

Wednesday, August 7, 2024  
Time of Issue: 0800 hours IST  
(MORNING)

## ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

### Significant Weather Features:

#### Weather Systems

- ✓ A **cyclonic circulation** over central Pakistan & neighbourhood and another over Gangetic West Bengal & adjoining Bangladesh both extending upto mid -tropospheric levels.
- ✓ An east-west **trough** runs from central parts of Rajasthan to East Bihar across Uttar Pradesh in lower tropospheric level.
- ✓ The **Monsoon trough** at mean sea level is active and lies south of its normal position.
- ✓ The **feeble off-shore trough** at mean sea level runs along South Gujarat to north Kerala coasts.

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

#### ❖ Northwest India

- ✓ Fairly widespread to widespread light to moderate rainfall **accompanied with thunderstorm & lightning** very likely over Jammu-Kashmir, Himachal Pradesh, Uttarakhand & Rajasthan; scattered to fairly widespread rainfall over Uttar Pradesh, Punjab, Haryana-Chandigarh-Delhi during the week.
- ✓ Isolated **very heavy rainfall** also likely over Himachal Pradesh on 07<sup>th</sup> & 10<sup>th</sup>; West Uttar Pradesh on 07<sup>th</sup> and Uttarakhand on 07<sup>th</sup> & 09<sup>th</sup> - 10<sup>th</sup> August.
- ✓ Isolated **heavy rainfall** very likely over Jammu-Kashmir, Punjab, Haryana-Chandigarh on 07<sup>th</sup> & 10<sup>th</sup>; Himachal Pradesh, Uttarakhand, East Uttar Pradesh, East Rajasthan during 07<sup>th</sup>-12<sup>th</sup>, West Rajasthan on 10<sup>th</sup>-12<sup>th</sup>; West Uttar Pradesh on 07<sup>th</sup> & 08<sup>th</sup> and on 11<sup>th</sup> & 12<sup>th</sup> August.

#### ❖ West & Central India

- ✓ Fairly widespread to widespread light to moderate rainfall **accompanied with thunderstorm & lightning** very likely over Konkan & Goa, Gujarat Region during the week; scattered to fairly widespread rainfall over Madhya Maharashtra, Marathwada & Saurashtra & Kutch during the week.
- ✓ **Very heavy rainfall** very likely at isolated places over East Madhya Pradesh on 07<sup>th</sup> August.
- ✓ **Heavy rainfall** very likely at isolated places over West Madhya Pradesh on 07<sup>th</sup> & 08<sup>th</sup>; East Madhya Pradesh on 07<sup>th</sup> & 08<sup>th</sup>; Chhattisgarh on 07<sup>th</sup>; Konkan & Goa during 07<sup>th</sup> -11<sup>th</sup>, Madhya Maharashtra during 07<sup>th</sup>-12<sup>th</sup> and Gujarat Region on 08<sup>th</sup> & 09<sup>th</sup> August.

#### ❖ East & Northeast India

- ✓ Fairly widespread to widespread light to moderate rainfall **accompanied with thunderstorm, lightning** very likely over East & Northeast India during the week.
- ✓ **Heavy to very heavy rainfall** very likely at isolated places over Assam & Meghalaya during 07<sup>th</sup>-12<sup>th</sup>; Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura during 07<sup>th</sup>-10<sup>th</sup>.
- ✓ Isolated **heavy rainfall** very likely over Bihar during 07<sup>th</sup>-11<sup>th</sup>; Odisha on 07<sup>th</sup> & 08<sup>th</sup>; Jharkhand on 07<sup>th</sup> & 11<sup>th</sup>; Sub-Himalayan West Bengal & Sikkim during 07<sup>th</sup>-10<sup>th</sup>.

#### ❖ South Peninsular India:

- ✓ Scattered to fairly widespread light to moderate rainfall over Kerala & Mahe, Lakshadweep, Karnataka and isolated to scattered rainfall over Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam, Telangana and Rayalaseema during next 5 days.
- ✓ **Heavy rainfall** very likely at isolated places over Tamil Nadu, Coastal Andhra Pradesh & Yanam, Telangana on 07<sup>th</sup> August.

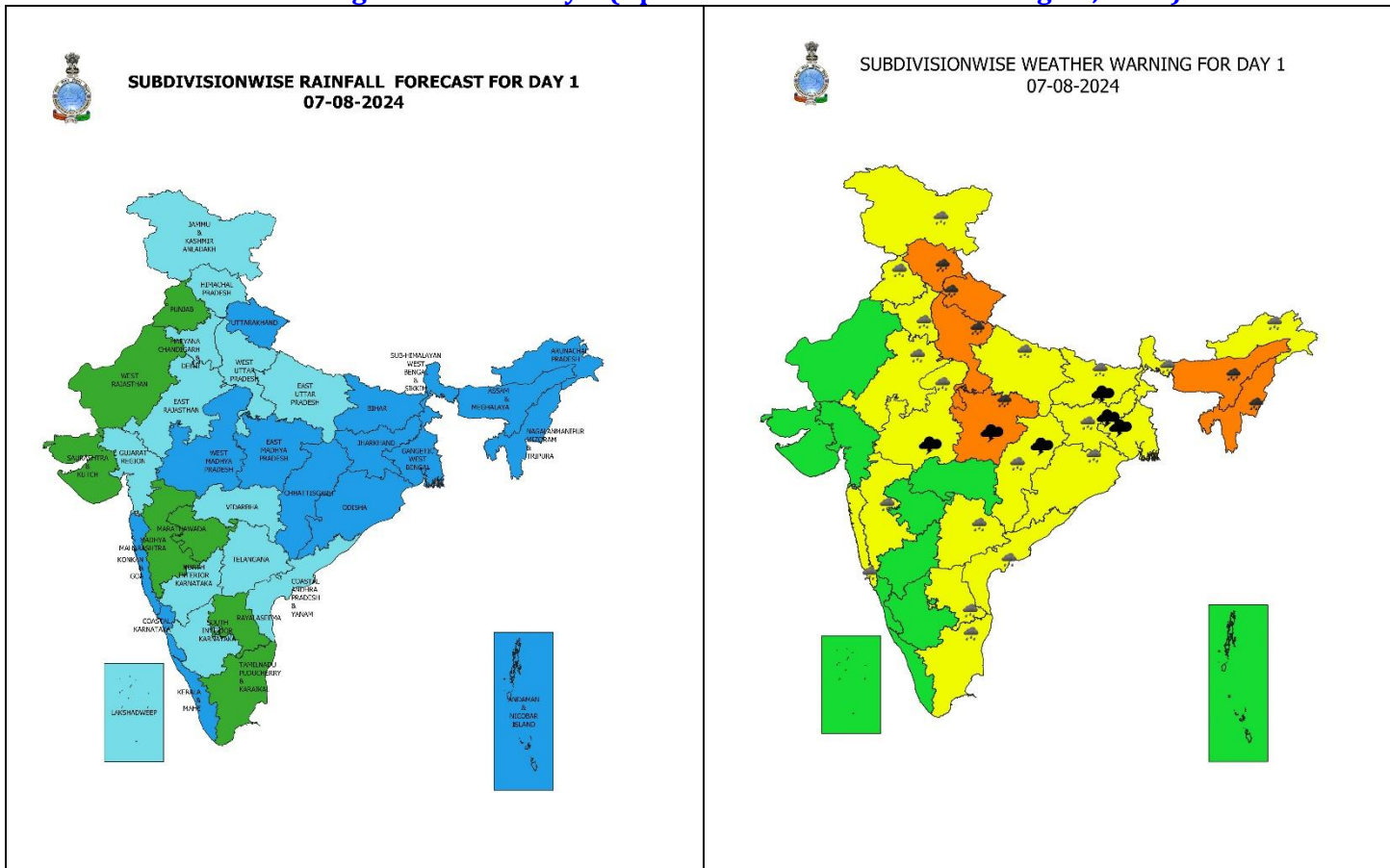
## Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST to 1730 hours IST of yesterday): **at many places** over Sub-Himalayan West Bengal & Sikkim, Himachal Pradesh and Kerala & Mahe; **at a few places** over Arunachal Pradesh, Assam & Meghalaya, Bihar, Odisha, East Uttar Pradesh, East Rajasthan, Chhattisgarh and Konkan & Goa; **at isolated places** over Uttarakhand, Punjab, West Rajasthan, Madhya Pradesh, Gujarat Region, Madhya Maharashtra, Telangana, Rayalaseema, Coastal Andhra Pradesh & Yanam and Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad.
- ❖ **Heavy rainfall recorded** (from 0830 hours IST to 1730 hours IST of yesterday): **Heavy to very heavy rainfall** at isolated places over Chhattisgarh; **Heavy rainfall** at isolated places over Assam & Meghalaya, Bihar and Jharkhand.
- ❖ **Significant amount of rainfall** (from 0830 hours IST to 1730 hours IST of yesterday) (in cm): **Assam & Meghalaya:** Majbat-7, Goalpara-2; **Bihar:** Supaul & Gaya -2 each; **Jharkhand:** Daltonganj-7; **Odisha:** Keonjhar-4; Dhenkanal-3; Sambalpur-1; **East Uttar Pradesh:** Babatpur & Varanasi -4 each; Gazipur-3; **Uttarakhand:** Dehradun-2; **Himachal Pradesh:** Shimla-2; **West Rajasthan:** Jodhpur-2; **East Rajasthan:** Sikar-1; **Coastal Karnataka:** Honavar & Mangalore-3 each; **Tamil Nadu, Puducherry & Karaikal:** Tiruttani-1; **Kerala & Mahe:** Kannur-3; Cannanore-2; **Rayalaseema:** Tirupathi-4; Cuddapah-1; **Chhattisgarh:** Jagdalpur-12; Raipur & Pandra Road -3 each.
- ❖ **Minimum Temperature Departures (as on 06-08-2024):** Minimum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at isolated places over Himachal Pradesh; **above normal (1.6°C to 3.0°C)** at isolated places over East Madhya Pradesh, Vidarbha, North Interior Karnataka, Konkan & Goa, Telangana, Chhattisgarh, Odisha, Rayalaseema, Coastal Andhra Pradesh & Yanam, Kerala & Mahe, Bihar, Punjab, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad. These were **below normal (-1.6°C to -3.0°C)** at isolated places over East Rajasthan, Tamil Nadu, Puducherry & Karaikal, Gangetic West Bengal, Assam & Meghalaya and are **near normal** over rest parts of the country. Yesterday, **the lowest minimum temperature of 20.0°C** was reported at **Yeotmal (Vidarbha)** over the plains of the country (Fig.4).
- ❖ **Maximum Temperature Departures (as on 06-08-2024):** 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 many places over Kerala & Mahe; at a few places over Himachal Pradesh and Vidarbha; at isolated places over Uttarakhand, Punjab, Madhya Pradesh and Tamil Nadu, Puducherry & Karaikal. These were **markedly below normal (-5.1°C or Less)** at a few places over West Rajasthan and at isolated places East Rajasthan; **below normal (-1.6°C to -3.0°C)** at isolated places over Arunachal Pradesh, Assam & Meghalaya, Odisha, Coastal Andhra Pradesh & Yanam, Telangana, Coastal Karnataka and Saurashtra & Kutch and **near normal** over rest parts of the country. Yesterday, **the highest Maximum Temperature of 36.1°C** was reported at **Nahan (Haryana)** over the country (Fig. 2).

### Meteorological Analysis (Based on 0530 hours IST)

- ❖ The **Monsoon trough** at mean sea level now passes through Ganganagar, Hissar, Agra, Daltonganj, Jamshedpur, Digha and thence southeastwards to northeast Bay of Bengal.
- ❖ The **cyclonic circulation** over central Pakistan & neighbourhood extending upto 5.8 km above mean sea level persists.
- ❖ The east-west **trough** from northwest Rajasthan to East Bihar across Uttar Pradesh between 0.9 & 3.1 km above mean sea level persists.
- ❖ The **cyclonic circulation** over northeast Assam & neighbourhood between 1.5 & 4.5 km above mean sea level persists.
- ❖ The **cyclonic circulation** over Gangetic West Bengal and adjoining Bangladesh persists and seen upto 7.6 km above mean sea level tilting southwestwards with height.
- ❖ The **feeble off-shore trough** at mean sea level along south Gujarat to north Kerala coast persists.

Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 14<sup>th</sup> August, 2024)

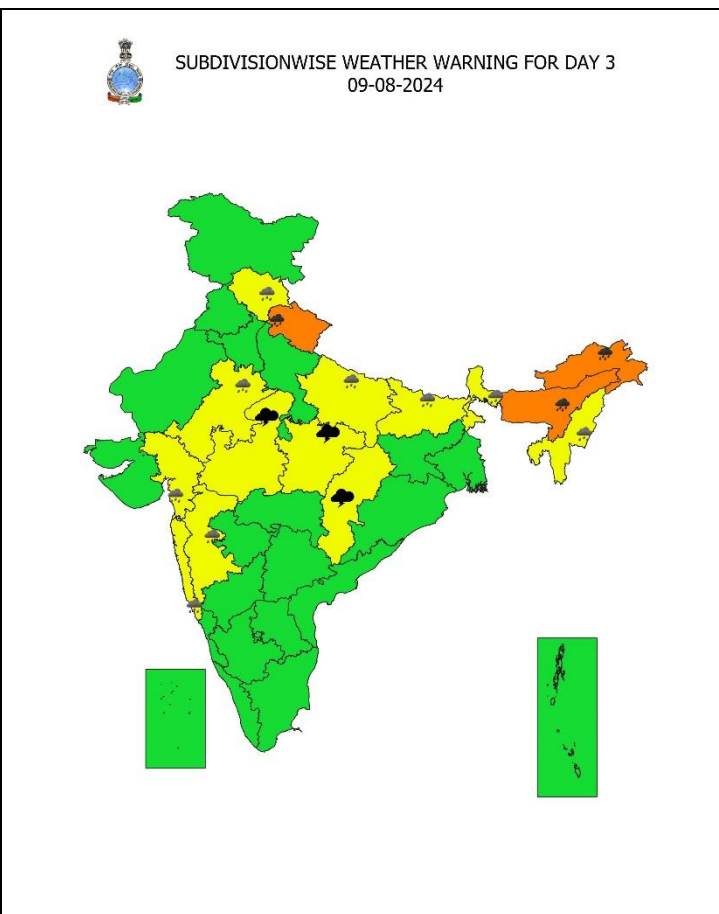
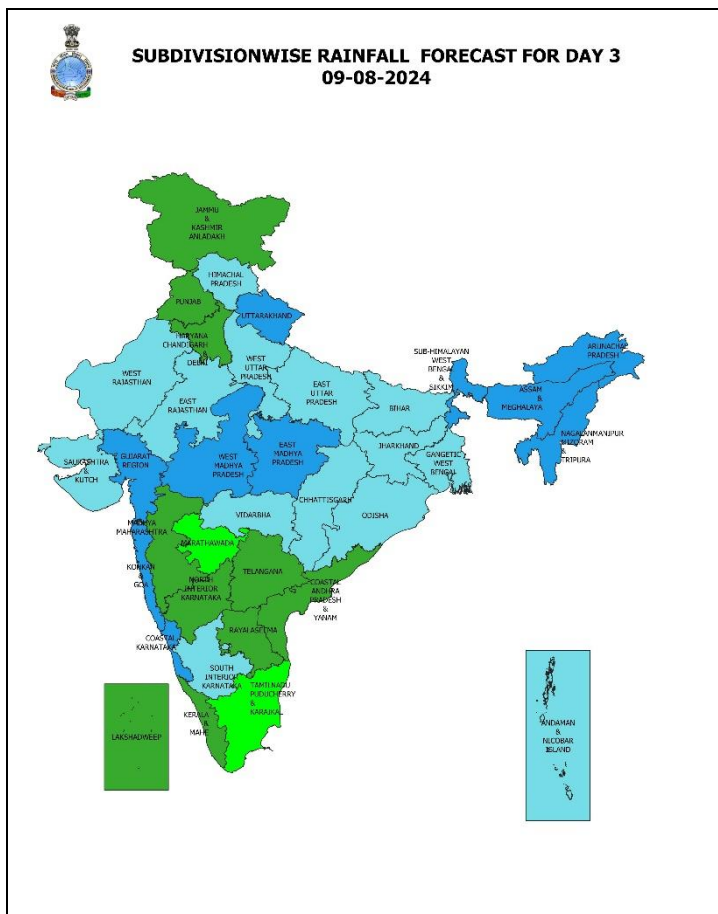


07 August (Day 1):

- ❖ **Heavy to very heavy rainfall ( $\geq 12$  cm)** very likely at isolated places over Himachal Pradesh, Uttarakhand, West Uttar Pradesh, East Madhya Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura; **Heavy rainfall ( $\geq 7$  cm)** at isolated places over Jammu division, Punjab, Haryana-Chandigarh, East Uttar Pradesh, East Rajasthan, West Madhya Pradesh, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim, Bihar, Jharkhand, Odisha, Arunachal Pradesh, Konkan & Goa, Madhya Maharashtra, Rayalaseema, Tamil Nadu, Puducherry & Karaikal, Coastal Andhra Pradesh & Yanam and Telangana.
- ❖ **Thunderstorm accompanied with lightning** very likely at isolated places over Madhya Pradesh, Chhattisgarh, Gangetic West Bengal, Bihar and Jharkhand.

**Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over northeast and adjoining northwest Arabian sea, many parts of eastcentral and westcentral Arabian sea, northern parts of southwest Arabian sea, along and off Gujrat coast, gulf of Mannar, off Sri Lanka coast, southwest and adjoining southeast Bay of Bengal, many parts of central Bay of Bengal and few southern parts of northwest Bay of Bengal. **Squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over central Arabian sea & adjoining areas of southwest Arabian sea, along & off Somalia, Yemen & Oman coasts. Fishermen are advised not to venture into these areas.



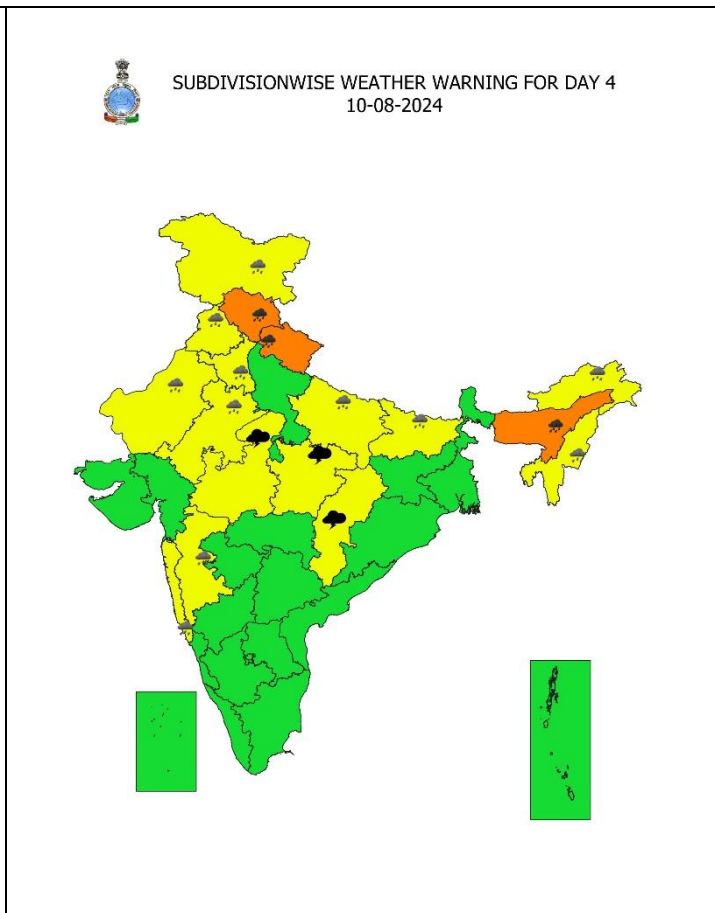
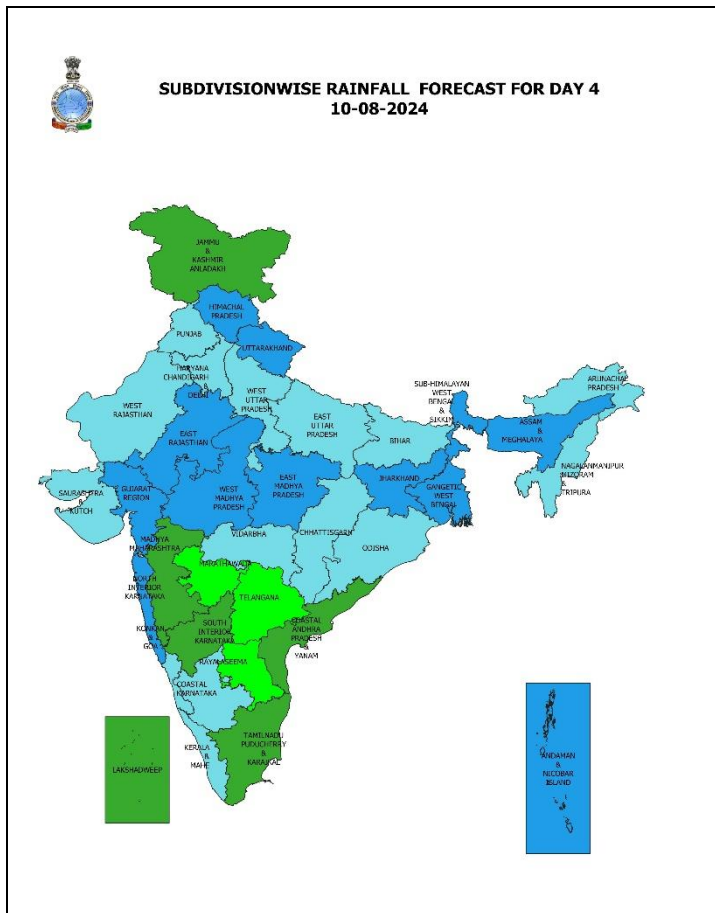


**09 August (Day 3):**

❖ **Heavy to very heavy rainfall ( $\geq 12$  cm)** likely at isolated places over Uttarakhand, Arunachal Pradesh and Assam & Meghalaya; **Heavy rainfall ( $\geq 7$  cm)** at isolated places over Himachal Pradesh, East Uttar Pradesh, East Rajasthan, Sub-Himalayan West Bengal & Sikkim, Bihar, Nagaland, Manipur, Mizoram & Tripura, Konkarn & Goa, Madhya Maharashtra and Gujarat Region.

❖ **Thunderstorm accompanied with lightning** likely at isolated places over Madhya Pradesh and Chhattisgarh.

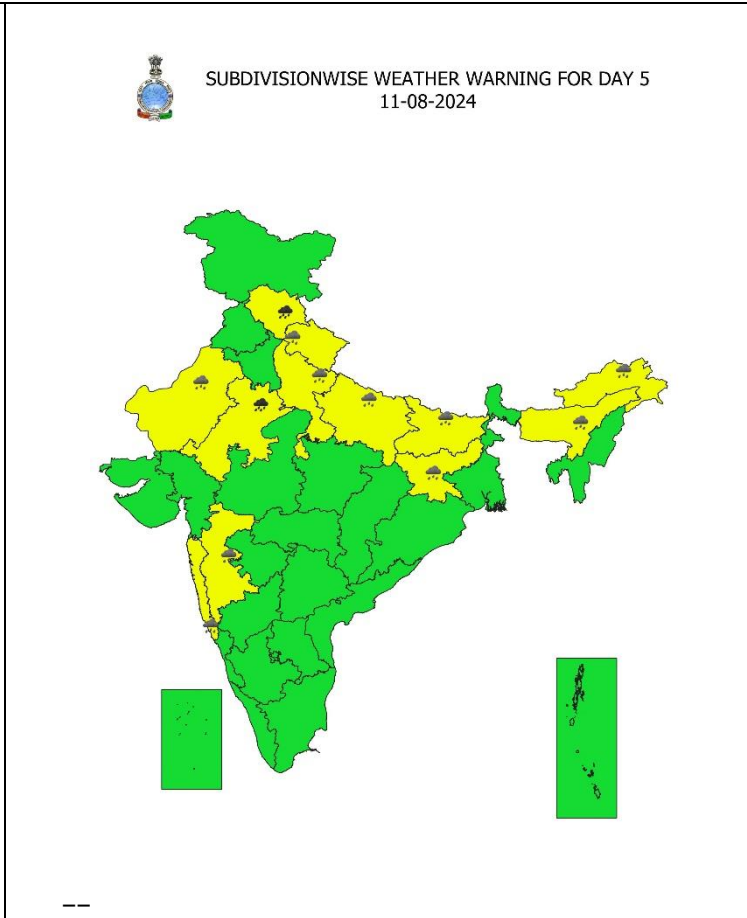
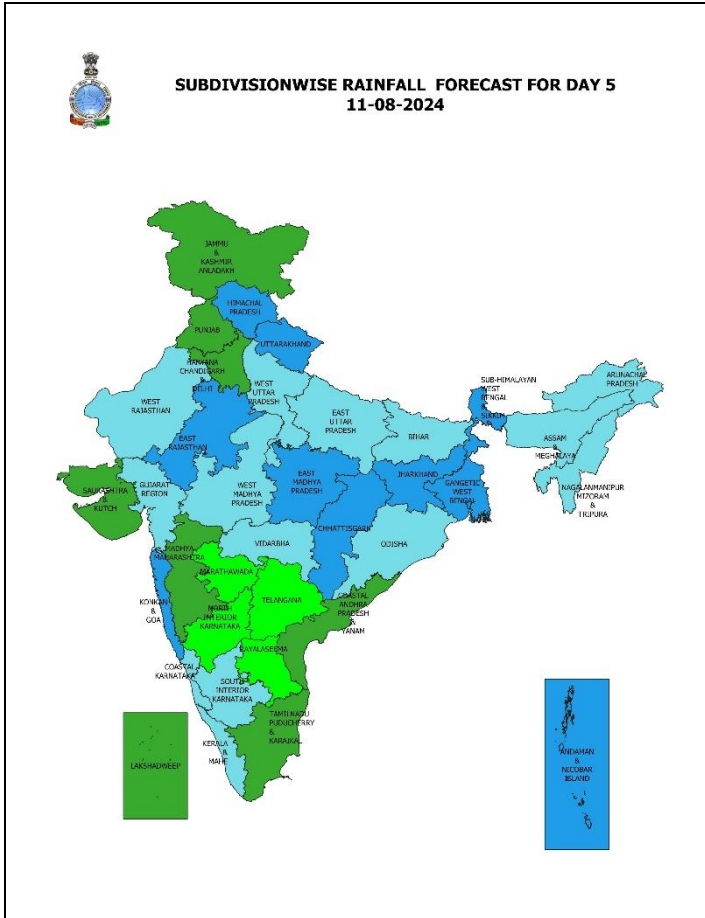
**Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over northeast and adjoining northwest Arabian sea, many parts of eastcentral and westcentral Arabian sea, northern parts of southwest Arabian sea, along and off Gujrat coast, gulf of Mannar, off Sri Lanka coast, southwest and adjoining southeast Bay of Bengal, many parts of central Bay of Bengal and few southern parts of northwest Bay of Bengal. **Squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over central Arabian sea & adjoining areas of southwest Arabian sea, along & off Somalia, Yemen & Oman coasts. Fishermen are advised not to venture into these areas.



### 10 August (Day 4):

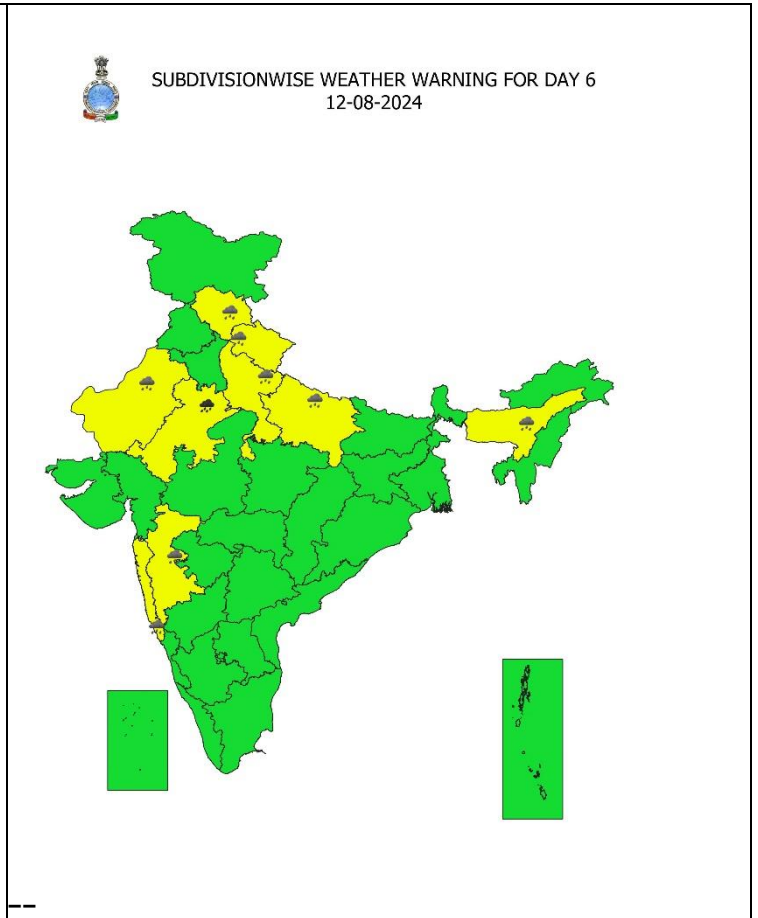
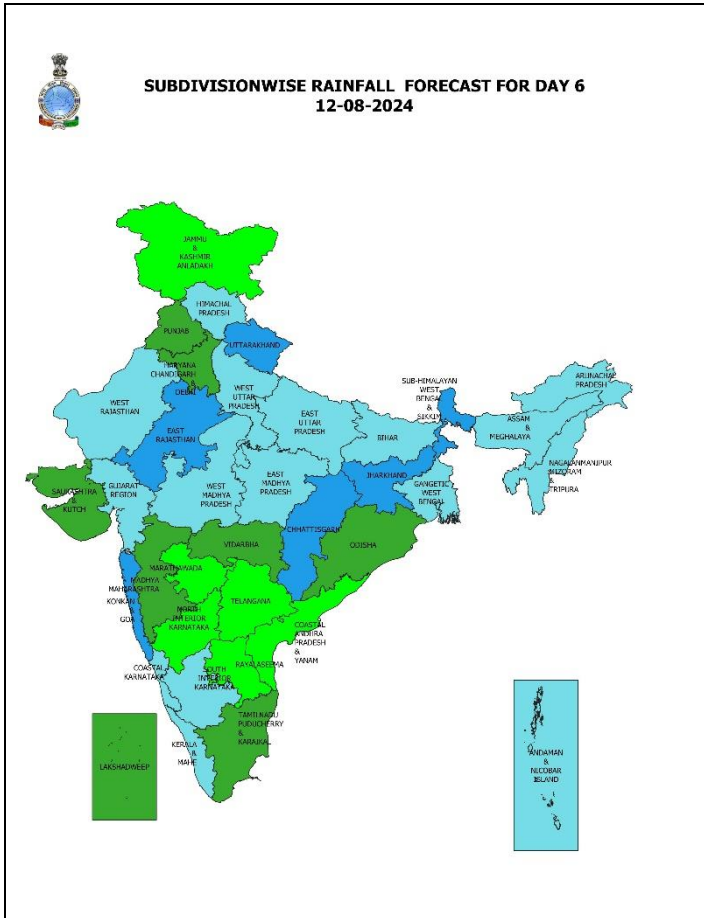
- ❖ **Heavy to very heavy rainfall ( $\geq 12$  cm)** likely at isolated places over Himachal Pradesh, Uttarakhand and Assam & Meghalaya; **Heavy rainfall ( $\geq 7$  cm)** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Punjab, Haryana-Chandigarh, East Uttar Pradesh, Rajasthan, Bihar, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa and Madhya Maharashtra.
- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Madhya Pradesh and Chhattisgarh.

**Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** likely to prevail over northeast and adjoining northwest Arabian sea, many parts of eastcentral and westcentral Arabian sea, northern parts of southwest Arabian sea, along and off Gujrat coast, gulf of Mannar, off Sri Lanka coast, southwest and adjoining southeast Bay of Bengal, many parts of central Bay of Bengal and few southern parts of northwest Bay of Bengal. **Squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over central Arabian sea & adjoining areas of southwest Arabian sea, along & off Somalia, Yemen & Oman coasts. Fishermen are advised not to venture into these areas.



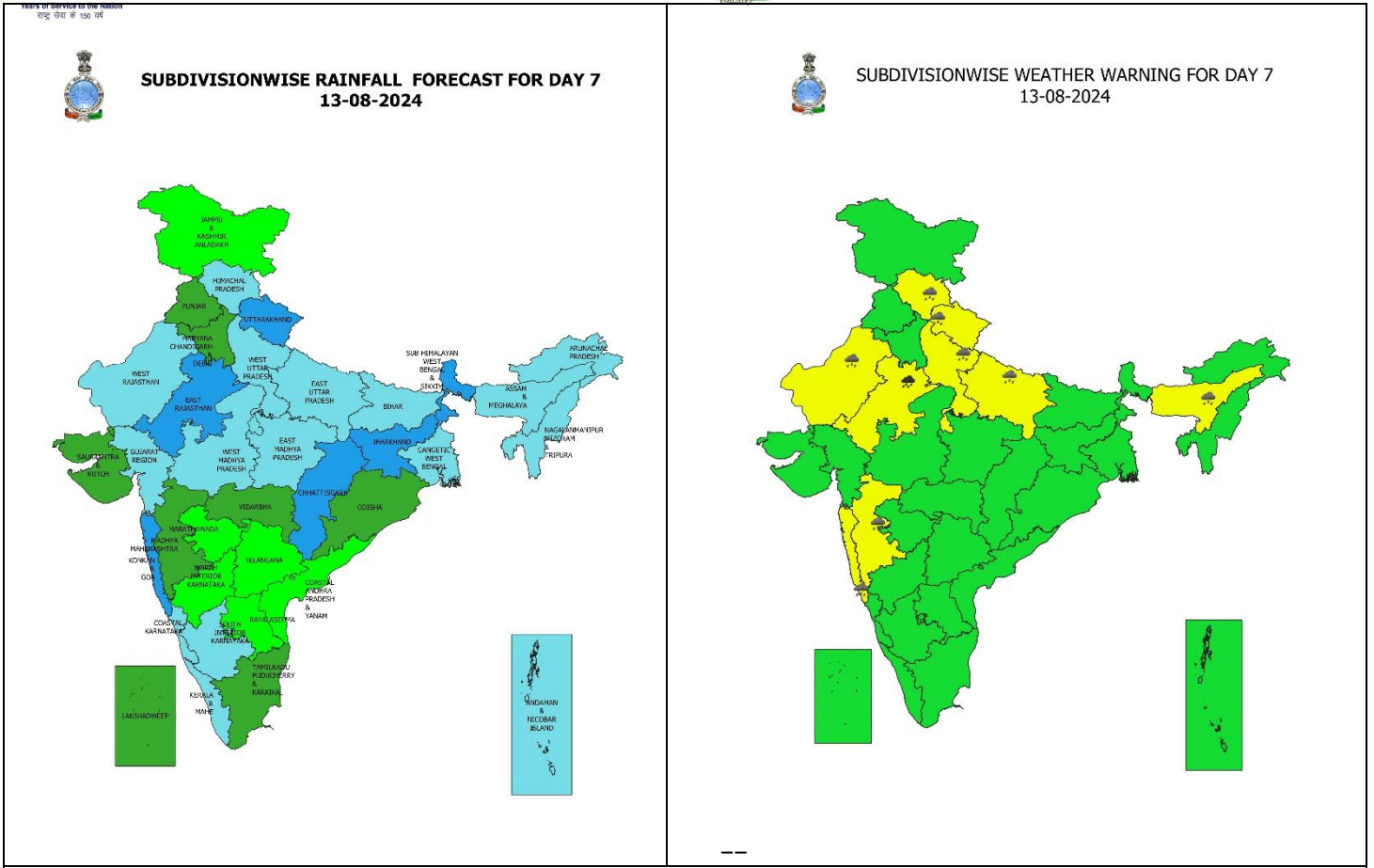
**11 August (Day 5):**

**Heavy to very heavy rainfall ( $\geq 12$  cm)** likely at isolated places over Himachal Pradesh and East Rajasthan; **Heavy rainfall ( $\geq 7$  cm)** at isolated places over Uttarakhand, Uttar Pradesh, West Rajasthan, Bihar, Jharkhand, Arunachal Pradesh, Assam & Meghalaya, Konkan & Goa and Madhya Maharashtra.



**12 August (Day 6):**

**Heavy to very heavy rainfall ( $\geq 12$  cm)** likely at isolated places over East Rajasthan; **Heavy rainfall ( $\geq 7$  cm)** at isolated places over Himachal Pradesh, Uttarakhand, Uttar Pradesh, West Rajasthan, Assam & Meghalaya, Konkan & Goa and Madhya Maharashtra.



**13 August (Day 7):**

- ❖ **Heavy to very heavy rainfall ( $\geq 12$  cm)** likely at isolated places over East Rajasthan; **Heavy rainfall ( $\geq 7$  cm)** at isolated places over Himachal Pradesh, Uttarakhand, Uttar Pradesh, West Rajasthan, Assam & Meghalaya, Konkan & Goa and Madhya Maharashtra.

**Weather Outlook for subsequent 3 days (During 14<sup>th</sup> August - 16<sup>th</sup> August, 2024)**

- ❖ Fairly widespread to widespread rainfall likely over most parts of the country except Marathwada 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.**

\* 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.  
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## Impact due to

- Isolated **very heavy rainfall** over Himachal Pradesh on 07<sup>th</sup> & 10<sup>th</sup>; West Uttar Pradesh, East Madhya Pradesh on 07<sup>th</sup>; Uttarakhand on 07<sup>th</sup>, 09<sup>th</sup> & 10<sup>th</sup> and Assam & Meghalaya during 07<sup>th</sup>-10<sup>th</sup> August.  
**Low to Moderate flash flood risk over few watersheds & neighbourhoods of Himachal Pradesh and Uttarakhand Met Sub-divisions during next 24 hours. (ANNEXURE I)**
- ✓ 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 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.
- ✓ It may lead to riverine flooding in some river catchments (for riverine flooding please visit Web page of CWC)

## Action Suggested

- ✓ 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

- Make provision for draining out excess water from crop fields to avoid water stagnation in North Eastern states, West Bengal, Odisha, Bihar, Himachal Pradesh, Uttarakhand, Rajasthan, Madhya Pradesh, ghat areas of Madhya Maharashtra, Tamil Nadu, Kerala, Coastal Karnataka and Telangana.
- Provide mechanical support to horticultural crops & staking to vegetables.

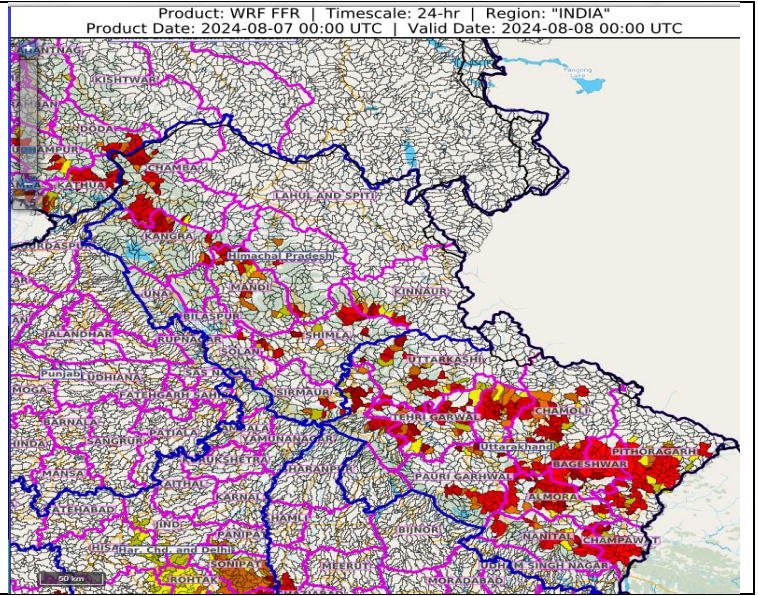
**FLASH FLOOD GUIDANCE:**

**Annexure-I**

**24 hours Outlook for the Flash Flood Risk (FFR) till 0530 IST of 08-08-2024:**

Low to Moderate flash flood risk likely over few watersheds & neighbourhoods of Himachal Pradesh and Uttarakhand Met Sub-divisions during next 24 hours.

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



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Fig. 1: Maximum Temperatures

Fig. 2: Departure of Maximum Temperatures

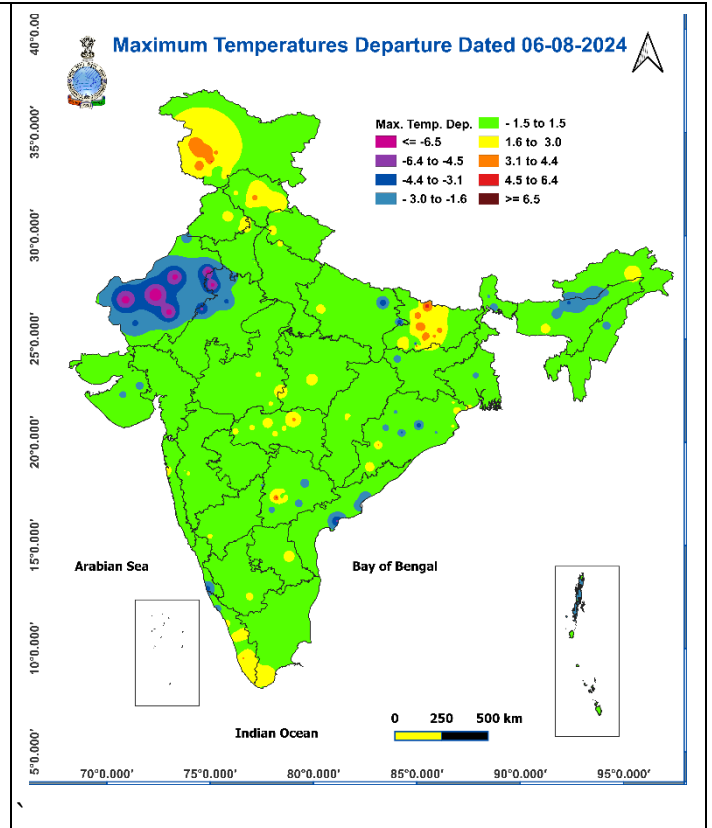
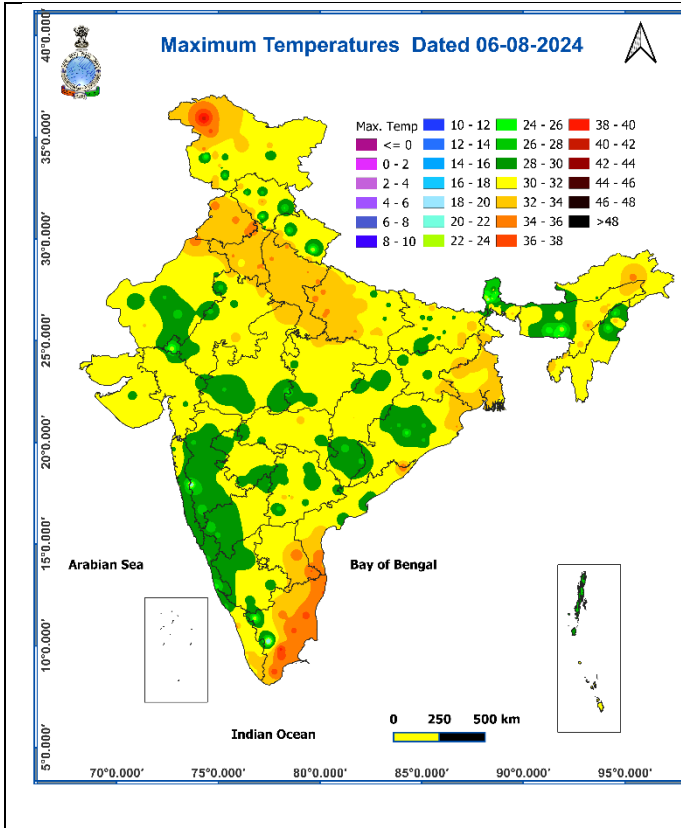


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures

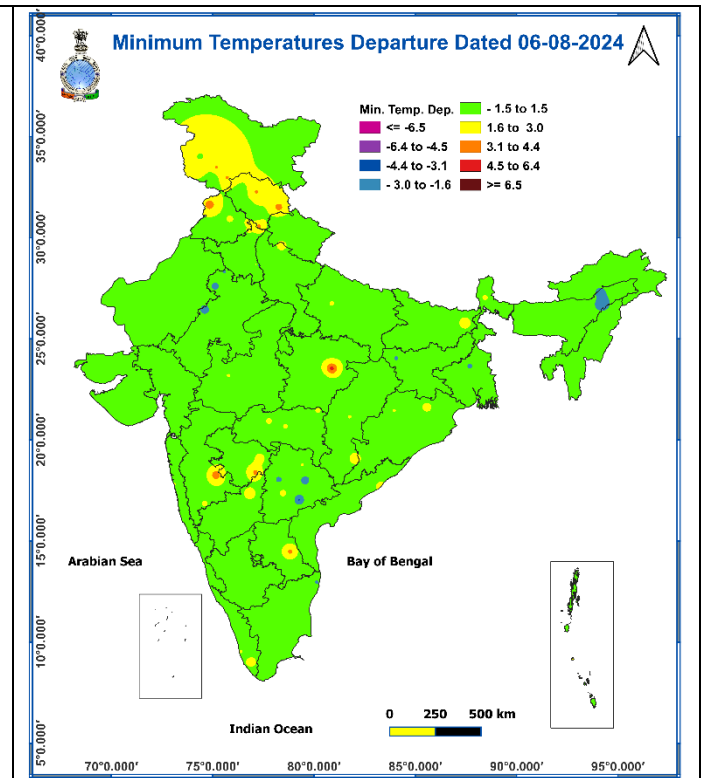
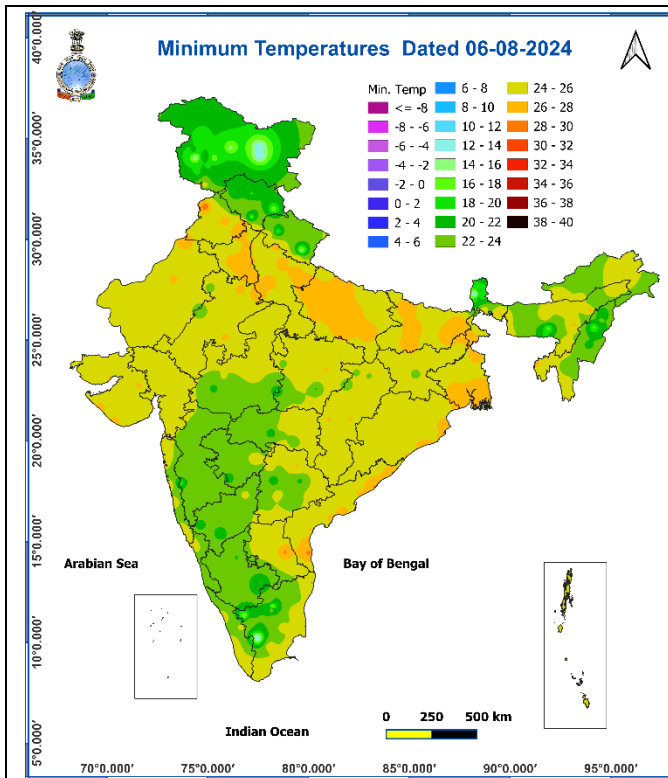
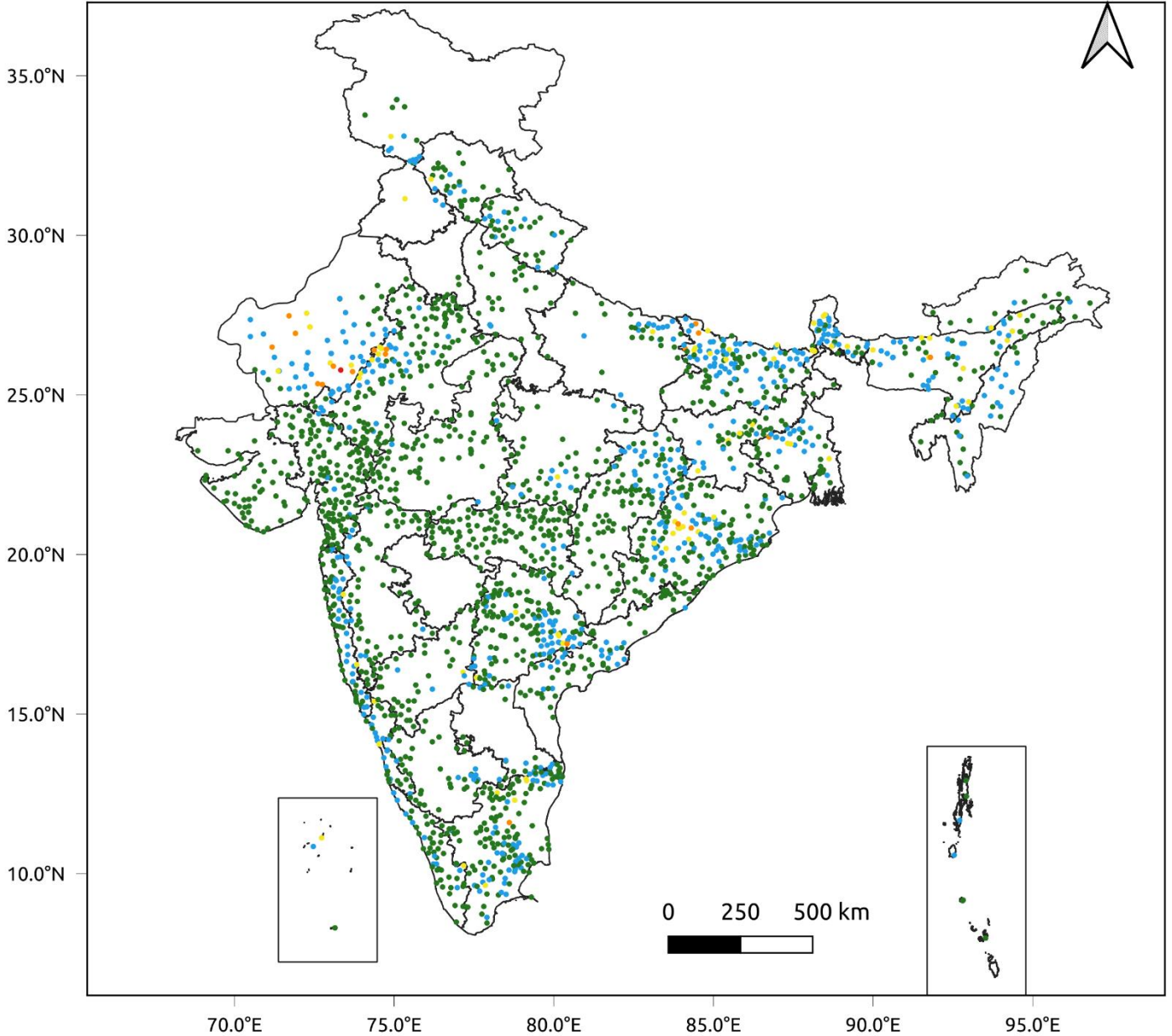


Fig. 5: Accumulated Rainfall (mm) during past 24 hours



24 Hr cumulative rainfall recorded over different stations during 0830 IST of 5-8-2024 to 0830 IST of 6-8-2024

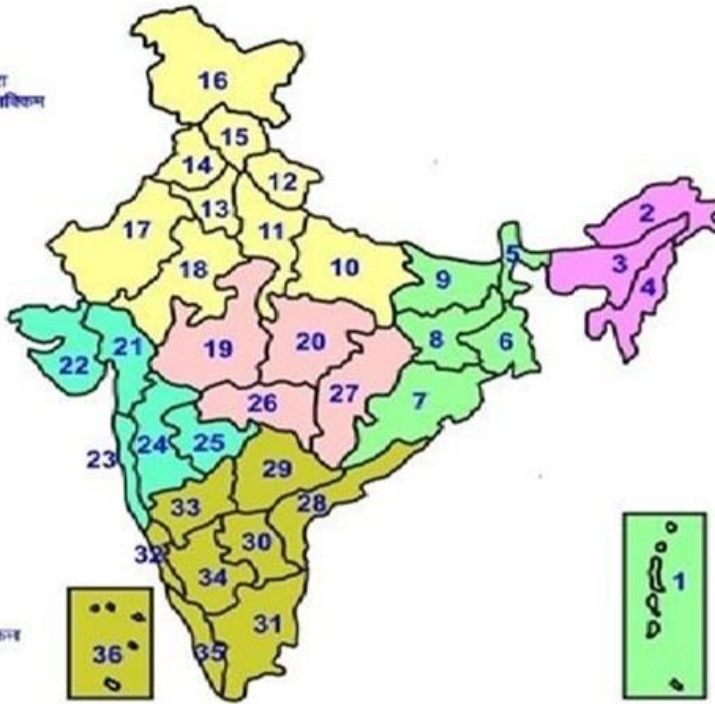


## Legends

- Very Light to Light Rainfall (0.1 - 15.5 mm)
- Moderate Rainfall (15.6 - 64.4 mm)
- Heavy Rainfall (64.5 - 115.5 mm)
- Very Heavy Rainfall (115.6 - 204.4 mm)
- Extremely Heavy Rainfall ( $\geq 204.5$  mm)

## LEGENDS

- 1 अंडमन और निकोबार द्वीप समूह
- 2 अरुणाचल प्रदेश
- 3 असम और मेघालय
- 4 नागालैंड, मणिपुर, मिजोरम और त्रिपुरा
- 5 उप हिमालय पश्चिम बंगाल एवं सिक्किम
- 6 पश्चिम बंगाल
- 7 ओडिशा
- 8 झारखंड
- 9 बिहार
- 10 पूर्वी उत्तर प्रदेश
- 11 पश्चिम उत्तर प्रदेश
- 12 उत्तराखंड
- 13 हरियाणा, चंडीगढ़ एवं दिल्ली
- 14 पंजाब
- 15 हिमाचल प्रदेश
- 16 जम्मू एवं कश्मीर एवं लद्दाख
- 17 पश्चिम राजस्थान
- 18 पूर्वी राजस्थान
- 19 पश्चिम मध्य प्रदेश
- 20 पूर्वी मध्य प्रदेश
- 21 गुजरात क्षेत्र
- 22 सौराष्ट्र एवं कच्छ
- 23 कोकण एवं गोवा
- 24 मध्य महाराष्ट्र
- 25 मराठवाड़ा
- 26 विदर्भ
- 27 छत्तीसगढ़
- 28 उत्तर आंध्र प्रदेश एवं यनम
- 29 तेलंगाना
- 30 दक्षिण तेलंगाना
- 31 तमिलनाडु, पुदुचेरी एवं कराईकल
- 32 उत्तरी कर्नाटक
- 33 अंतरीक उत्तरी कर्नाटक
- 34 अंतरीक दक्षिणी कर्नाटक
- 35 केरल एवं 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, Chd & 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. Marathawada
26. Vidharbha
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)

			Subdivision Colour

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## LEGENDS

### WARNING

WARNING (TAKE ACTION)
ALERT ( BE PREPARED)
WATCH (BE UPDATED)
NO WARNING ( NO ACTION)

### Probabilistic Forecast

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



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 Storm: Wind speed  $> 220$  kmph ( $> 119$  knots)

\* 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

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