

Saturday, September 14, 2024
Time of Issue: 1315 hours IST
(MID-DAY)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

Weather Systems:

- ✓ Yesterday's **deep depression** over Bangladesh and adjoining Gangetic West Bengal moved west-northwestwards with a speed of 28 kmph during past 6 hours and lay centered at 0830 hours IST of today, the 14th September 2024, over Gangetic West Bengal and adjoining Bangladesh near latitude 22.9° N and longitude 88.6° E, 50 km northeast of Kolkata (West Bengal), 160 km east-southeast of Bankura (West Bengal), 250 km east of Jamshedpur (Jharkhand) and 340 km east of Ranchi (Jharkhand). It is likely to continue to move west-northwestwards across Gangetic West Bengal and maintain its intensity of **deep depression** today, the 14th September. Thereafter, it will continue to move west-northwestwards across Jharkhand, north Chhattisgarh and Madhya Pradesh as a **depression** during subsequent 48 hours.
- ✓ The **low-pressure area** over northwest Uttar Pradesh and adjoining Uttarakhand has become less marked. The associated **cyclonic circulation** lies over the same region in middle tropospheric levels.
- ✓ **Monsoon trough** lies close to its normal position.

Forecast & Warnings (upto 7 days):

West & Central India:

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over Konkan & Goa; Scattered to Fairly widespread light/moderate rainfall very likely over Madhya Pradesh & Chhattisgarh; Isolated to Scattered light/moderate rainfall very likely over Vidarbha, Madhya Maharashtra, Marathwada & Gujarat State during the week.
- ✓ **Isolated extremely heavy rainfall** very likely over Chhattisgarh on 15th; East Madhya Pradesh on 16th September.
- ✓ **Isolated very heavy rainfall** very likely over Chhattisgarh on 14th; East Madhya Pradesh during 15th -17th September.
- ✓ **Isolated heavy rainfall** very likely over Chhattisgarh on 16th; West Madhya Pradesh on 17th & 18th September.

East & Northeast India

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over East India; Scattered to Fairly widespread light/moderate rainfall very likely over Northeast India during the week.
- ✓ **Isolated extremely heavy rainfall** very likely over Gangetic West Bengal & north Odisha on 14th and over Jharkhand on 14th & 15th September.
- ✓ **Isolated very heavy rainfall** very likely over Bihar and Odisha on 14th & 15th September.
- ✓ **Isolated heavy rainfall** very likely over Arunachal Pradesh, Sub-Himalayan West Bengal & Sikkim on 14th; Gangetic West Bengal on 15th; Bihar, Jharkhand, Odisha, Nagaland, Manipur, Mizoram & Tripura during 14th - 16th; Assam & Meghalaya on 14th and during 18th -20th September.

Northwest India

- ✓ Scattered to Fairly widespread light/moderate rainfall very likely over Uttar Pradesh; Isolated to scattered rainfall over the remaining region during the week.
- ✓ **Isolated heavy rainfall** very likely over Uttarakhand on 14th; East Uttar Pradesh on 16th & 17th and over West Uttar Pradesh on 17th September.

South Peninsular India:

- ✓ Scattered to Fairly widespread light/moderate rainfall over Coastal Karnataka, Kerala & Mahe, Lakshadweep; Isolated to Scattered rainfall over the remaining region during the week.

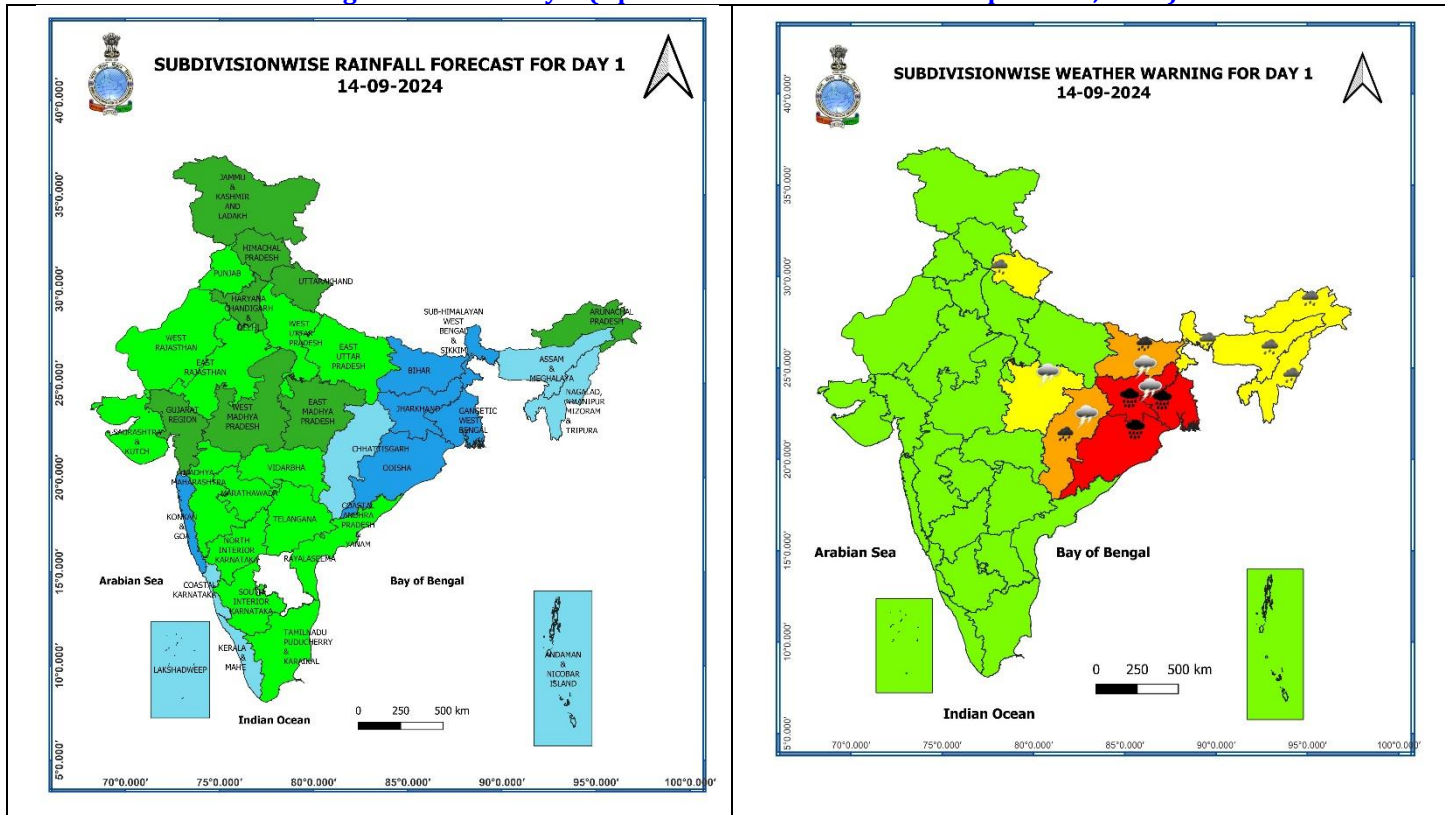
Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST of yesterday to 0830 hours IST of today): **at most places** over Himachal Pradesh, Uttarakhand, Andaman & Nicobar Islands, Gangetic West Bengal, Konkan & Goa and Lakshadweep; **at many places** over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Haryana-Chandigarh-Delhi, West Uttar Pradesh, Bihar, Jharkhand, Odisha, Nagaland, Manipur, Mizoram & Tripura, Kerala & Mahe and Coastal Karnataka; **at a few places** over Vidarbha, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Gujarat Region; **at isolated places** over Punjab, East Uttar Pradesh, Rajasthan, Madhya Pradesh, Chhattisgarh, Assam & Meghalaya, Saurashtra & Kutch, Madhya Maharashtra, Marathwada, Interior Karnataka, Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam and Telangana.
- ❖ **Heavy rainfall recorded** (from 0830 hours IST of yesterday to 0830 hours IST of today): **Heavy to very heavy rainfall with isolated extremely heavy falls** at a few places over Haryana; **Heavy to very heavy rainfall** at a few places over Gangetic West Bengal and **at isolated places** over Uttarakhand; Heavy rainfall at isolated places over Himachal Pradesh, Delhi, Uttar Pradesh, Chhattisgarh, Bihar, Sub-Himalayan West Bengal and Jharkhand.
- ❖ **Significant amount of rainfall** (from 0830 hours IST of yesterday to 0830 hours IST of today) (in cm):**Haryana-Chandigarh:** Pataudi (dist Gurgaon) 21, Nahar Rev (dist Rewari) 13, Kosli (dist Rewari) 13, Palhawas Rev (dist Rewari) 9, Taoru (dist Nuh) 8, Faridabad (dist Faridabad) 8, Dadri (dist Charkhi Dadri) 7, Sohana (dist Gurgaon) 7, Nuh (dist Nuh) 7, Bhadkal (dist Faridabad) 7; **Gangetic West Bengal:** Contai (dist East Midnapore) 18, Durgachack (dist East Midnapore) 17, Digha (dist East Midnapore) 12, Bagati (dist Hooghly) 11, Sagar Island (South 24 Parganas) 11, Durgapur (dist Paschim Bardhaman) 10, Diamond Harbour (dist South 24 Parganas) 9, Panagarh (iaf) (dist Paschim Bardhaman) 9, Suri (pto) (dist Birbhum) 9, Jangipur (dist Murshidabad) 8, Dum Dum (dist North 24 Parganas) 8, Alipore (dist Kolkata) 8, Salar (dist Murshidabad) 8, Suri (cwc) (dist Birbhum) 8; **Uttarakhand:** Champawat (Champawat): 18, Haldwani (Nainital): 16, Nainital (Nainital): 15, Lohaghat (Champawat): 11, Pantnagar (Udham Singh Nagar): 9, Pithoragarh (Pithoragarh): 9, Ghansali (Tehri Garhwal): 8; **Odisha:** Kusumi (dist Mayurbhanj) 14, Bhograi (dist Balasore) 10; **Bihar:** Beldaur (dist Khagaria) 9, Khaira (dist Jamui) 9, Lakhisarai (dist Lakhisarai) 8, Nabinagar (dist Aurangabad) 8, Halsi (dist Lakhisarai) 8, Jamui (dist Jamui) 8; **West Uttar Pradesh:** Kasba Tanda (dist Rampur) 9, Bijnor (dist Bijnor) 8; **Himachal Pradesh:** Kataula (dist Mandi) 8, Palampur (dist Kangra) 7; **Delhi:** Palam (dist South West Delhi) 8, Aya Nagar (dist South Delhi) 7, Lodi Road Aws (dist New Delhi) 7; **Jharkhand:** Giridih Bengbad Kvk Aws (dist Giridih) 8, Bengabad (dist Giridih) 8; **Chhattisgarh:** Surajpur (dist Surajpur) 7; **Sub-Himalayan West Bengal:** Malda (dist Malda) 7; **East Uttar Pradesh:** Katarniaghat (dist Bahraich) 7.
- ❖ **Minimum Temperature Departures (as on 14-09-2024):** Minimum temperatures are **above normal (1.6°C to 3.0°C)** at a few places over Tamil Nadu, Puducherry & Karaikal; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Bihar, Odisha, Arunachal Pradesh and Assam & Meghalaya. These are **appreciably below normal (-3.1°C to -5.0°C)** at isolated places over Delhi; **below normal (-1.6°C to -3.0°C)** at isolated places over Uttarakhand, West Uttar Pradesh, Gangetic West Bengal and Madhya Maharashtra and **near normal** over rest parts of the country. Today, **the lowest minimum temperature of 18.0°C** is reported at **Delhi-Ridge (New Delhi)** over the plains of the country. (Fig.4)
- ❖ **Maximum Temperature Departures (as on 13-09-2024):** Maximum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at many places over Assam & Meghalaya; at a few places over Tamil Nadu, Puducherry & Karaikal; at isolated places over Jammu division, Sub-Himalayan West Bengal & Sikkim, Bihar and Coastal Andhra Pradesh & Yanam; **above normal (1.6°C to 3.0°C)** at many places over Kerala & Mahe; at isolated places over Gangetic West Bengal, Odisha, Jharkhand, Nagaland, Manipur, Mizoram & Tripura and Konkan & Goa. These were **markedly below normal (-5.1°C or less)** at a few places over West Uttar Pradesh, Uttarakhand and Haryana-Chandigarh-Delhi; at isolated places over Himachal Pradesh; **appreciably below normal (-3.1°C to -5.0°C)** at isolated places over West Madhya Pradesh, and East Uttar Pradesh; **below normal (-1.6°C to -3.0°C)** at many places over Rajasthan; at isolated places over Gujarat state and Punjab and **near normal** over rest parts of the country. Yesterday, **the highest Maximum Temperature of 40.1°C** was reported at **Thanjavur (Tamil Nadu)** over the country. (Fig. 2)

Meteorological Analysis (Based on 0830 hours IST)

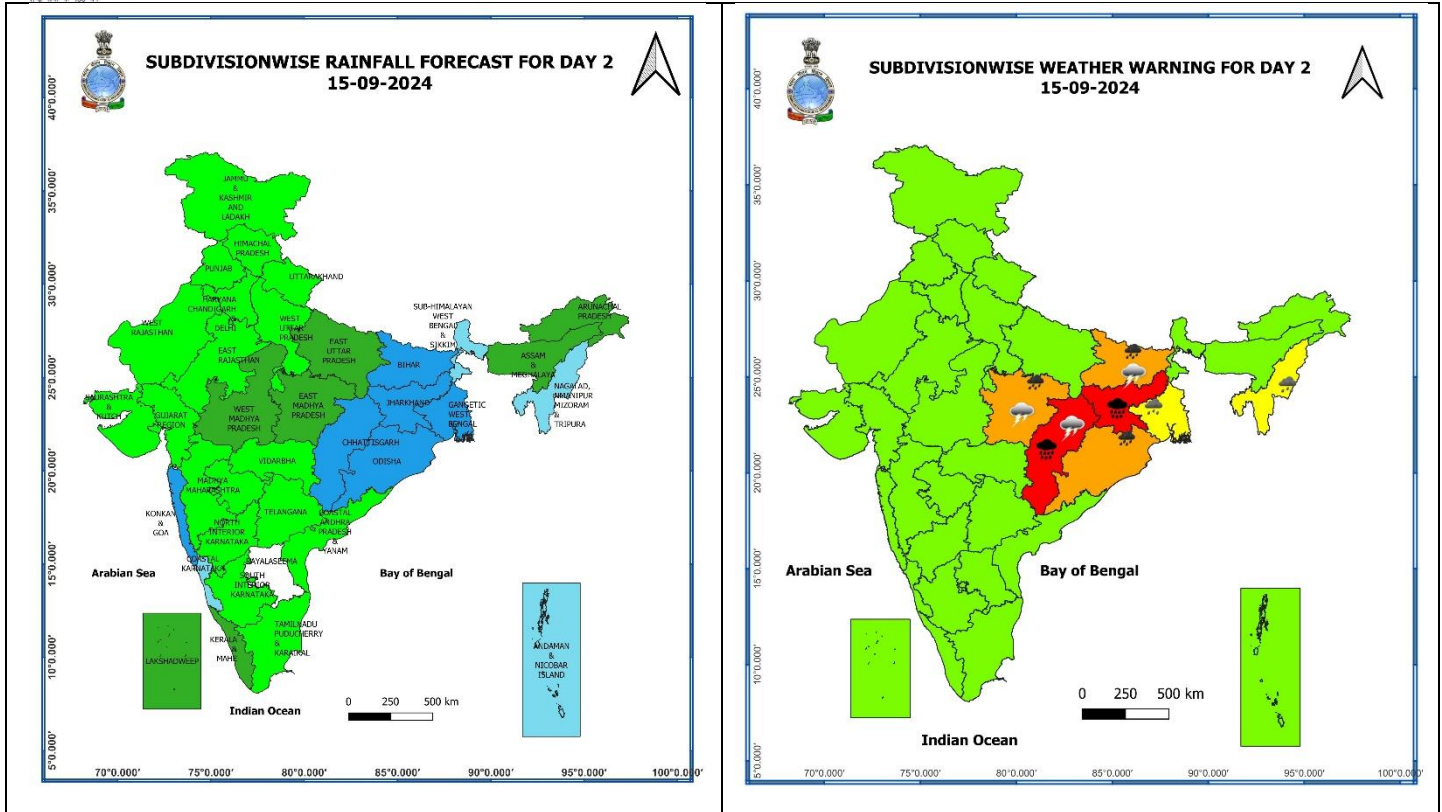
- ❖ The **deep depression** over Bangladesh and adjoining Gangetic West Bengal moved west-northwestwards with a speed of 28 kmph during past 6 hours and lay centered at 0830 hours IST of today, the 14th September 2024, over Gangetic West Bengal and adjoining Bangladesh near latitude 22.9° N and longitude 88.6° E, 50 km northeast of Kolkata (West Bengal), 160 km east-southeast of Bankura (West Bengal), 250 km east of Jamshedpur (Jharkhand) and 340 km east of Ranchi (Jharkhand). It is likely to continue to move west-northwestwards across Gangetic West Bengal and maintain its intensity of deep depression today, the 14th September. Thereafter, it will continue to move west-northwestwards across Jharkhand, north Chhattisgarh and Madhya Pradesh as a depression during subsequent 48 hours.
- ❖ The **Monsoon trough** at mean sea level now passes through Ganganagar, Hissar, Delhi, Shahjahanpur, Barabanki, Muzaffarpur, the centre of **deep depression** over Gangetic West Bengal & adjoining Bangladesh and thence south-southeastwards to northeast Bay of Bengal.
- ❖ The **Western Disturbance** as a trough in middle tropospheric westerlies with its axis at 5.8 km above mean sea level now runs roughly along Long. 68°E to the north of Lat. 28°N.
- ❖ The **low pressure area** over northwest Uttar Pradesh and adjoining Uttarakhand has become less marked. The associated cyclonic circulation lies over the same region between 3.1 & 5.8 km above mean sea level.
- ❖ The **cyclonic circulation** over Saurashtra now lies over north Gujarat & adjoining southwest Rajasthan between 3.1 & 4.5 km above mean sea level.

Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 21st September, 2024)



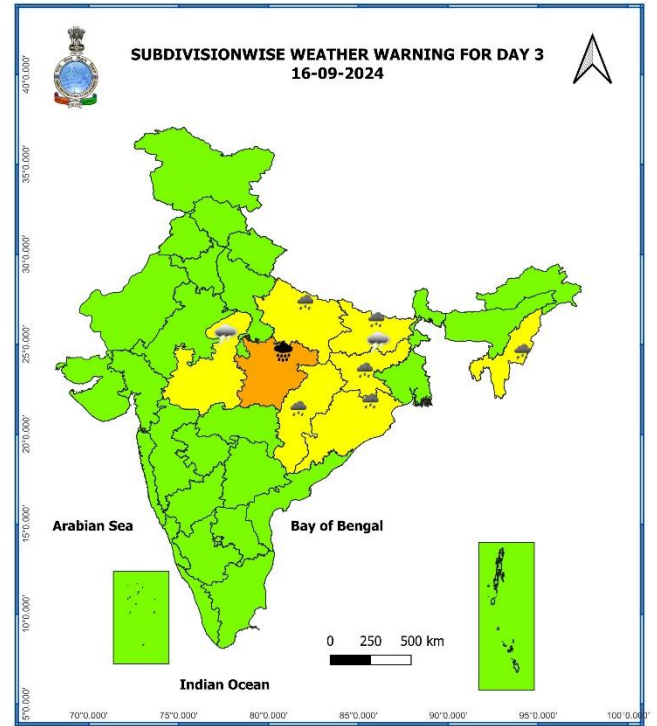
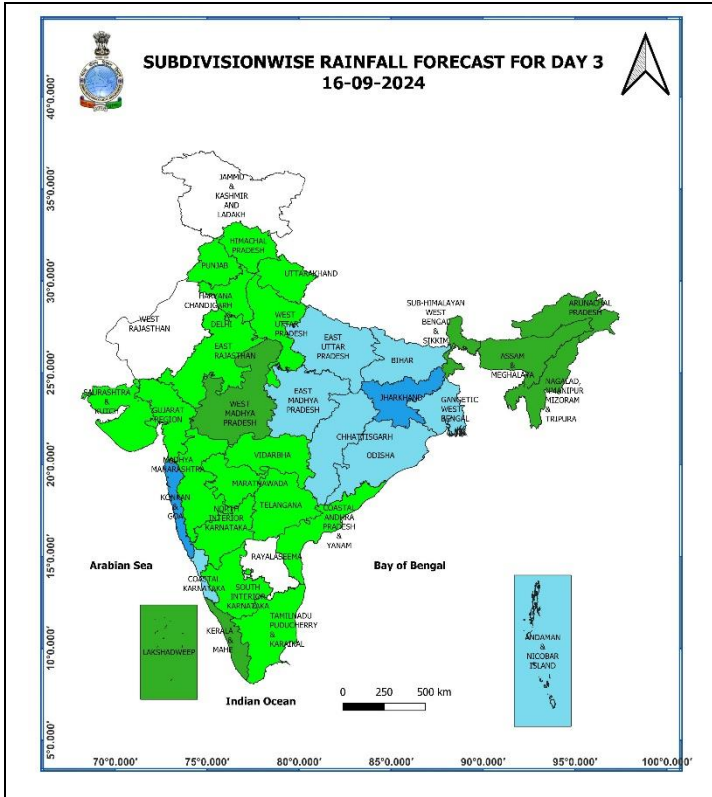
14 September (Day 1):

- ❖ **Heavy to very heavy rainfall (≥ 12 cm) with extremely heavy falls (> 20 cm)** very likely at isolated places over Gangetic West Bengal, Jharkhand, Odisha; **Heavy to very heavy rainfall (≥ 12 cm)** is very likely at isolated places over Chhattisgarh, Bihar; **Heavy rainfall (≥ 7 cm)** likely at isolated places over Uttarakhand, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Thunderstorm accompanied with lightning** very likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim, Bihar, Jharkhand, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over central parts of central Arabian sea, off Sri Lanka coast, most parts of south Bay of Bengal, many parts of central Bay of Bengal, most parts of north Bay of Bengal, along and off Odisha, west Bengal and Bangladesh coasts & off north Myanmar coast. **Squally weather with wind speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over gulf of Mannar, north Bay of Bengal along and off Odisha, west Bengal & adjoining, Bangladesh coasts. **Squally weather with wind speed reaching 50 kmph to 60 kmph gusting to 75 kmph** likely to prevail over north Bay of Bengal along and off west Bengal & adjoining Odisha, Bangladesh coasts. **Squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over western parts of southwest Arabian sea & many parts of westcentral Arabian sea, along and off Somalia, off Yemen and Oman coasts. Fishermen are advised not to venture into these areas.



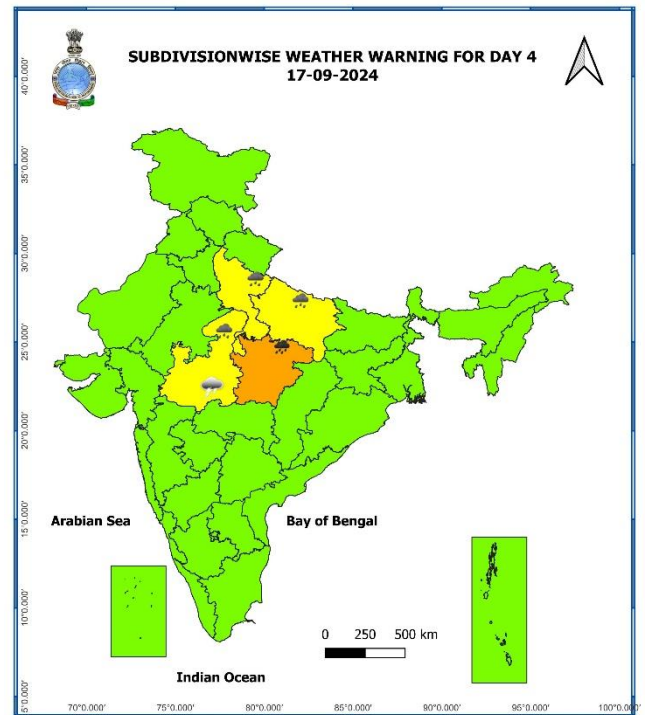
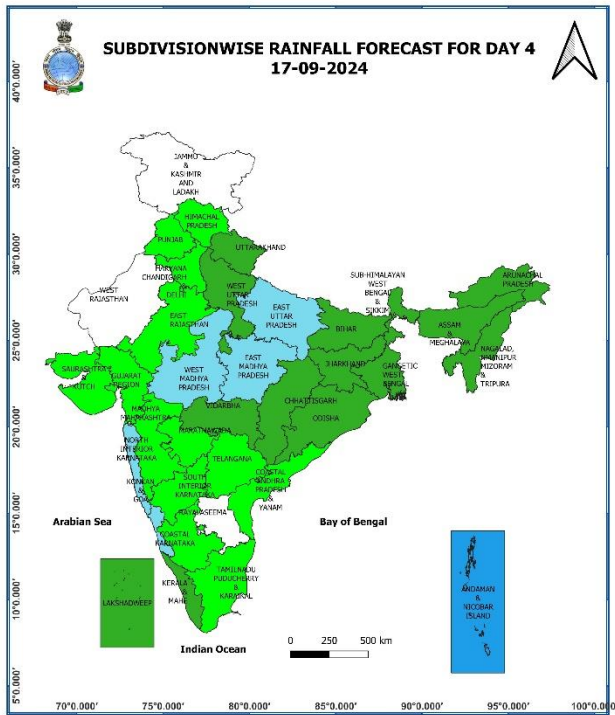
15 September (Day 2):

- ❖ **Heavy to very heavy rainfall (≥ 12 cm) with extremely heavy falls (> 20 cm) very likely at isolated places over Chhattisgarh, Jharkhand; Heavy to very heavy rainfall (≥ 12 cm) very likely at isolated places over East Madhya Pradesh, Bihar, Odisha; Heavy rainfall (≥ 7 cm) at isolated places over Gangetic West Bengal, Nagaland, Manipur, Mizoram & Tripura.**
- ❖ **Thunderstorm accompanied with lightning very likely at isolated places over East Uttar Pradesh, Chhattisgarh, East Madhya Pradesh, Sub-Himalayan West Bengal & Sikkim, Bihar, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura.**
- ❖ **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph very likely to prevail over many parts of west central Arabian sea and adjoining east central Arabian sea, off Sri Lanka coast, most parts of south Bay of Bengal, many parts of central Bay of Bengal, most parts of north Bay of Bengal, along and off Odisha, west Bengal and Bangladesh, coasts. Squally weather with wind speed reaching 45 kmph to 55 kmph gusting to 65 kmph likely to prevail over gulf of Mannar along and off north Odisha, west Bengal coasts, and adjoining Bangladesh coast. Squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph likely to prevail over western parts of southwest Arabian sea & many parts of westcentral Arabian sea, along and off Somalia coast, and off Oman coast. Fishermen are advised not to venture into these areas.**



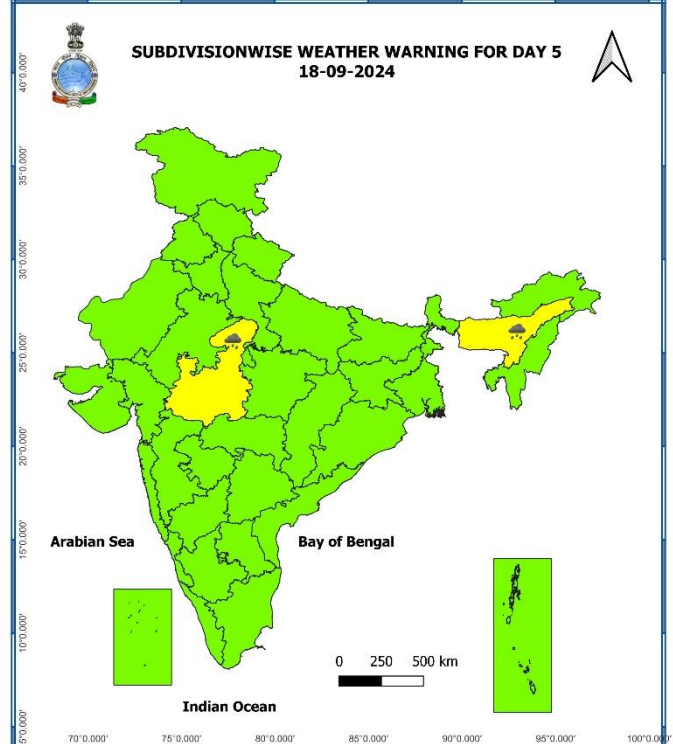
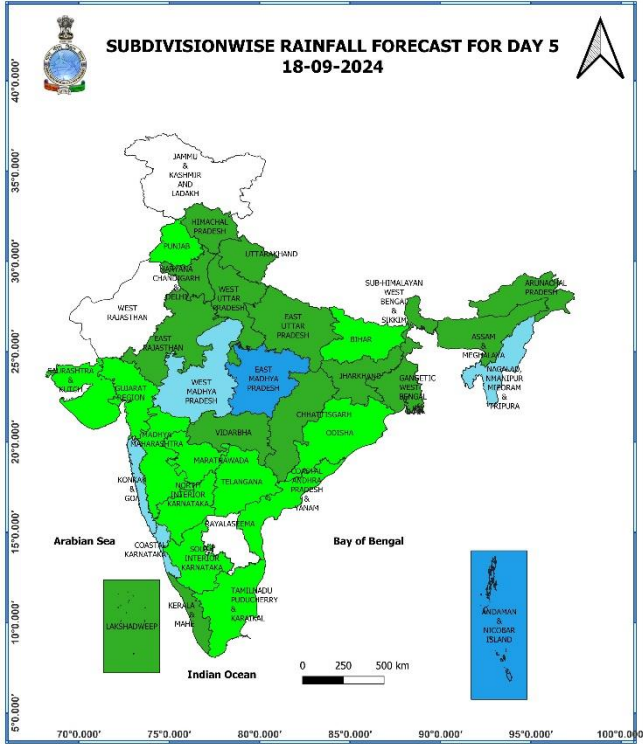
16 September (Day 3):

- ❖ **Heavy to very heavy rainfall (≥ 12 cm) with extremely heavy falls (> 20 cm)** very likely at isolated places over East Madhya Pradesh; **Heavy rainfall (≥ 7 cm)** at isolated places over East Uttar Pradesh, Chhattisgarh, Bihar, Jharkhand, Odisha and Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over East Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Bihar, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over many parts of west central Arabian sea and adjoining parts of east central Arabian sea, northern parts of southwest Arabian sea, over gulf of Mannar, off silence coast, many parts of south Bay of Bengal & adjoining parts of central Bay of Bengal, along and off north Odisha, west Bengal coasts, adjoining Bangladesh coast and adjoining sea areas. **Squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over western parts of southwest Arabian sea & many parts of westcentral Arabian sea, along and off Somalia coast, and off Oman coast. Fishermen are advised not to venture into these areas.



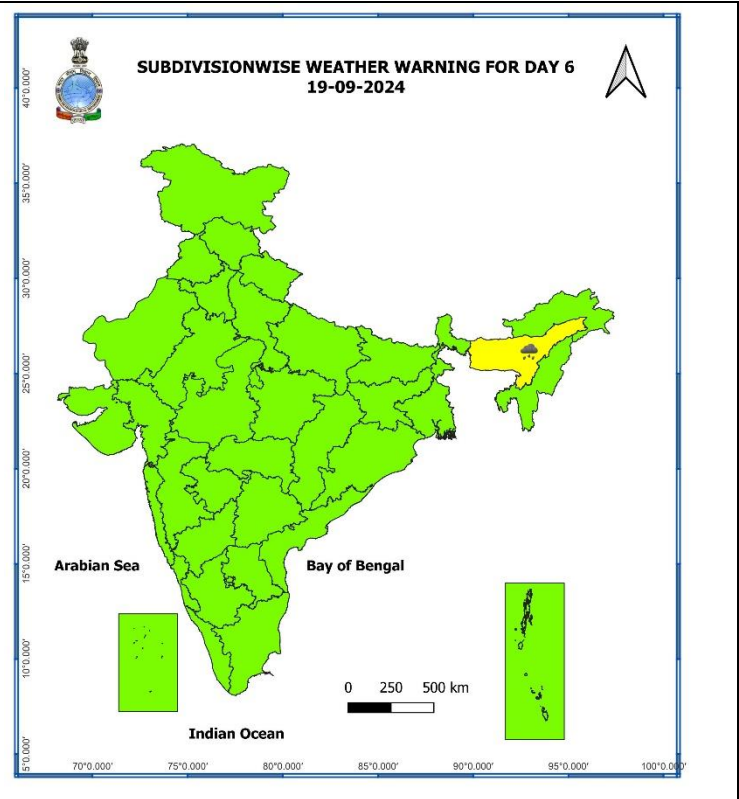
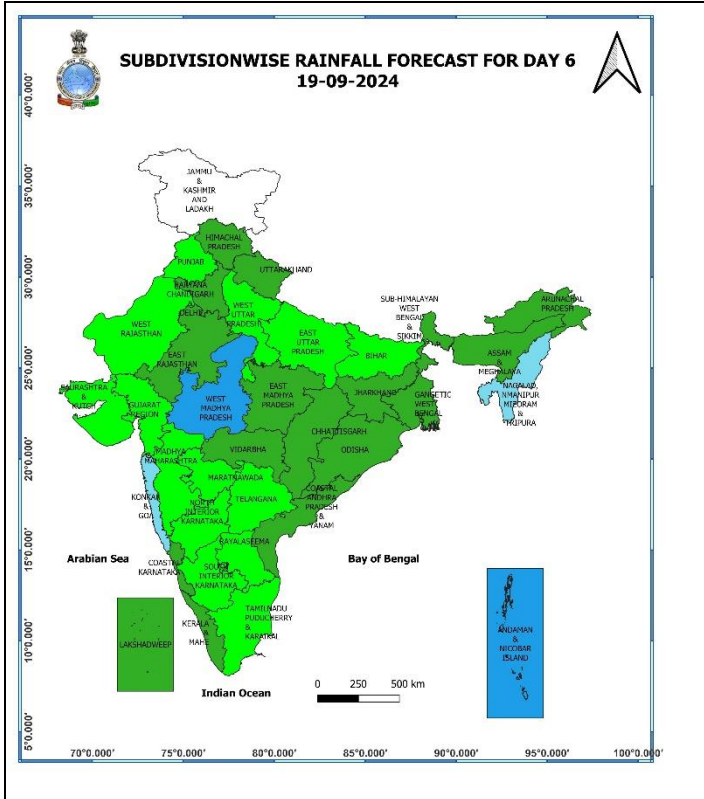
17 September (Day 4):

- ❖ **Heavy to very heavy rainfall (≥ 12 cm)** likely at isolated places over East Madhya Pradesh; **Heavy rainfall (≥ 7 cm)** at isolated places over Uttar Pradesh, West Madhya Pradesh.
- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Uttarakhand, Uttar Pradesh, East Rajasthan, Madhya Pradesh, Chhattisgarh, Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over few northern parts of southwest Arabian sea and adjoining parts of westcentral Arabian sea, northern parts of southwest Arabian sea, over gulf of Mannar, off Sri Lanka coast, most parts of south Bay of Bengal. **Squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over western parts of southwest Arabian sea & adjoining parts of westcentral Arabian sea along and off Somalia coast. Fishermen are advised not to venture into these areas.



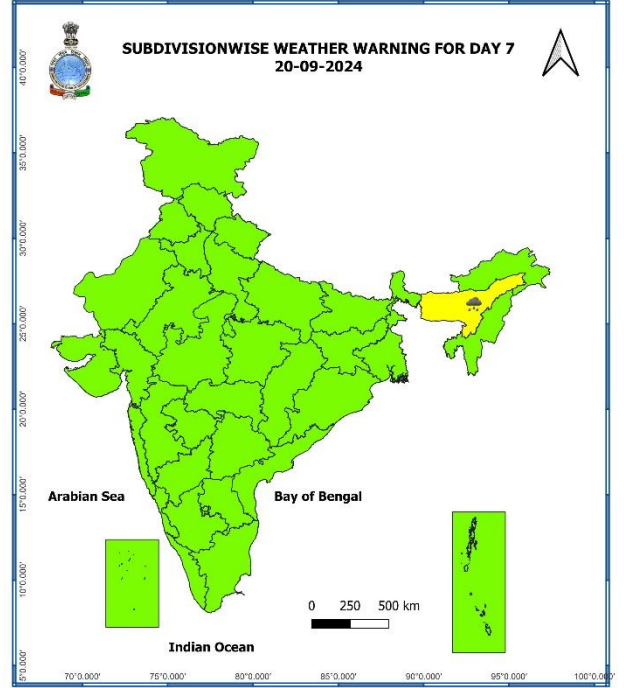
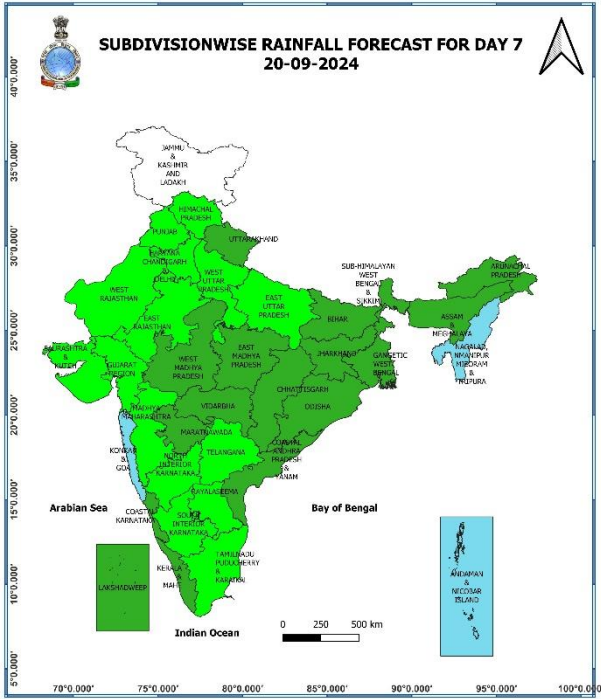
18 September (Day 5):

- ❖ **Heavy rainfall (≥ 7 cm)** likely at isolated places over west Madhya Pradesh, Assam & Meghalaya.
- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Uttarakhand, West Uttar Pradesh, East Rajasthan, Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over few northern parts of southwest Arabian sea and adjoining parts of westcentral Arabian sea, northern parts of southwest Arabian sea, over gulf of Mannar, off Sri Lanka coast, most parts of south Bay of Bengal. **Squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over western parts of southwest Arabian sea & adjoining parts of westcentral Arabian sea along and off Somalia coast. Fishermen are advised not to venture into these areas.



19 September (Day 6):

❖ Heavy rainfall (≥ 7 cm) likely at isolated places over Assam & Meghalaya.



20 September (Day 7):

- ❖ Heavy rainfall (≥ 7 cm) likely at isolated places over Assam & Meghalaya.

Weather Outlook for subsequent 3 days (During 21st September- 23rd September, 2024)

- ❖ Fairly widespread to widespread rainfall likely over most parts of the country except Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, West Rajasthan, Punjab, Tamil Nadu, Puducherry & Karaikal where isolated to scattered rainfall likely.

- 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 **extremely heavy rainfall** very likely over Gangetic West Bengal & north Odisha on 14th; Chhattisgarh on 15th; East Madhya Pradesh on 16th; Jharkhand on 14th & 15th September.
- **Very heavy rainfall** at isolated places over Chhattisgarh on 14th; East Madhya Pradesh during 15th -17th September, Bihar and Odisha on 14th & 15th September.
- **Moderate flash flood risk** likely over few watersheds & neighbourhoods of Bihar, Odisha, Gangetic West Bengal and Jharkhand on 14th & 15th September. **(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, groundnut, brinjal, cucurbits and betel vine gardens in **Gangetic West Bengal**; from maize, green gram, black gram, rice, vegetables and other standing crops in **Odisha**; from pulse crops and vegetables in **Jharkhand**; from maize, pulses and millets in **Chhattisgarh**; from rice, maize, soybean, finger millet, pigeon pea and vegetables in **Uttarakhand** to prevent water logging.
- ✓ Make provision for draining out excess water from standing crop fields and fruit orchards to avoid water stagnation in Arunachal Pradesh, Assam & Meghalaya, NMMT, Bihar and East Madhya Pradesh.
- ✓ Provide mechanical support to horticultural crops & staking to vegetables.
- ✓ Keep the harvested produce at safer place.

Flash Flood Guidance:

24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 15-09-2024 :

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

Bihar - Banka, Jamui, Lakhisarai and Munger districts.

Odisha - Baleshwar, Bhadrak, Kendraparha, Kendujhar, Mayurbhanj and Sundargarh districts.

Gangetic West Bengal - Bankura, Bardaman, Birbhum, Eastmednipur, Pashchim Medinipur and Puruliya districts.

Jharkhand - Bokaro, Chatra, Deoghar, Dhanbad, Dumka, East Singhbhum, Garhwa, Giridih, Godda, Hazaribagh, Jamtara, Khunti, Koderma, Latehar, Lohardaga, Pakur, Palamu, Ramgarh, Ranchi, Sahebganj, Saraikela and West Singhbhum 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.

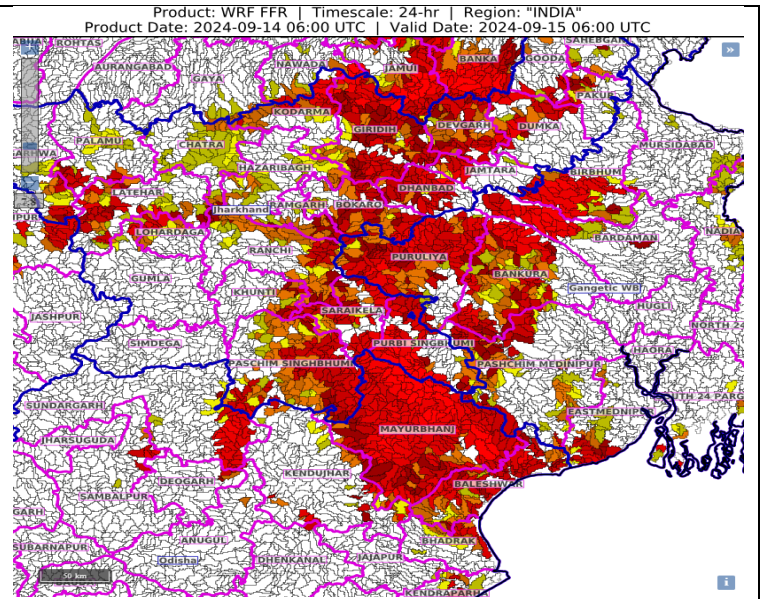


Fig. 1: Maximum Temperatures

Fig. 2: Departure of Maximum Temperatures

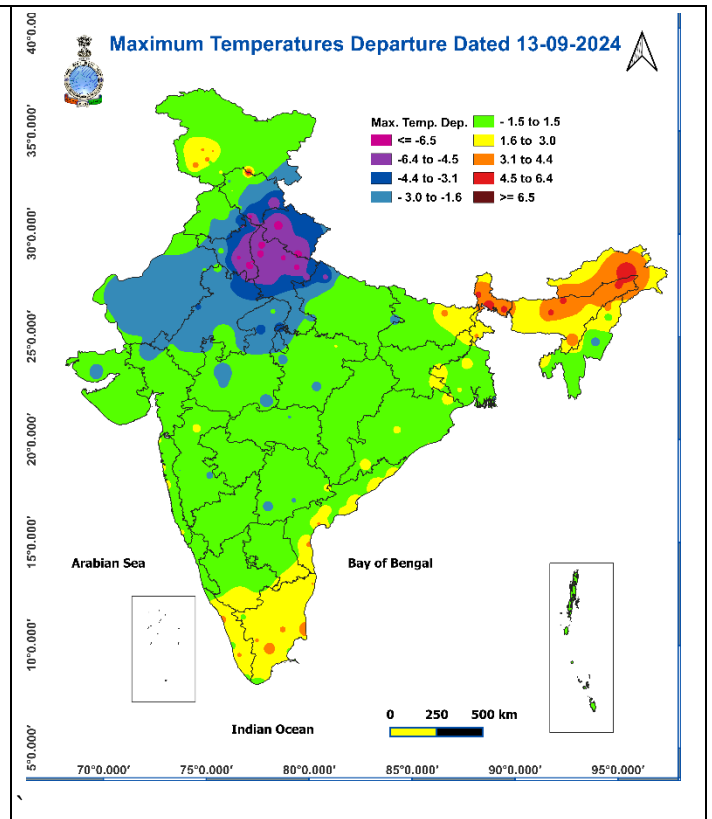
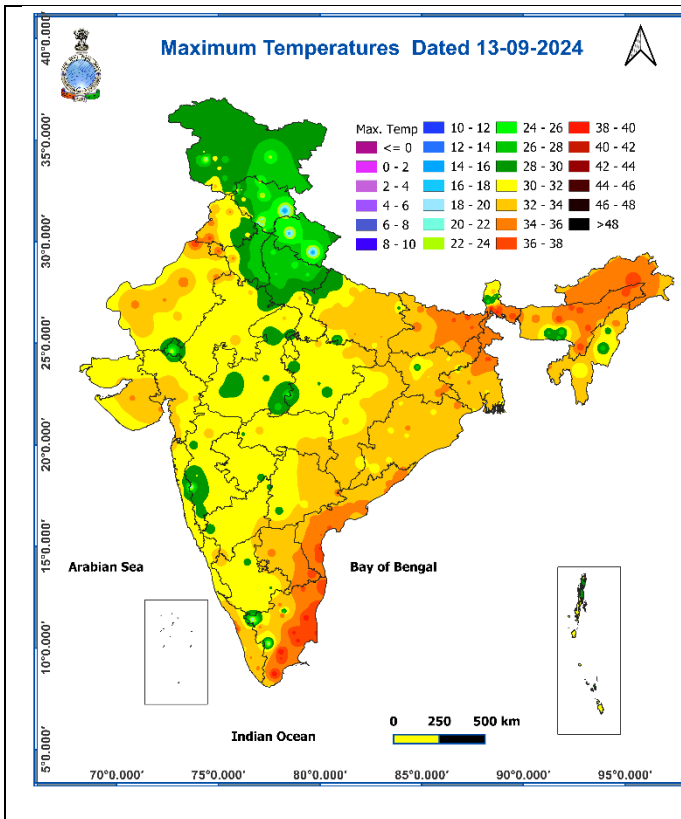


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures

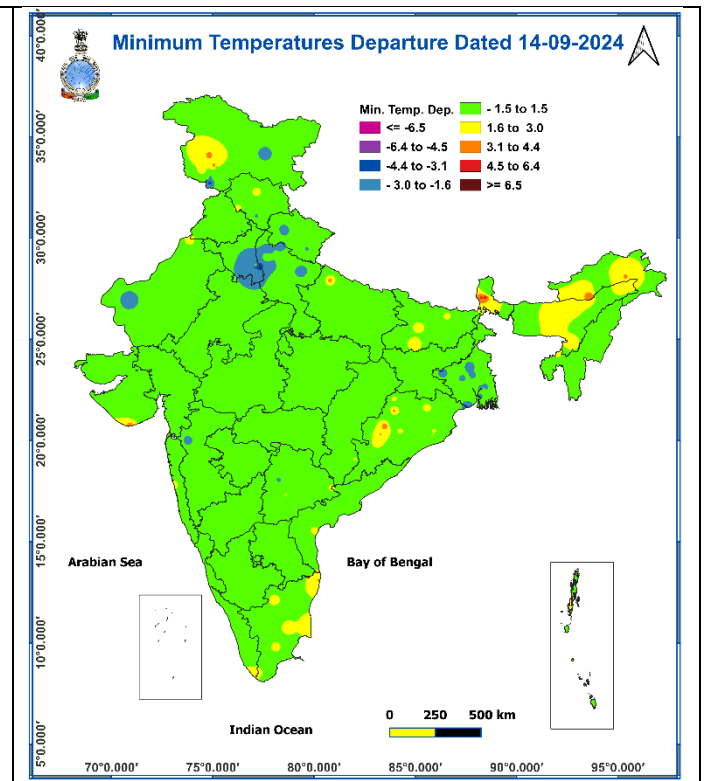
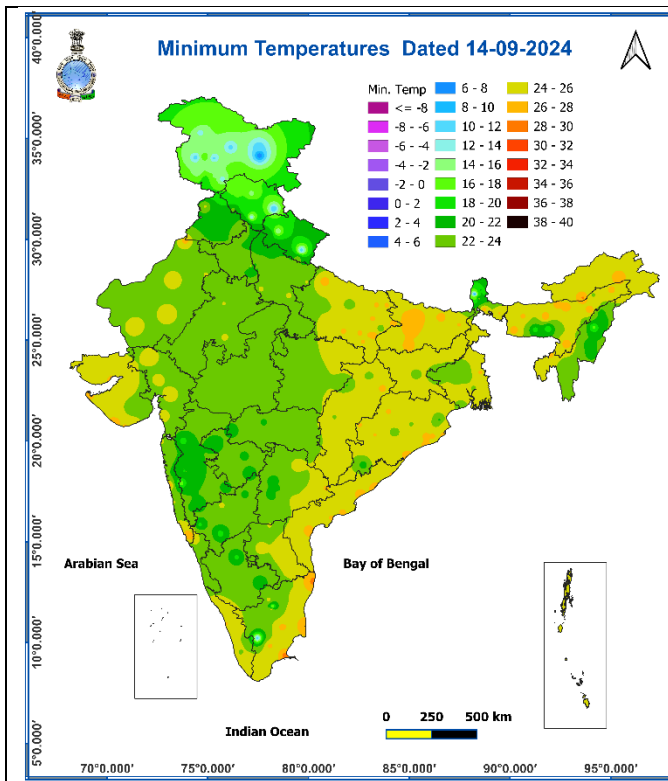
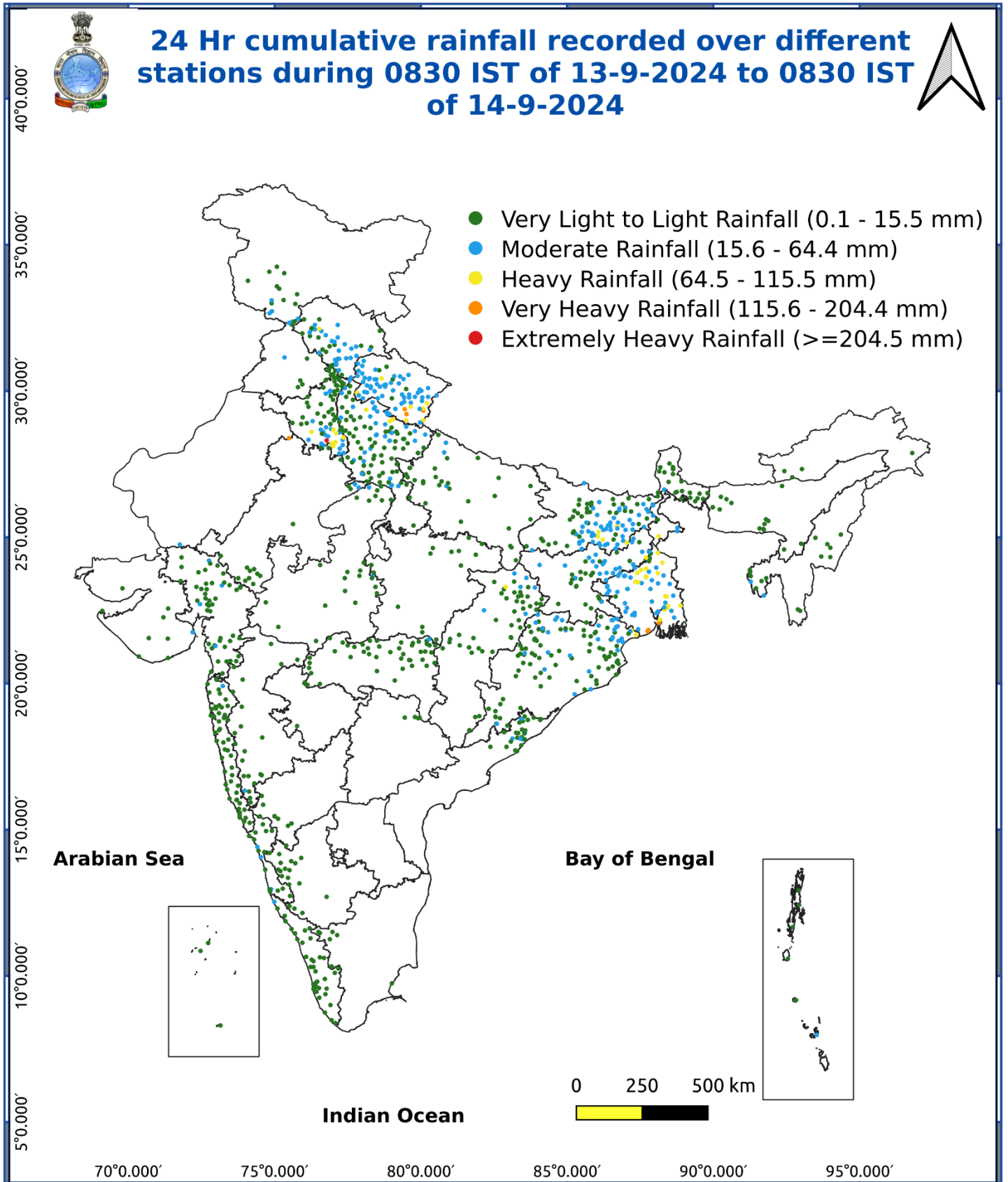


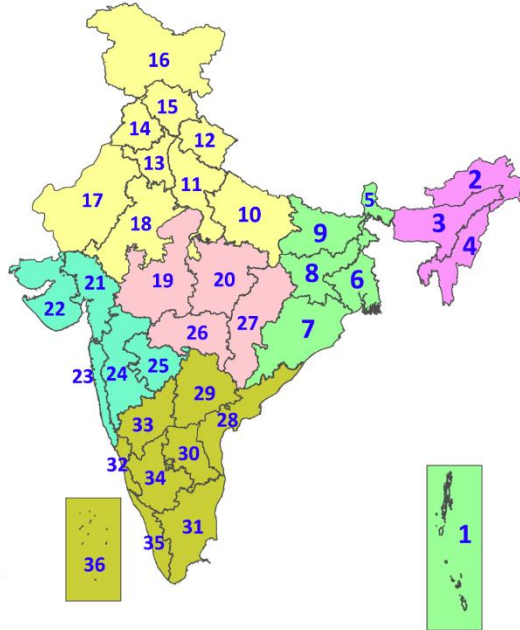
Fig. 5: Accumulated Rainfall (mm) during past 24 hours



* Red colour warning does not mean "Red Alert", Red colour warning means "Take Action".
Forecast and Warning for any day is valid from 0830 hours IST of day till 0830 hours IST of next day.
For more details, kindly visit <https://mausam.imd.gov.in> or contact: 011-2434-4599
(Service to the Nation since 1875)

LEGENDS

1. अंडमान और निकोबार द्वीपसमूह
2. अरुणाचल प्रदेश
3. असम और मेघालय
4. नागालैंड, मणिपुर, मिजोरम और त्रिपुरा
5. उप-हिमालयी पश्चिम बंगाल और सिक्किम
6. गंगीय पश्चिम बंगाल
7. ओडिशा
8. झारखंड
9. बिहार
10. पूर्वी उत्तर प्रदेश
11. पश्चिम उत्तर प्रदेश
12. उत्तराखंड
13. हरियाणा, चंडीगढ़ और दिल्ली
14. पंजाब
15. हिमाचल प्रदेश
16. जम्मू और कश्मीर और लद्दाख
17. पश्चिम राजस्थान
18. पूर्वी राजस्थान
19. पश्चिम मध्य प्रदेश
20. पूर्वी मध्य प्रदेश
21. गुजरात
22. सौराष्ट्र
23. कोंकण और गोवा
24. मध्य महाराष्ट्र
25. मराठवाड़ा
26. विदर्भ
27. छत्तीसगढ़
28. तटीय आंध्र प्रदेश और यनम
29. तेलंगाना
30. रायलसीमा
31. तमिलनाडु, पुडुचेरी और कराईकल
32. तटीय कर्नाटक
33. आंतरिक उत्तरी कर्नाटक
34. आंतरिक दक्षिणी कर्नाटक
35. केरल और माहे
36. लक्षद्वीप



1. Andaman & Nicobar Islands
2. Arunachal Pradesh
3. Assam & Meghalaya
4. Nagaland, Manipur, Mizoram & Tripura
5. Sub-Himalayan West Bengal & Sikkim
6. Gangetic West Bengal
7. Odisha
8. Jharkhand
9. Bihar
10. East Uttar Pradesh
11. West Uttar Pradesh
12. Uttarakhand
13. Haryana, Chandigarh & Delhi
14. Punjab
15. Himachal Pradesh
16. Jammu & Kashmir and Ladakh
17. West Rajasthan
18. East Rajasthan
19. West Madhya Pradesh
20. East Madhya Pradesh
21. Gujarat
22. Saurashtra
23. Konkan & Goa
24. Madhya Maharashtra
25. Marathwada
26. Vidarbha
27. Chhattisgarh
28. Coastal Andhra Pradesh & Yanam
29. Telangana
30. Rayalaseema
31. Tamilnadu, Puducherry & Karaikal
32. Coastal Karnataka
33. North Interior Karnataka
34. South Interior Karnataka
35. Kerala & Mahe
36. Lakshadweep

SPATIAL DISTRIBUTION (% of Stations reporting)

% Stations	Category	% Stations	Category
76-100	Widespread (WS/Most Places)	26-50	Scattered (SCT/A Few Places)
51-75	Fairly Widespread (FWS/Many Places)	1-25	Isolated (ISOL)

- | | | |
|----------------------|----------------------|--------------|
| Fog | Heavy Snow | Cold Wave |
| Heavy Rain | Dust Storm | Cold Day |
| Very Heavy Rain | Heat Wave | Ground Frost |
| Extremely Heavy Rain | Warm Night | |
| Thunder & Lightning | Hot Day | |
| Hailstorm | Hot & Humid | |
| Dust Raising Winds | Strong Surface Winds | |

COLOUR CODED WARNING

No Warning (No Action)
Watch (Be Aware)
Alert (Be Prepared To Take Action)
Warning (Take Action)

Probabilistic Forecast

Terms	Probability of Occurrence (%)
Unlikely	< 25
Likely	25 - 50
Very Likely	50 - 75
Most Likely	> 75

DEFINITION/CRITERIA

Rain/ Snow *	<p>Heavy: 64.5 to 115.5 mm/cm *</p> <p>Very Heavy: 115.6 to 204.4 mm/cm*</p> <p>Extremely Heavy: > 204.4 mm/cm *</p>
Heat Wave	<p>When maximum temperature of a station reaches $\geq 40^\circ\text{C}$ for plains and $\geq 30^\circ\text{C}$ for hilly regions</p> <p>(a) Based on Departure from normal</p> <p>Heat Wave: Maximum Temperature Departure from normal 4.5°C to 6.4°C.</p> <p>Severe Heat Wave: Maximum Temperature Departure from normal $\geq 6.5^\circ\text{C}$</p> <p>(b). Based on Actual maximum temperature</p> <p>Heat Wave: When actual maximum temperature $\geq 45^\circ\text{C}$.</p> <p>Severe Heat Wave: When actual maximum temperature $\geq 47^\circ\text{C}$</p> <p>(c) Criteria for heat wave for coastal stations</p> <p>When maximum temperature departure is $>4.5^\circ\text{C}$ from normal. Heat Wave may be described provided maximum temperature $\geq 37^\circ\text{C}$</p>
Warm Night	<p>When maximum temperature remains 40°C</p> <p>Warm Night: When minimum temperature departure 4.5°C to 6.4°C.</p> <p>Severe Warm Night: When minimum temperature departure $>6.4^\circ\text{C}$.</p>
Cold Wave	<p>When minimum temperature of a station $\leq 10^\circ\text{C}$ for plains and $\leq 0^\circ\text{C}$ for hilly regions.</p> <p>(a). Based on departure</p> <p>Cold Wave: Minimum Temperature Departure from normal -4.5°C to -6.4°C.</p> <p>Severe Cold Wave: Minimum Temperature Departure from normal $\leq -6.5^\circ\text{C}$</p> <p>(b) Based on actual Minimum Temperature (for Plains only)</p> <p>Cold Wave : When Minimum Temperature is $\leq 4.0^\circ\text{C}$</p> <p>Severe Cold Wave: When Minimum Temperature is $\leq 2.0^\circ\text{C}$</p> <p>(c) For Coastal Stations</p> <p>When Minimum Temperature departure is $\leq -4.5^\circ\text{C}$ & actual Minimum Temperature is $\leq 15^\circ\text{C}$</p>
Cold Day	<p>When minimum temperature of a station $\leq 10^\circ\text{C}$ for plains and $\leq 0^\circ\text{C}$ for hilly regions</p> <p>Based on departure</p> <p>Cold Day: Maximum Temperature Departure from normal -4.5°C to -6.4°C.</p> <p>Severe Cold Day: Maximum Temperature Departure from normal $\leq -6.5^\circ\text{C}$</p>
Fog	<p>Phenomenon of small droplets suspended in air and the horizontal visibility $< 1\text{km}$</p> <p>Moderate Fog: When the visibility between 500-200 metres</p> <p>Dense Fog: when the visibility between 50- 200 metres</p> <p>Very Dense Fog: when the visibility < 50 metres</p>
Thunderstorm	<p>Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder)</p>
Dust/Sand Storm	<p>An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind.</p>
Frost	<p>Ice deposits on ground</p> <p>Air temperature $\leq 4^\circ\text{C}$ (over Plains)</p>
Squall	<p>A strong wind that rises suddenly, lasts for atleast 1 minute.</p> <p>Moderate: Wind speed 52-61 kmph</p> <p>Severe: Wind speed 62-87 kmph</p> <p>Very Severe: Wind speed >87 kmph</p>
Sea State	<p>Effect of various waves in the sea over specific area</p> <p>Rough to very rough: Wind speed 41-62 kmph (22-33 knots) & Wave height 2.5-6 metre</p> <p>High to very high: Wind speed 63-117 kmph (34-63 knots) & Wave height 6-14 metre</p> <p>Phenomenal: Wind speed >117 kmph (>63 knots) & Wave height >14 metre</p>
Cyclone	<p>Cyclonic Storm: Wind speed 62-87 kmph (34-47 knots)</p> <p>Severe Cyclonic Storm: Wind speed 88-117 kmph (48-63 knots)</p> <p>Very Severe Cyclonic Storm: Wind speed 118-165 kmph (64 - 89 knots)</p> <p>Extremely Severe Cyclonic Storm: Wind speed 166-220 kmph (90 -119 knots)</p> <p>Super Cyclone Strom: Wind speed >220 kmph (>119 knots)</p>