

Wednesday, October 2, 2024
Time of Issue: 1340 hours IST
(MID-DAY)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

Weather Systems:

- ✓ A cyclonic circulation lies over southeast Bangladesh & neighbourhood and a trough runs from this cyclonic circulation to North Andaman Sea across Myanmar coast in lower tropospheric levels. Under its influence, a **Low Pressure Area** is likely to form over North Bay of Bengal & neighbourhood around 04th October.

Forecast & Warnings (upto 7 days):

East & Northeast India

- ✓ Fairly widespread to widespread light to moderate rainfall very likely over northeast region during the week; widespread light to moderate rainfall very likely over Andaman & Nicobar Islands during the week; Scattered to Fairly widespread light to moderate rainfall very likely over Bihar, West Bengal & Sikkim during the week and Isolated to Scattered light to moderate rainfall over Jharkhand, Odisha region during the week.
- ✓ **Isolated heavy to very Heavy rainfall** very likely over northeast region on 02nd & 03rd October.
- ✓ **Isolated heavy rainfall** very likely over Andaman & Nicobar Islands on 02nd October, Sub-Himalayan West Bengal & Sikkim on 03rd October, Gangetic West Bengal on 04th October, northeast region on during 04st - 05th October; Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during 06th - 08th October.

South Peninsular India

- ✓ Fairly widespread to widespread light to moderate rainfall very likely over Kerala & Mahe, South Interior Karnataka, Lakshadweep during the week; Scattered to Fairly widespread light to moderate rainfall very likely over Tamil Nadu, Puducherry & Karaikal, Coastal Karnataka North Interior Karnataka during the week; Isolated to Scattered light to moderate rainfall very likely over Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana during the week.
- ✓ **Isolated heavy rainfall** very likely over Tamil Nadu, Puducherry & Karaikal during 02nd - 06th October; Kerala & Mahe during 02nd - 03rd October.

Central India:

- ✓ Isolated to Scattered light to moderate rainfall over Vidarbha, Chhattisgarh region during last 03 days of the week.

Northwest & West India:

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

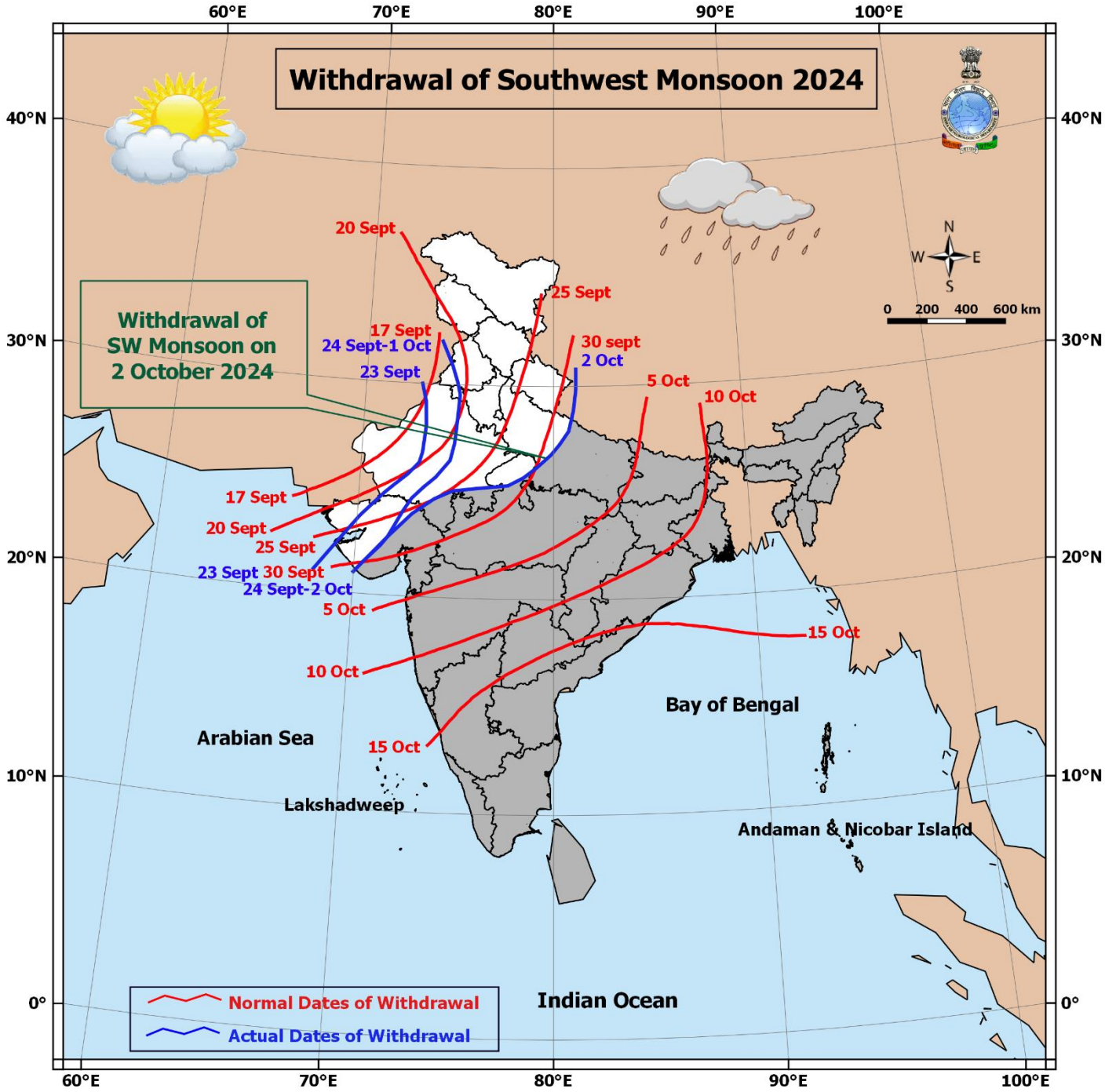
Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST of yesterday to 0830 hours IST of Today): **at most places** over Lakshadweep, Andaman & Nicobar Islands; **at many places** over Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh; **at a few places** over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Kerala & Mahe, Karnataka, Gangetic West Bengal; **at isolated places** over West Uttar Pradesh, East Rajasthan, West Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Jharkhand, Odisha, Konkan & Goa, Gujarat state, Madhya Maharashtra, Marathwada, Telangana, Tamil Nadu, Puducherry & Karaikal, Rayalaseema, Coastal Andhra Pradesh & Yanam.
- ❖ **Heavy rainfall** recorded (from 0830 hours IST of yesterday to 0830 hours IST of Today): **Heavy rainfall** at isolated places over West Bengal & Sikkim, Telangana, Kerala & Mahe, Interior Karnataka and Tamil Nadu.
- ❖ **Significant amount of rainfall** (from 0830 hours IST of yesterday to 0830 hours IST of Today): (in cm): **Telangana:** Sangareddy (dist Sangareddy) 11, Gandhari (dist Kamareddy) 9; **North Interior Karnataka:** Bhalki (dist Bidar) 9; **Kerala & Mahe:** Mannarkkad (dist Palakkad) 8; **South Interior Karnataka:** Kammardi (dist Chikkamagaluru) 7; **Tamil Nadu:** Uppar Dam (dist Tiruppur) , Tiruppur IB PWD (dist Tiruppur) 7 each; **Gangetic West Bengal:** Canning (dist South 24 Parganas) 7; **Sub-Himalayan West Bengal & Sikkim:** Neora (dist Jalpaiguri) 7, Nagarkata (dist Jalpaiguri) 7, Nh31 Bridge (dist Jalpaiguri) 7.
- ❖ **Minimum Temperature Departures (as on 02-10-2024):** Minimum temperatures are **appreciably above normal (3.0°C to 5.0°C)** at isolated places over Sub-Himalayan West Bengal & Sikkim, Rajasthan, Gujarat state, Odisha , Madhya Maharashtra; **above normal (1.6°C to 3.0°C)** at most place over Uttarakhand, Jharkhand, Gujarat, Vidarbha & East Madhya Pradesh; at many places over Arunachal Pradesh, Assam & Meghalaya, Uttar Pradesh, Himachal Pradesh, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Punjab, Haryana-Chandigarh-Delhi, Coastal Andhra Pradesh & Yanam, Rayalaseema, Kerala & Mahe, Marathwada; at a few places over Konkan & Goa, Telangana, South Interior Karnataka; at isolated places over Nagaland, Manipur, Mizoram & Tripura, Gangetic West Bengal, North Interior Karnataka, Tamil Nadu, Puducherry & Karaikal; Today, the lowest minimum temperature of **17.0°C** is reported at **Deesa (Gujarat Region)** over the plains of the country. (Fig.4)
- ❖ **Maximum Temperature Departures (as on 01-10-2024):** Maximum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at a few places over Rayalaseema; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Odisha; **above normal (1.6°C to 3.0°C)** at most places over Chhattisgarh, Kerala & Mahe, Telangana, Coastal Andhra Pradesh & Yanam, Tamil Nadu, Puducherry & Karaikal; at many places over Gangetic West Bengal, Vidarbha, Marathwada, Interior Karnataka; at a few places over Himachal Pradesh, Jharkhand, Madhya Maharashtra; at isolated places over Uttarakhand, Punjab, West Rajasthan, Bihar, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Konkan & Goa. These were **below normal (-1.6°C to -3.0°C)** at isolated places Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and **near normal** over rest parts of the country. Yesterday, **the highest Maximum Temperature** of **40.0°C** was reported at **Pokhran (West Rajasthan)** over the country. (Fig. 2)

Meteorological Analysis (Based on 0830 hours IST)

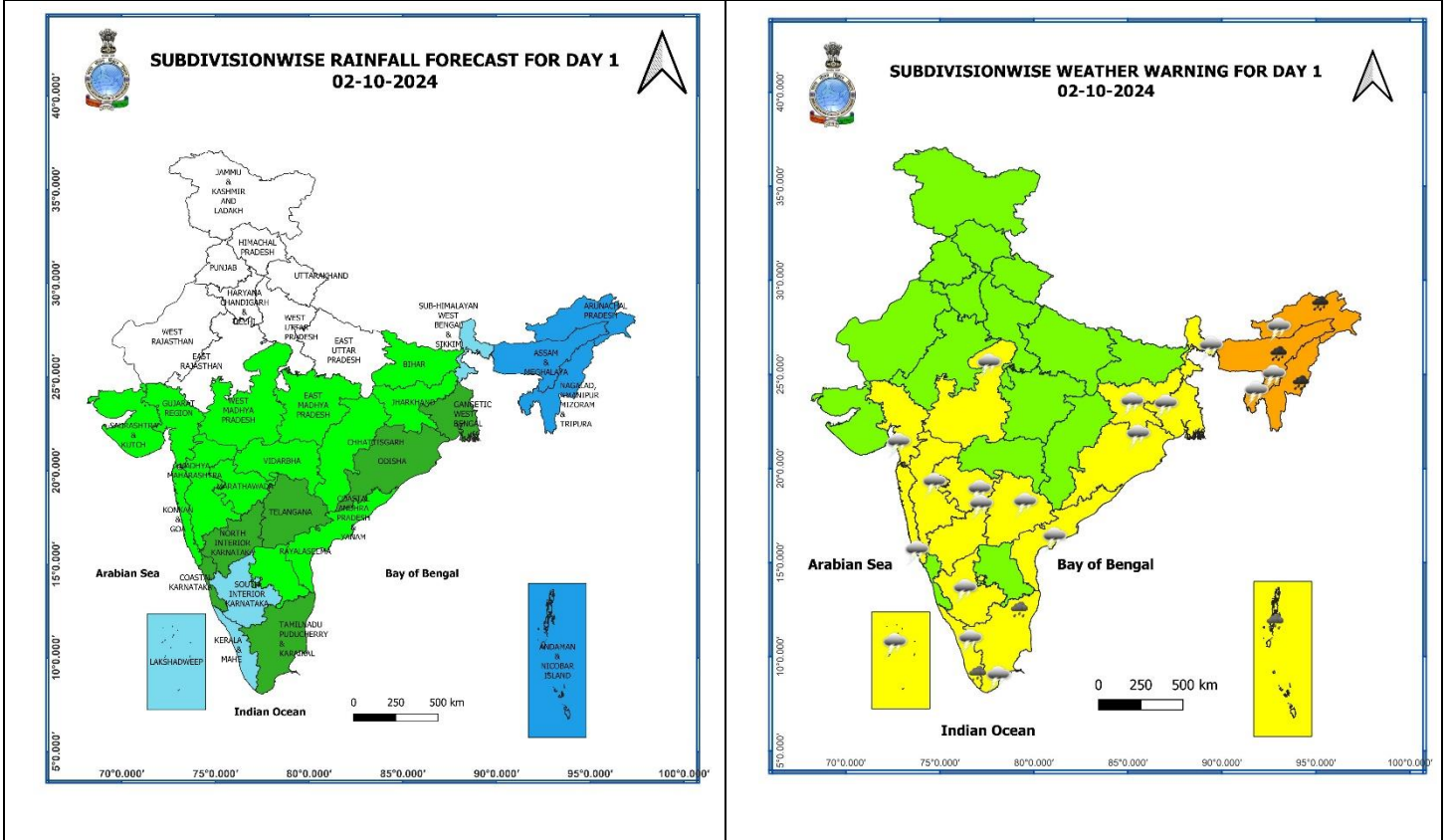
- ❖ Today, the **Southwest Monsoon** has further withdrawn from entire Jammu & Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab and Haryana-Chandigarh-Delhi; remaining parts of West Rajasthan; some parts of West Uttar Pradesh, West Madhya Pradesh and East Rajasthan.
- ❖ The **line of withdrawal of Southwest Monsoon** now passes 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 circulation** lies over southeast Bangladesh & neighbourhood at 0830 hrs IST of today, the 02nd October and extends upto 5.8 km above mean sea level. A **trough** runs from the cyclonic circulation over southeast Bangladesh & neighbourhood to North Andaman Sea across Myanmar coast and extends upto 1.5 km above mean sea level. Under its influence, a **Low Pressure Area** is likely to form over North Bay of Bengal & neighbourhood around 04th October.
- ❖ The **cyclonic circulation** over Comorin area & adjoining Equatorial Indian Ocean now lies over Maldives & neighbourhood and extends upto 4.5 km above mean sea level.
- ❖ The **trough** from the cyclonic circulation over Comorin area to North Interior Karnataka across Interior Tamil Nadu at 0.9 km above mean sea level has become less marked.
- ❖ The **trough** from north Konkan to northeast Madhya Pradesh across Interior Maharashtra at 3.1 km above mean sea level has become less marked.
- ❖ The **cyclonic circulation** over northeast Assam & neighbourhood extending upto 4.5 km above mean sea level has become less marked.

Withdrawal of Southwest Monsoon 2024



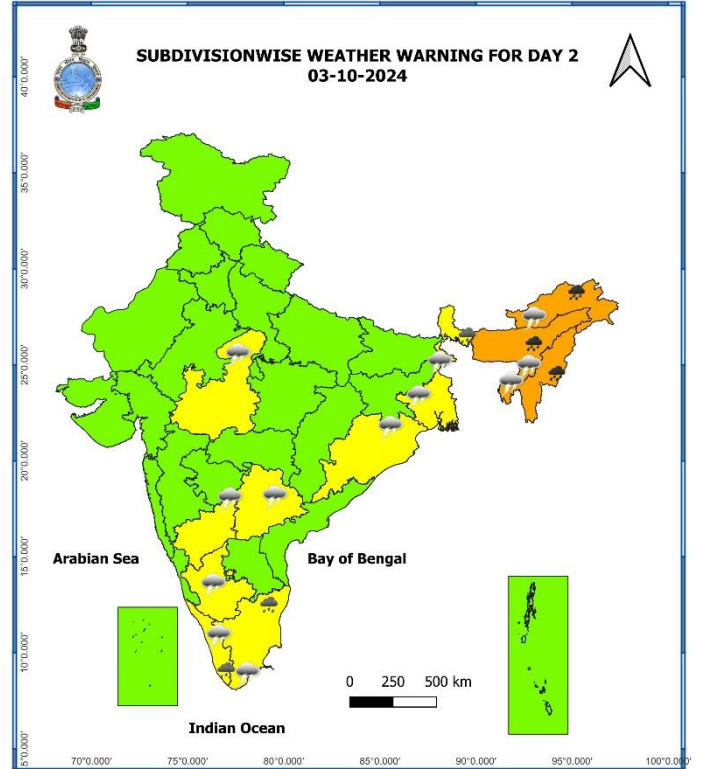
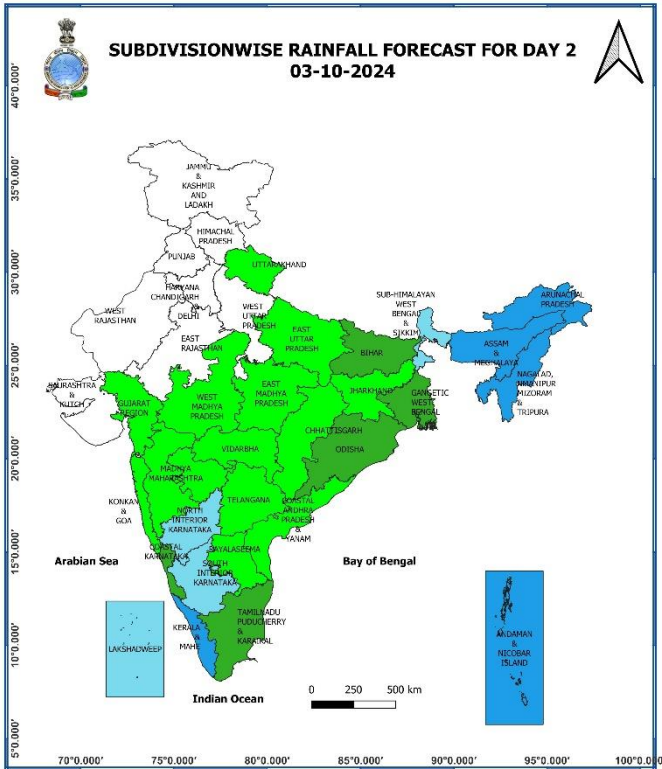
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Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 09th October, 2024)



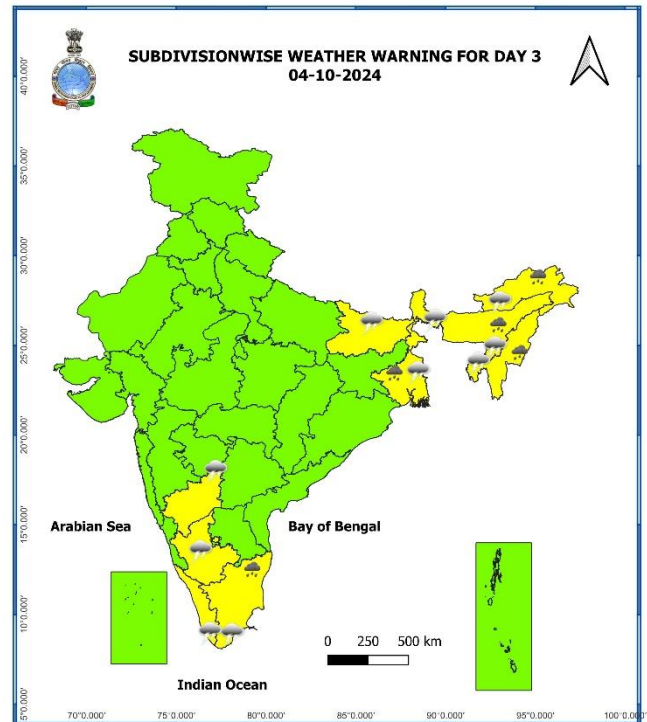
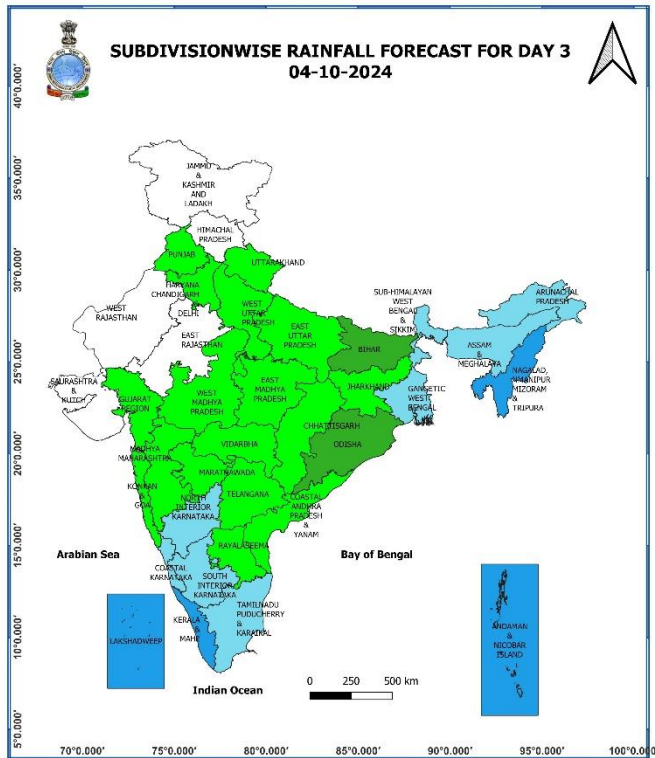
02 October (Day 1):

- ❖ **Heavy to very Heavy rainfall (≥ 12 cm)** very likely at isolated places over Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura; **Heavy rainfall (≥ 7 cm)** at isolated places over Andaman & Nicobar Islands, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe.
- ❖ **Thunderstorm with lightning & gusty winds (30-40 kmph)** very likely at isolated places over Telangana; **with lightning** at isolated places over West Madhya Pradesh, West Bengal & Sikkim, Jharkhand, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Madhya Maharashtra, Marathwada, Gujarat Region, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Lakshadweep, Coastal Andhra Pradesh & Yanam, Interior Karnataka.
- ❖ **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over Gulf of Mannar, many parts of northeast and adjoining northwest Bay of Bengal & many parts of eastcentral Bay of Bengal. Fishermen are advised not to venture into these areas.



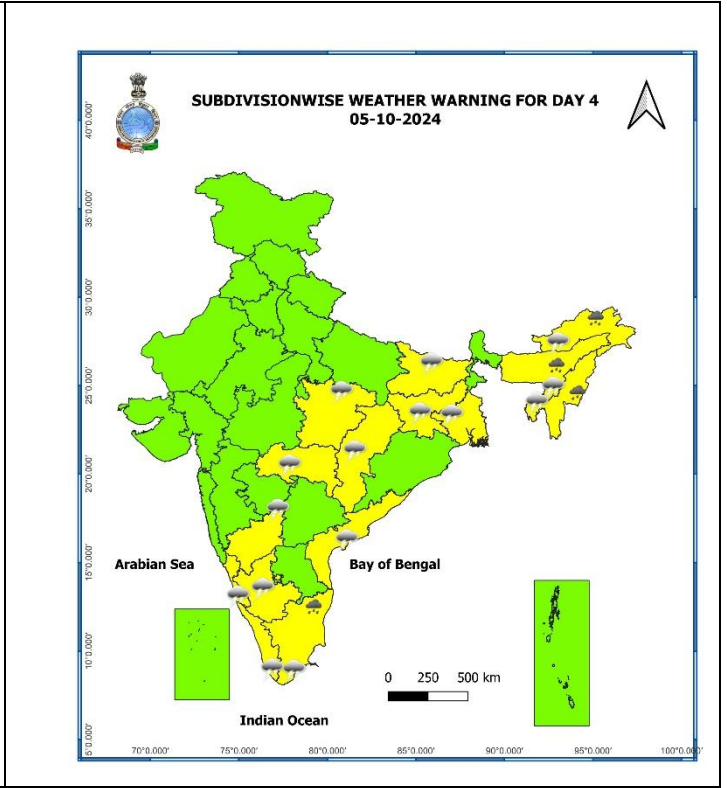
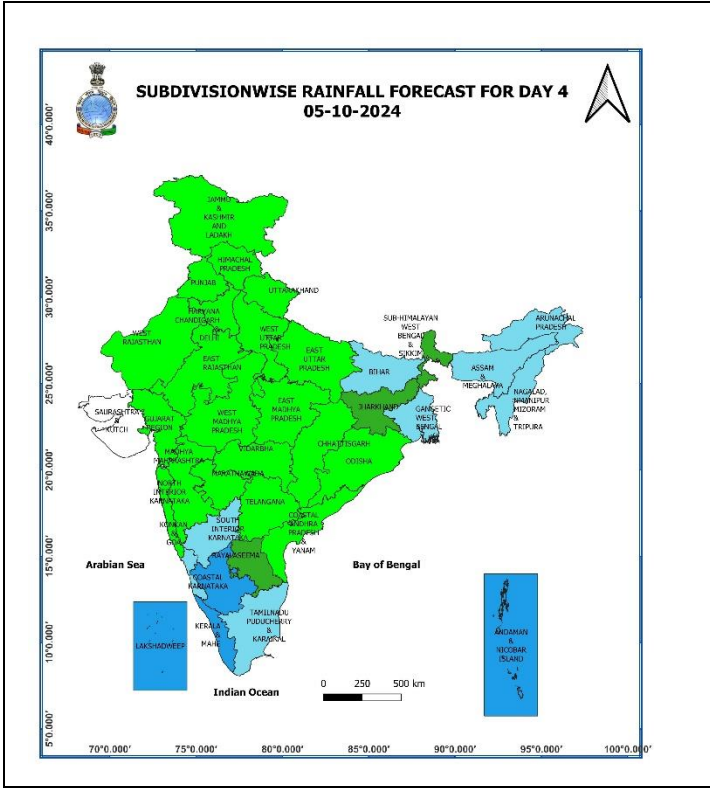
03 October (Day 2):

- ❖ **Heavy to very Heavy rainfall (≥ 12 cm)** very likely at isolated places over Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura; **Heavy rainfall (≥ 7 cm)** at isolated places over Andaman & Nicobar Islands, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe.
- ❖ **Thunderstorm with lightning & gusty winds (30-40 kmph)** very likely at isolated places over Telangana; **with lightning** at isolated places over West Madhya Pradesh, West Bengal & Sikkim, Jharkhand, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Madhya Maharashtra, Marathwada, Gujarat Region, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Lakshadweep, Coastal Andhra Pradesh & Yanam, Interior Karnataka.
- ❖ **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over Gulf of Mannar, many parts of northeast and adjoining northwest Bay of Bengal & many parts of eastcentral Bay of Bengal. Fishermen are advised not to venture into these areas.



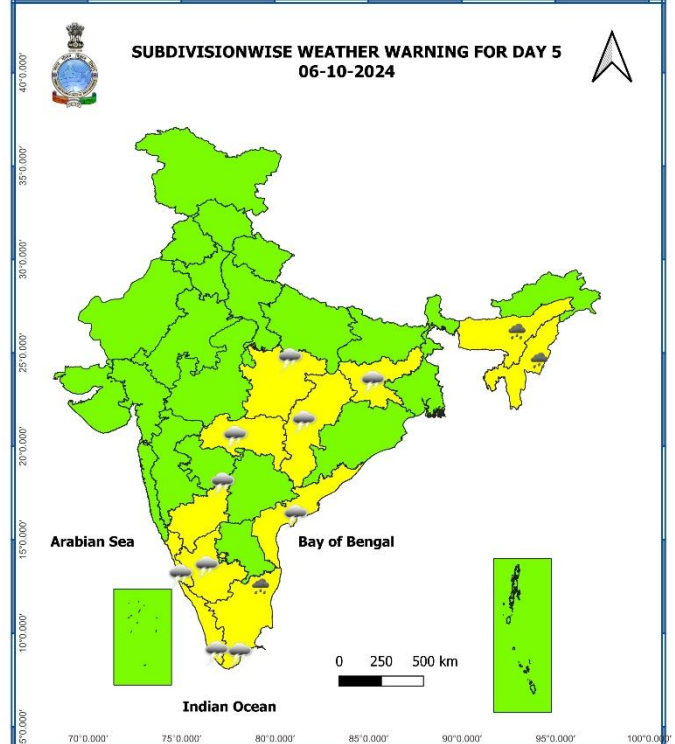
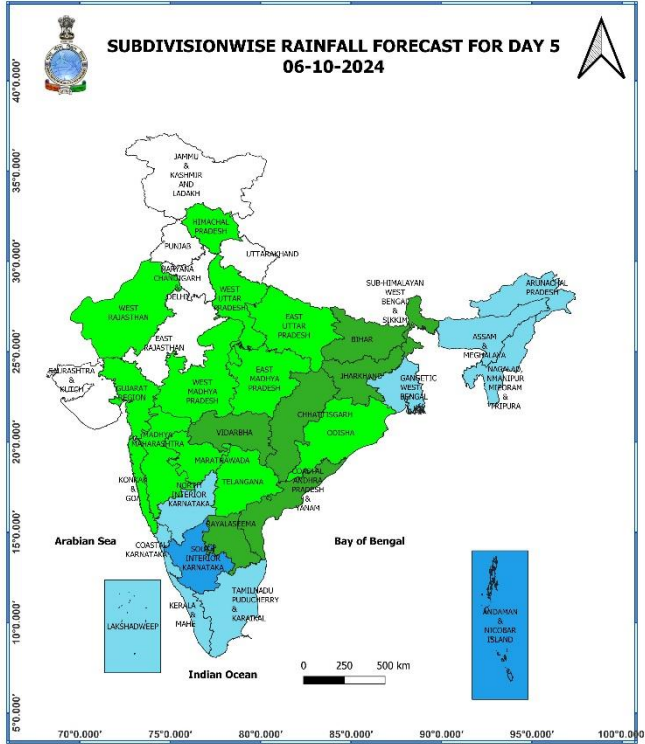
04 October (Day 3):

- ❖ **Heavy rainfall (≥ 7 cm)** very likely at isolated places over Gangetic West Bengal, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Tamil Nadu, Puducherry & Karaikal.
- ❖ **Thunderstorm with lightning** very likely at isolated places over West Bengal & Sikkim, east Bihar, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Interior Karnataka.
- ❖ **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over many parts of northeast and adjoining northwest Bay of Bengal & many parts of eastcentral Bay of Bengal. Fishermen are advised not to venture into these areas.



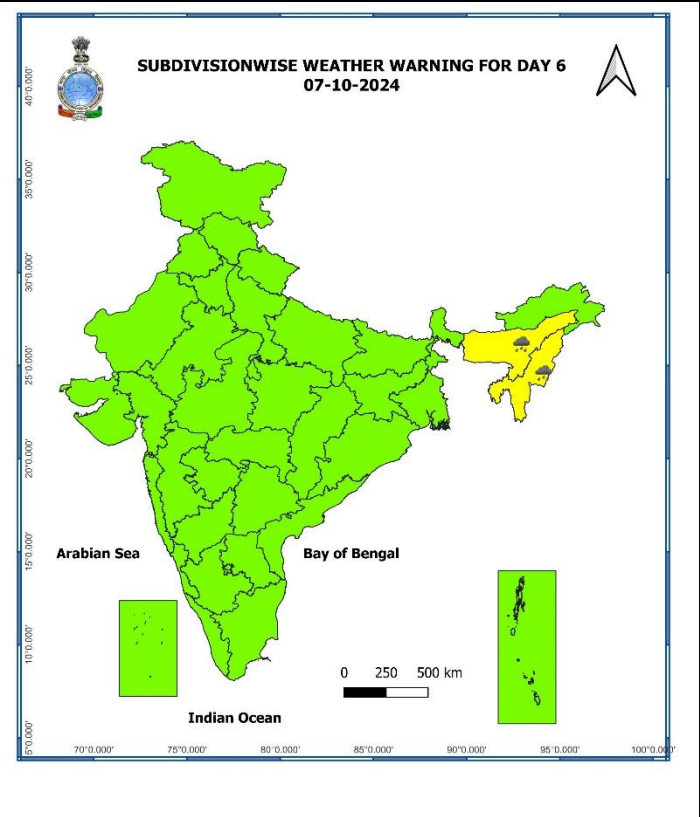
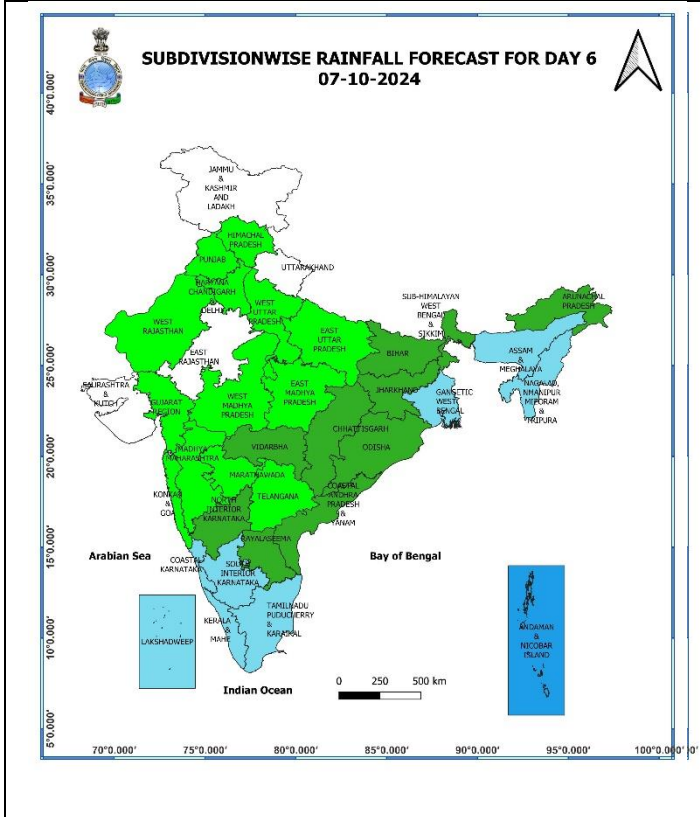
05 October (Day 4):

- ❖ **Heavy rainfall (≥ 7 cm)** likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Tamil Nadu, Puducherry & Karaikal.
- ❖ **Thunderstorm with lightning** likely at isolated places over East Madhya Pradesh, Vidarbha, Chhattisgarh, Gangetic West Bengal, east Bihar, Jharkhand, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Karnataka.



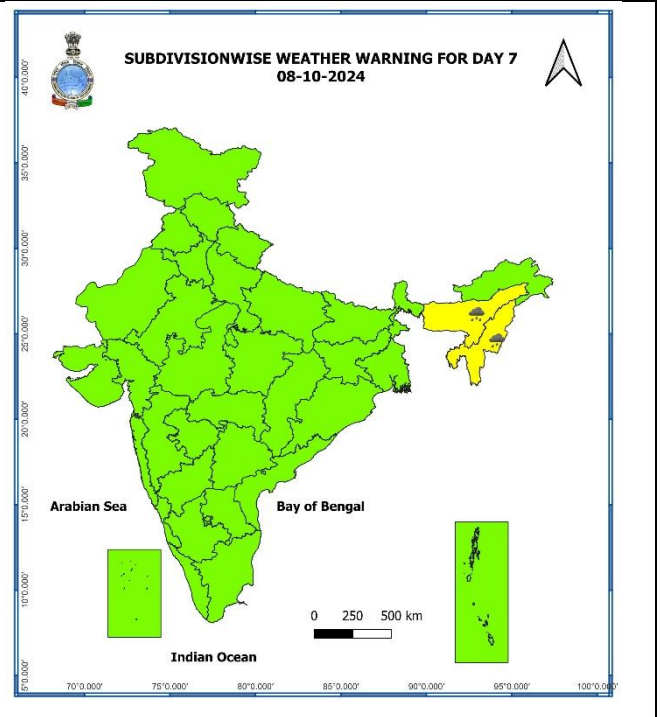
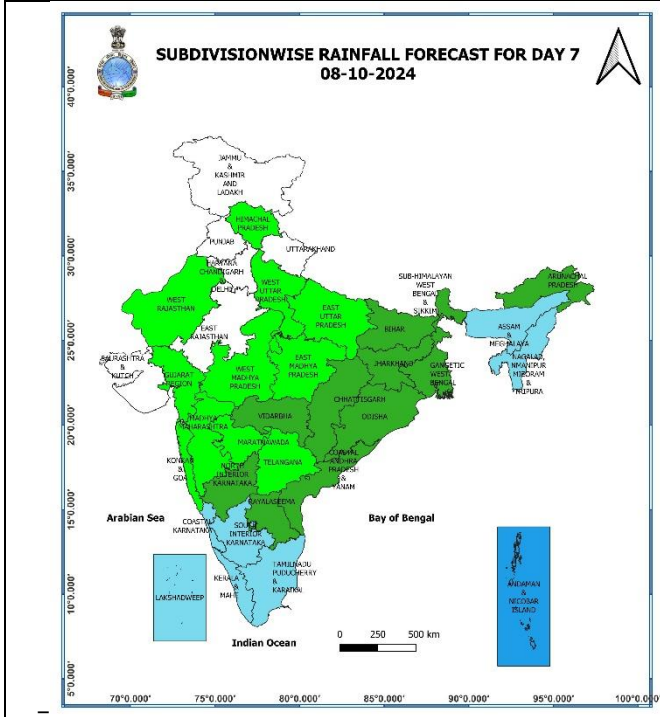
06 October (Day 5):

- ❖ **Heavy rainfall ($\geq 7\text{cm}$)** likely at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Tamil Nadu, Puducherry & Karaikal.
- ❖ **Thunderstorm with lightning** likely at isolated places over East Madhya Pradesh, Vidarbha, Chhattisgarh, Jharkhand, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Karnataka.



07 October (Day 6):

- ❖ **Heavy rainfall ($\geq 7\text{cm}$)** likely at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.



08 October (Day 7):

- ❖ **Heavy rainfall ($\geq 7\text{cm}$)** likely at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.

Weather Outlook for subsequent 3 days (During 09th October- 11th October, 2024)

- ❖ Fairly widespread to widespread rainfall likely over Andhra Pradesh, Eastern and North Eastern India and Islands.
- ❖ Isolated to Scattered rainfall likely over remaining Peninsular and West coast of 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

- ✓ **Heavy rainfall** at isolated places over West Bengal & Sikkim, Telangana, Kerala & Mahe, Interior Karnataka and Tamil Nadu.
- ✓ **Low to Moderate flash flood risk** likely over few watersheds & neighbourhoods of Gangetic West Bengal on 02nd 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

- ✓ Drain Make provision for draining out excess water from standing crop fields and fruit orchards to avoid water stagnation in Tamil Nadu, Kerala, Interior Karnataka, Telangana 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

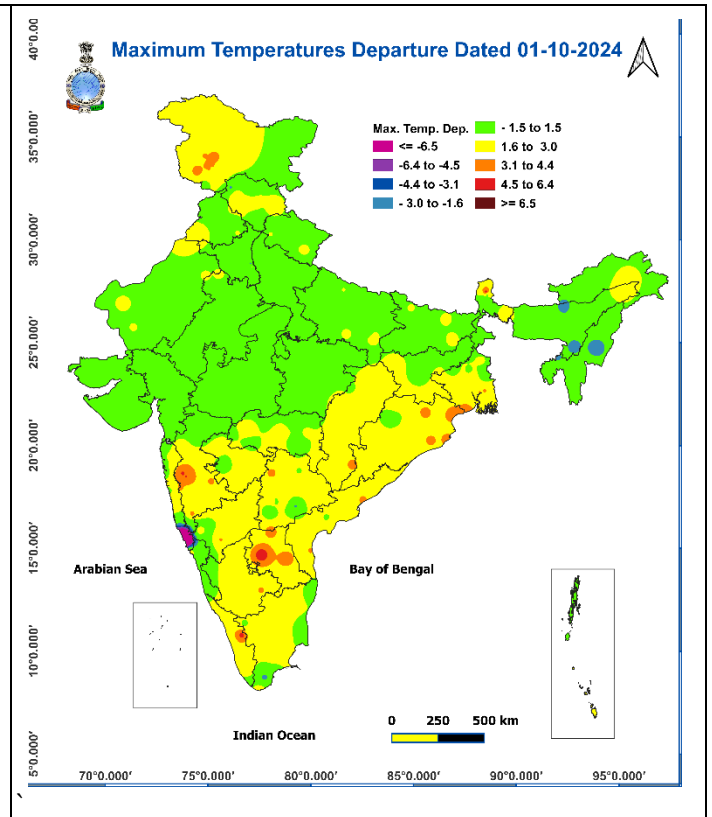
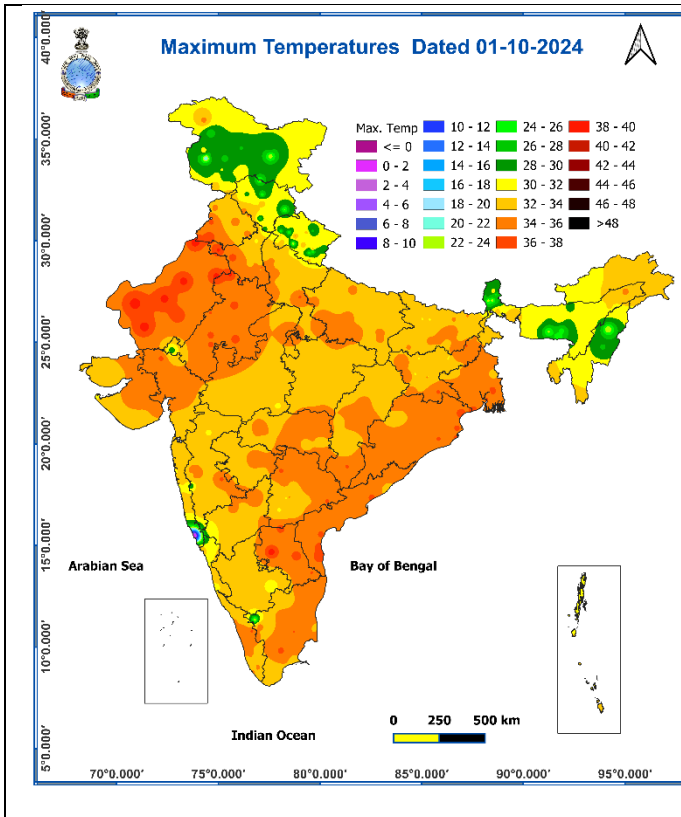
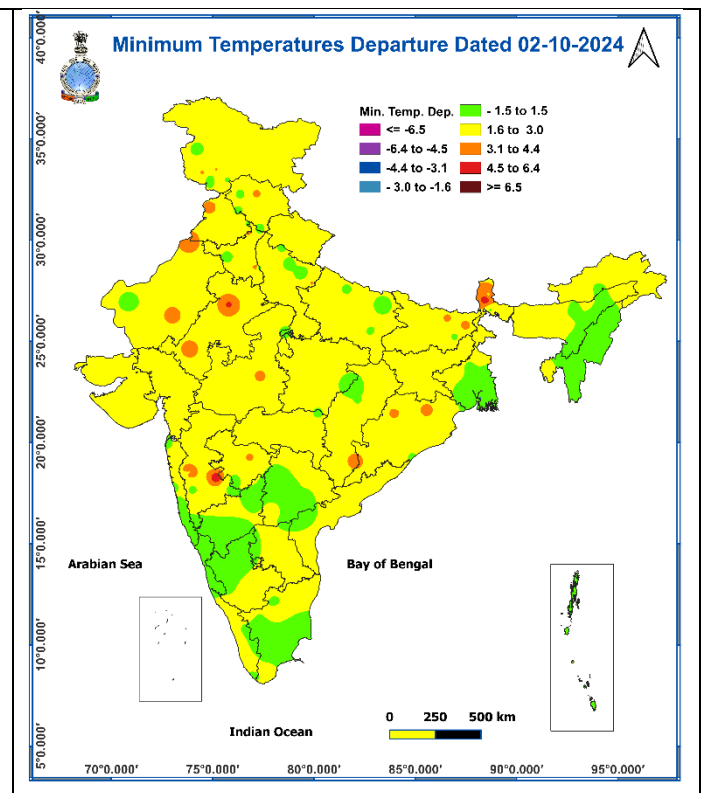
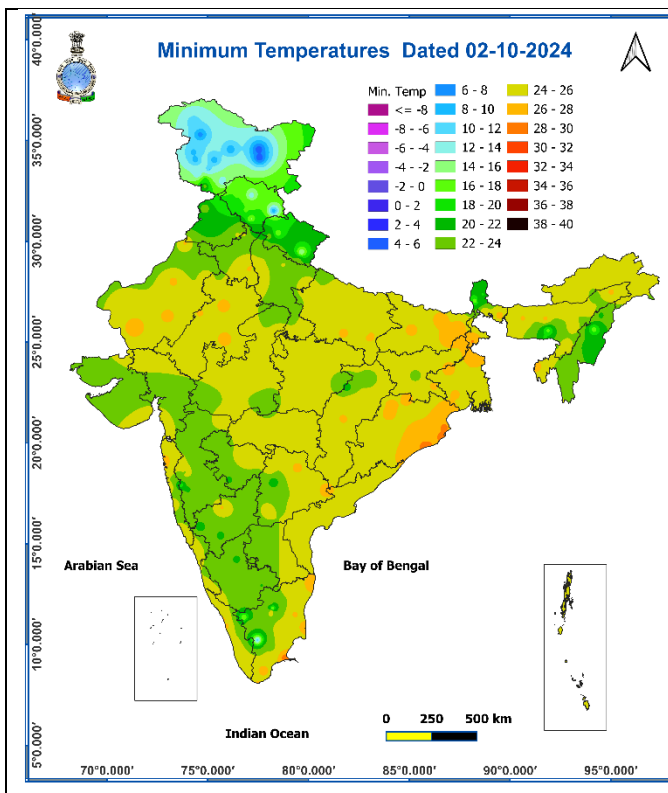


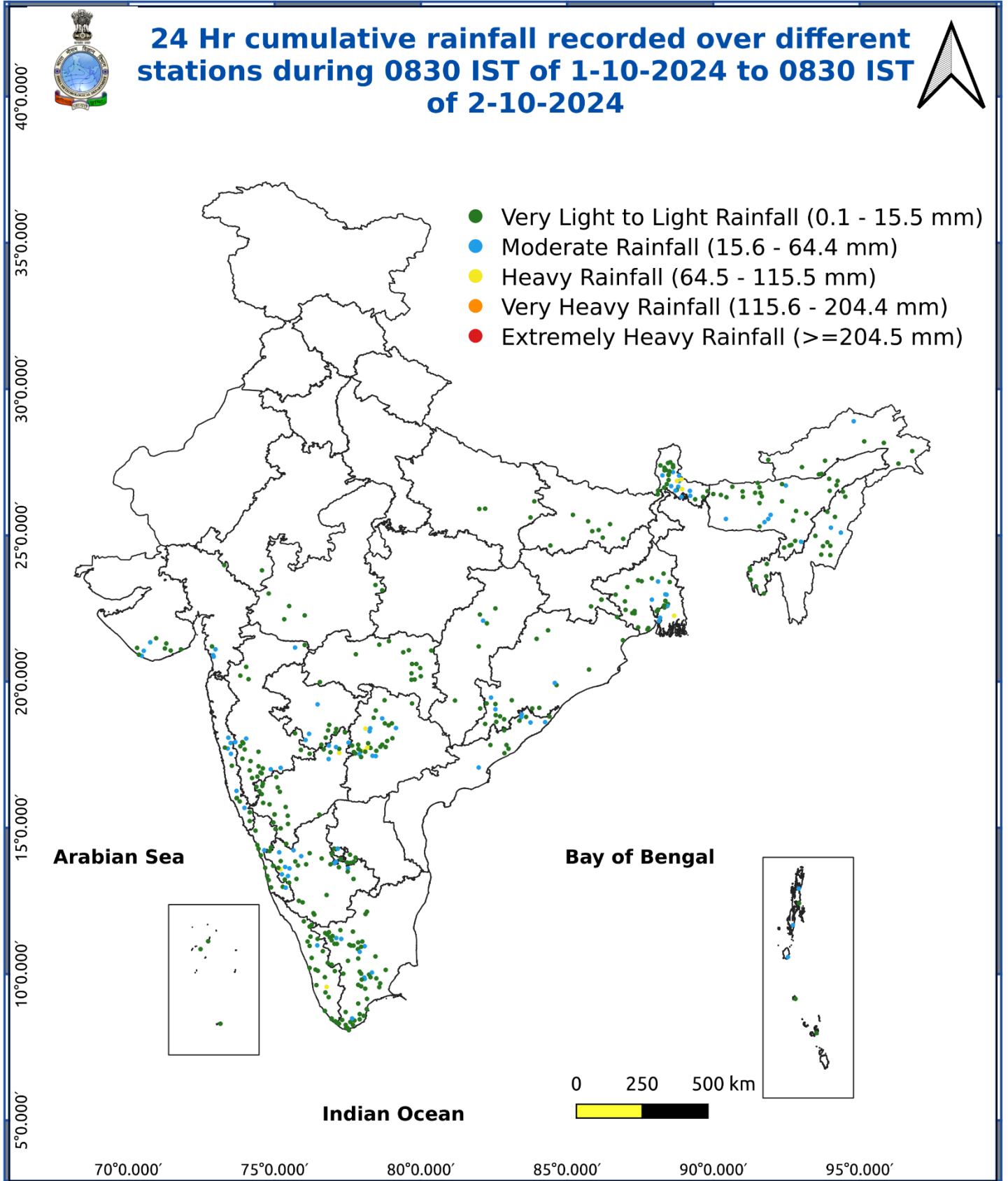
Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures



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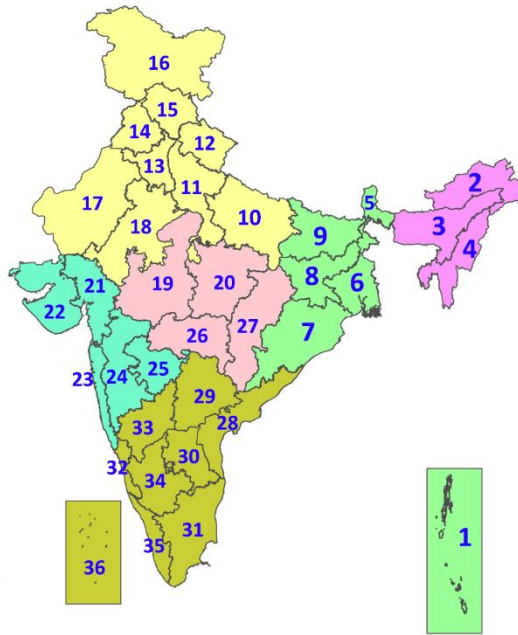
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



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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 *

Heavy: 64.5 to 115.5 mm/cm *
Very Heavy: 115.6 to 204.4 mm/cm*
Extremely Heavy: > 204.4 mm/cm *

Heat Wave

When maximum temperature of a station reaches $\geq 40^\circ\text{C}$ for plains and $\geq 30^\circ\text{C}$ for hilly regions
(a) Based on Departure from normal

Heat Wave: Maximum Temperature Departure from normal 4.5°C to 6.4°C .
Severe Heat Wave: Maximum Temperature Departure from normal $\geq 6.5^\circ\text{C}$

(b). Based on Actual maximum temperature

Heat Wave: When actual maximum temperature $\geq 45^\circ\text{C}$.
Severe Heat Wave: When actual maximum temperature $\geq 47^\circ\text{C}$

(c) Criteria for heat wave for coastal stations

When maximum temperature departure is $>4.5^\circ\text{C}$ from normal. Heat Wave may be described provided maximum temperature $\geq 37^\circ\text{C}$

Warm Night

When maximum temperature remains 40°C

Warm Night: When minimum temperature departure 4.5°C to 6.4°C .
Severe Warm Night: When minimum temperature departure $>6.4^\circ\text{C}$.

Cold Wave

When minimum temperature of a station $\leq 10^\circ\text{C}$ for plains and $\leq 0^\circ\text{C}$ for hilly regions.
(a). Based on departure

Cold Wave: Minimum Temperature Departure from normal -4.5°C to -6.4°C .
Severe Cold Wave: Minimum Temperature Departure from normal $\leq -6.5^\circ\text{C}$

(b) Based on actual Minimum Temperature (for Plains only)

Cold Wave : When Minimum Temperature is $\leq 4.0^\circ\text{C}$
Severe Cold Wave: When Minimum Temperature is $\leq 2.0^\circ\text{C}$

(c) For Coastal Stations

When Minimum Temperature departure is $\leq -4.5^\circ\text{C}$ & actual Minimum Temperature is $\leq 15^\circ\text{C}$

Cold Day

When minimum temperature of a station $\leq 10^\circ\text{C}$ for plains and $\leq 0^\circ\text{C}$ for hilly regions
Based on departure

Cold Day: Maximum Temperature Departure from normal -4.5°C to -6.4°C .
Severe Cold Day: Maximum Temperature Departure from normal $\leq -6.5^\circ\text{C}$

Fog

Phenomenon of small droplets suspended in air and the horizontal visibility $< 1\text{km}$

Moderate Fog: When the visibility between 500-200 metres
Dense Fog: when the visibility between 50- 200 metres
Very Dense Fog: when the visibility < 50 metres

Thunderstorm

Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)

Dust/Sand Storm

An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.

Frost

Ice deposits on ground

Air temperature $\leq 4^\circ\text{C}$ (over Plains)

Squall

A strong wind that rises suddenly, lasts for atleast 1 minute.

Moderate: Wind speed 52-61 kmph
Severe: Wind speed 62-87 kmph
Very Severe: Wind speed >87 kmph

Sea State

Effect of various waves in the sea over specific area

Rough to very rough: Wind speed 41-62 kmph (22-33 knots) & Wave height 2.5-6 metre
High to very high: Wind speed 63-117 kmph (34-63 knots) & Wave height 6-14 metre
Phenomenal: Wind speed >117 kmph (>63 knots) & Wave height >14 metre

Cyclone

Cyclonic Storm: Wind speed 62-87 kmph (34-47 knots)
Severe Cyclonic Storm: Wind speed 88-117 kmph (48-63 knots)
Very Severe Cyclonic Storm: Wind speed 118-165 kmph (64 - 89 knots)
Extremely Severe Cyclonic Storm: Wind speed 166-220 kmph (90 -119 knots)
Super Cyclone Strom: Wind speed >220 kmph (>119 knots)