

Tuesday, October 1, 2024
Time of Issue: 0745 hours IST
(MORNING)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

Weather Systems:

- ✓ Conditions are becoming favourable for the further withdrawal of southwest monsoon from some more parts of Rajasthan, Haryana, Punjab and some parts of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad & Himachal Pradesh during next 2-3 days.
- ✓ The trough runs from Comorin area to south Coastal Karnataka in lower tropospheric levels.
- ✓ A cyclonic circulation lies over northeast Assam & neighbourhood between lower & middle tropospheric levels.

Forecast & Warnings (upto 7 days):

East & Northeast India:

- ✓ Fairly widespread to widespread light to moderate rainfall very likely over northeast region during the week; Scattered to Fairly widespread light to moderate rainfall very likely over Andaman & Nicobar Islands and Sub-Himalayan West Bengal & Sikkim during the week and Isolated to Scattered light to moderate rainfall over remaining region during the week.
- ✓ **Isolated heavy to very Heavy rainfall** very likely over Arunachal Pradesh, Assam & Meghalaya on 03rd October.
- ✓ **Isolated heavy rainfall** very likely over Arunachal Pradesh on 01st, 02nd & 04th October; Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during the week.

South Peninsular India:

- ✓ Scattered to Fairly widespread light to moderate rainfall very likely over Coastal Andhra Pradesh & Yanam, Karnataka; Isolated to Scattered light to moderate rainfall very likely over Tamil Nadu, Puducherry & Karaikal, Rayalaseema, Telangana during the week.
- ✓ **Isolated heavy rainfall** very likely over Tamil Nadu, Puducherry & Karaikal during 01st-04th October; Kerala & Mahe during 01st-03rd October.

Northwest, West & Central India:

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

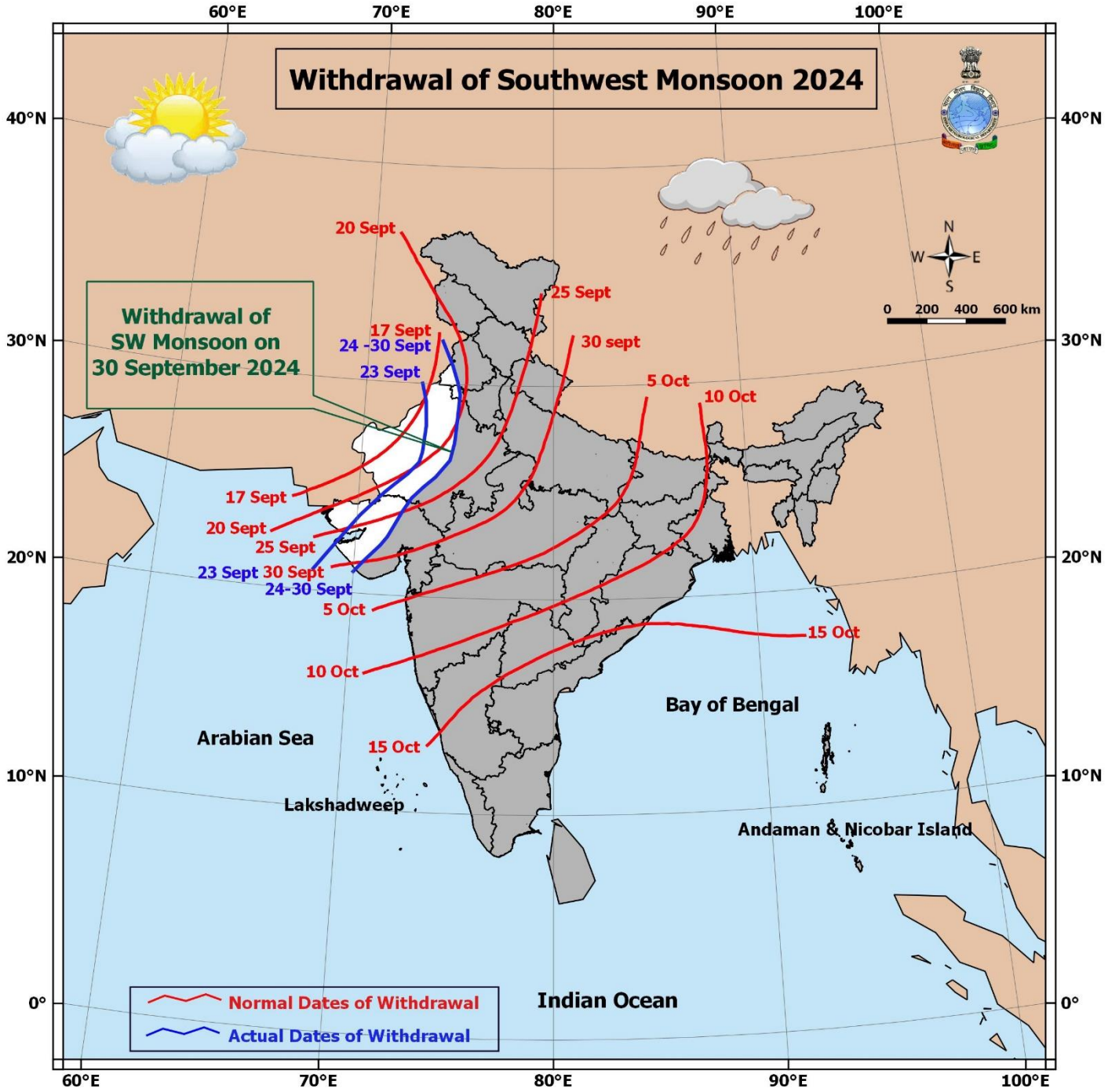
Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST to 1730 hours IST of yesterday): **at a few places** over Kerala & Mahe, Assam & Meghalaya, Bihar; **at isolated places** over Jharkhand, West Bengal & Sikkim, Odisha, Chhattisgarh, Telangana, Madhya Pradesh, Gujarat state, Konkan & Goa.
- ❖ **Heavy rainfall recorded** (from 0830 hours IST to 1730 hours IST of yesterday): **NIL**.
- ❖ **Significant amount of rainfall** (from 0830 hours IST to 1730 hours IST of yesterday): (in cm): **Saurashtra & Kutch: Amreli 4, Sub-Himalayan West Bengal & Sikkim: Malda 2.**
- ❖ **Minimum Temperature Departures (as on 30-09-2024):** Minimum temperatures were **markedly above normal (5.1°C or above)** at isolated places over East Rajasthan; **appreciably above normal (3.0°C to 5.0°C)** at isolated places over West Rajasthan, Bihar; **above normal (1.6°C to 3.0°C)** at most places over Punjab, Uttarakhand, Jharkhand; at many places over Himachal Pradesh, Haryana-Chandigarh-Delhi, East Madhya Pradesh, Gangetic West Bengal, Odisha; at a few places over West Madhya Pradesh, Chhattisgarh, Vidarbha; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Uttar Pradesh, Gujarat state, Madhya Maharashtra, Marathwada, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Tamil Nadu, Puducherry & Karaikal, Coastal and north Karnataka. Yesterday, **the lowest minimum temperature of 20.4°C** was reported at **Delhi Ridge (New Delhi)** over the plains of the country. **(Fig.4)**
- ❖ **Maximum Temperature Departures (as on 30-09-2024):** Maximum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; **above normal (1.6°C to 3.0°C) at most places over Coastal Andhra Pradesh & Yanam, Odisha, Rayalaseema, North Interior Karnataka;** at many places over Madhya Maharashtra, Konkan & Goa, Telangana, Marathwada, Chhattisgarh; at a few places over South Interior Karnataka, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya; at isolated places over Himachal Pradesh, Uttarakhand, Bihar, Coastal Karnataka, East Madhya Pradesh, Vidarbha, Kerala & Mahe. These were **below normal (-1.6°C to -3.0°C)** at isolated places Gujarat state, Haryana-Chandigarh-Delhi, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Tamil Nadu, Puducherry & Karaikal and **near normal** over rest parts of the country. Yesterday, **the highest Maximum Temperature of 39.4°C** was reported at **Phalodi (West Rajasthan)** over the country. **(Fig. 2)**

Meteorological Analysis (Based on 0530 hours IST)

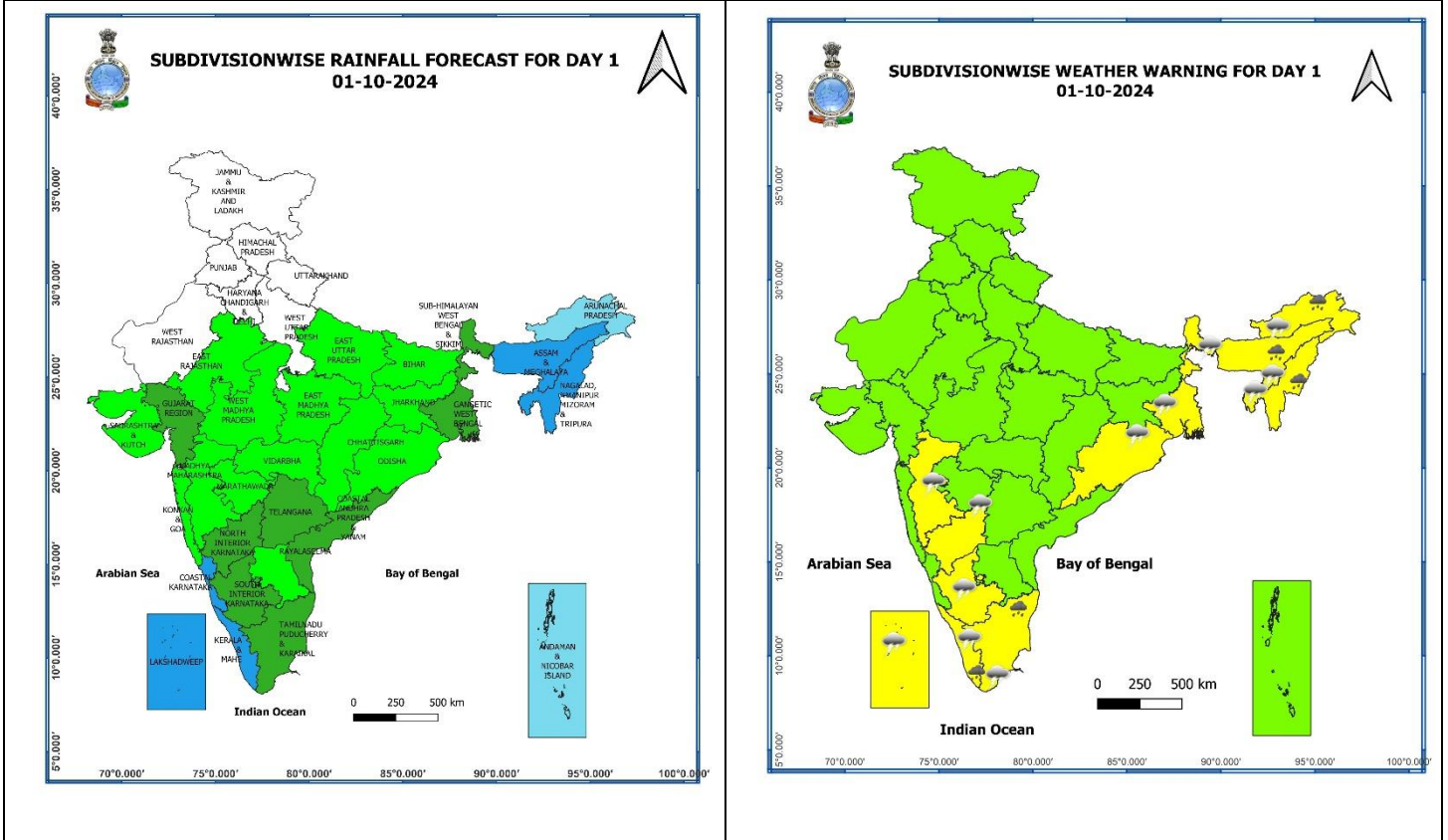
- ❖ Conditions are becoming favourable for the **further withdrawal** of southwest monsoon from some more parts of Rajasthan, Haryana, Punjab and some parts of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad & Himachal Pradesh during next 2-3 days.
- ❖ The **line of withdrawal of southwest monsoon** continues to pass through Firozpur, Sirsa, Churu, Ajmer, Mount Abu, Deesa, Surendranagar, Junagarh and 21°N/70°E.
- ❖ The **trough** from Comorin area to south Coastal Karnataka extending upto 1.5 km above mean sea level persists.
- ❖ The **trough** from north Konkan to southeast Uttar Pradesh across Madhya Pradesh between 1.5 & 3.1 km above mean sea level persists.
- ❖ The **cyclonic circulation** over northeast Assam & neighbourhood now lies between 1.5 & 3.1 km above mean sea level.

Withdrawal of Southwest Monsoon 2024



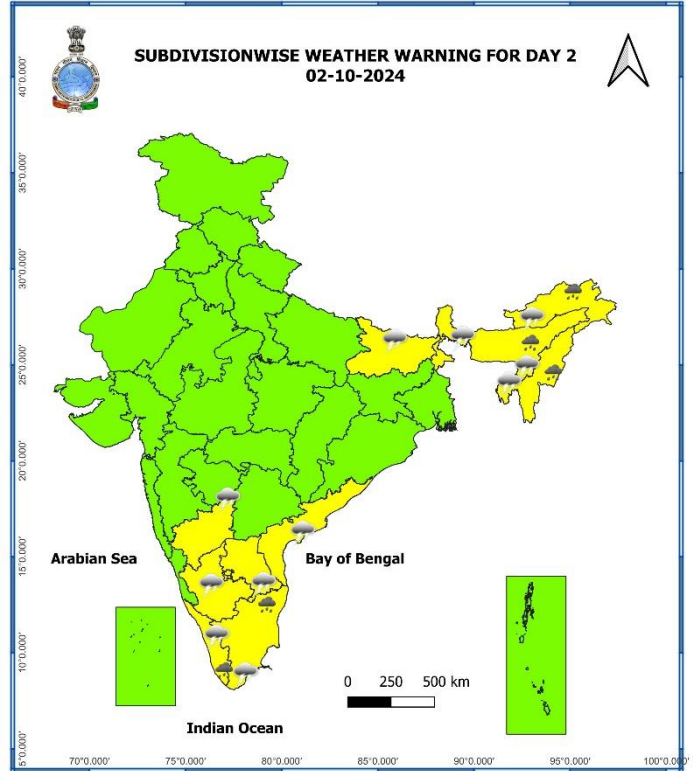
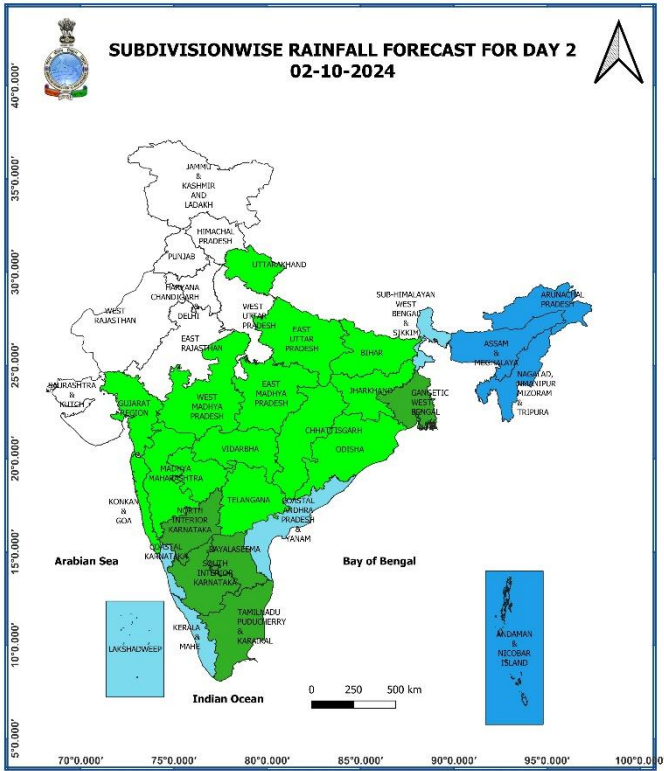
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Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 08th October, 2024)



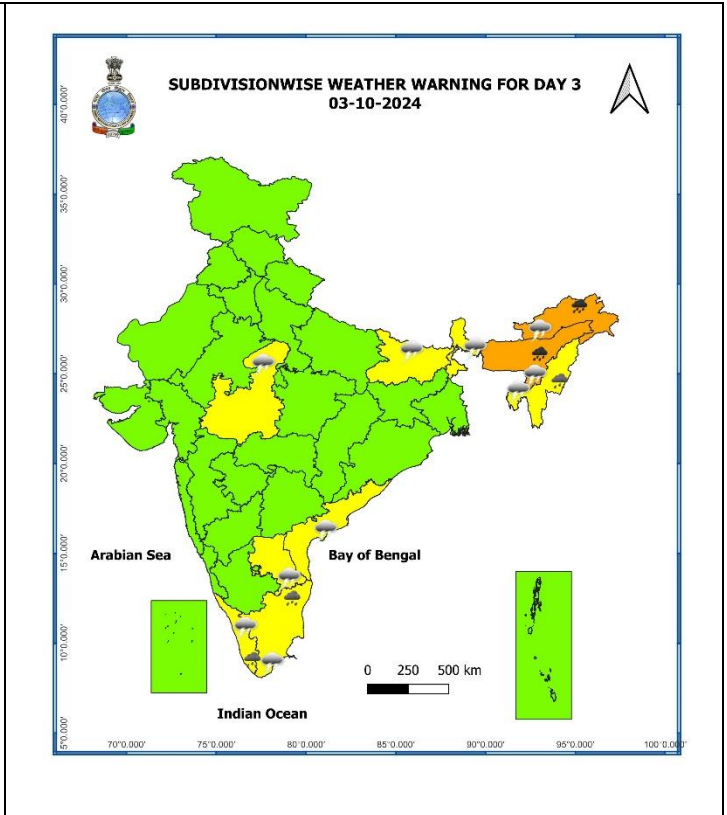
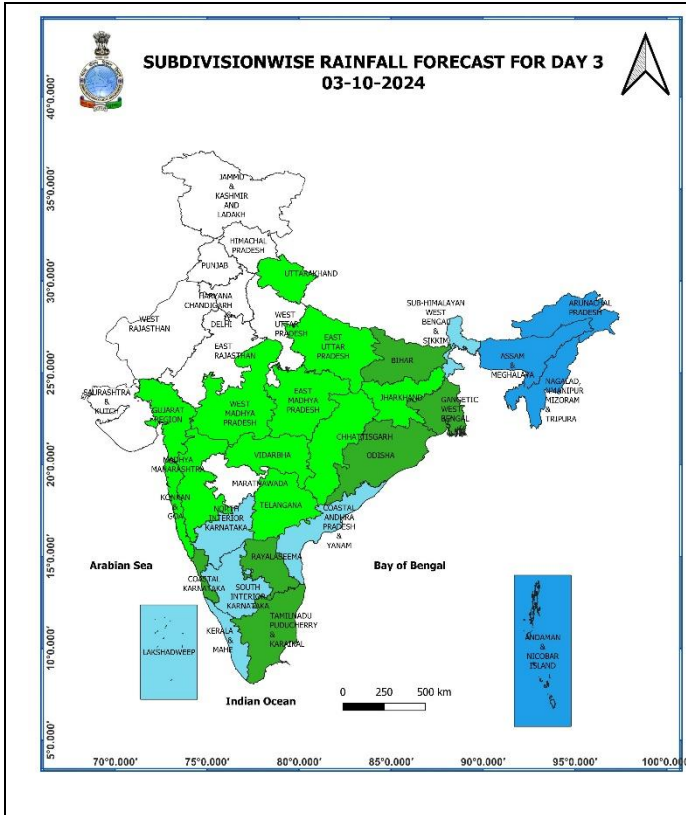
01 October (Day 1):

- ❖ **Heavy rainfall (≥ 7 cm)** very likely at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Arunachal Pradesh, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- ❖ **Thunderstorm with lightning** very likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Madhya Maharashtra, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Interior Karnataka, West Bengal & Sikkim, Odisha and Lakshadweep.
- ❖ **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over gulf of Mannar, Comorin area, along and off Kerala coast, Lakshadweep area and adjoining Maldives area. **Squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over along and off Somalia coast. Fishermen are advised not to venture into these areas.



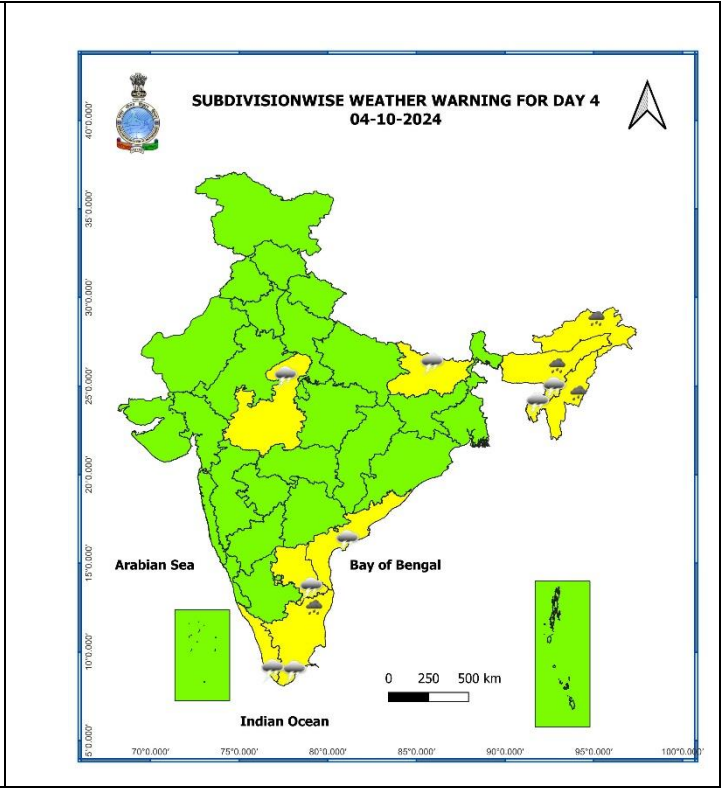
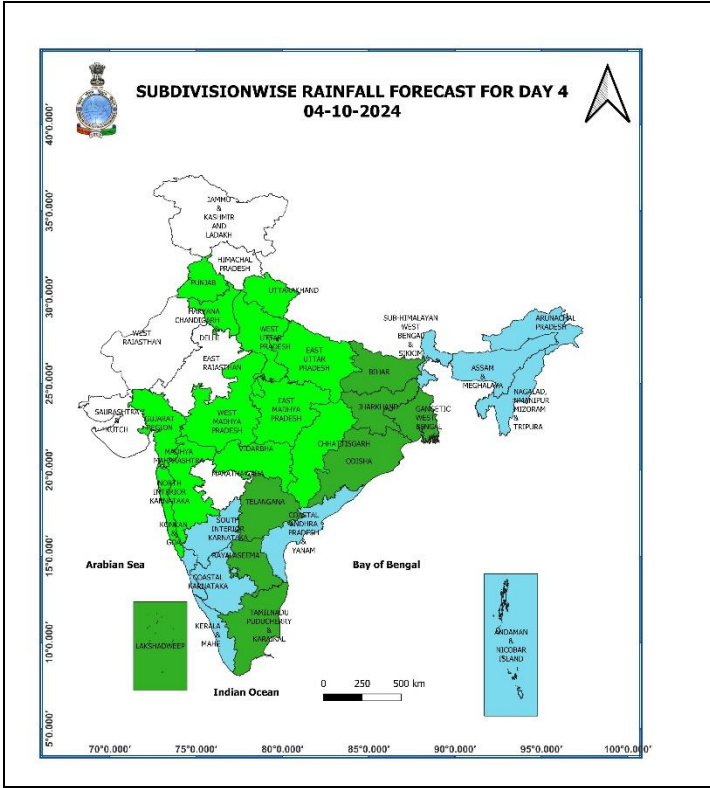
02 October (Day 2):

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



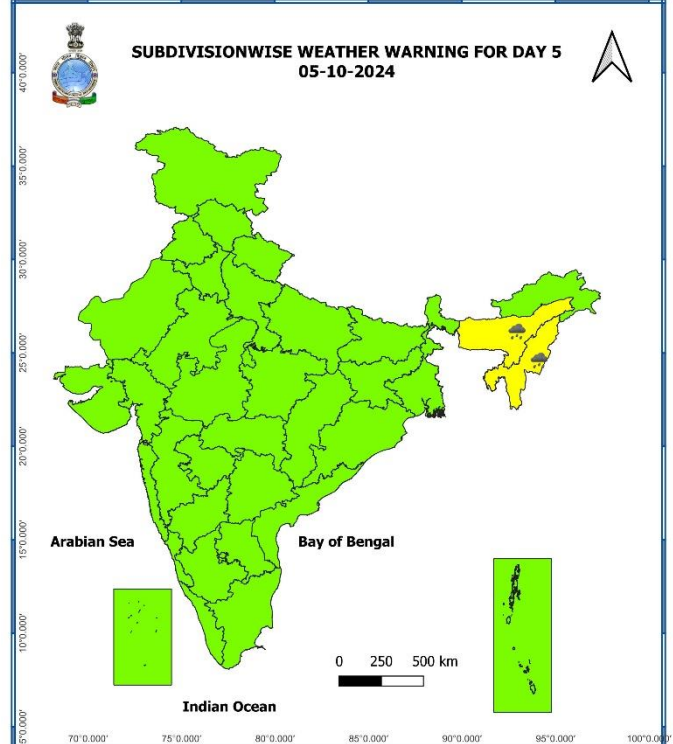
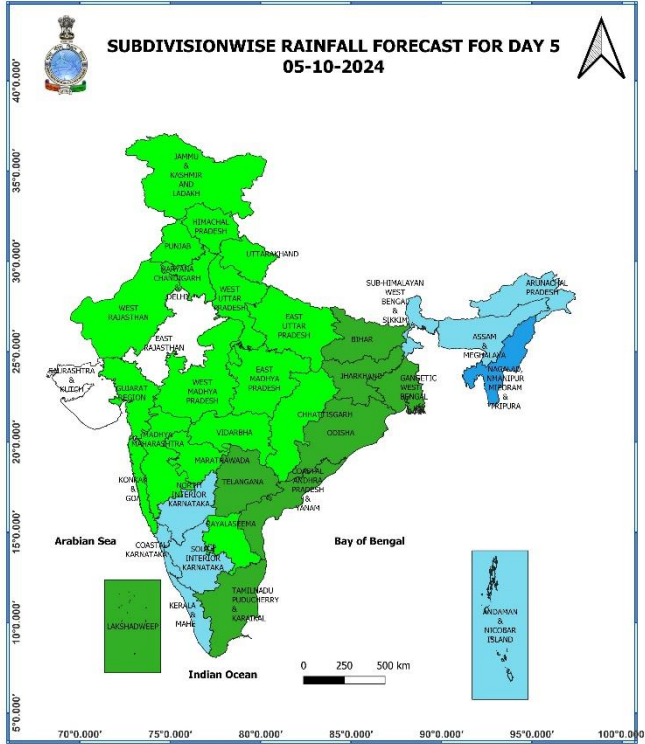
03 October (Day 3):

- ❖ **Heavy to very Heavy rainfall (≥ 12 cm)** very likely at isolated places over Arunachal Pradesh and Assam & Meghalaya; **Heavy rainfall (≥ 7 cm)** very likely at isolated places over Nagaland, Manipur, Mizoram & Tripura, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- ❖ **Thunderstorm with lightning** very likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema, West Madhya Pradesh, Sub-Himalayan West Bengal & Sikkim and Bihar.
- ❖ **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over parts of westcentral Bay of Bengal. Fishermen are advised not to venture into these areas.



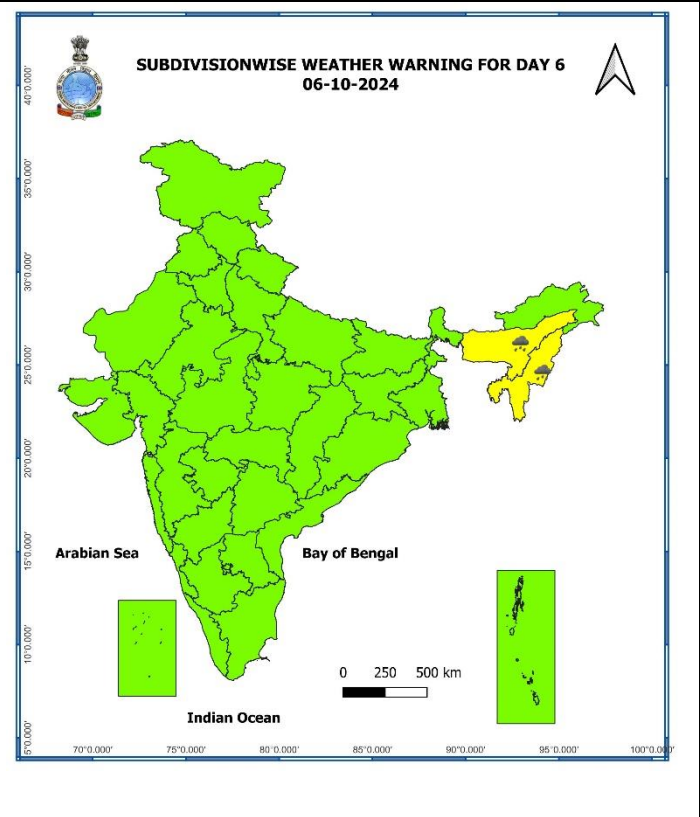
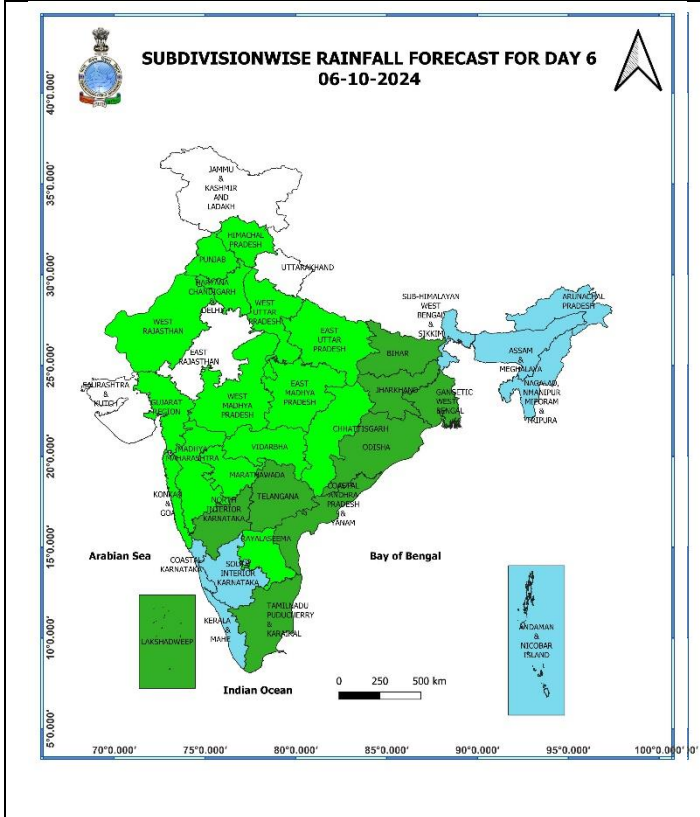
04 October (Day 4):

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



05 October (Day 5):

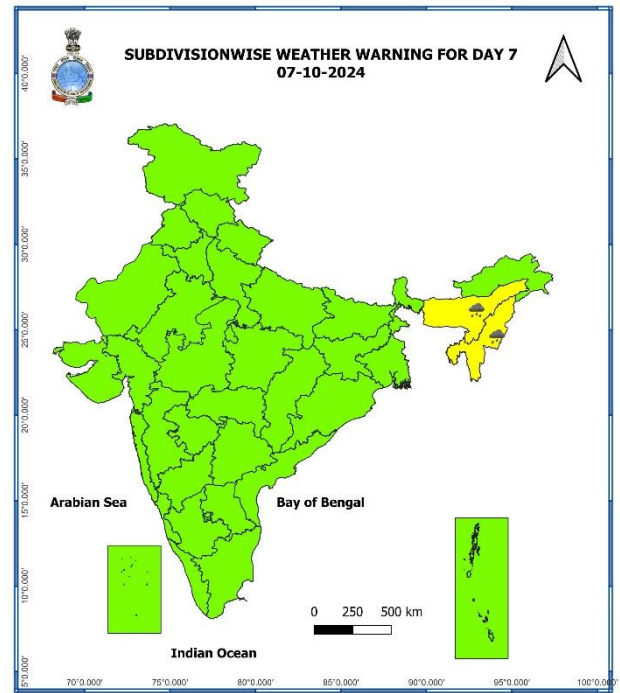
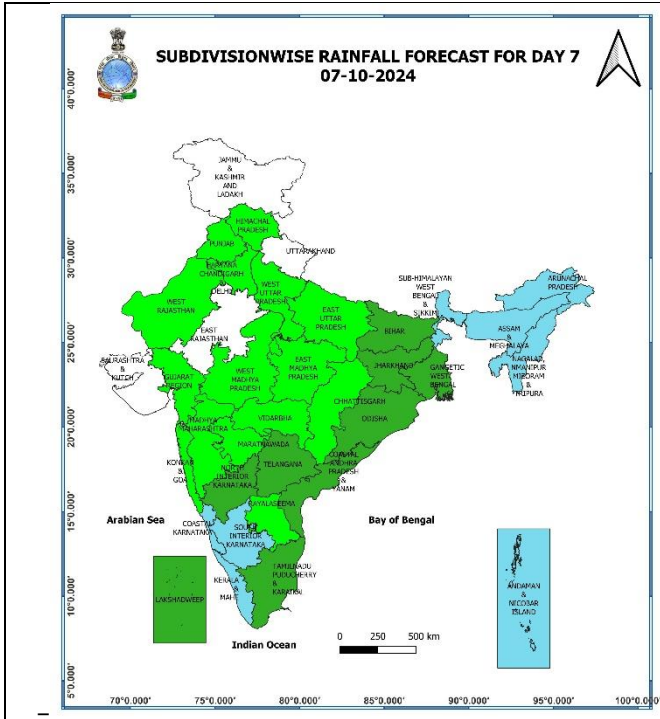
❖ **Heavy rainfall ($\geq 7\text{cm}$)** likely at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.



06 October (Day 6):

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

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07 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 08th October- 10th 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

- **Isolated heavy to very heavy rainfall** very likely over Arunachal Pradesh, Assam & Meghalaya on 03rd 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 out excess water from standing crop fields and fruit orchards to avoid water stagnation in West Madhya Pradesh, Gujarat, Tamil Nadu and South Interior Karnataka.
- ✓ Make provision for draining out excess water from standing crop fields and fruit orchards to avoid water stagnation in Kerala 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

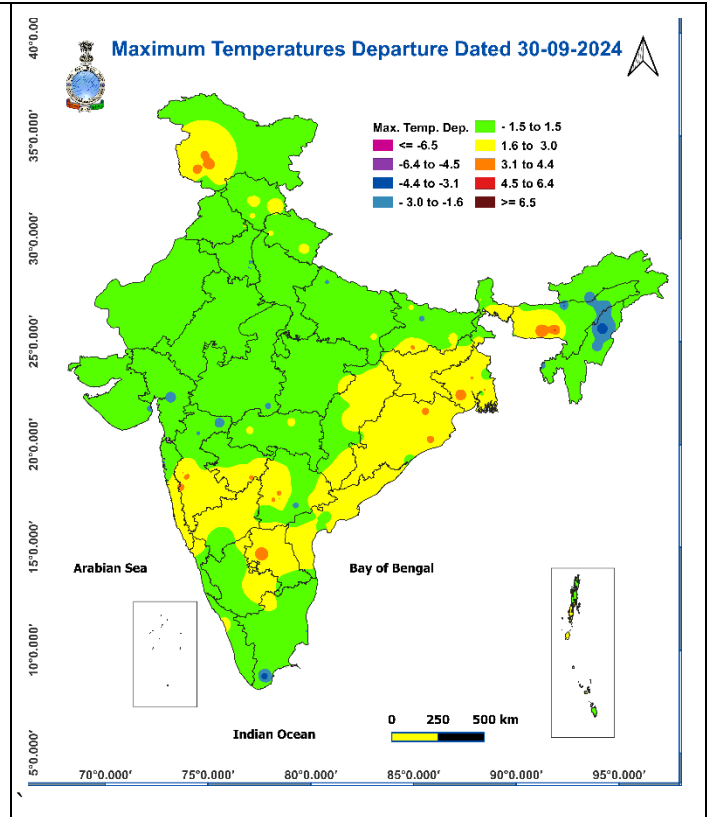
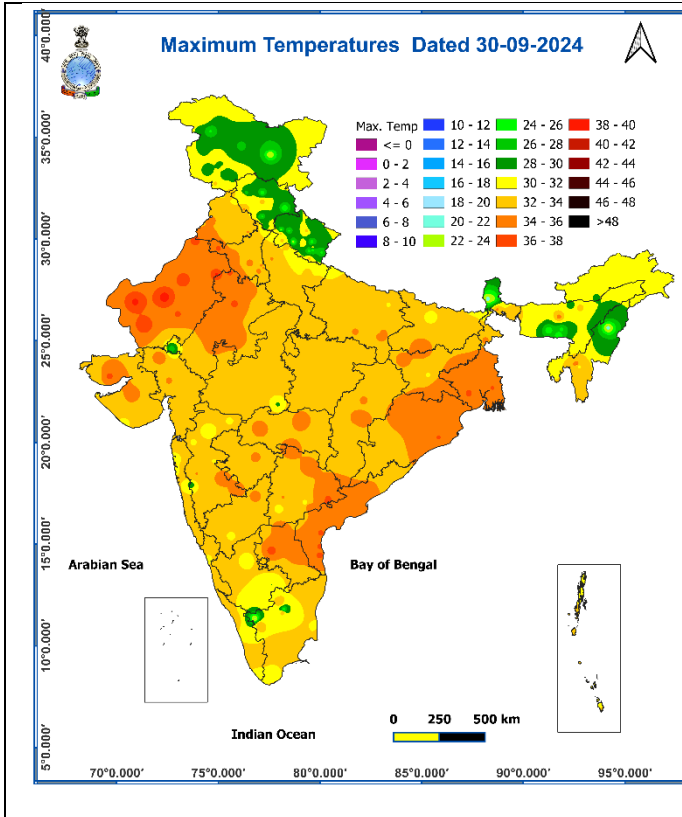
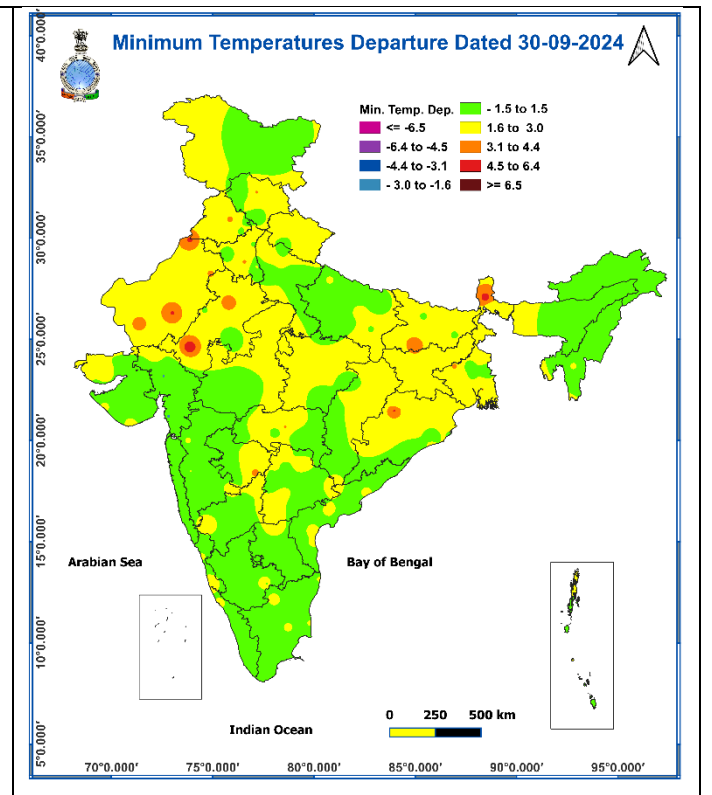
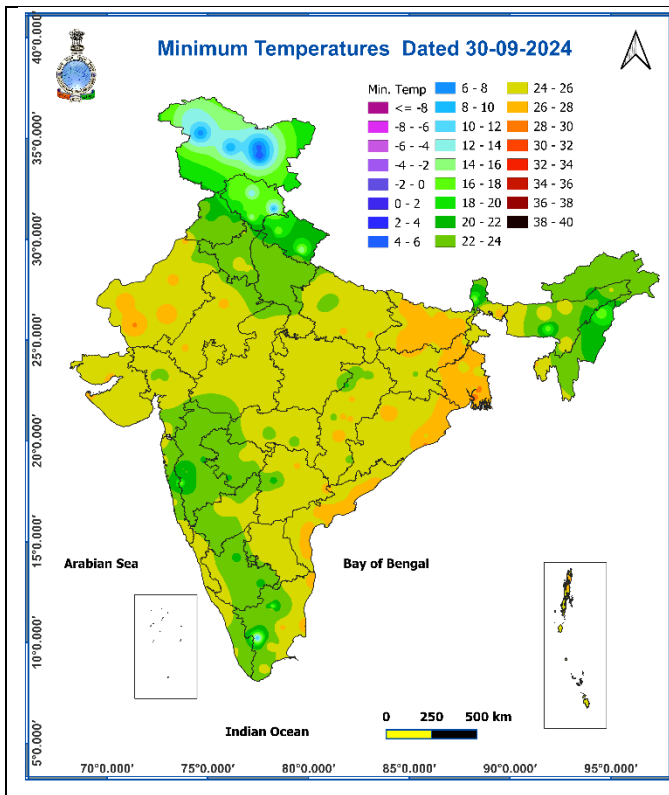


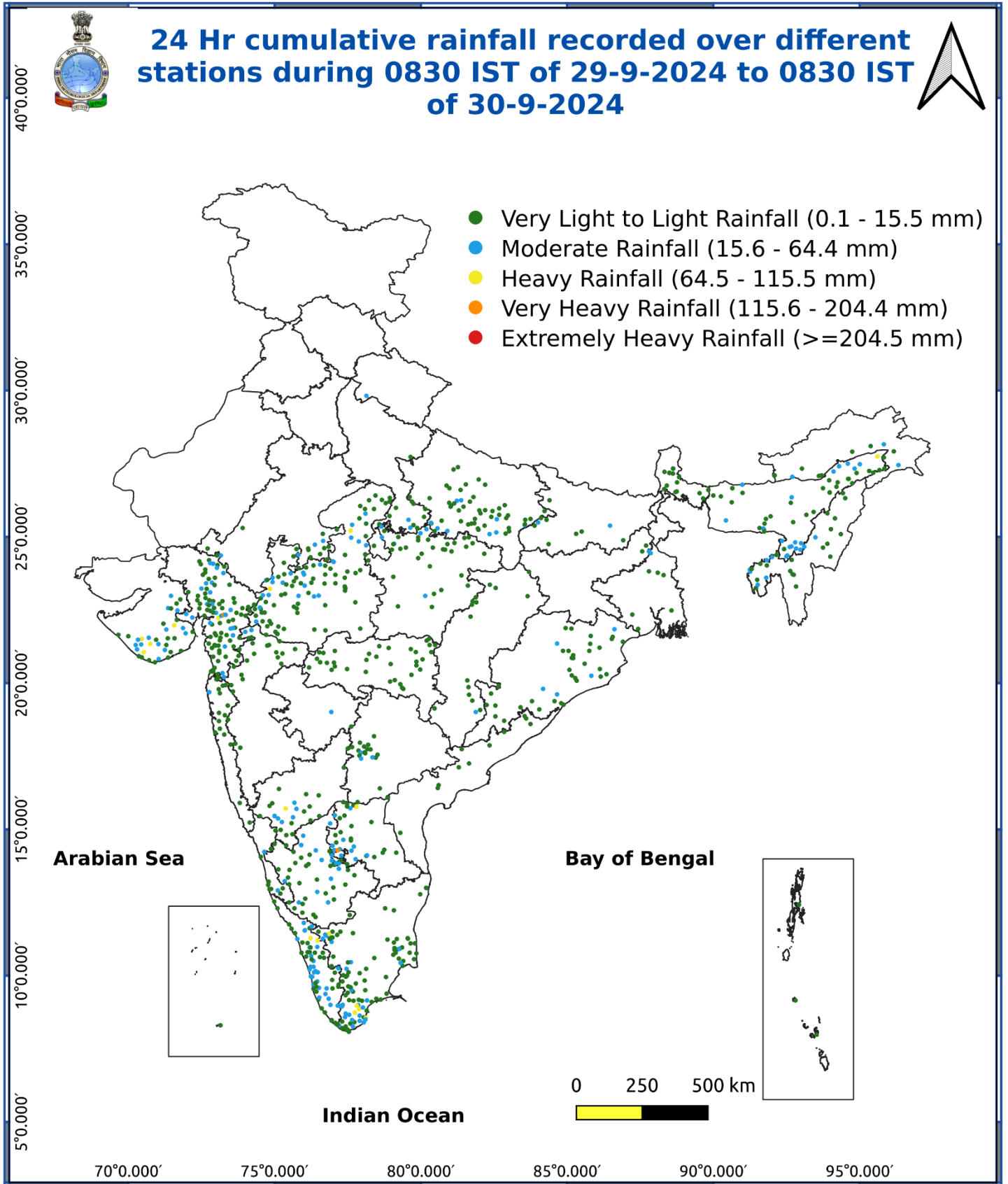
Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures



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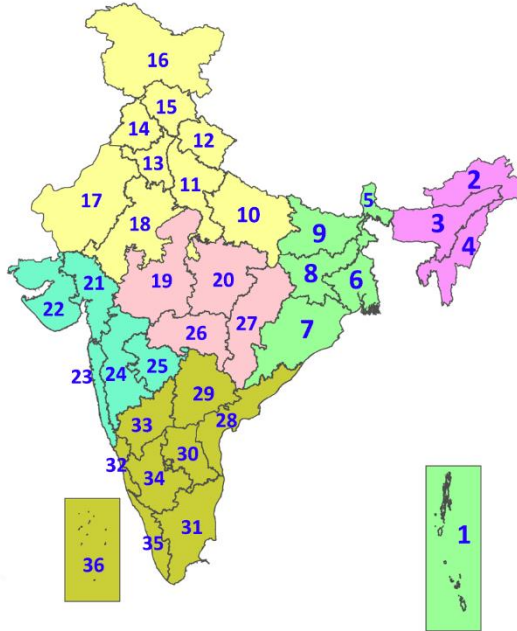
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



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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)