

Thursday, September 5, 2024  
Time of Issue: 0800 hours IST  
(MORNING)

## ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

### Significant Weather Features:

#### Weather Systems:

- ✓ The monsoon trough is active and its western end is near its normal position and eastern end is south of its normal position at mean sea level. It is likely to continue so for next 2-3 days.
- ✓ A shear zone runs roughly along 22°N over north Peninsular India at 3.1 km above mean sea level.
- ✓ A **cyclonic circulation** lies over Coastal Andhra Pradesh & adjoining westcentral Bay of Bengal in middle tropospheric levels. **Under its influence, a low pressure area** is likely to form over westcentral & adjoining northwest Bay of Bengal during the next 24 hours.

#### Forecast & Warnings (upto 7 days):

##### ❖ West & Central India:

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over West & Central India during the week.
- ✓ Isolated **heavy rainfall** very likely over Chhattisgarh during next 7 days; East Madhya Pradesh, Saurashtra & Kutch on 05<sup>th</sup> & 06<sup>th</sup>; Vidarbha on 10<sup>th</sup>; Konkan & Goa during 05<sup>th</sup> -08<sup>th</sup>; ghat areas of Madhya Maharashtra during 06<sup>th</sup> - 08<sup>th</sup>; Gujarat Region during 05<sup>th</sup> -08<sup>th</sup> September.

##### ❖ South Peninsular India:

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over Coastal Karnataka, Kerala & Mahe; Scattered to Fairly widespread light/moderate rainfall over Coastal Andhra Pradesh & Yanam, Telangana, Lakshadweep; isolated to scattered rainfall over Tamil Nadu, Puducherry & Karaikal, North Interior Karnataka, Rayalaseema and Interior Karnataka during the week.
- ✓ Isolated **very heavy rainfall** also very likely over Coastal Andhra Pradesh & Yanam, Telangana on 05<sup>th</sup> September.
- ✓ Isolated **heavy rainfall** very likely over Coastal Andhra Pradesh & Yanam, Telangana, Coastal Karnataka, North Interior Karnataka during 05<sup>th</sup> -08<sup>th</sup>; South Interior Karnataka during 05<sup>th</sup> - 07<sup>th</sup>; Kerala & Mahe during 08<sup>th</sup> -10<sup>th</sup> September.

##### ❖ East & Northeast India

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over Northeast India, Andaman & Nicobar Islands, Sub-Himalayan West Bengal & Sikkim; Scattered to Fairly widespread light/moderate rainfall very likely over Gangetic West Bengal, Bihar, Jharkhand & Odisha during the week.
- ✓ Isolated **heavy rainfall** very likely over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during next 7 days; Arunachal Pradesh during 05<sup>th</sup> & 06<sup>th</sup>; Sub-Himalayan West Bengal & Sikkim on 05<sup>th</sup>; Bihar on 05<sup>th</sup> & 06<sup>th</sup>; Odisha during 05<sup>th</sup>-08<sup>th</sup> September.

##### ❖ Northwest India

- ✓ Scattered to Fairly widespread light/moderate rainfall very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand, Uttar Pradesh, Rajasthan; isolated to scattered rainfall over Punjab & Haryana-Chandigarh-Delhi during the week.
- ✓ Isolated **heavy rainfall** very likely over Uttarakhand, Rajasthan during 05<sup>th</sup>-08<sup>th</sup>; West Uttar Pradesh on 05<sup>th</sup>; East Uttar Pradesh on 05<sup>th</sup> & 06<sup>th</sup> September.

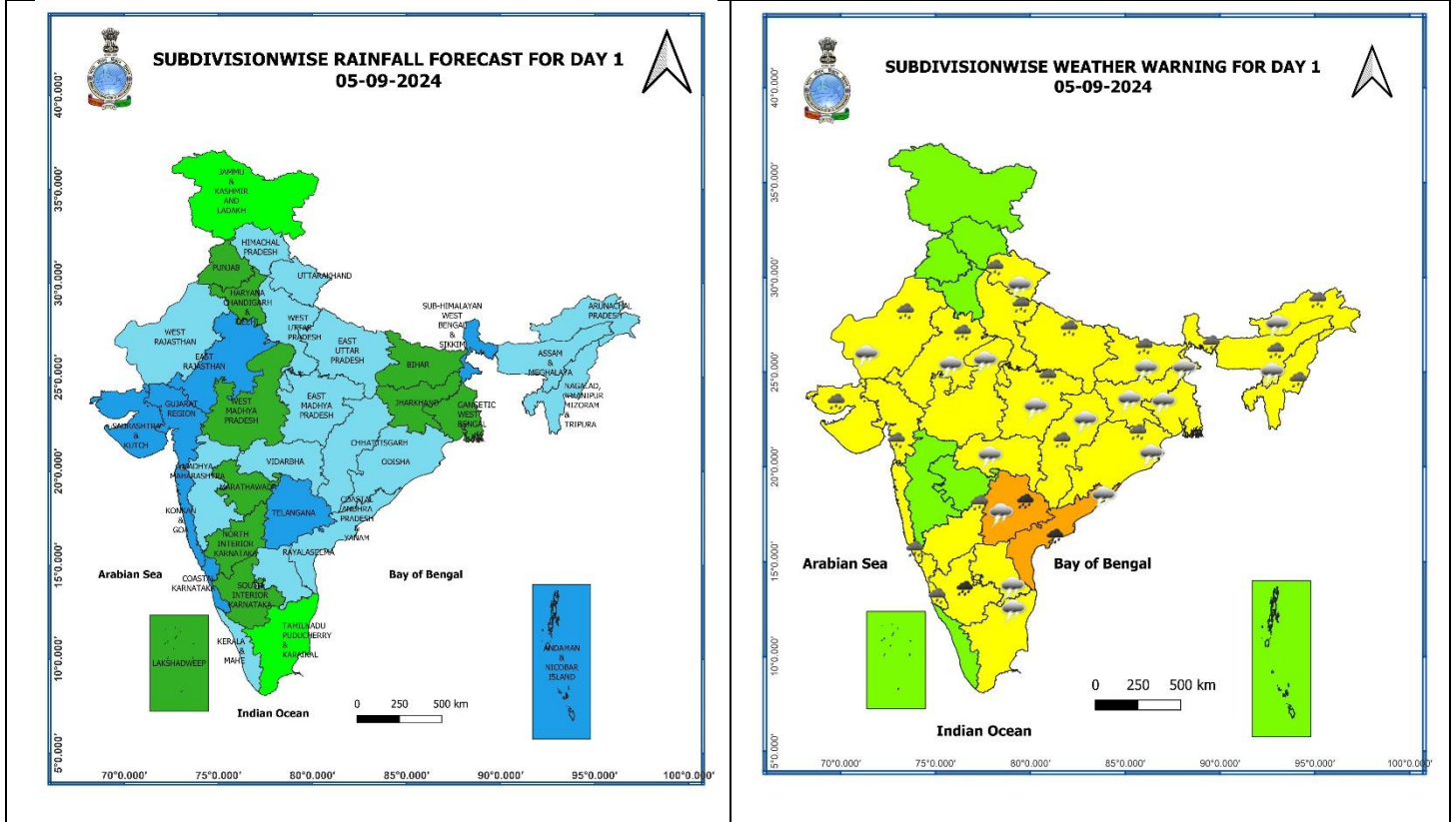
## Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST to 1730 hours IST of yesterday): **at most places** over Gujarat state and Konkan & Goa; **at many places** over Himachal Pradesh, Delhi, Uttar Pradesh, Coastal Andhra Pradesh & Yanam and Telangana; **at a few places** over Uttarakhand, Rayalaseema, Bihar, Sub-Himalayan West Bengal & Sikkim, Odisha, Madhya Maharashtra and Coastal Karnataka; **at isolated places** over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Haryana-Chandigarh, Madhya Pradesh, Jharkhand, Chhattisgarh, Gangetic West Bengal, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Marathwada, Interior Karnataka, Rayalaseema, Kerala & Mahe and Andaman & Nicobar Islands.
- ❖ **Heavy rainfall recorded** (from 0830 hours IST to 1730 hours IST of yesterday): **Heavy rainfall** at isolated places over West Rajasthan and Himachal Pradesh.
- ❖ **Significant amount of rainfall** (from 0830 hours IST to 1730 hours IST of yesterday) (in cm): **West Rajasthan:** Jodhpur 9, Barmer 2; **Himachal Pradesh:** Dharamshala 7; **Haryana-Chandigarh-Delhi:** Delhi Ayanagar 5, Ridge 2; **Odisha:** Jagatsingpur 4; **West Uttar Pradesh:** Meerut 3, Jhansi 2; **East Uttar Pradesh:** Bahraich & Babatpur 2 each; **Bihar:** Muzaffarpur 5, Dehri 2; **Gangetic West Bengal:** Bagatti 3; **Chhattisgarh:** Mana 2; **Madhya Maharashtra:** Mahabaleshwar 2.
- ❖ **Minimum Temperature Departures (as on 04-09-2024):** Minimum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at isolated places over East Uttar Pradesh; **above normal (1.6°C to 3.0°C)** at isolated places over Himachal Pradesh, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, West Bengal & Sikkim, West Uttar Pradesh, Madhya Pradesh, Vidarbha, Madhya Maharashtra, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Kerala & Mahe. These were **below normal (-1.6°C to -3.0°C)** at isolated places over West Rajasthan and Telangana and **near normal** over rest parts of the country. Yesterday, **the lowest minimum temperature of 18.8°C** was reported at **Bulsar (Gujarat Region)** over the plains of the country. (Fig.4)
- ❖ **Maximum Temperature Departures (as on 04-09-2024):** Maximum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at isolated places over East Uttar Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim, East Madhya Pradesh, Chhattisgarh, Odisha, Nagaland, Manipur, Mizoram & Tripura; **above normal (1.6°C to 3.0°C)** at many places over Jharkhand, Gangetic West Bengal; at a few places over Assam & Meghalaya; at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Konkan & Goa, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal. These were **markedly below normal (-5.1°C or Less)** at many places over West Rajasthan; at isolated places over Uttarakhand, Haryana-Chandigarh-Delhi, Gujarat Region, Rayalaseema, Coastal Andhra Pradesh & Yanam; **below normal (-1.6°C to -3.0°C)** at isolated places over Himachal Pradesh, West Uttar Pradesh, East Rajasthan, Saurashtra & Kutch, West Madhya Pradesh and **near normal** over rest parts of the country. Yesterday, **the highest Maximum Temperature of 39.0°C** was reported at **Madurai (Tamil Nadu)** over the country. (Fig. 2)

## Meteorological Analysis (Based on 0530 hours IST)

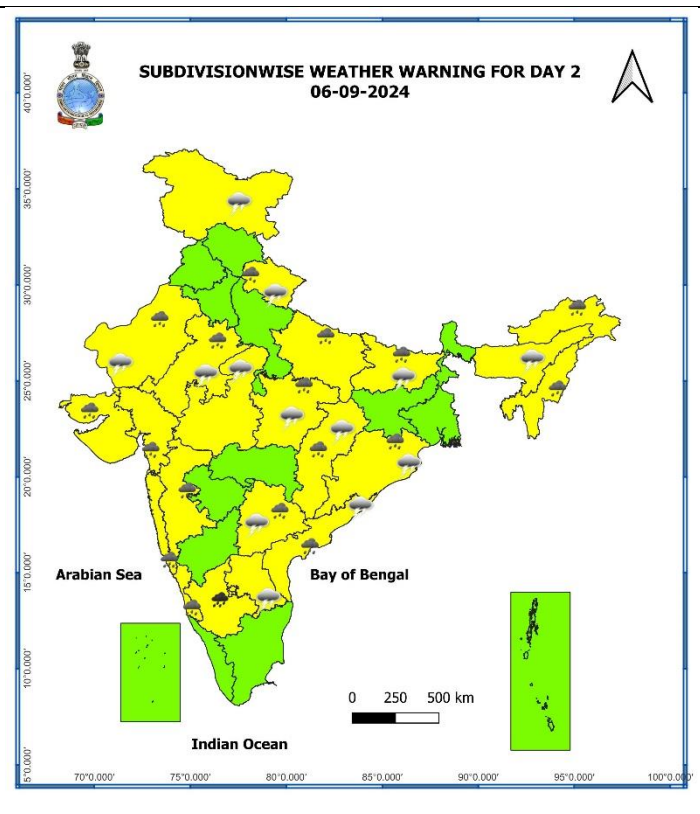
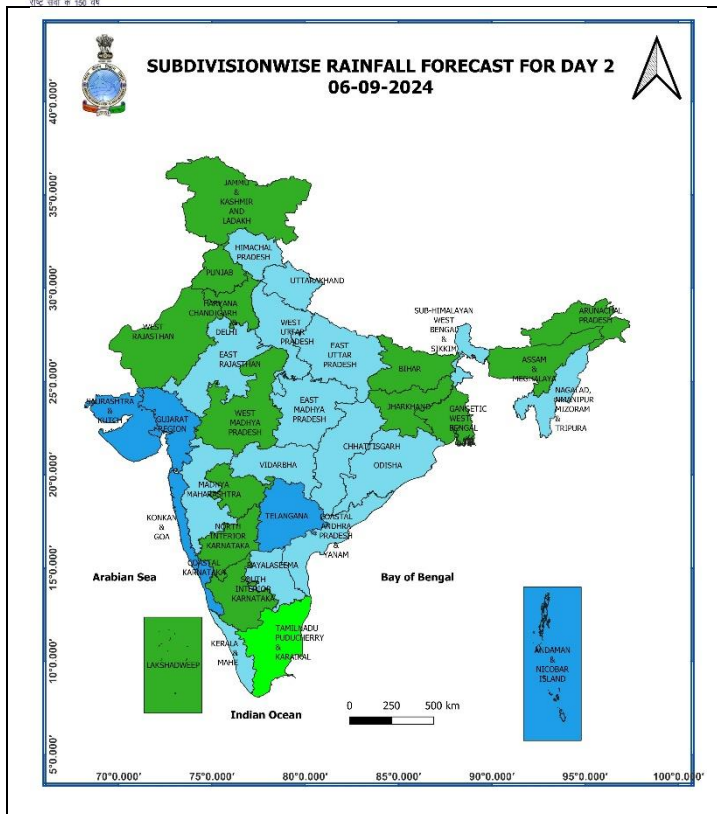
- ❖ The **cyclonic circulation** over southwest Rajasthan & neighbourhood now lies over central parts of Rajasthan & neighbourhood and extends upto 5.8 km above mean sea level.
- ❖ The **Monsoon trough** at mean sea level now passes through Jaisalmer, Kota, Bhopal, Jabalpur, Pendra Road, Kalingapatnam and thence southeastwards to eastcentral Bay of Bengal and extends upto 1.5 km above mean sea level.
- ❖ The **cyclonic circulation** over north Coastal Andhra Pradesh & neighbourhood now lies over Coastal Andhra Pradesh & adjoining westcentral Bay of Bengal and extends upto 7.6 km above mean sea level tilting southwestwards with height. **Under its influence, a low pressure area** is likely to form over westcentral and adjoining northwest Bay of Bengal during the next 24 hours.
- ❖ The **shear zone** roughly along 22°N over north Peninsular India at 3.1 km above mean sea level persists.
- ❖ 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. 69°E to the north of Lat. 32°N.
- ❖ The **cyclonic circulation** over northeast Assam & neighbourhood extending upto 1.5 km above mean sea level persists.
- ❖ The **cyclonic circulation** over Haryana & neighbourhood at 1.5 km above mean sea level persists.
- ❖ The **cyclonic circulation** over north Andaman Sea & neighbourhood between 4.5 & 5.8 km above mean sea level persists.
- ❖ The **cyclonic circulation** over north Bangladesh & neighbourhood between 3.1 & 7.6 km above mean sea level persists.
- ❖ The **cyclonic circulation** over Westcentral Arabian Sea off Oman coast extending upto 3.1 km above mean sea level persists.

Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 12<sup>th</sup> September, 2024)



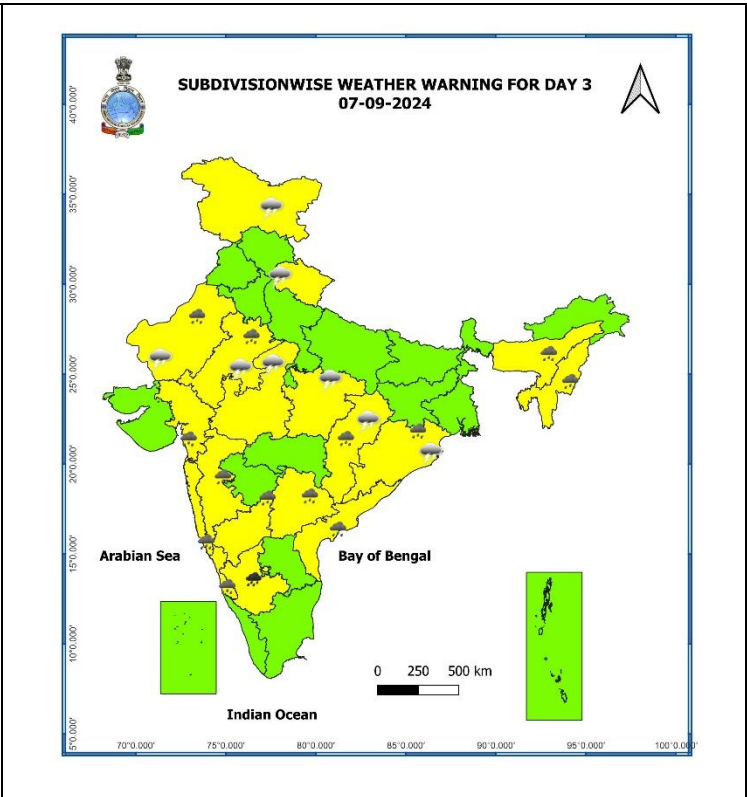
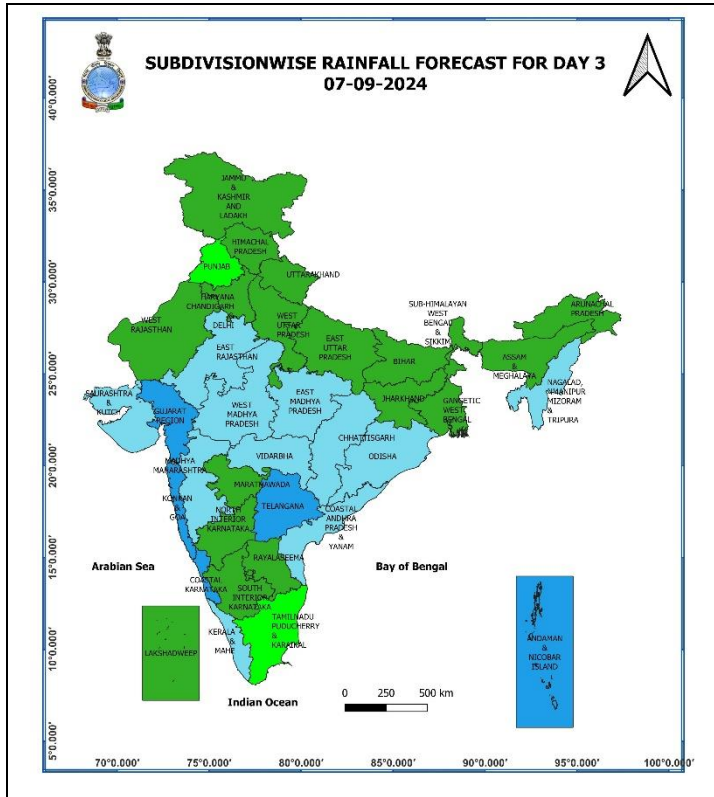
**05 September (Day 1):**

- ❖ **Heavy to very heavy rainfall ( $\geq 12$  cm)** very likely at isolated places over Coastal Andhra Pradesh & Yanam, Telangana; **Heavy rainfall ( $\geq 7$  cm)** at isolated places over Uttarakhand, Uttar Pradesh, Rajasthan, East Madhya Pradesh, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim, Bihar, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Gujarat state, Karnataka.
- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed 30-40 kmph)** very likely at isolated places over Telangana and **with lightning** at isolated places over Uttarakhand, Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, West Bengal & Sikkim, Bihar, Jharkhand, Odisha, Arunachal Pradesh, Assam & Meghalaya, Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Rayalaseema.
- ❖ **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over off south Gujarat and Maharashtra coasts, most parts of central Arabian sea and north parts of southwest Arabian sea, gulf of Mannar, off Sri Lanka coast, most parts of south and central Bay of Bengal, off north adprep radish coast, Andaman Sea. **Squally weather with wind speed reaching 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevail over some parts of south and central Bay of Bengal. **Squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over many parts of westcentral, western parts of southwest Arabian sea, along and off Somalia, Yemen, south Oman coasts. Fishermen are advised not to venture into these areas.



## 06 September (Day 2):

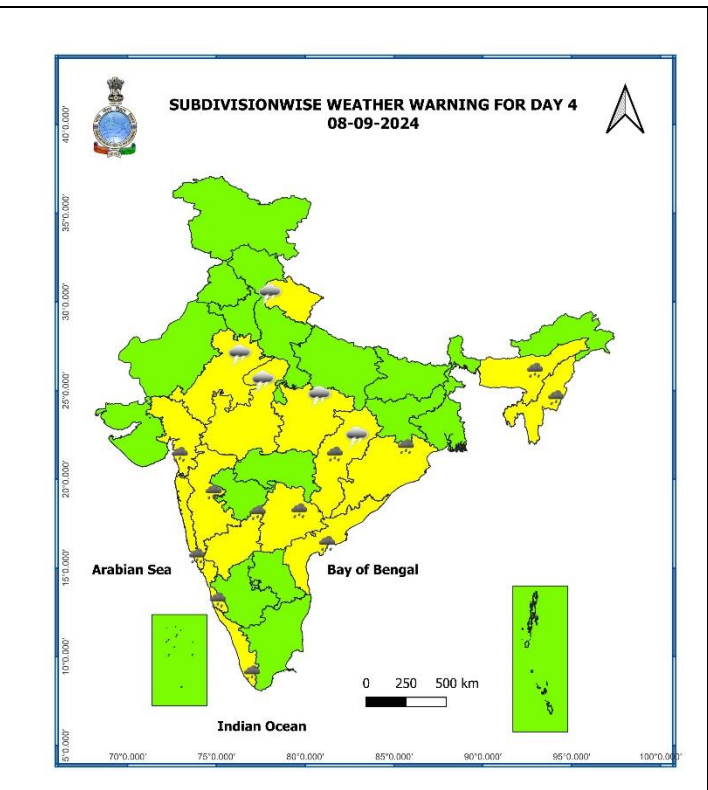
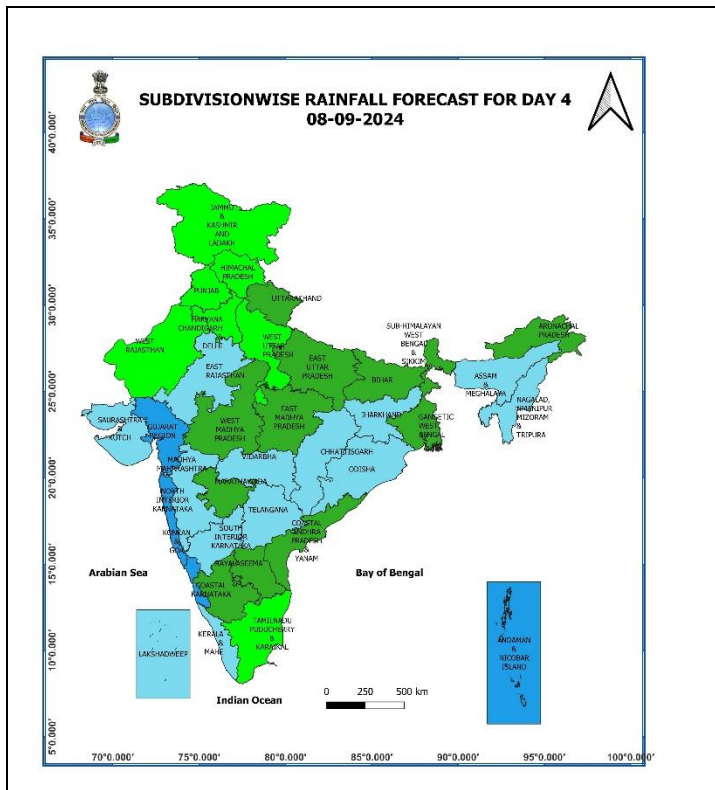
- ❖ **Heavy rainfall ( $\geq 7$  cm)** very likely at isolated places over Uttarakhand, East Uttar Pradesh, Rajasthan, East Madhya Pradesh, Chhattisgarh, Bihar, Odisha, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Madhya Maharashtra, Gujarat state, Coastal Andhra Pradesh & Yanam, Telangana, Coastal & South Interior Karnataka.
- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed 30-40 kmph)** very likely at isolated places over Telangana and **with lightning** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Uttarakhand, Rajasthan, Madhya Pradesh, Chhattisgarh, Bihar, Odisha, Assam & Meghalaya, Coastal Andhra Pradesh & Yanam, Rayalaseema.
- ❖ **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** very likely to prevail over many parts of central Arabian sea, off north Maharashtra coast, gulf of Mannar, off Sri Lanka coast, most parts of south and central Bay of Bengal, along and off north Andhra Pradesh coast, Andaman Sea. **Squally weather with wind speed reaching 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevail over many parts of central adjoining parts of northeast & southeast Bay of Bengal. **Squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over many parts of westcentral, western parts of southwest Arabian sea, along and off Somalia, Yemen, south Oman coasts. Fishermen are advised not to venture into these areas.



**07 September (Day 3):**

- ❖ **Heavy rainfall ( $\geq 7$  cm)** likely at isolated places over Rajasthan, Chhattisgarh, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Madhya Maharashtra, Gujarat Region, Coastal Andhra Pradesh & Yanam, Telangana, Karnataka.
- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Uttarakhand, Rajasthan, Madhya Pradesh, Chhattisgarh, Odisha.

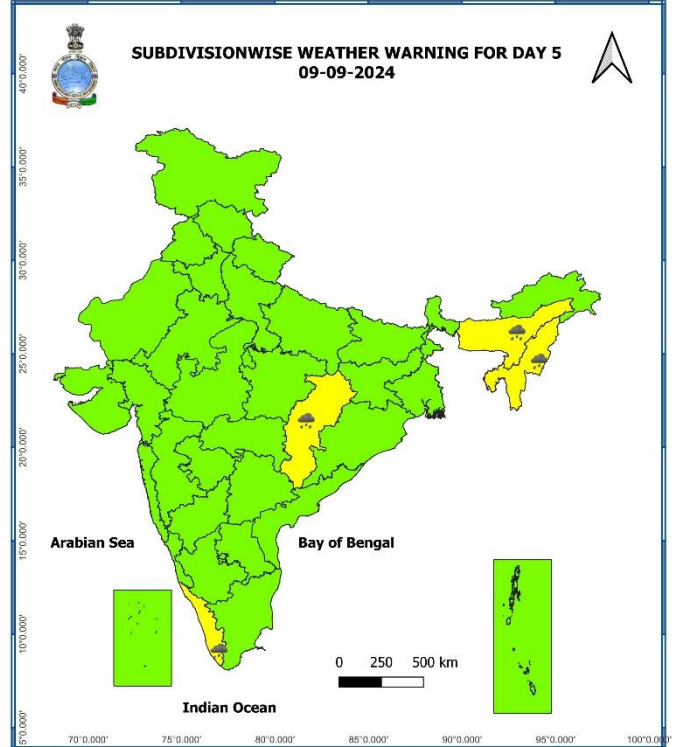
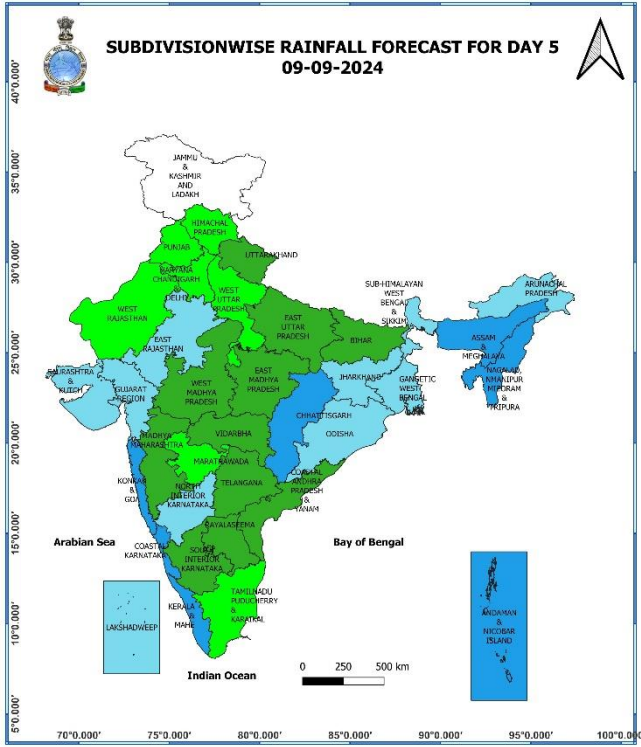
**Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** is likely to prevail over many parts of westcentral and adjoining parts of eastcentral Arabian sea, gulf of Mannar, off Sri Lanka coast, most parts of south and central Bay of Bengal, along off north Andhra Pradesh coast, Andaman Sea. **Squally weather with wind speed reaching 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevail over many parts of southeast and central Bay of Bengal. **Squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over many parts of westcentral, western parts of southwest Arabian sea, along and off Somalia coast. Fishermen are advised not to venture into these areas.



### 08 September (Day 4):

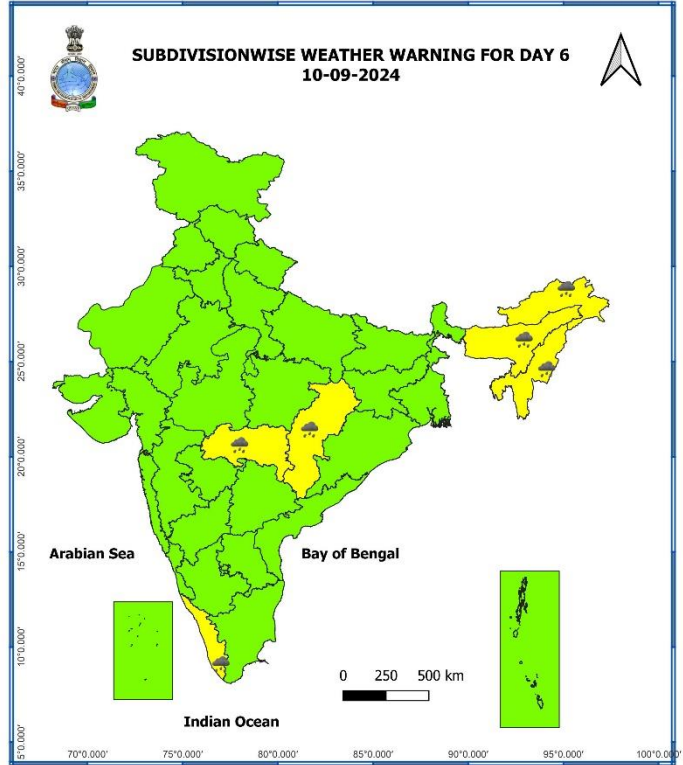
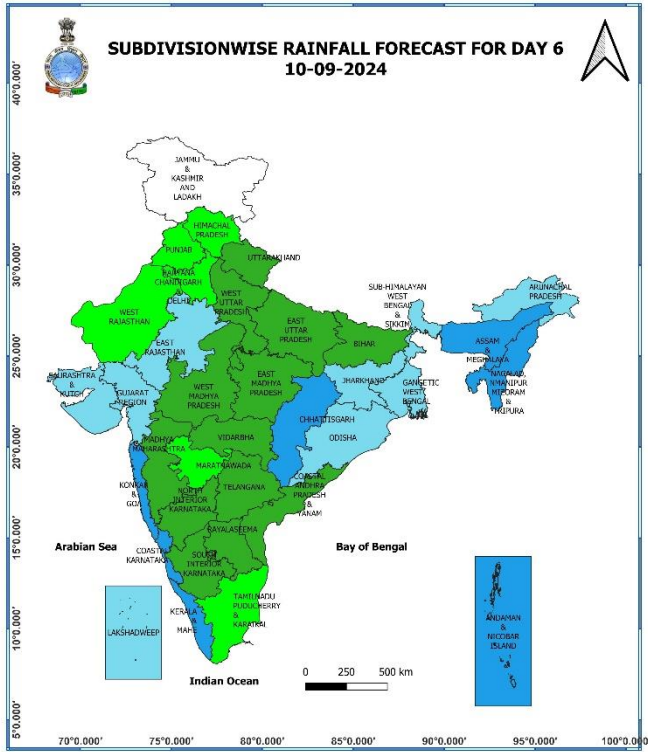
- ❖ **Heavy rainfall ( $\geq 7$  cm)** likely at isolated places over Odisha, Chhattisgarh, Konkan & Goa, Madhya Maharashtra, Gujarat Region, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Telangana, Coastal & North Interior Karnataka.
- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Uttarakhand, East Rajasthan, Madhya Pradesh, Chhattisgarh.

**Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** is likely to prevail over many parts of westcentral and adjoining parts of eastcentral Arabian sea, Gulf of Mannar, off Sri Lanka coast, most parts of south and central Bay of Bengal, along off north Andhra Pradesh coast, Andaman Sea. **Squally weather with wind speed reaching 45 kmph to 55 kmph gusting to 65 kmph** is likely to prevail over many parts of southeast and central Bay of Bengal. **Squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over many parts of westcentral, western parts of southwest Arabian sea, along and off Somalia coast. Fishermen are advised not to venture into these areas.



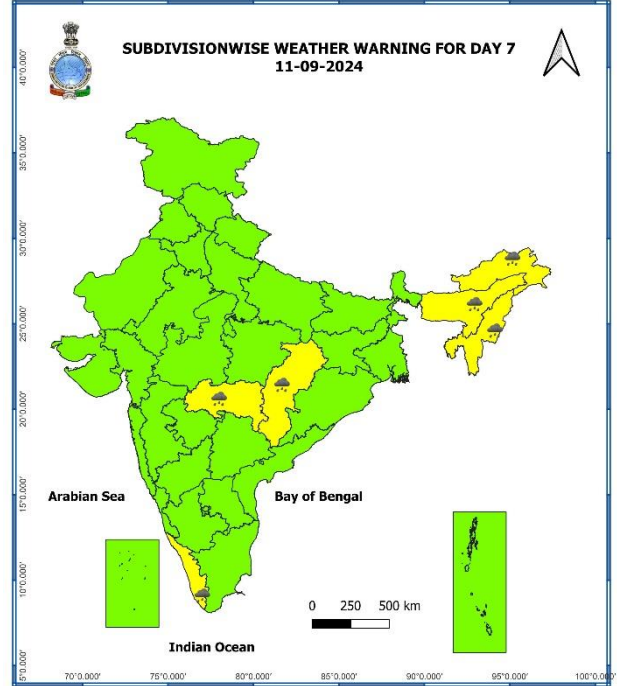
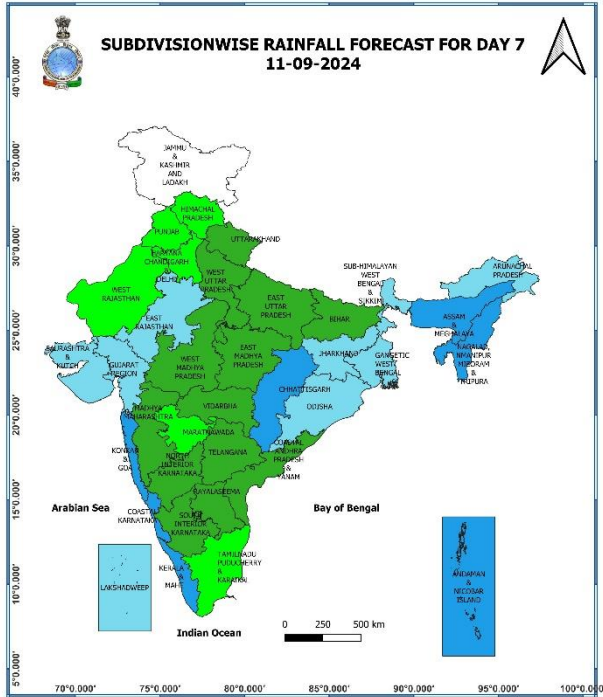
**09 September (Day 5):**

**Heavy rainfall ( $\geq 7$  cm) likely at isolated places over Chhattisgarh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Kerala & Mahe.**



**10 September (Day 6):**

- ❖ **Heavy rainfall ( $\geq 7$  cm)** likely at isolated places over Vidarbha, Chhattisgarh, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Kerala & Mahe.



### 11 September (Day 7):

- ❖ **Heavy rainfall ( $\geq 7$  cm)** likely at isolated places over Vidarbha, Chhattisgarh, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Kerala & Mahe.

### Weather Outlook for subsequent 3 days (During 12<sup>th</sup> September– 14<sup>th</sup> 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

- **Very heavy rainfall** at isolated over Coastal Andhra Pradesh & Yanam, Telangana on 05<sup>th</sup> September.
- **Low to Moderate flash flood risk** likely over few watersheds & neighbourhoods of Himachal Pradesh and Uttarakhand on 05<sup>th</sup> 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.
- ✓ Reduction of visibility over sea area due to sea spray induced by strong wind and heavy rainfall.
- ✓ Disruption of traffic in major cities due to water logging in roads leading to increased travel time.
- ✓ Minor damage to kutchha 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.
- ✓ It may lead to riverine flooding in some river catchments (for riverine flooding please visit Web page of CWC)

## Action Suggested

- ✓ Judicious regulation of offshore/onshore Operations
- ✓ 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 field crops and horticultural crops in Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Andaman & Nicobar, Jharkhand, Bihar, Himachal Pradesh, Uttarakhand, Rajasthan, Madhya Pradesh, Konkan & Goa, Madhya Maharashtra, Gujrat region, Karnataka, Coastal Andhra Pradesh and Telangana.
- ✓ Make provision for draining out excess water from standing crop fields and fruit orchards to avoid water stagnation in Sub Himalayan West Bengal, Odisha, Uttar Pradesh, Vidarbha, Chhattisgarh, Saurashtra & Kutch.
- ✓ Drain out excess water from rice, castor, cotton, pearl millet, groundnut, sesame and maize fields in **Gujarat**; from rice, soybean, red gram, maize, cotton and Turmeric in **Telangana** to prevent water logging.
- ✓ Store the harvested produce of black gram and green gram at safer places in **Vidarbha**.
- ✓ Provide mechanical support to horticultural crops & staking to vegetables.

**Flash Flood Guidance:**

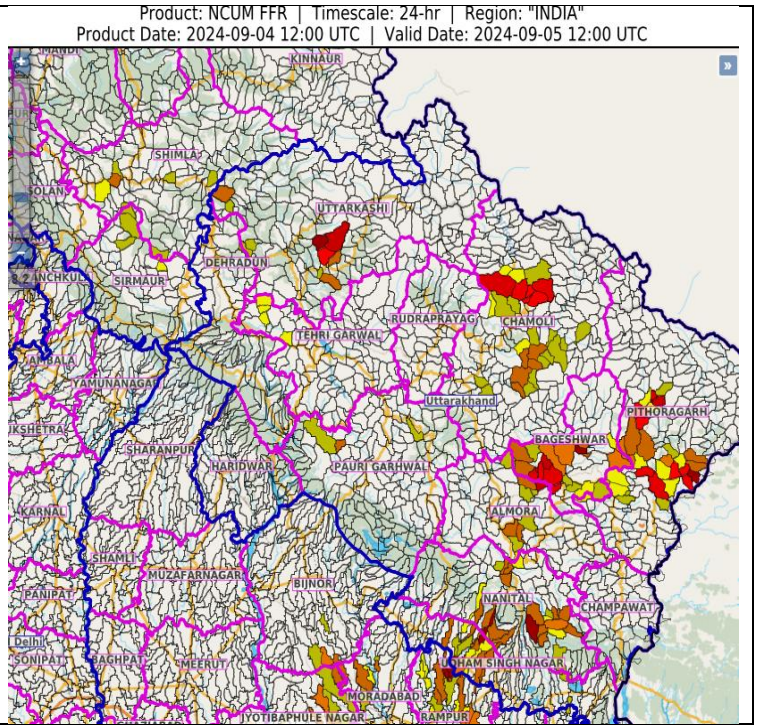
**ANNEXURE I**

**24 hours Outlook for the Flash Flood Risk (FFR) till 1730 IST of 05-09-2024:**

**Low to Moderate flash flood risk** likely over few watersheds & neighbourhoods of **Himachal Pradesh** - Shimla and Sirmaur districts.

**Uttarakhand** - Almora, Bageshwar, Chamoli, Dehradun, Nainital, Pauri Garhwal, Pithoragarh, Tehri Garwal, Udham Singh Nagar and Uttarkashi districts.

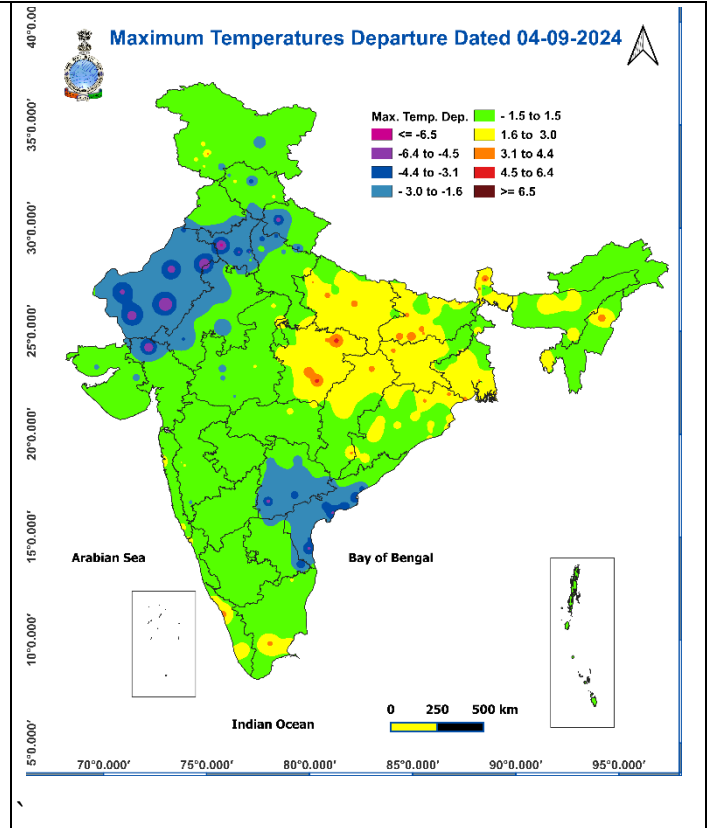
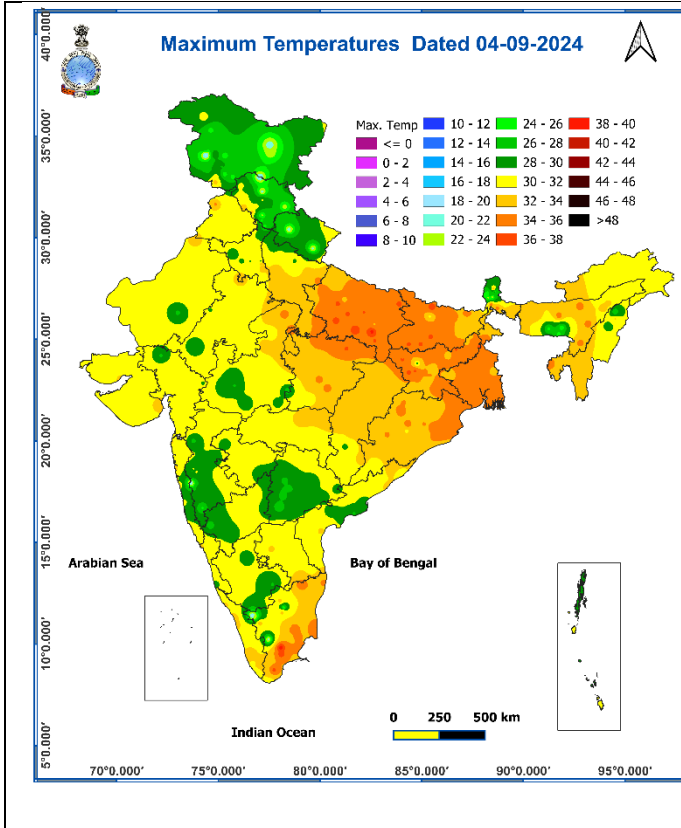
Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over AoC as shown in map due to expected rainfall occurrence in next 24 hours.



\* 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)

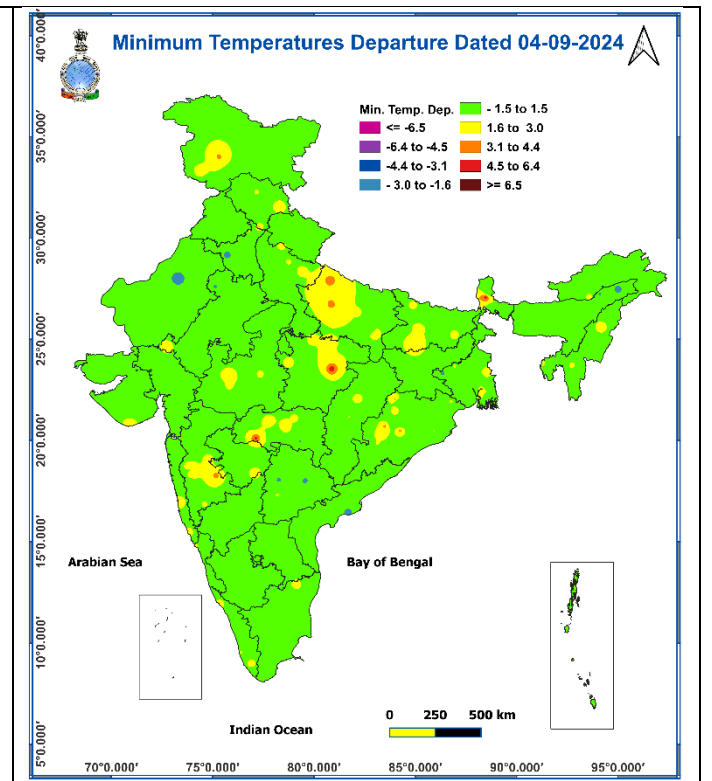
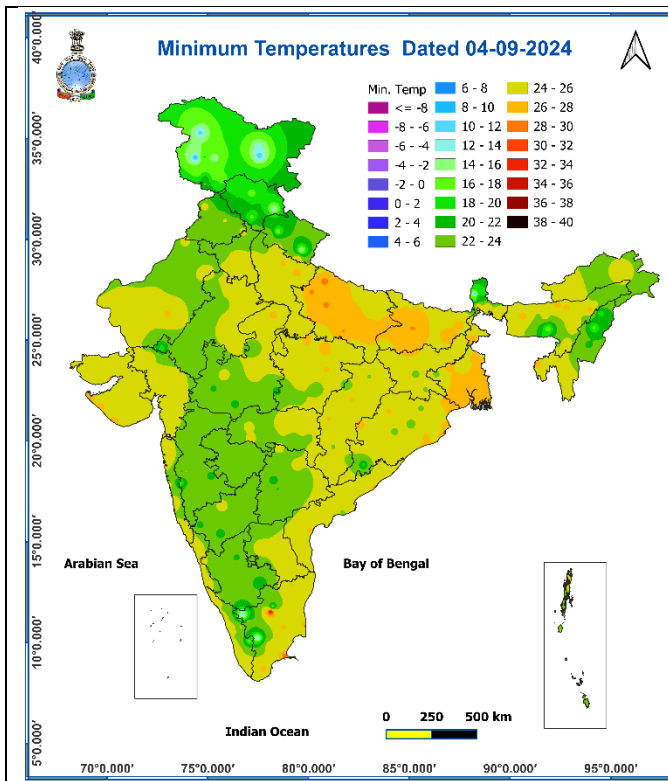
**Fig. 1: Maximum Temperatures**

**Fig. 2: Departure of Maximum Temperatures**

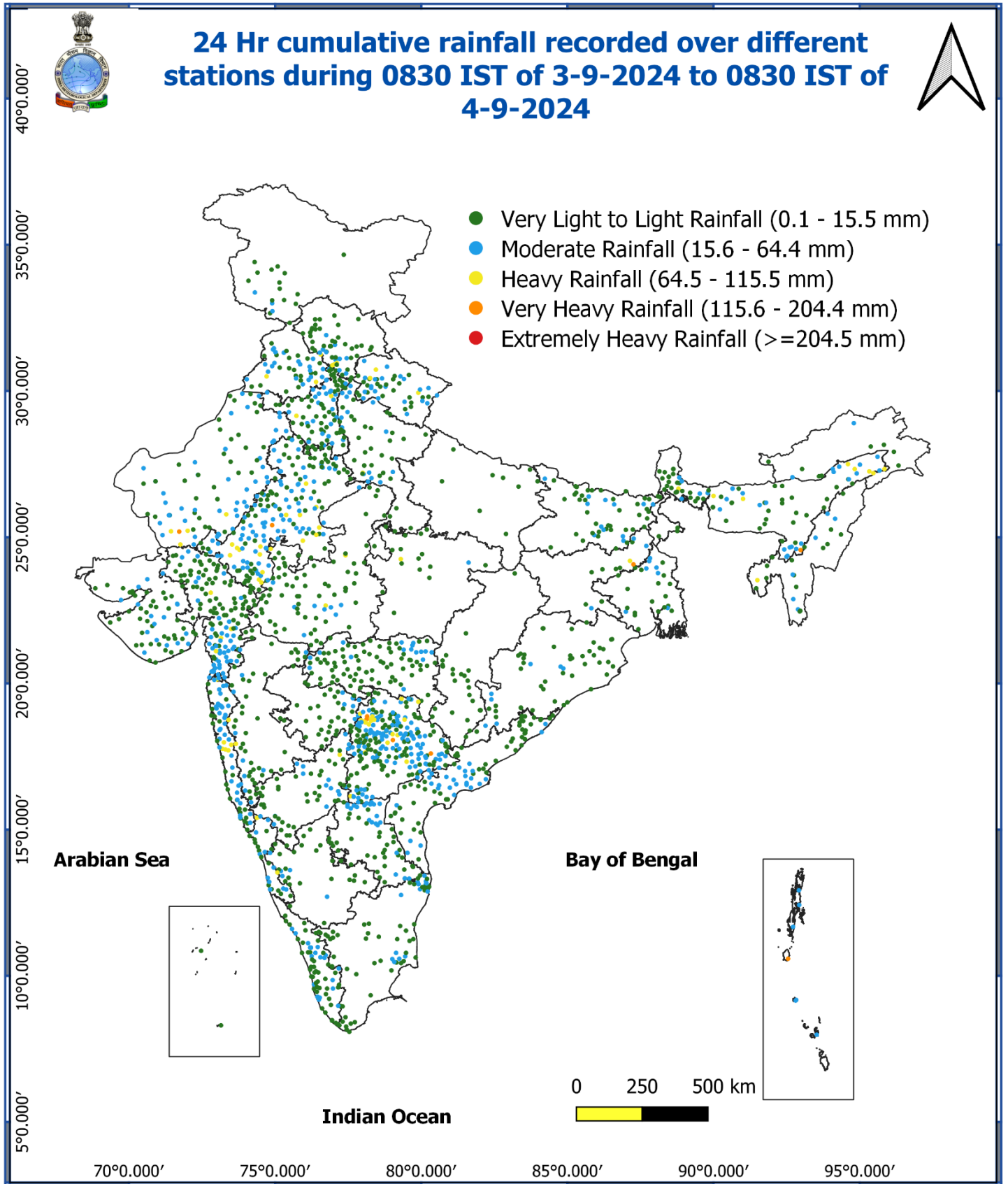


**Fig. 3: Minimum Temperatures**

**Fig. 4: Departure of Minimum Temperatures**



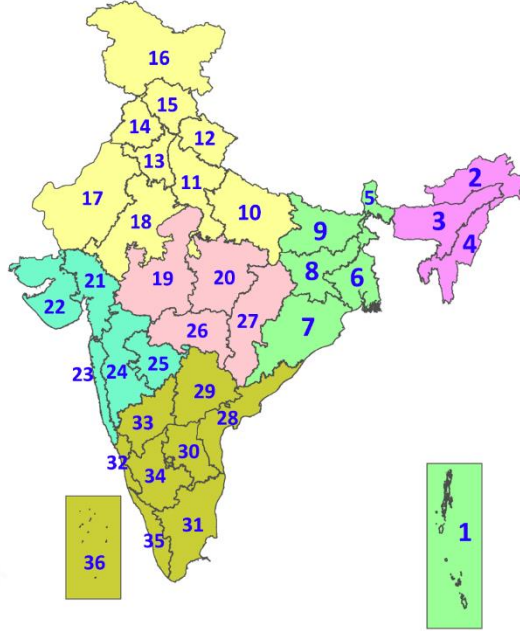
**Fig. 5: Accumulated Rainfall (mm) during past 24 hours**



\* 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 \*

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  $4.5^\circ\text{C}$  to  $6.4^\circ\text{C}$ .  
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  $40^\circ\text{C}$

Warm Night: When minimum temperature departure  $4.5^\circ\text{C}$  to  $6.4^\circ\text{C}$ .  
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  $-4.5^\circ\text{C}$  to  $-6.4^\circ\text{C}$ .  
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  $-4.5^\circ\text{C}$  to  $-6.4^\circ\text{C}$ .  
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)