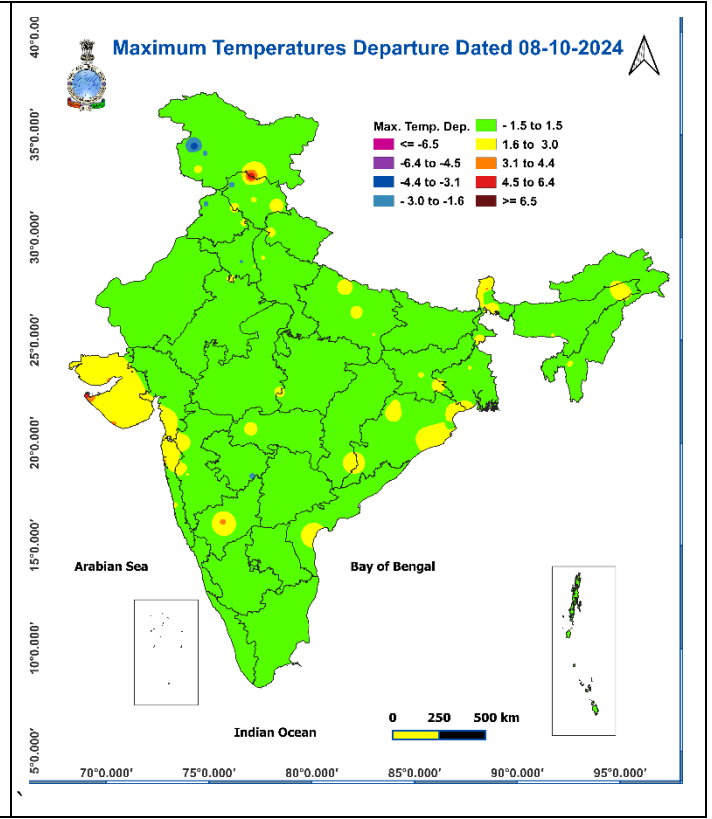
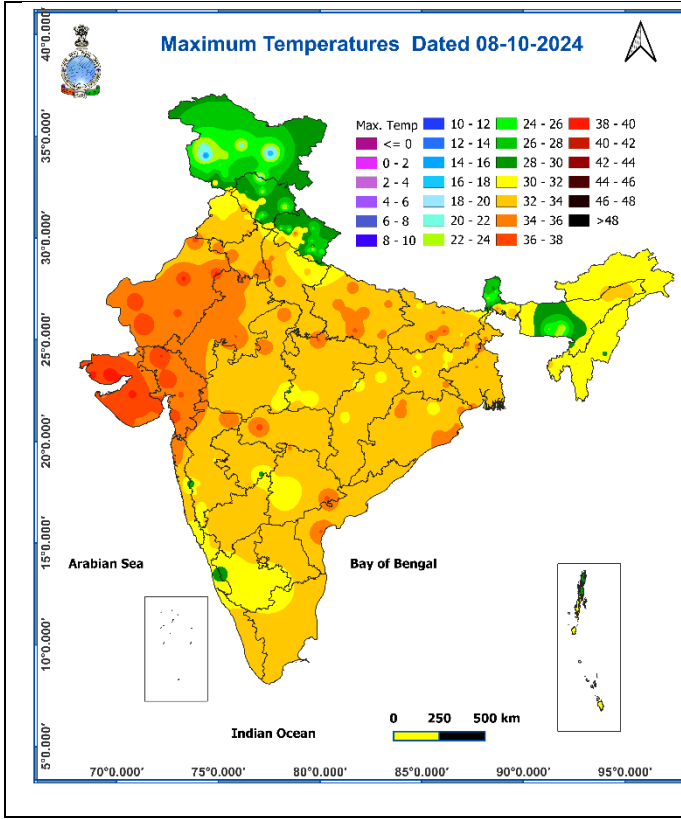


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures

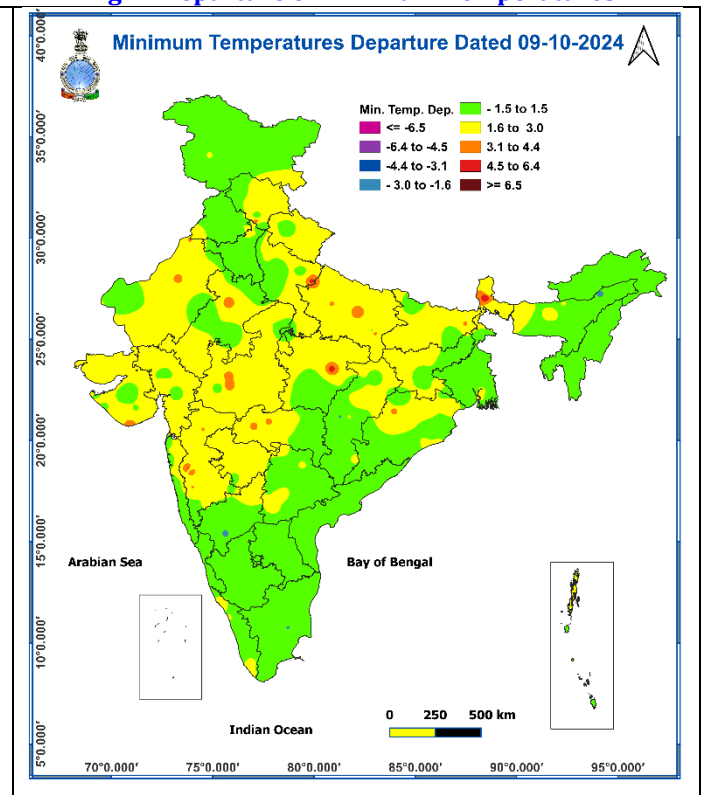
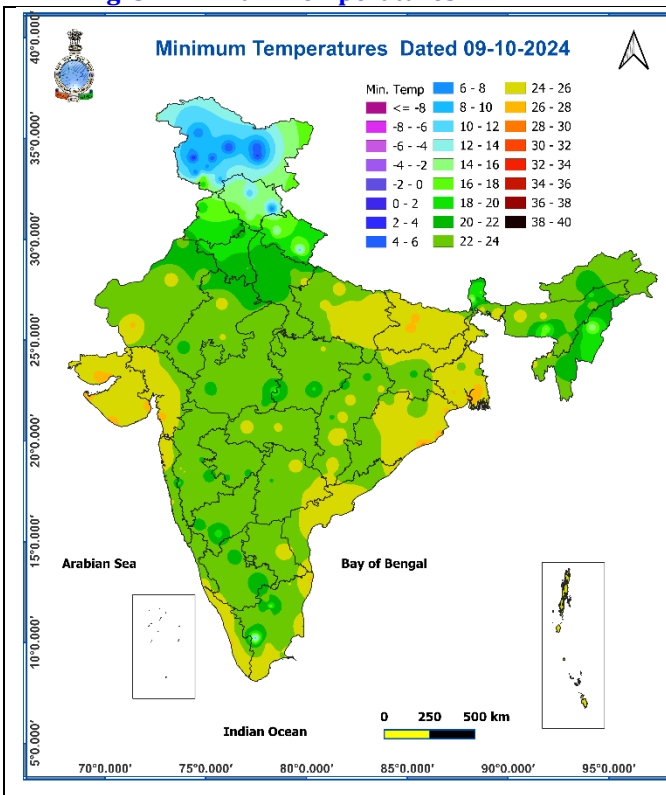
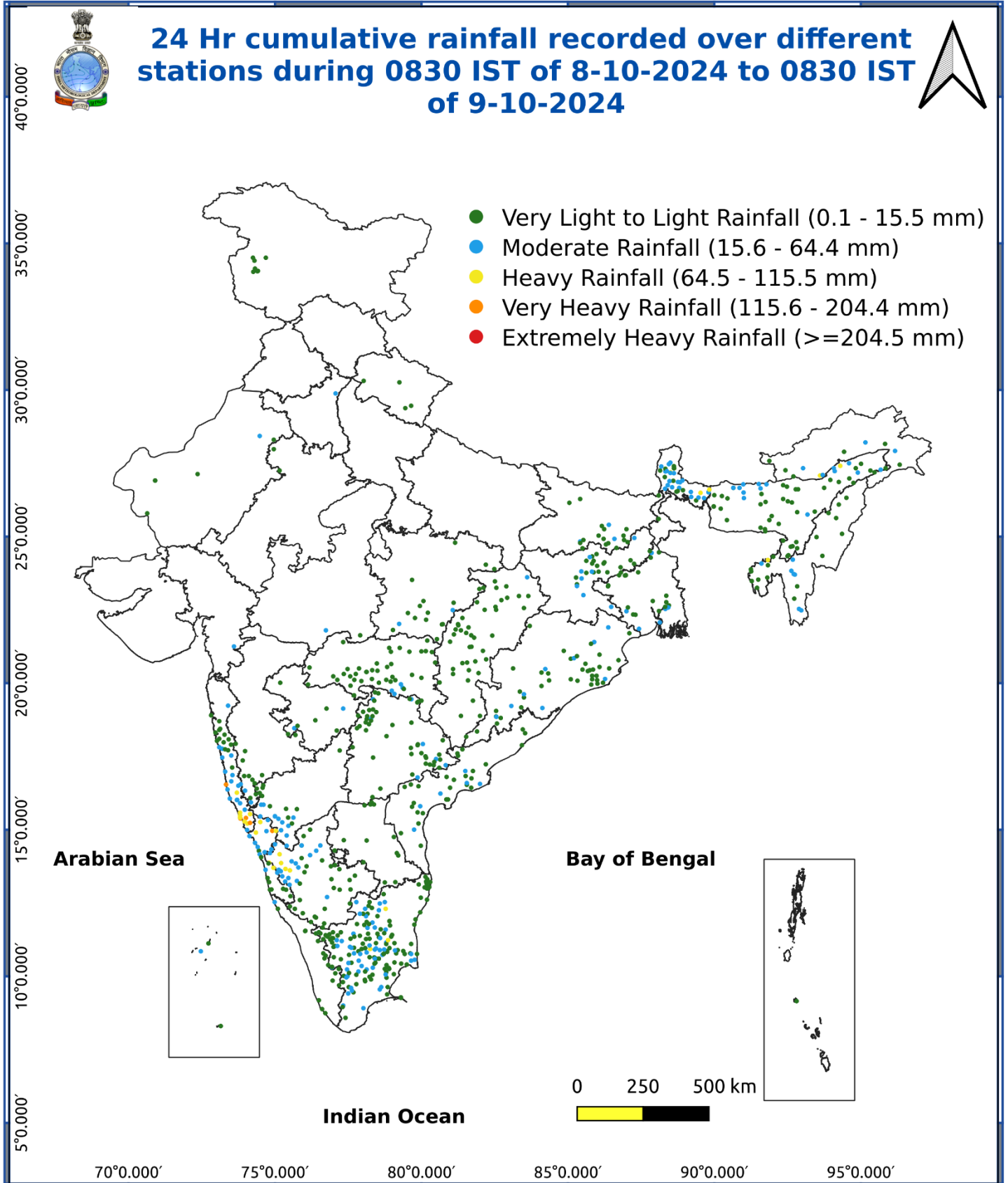


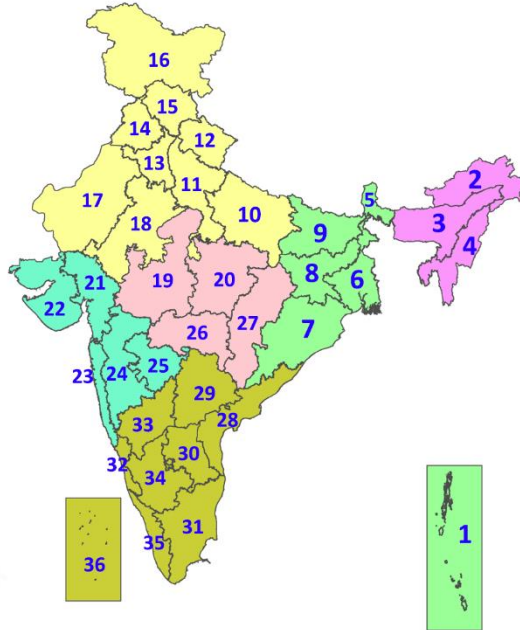
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



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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)



Heavy Rain

Very Heavy Rain

Extremely Heavy Rain

Thunder & Lightning

Hailstorm

Dust Raising Winds

Heavy Snow

Dust Storm

Heat Wave

Warm Night

Hot Day

Hot & Humid

Strong Surface Winds

Cold Wave

Cold Day

Ground Frost

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

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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)