

Tuesday, August 13, 2024
Time of Issue: 0800 hours IST
(MORNING)

ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

Significant Weather Features:

Weather Systems:

- ✓ A cyclonic circulation lies over northwest Madhya Pradesh & neighbourhood extending upto middle tropospheric levels. A trough runs from this cyclonic circulation to Bangladesh in lower tropospheric levels.
- ✓ A cyclonic circulation lies over southeast Pakistan & adjoining Rajasthan at lower tropospheric levels.
- ✓ The **Monsoon trough** is near its normal position at mean sea level. It is likely to oscillate near its normal position during most days of the week.
- ✓ A trough runs from northeast Arabian sea to above cyclonic circulation over northwest Madhya Pradesh & neighbourhood in lower tropospheric levels.
- ✓ Another trough runs from Rayalaseema to Comorin area in lower tropospheric levels.
- ✓ Another **cyclonic circulation** over northeast Assam extending upto middle tropospheric levels.

Forecast & Warnings: (upto 7 days):

(Rainfall distribution and Graphics for warning are given in Annexure II & III respectively)

❖ Northwest India

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over Western Himalayan Region and Scattered to Fairly widespread over plains of northwest India during the week.
- ✓ Isolated **heavy rainfall** very likely over Himachal Pradesh, Uttarakhand, Uttar Pradesh, West Rajasthan during 13th-18th; East Rajasthan, Haryana during 13th-16th; Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad during 14th-16th; Punjab on 14th August.
- ✓ Isolated **very heavy rainfall** also very likely over Uttarakhand, East Rajasthan on 13th August.

❖ West & Central India

- ✓ Scattered to Fairly widespread light/moderate rainfall very likely over West & Central India during most days of the week.
- ✓ Isolated **Heavy rainfall** very likely over West Madhya Pradesh, Chhattisgarh on 13th; East Madhya Pradesh during 13th - 14th August.

❖ East & Northeast India

- ✓ Fairly widespread to widespread light/moderate rainfall very likely over east & northeast India during the week.
- ✓ Isolated **heavy rainfall** very likely over Arunachal Pradesh during 13th-15th; Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during 13th-17th; Sub-Himalayan West Bengal & Sikkim during 13th-14th; Gangetic West Bengal during 14th-18th; Jharkhand, Odisha during 13th-16th; Bihar during 13th-18th August.
- ✓ **Very heavy rainfall** also very likely at isolated places over Arunachal Pradesh on 14th August.

❖ South Peninsular India:

- ✓ Scattered to Fairly widespread light/moderate rainfall very likely over South Peninsular India during the week.
- ✓ Isolated **heavy rainfall** very likely over Rayalaseema, Tamil Nadu, Puducherry & Karaikal, South Interior Karnataka, Kerala & Mahe, Lakshadweep during 13th-16th August.
- ✓ Isolated **very heavy rainfall** also very likely over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe during 13th-14th August.

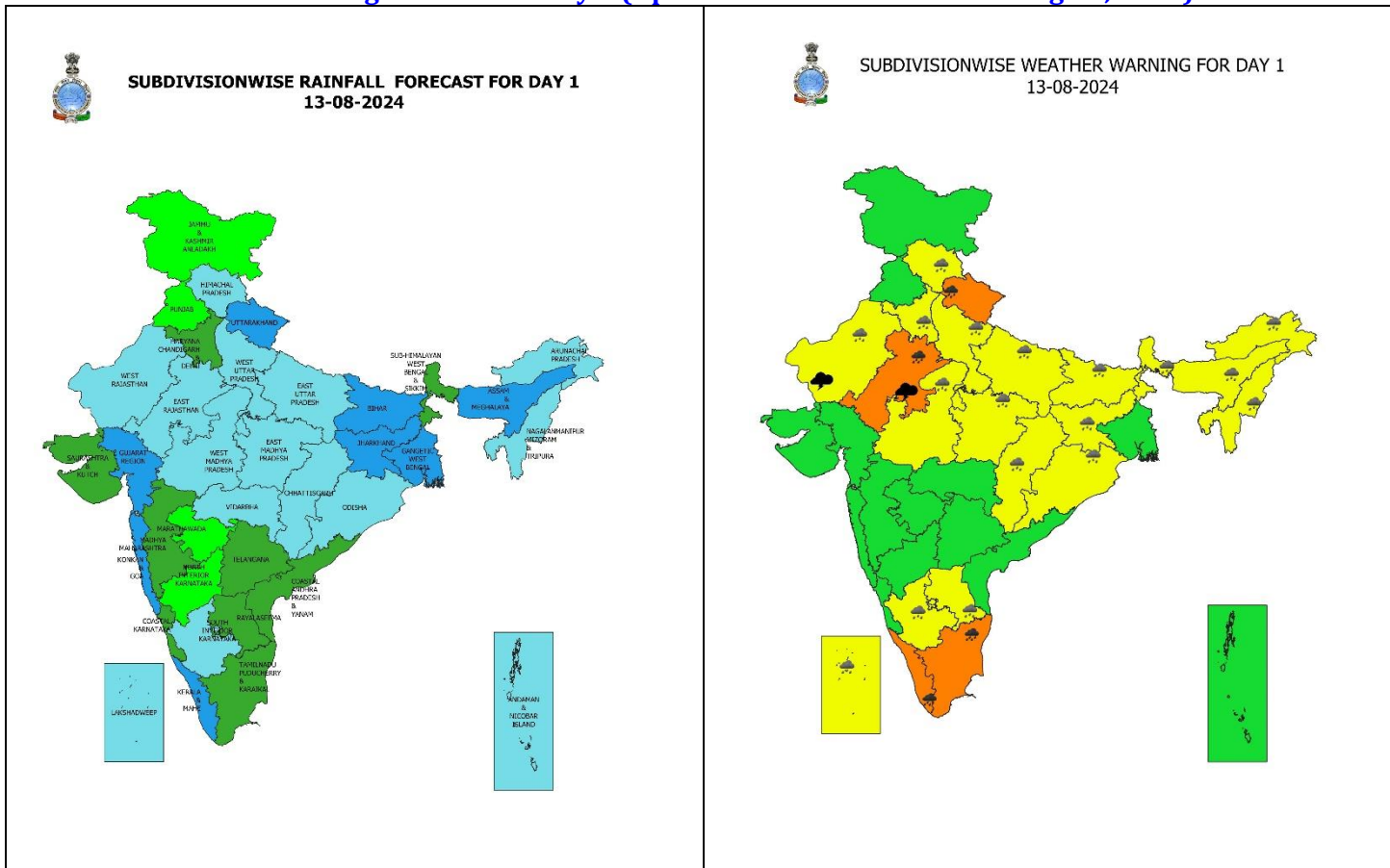
Main Weather Observations:

- ❖ **Rainfall distribution** (from 0830 hours IST to 1730 hours IST of yesterday): **at most places** over East Uttar Pradesh, East Madhya Pradesh, Konkan & Goa, Gujarat Region and East Rajasthan; **at many places** over Uttarakhand, West Uttar Pradesh, West Madhya Pradesh and Assam & Meghalaya; **at a few places over** Nagaland, Manipur, Mizoram & Tripura, Sub-Himalayan West Bengal & Sikkim and Madhya Maharashtra; **at isolated places** over Himachal Pradesh, Punjab, West Rajasthan, Saurashtra & Kutch, Bihar, Jharkhand, Chhattisgarh, Odisha, Gangetic West Bengal, Andaman & Nicobar Islands, Marathwada, South Interior Karnataka, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe and Lakshadweep.
- ❖ **Heavy rainfall recorded** (from 0830 hours IST to 1730 hours IST of yesterday): **at isolated paces** over East Rajasthan and Nagaland, Manipur, Mizoram & Tripura.
- ❖ **Significant amount of rainfall** (from 0830 hours IST to 1730 hours IST of yesterday) (in cm): **East Rajasthan:** Jaipur-8; **Nagaland, Manipur, Mizoram & Tripura:** Agartala-8; **West Uttar Pradesh:** Jhansi-5, Najibabad-2; **West Uttar Pradesh:** Sultanpur-5, Hardoi-2; **Sub-Himalayan West Bengal & Sikkim:** Bagdogra-3; **Assam & Meghalaya:** Lumding-3; **Andaman & Nicobar Islands:** Long Island-3, Mayabandar-2; **Gangetic West Bengal:** Midnapore-2; **West Madhya Pradesh:** Guna & Bhopal-2 each.
- ❖ **Minimum Temperature Departures (as on 12-08-2024):** Minimum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at isolated places over West Rajasthan, East Madhya Pradesh and Sub-Himalayan West Bengal & Sikkim; **above normal (1.6°C to 3.0°C)** at isolated places over East Rajasthan, Bihar, Odisha, Coastal Andhra Pradesh & Yanam, Chhattisgarh, Vidarbha, Marathwada, Madhya Maharashtra, Telangana, Rayalaseema, North Interior Karnataka, Coastal Karnataka and Kerala & Mahe. These were **below normal (-1.6°C to -3.0°C)** at isolated places over Punjab & Haryana-Chandigarh-Delhi and **near normal** over rest parts of the country. Yesterday, **the lowest minimum temperature** of 18.8°C was reported at **Bulsar-Valsad (Gujarat Region)** over the plains of the country. (Fig.4).
- ❖ **Maximum Temperature Departures (as on 12-08-2024):** Maximum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at a few places over North Interior Karnataka; at isolated places over Konkan & Goa, Madhya Maharashtra, Chhattisgarh, Coastal Andhra Pradesh & Yanam, Kerala & Mahe and Tamil Nadu, Puducherry & Karaikal; **above normal (1.6°C to 3.0°C)** at most places over Coastal Karnataka ; at many places over Telangana and Marathwada ; at a few places over Gangetic West Bengal and Odisha, at isolated places over Rayalaseema, South Interior Karnataka, East Madhya Pradesh, Vidarbha, Jharkhand and Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad. These were **appreciably below normal (-3.1°C to -5.0°C)** at isolated places over Haryana-Chandigarh-Delhi, East Uttar Pradesh and Assam & Meghalaya; **below normal (-1.6°C to -3.0°C)** at isolated places over West Madhya Pradesh, Himachal Pradesh, West Rajasthan and Nagaland, Manipur, Mizoram & Tripura and **near normal** over rest parts of the country. Yesterday, **the highest Maximum Temperature** of 38.0°C was reported at **Jeur (Madhya Maharashtra)** over the country. (Fig. 2)

Meteorological Analysis (Based on 0530 hours IST)

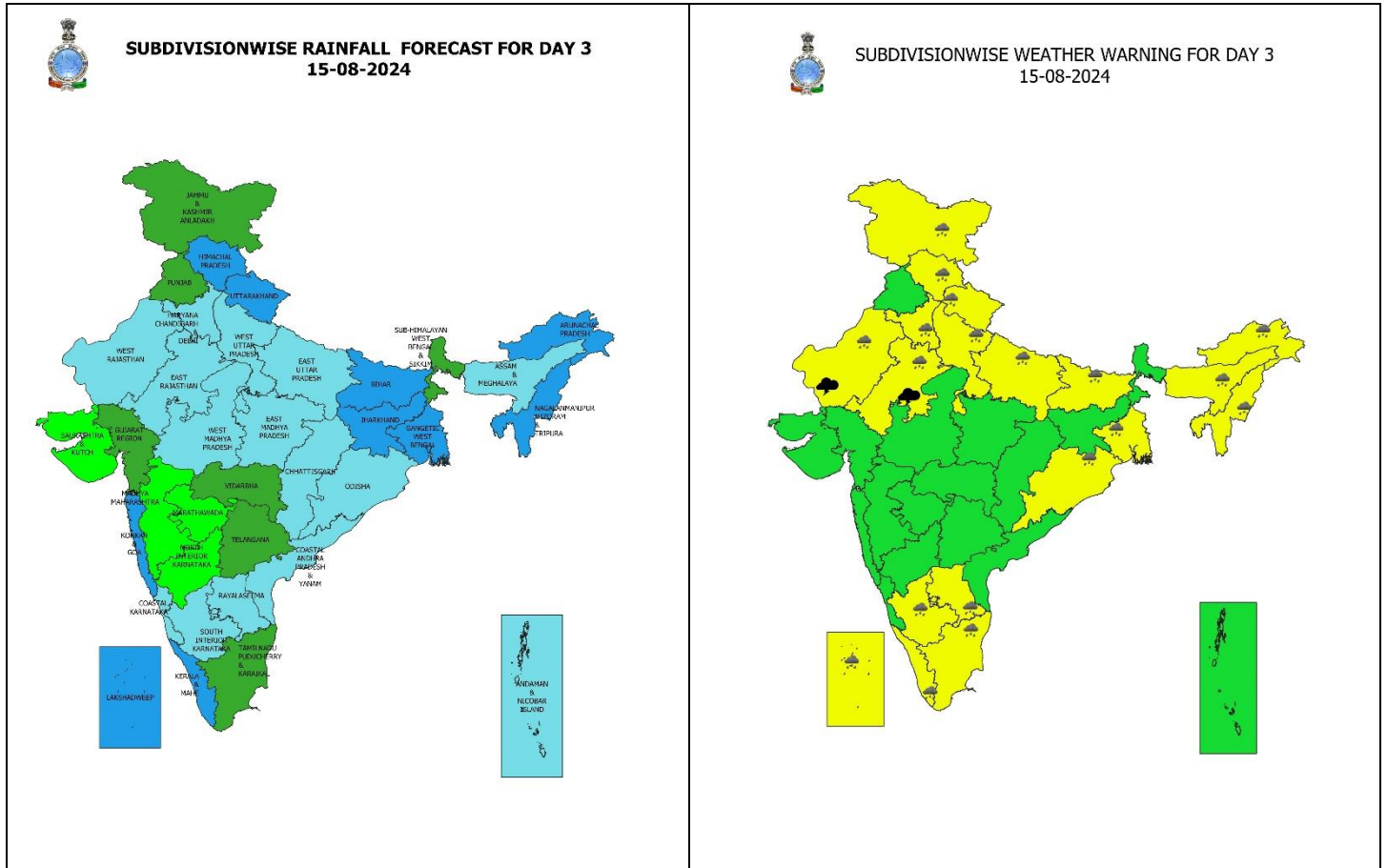
- ❖ The **Monsoon trough** at mean sea level now passes through Bikaner, Gwalior, Churk, Jamshedpur, Digha and thence east-southeastwards to northeast Bay of Bengal.
- ❖ The **cyclonic circulation** over northwest Madhya Pradesh & neighbourhood extending upto 4.5 km above mean sea level tilting southwards with height persists.
- ❖ The **trough** from northeast Arabian sea to above **cyclonic circulation** over northwest Madhya Pradesh & neighbourhood between 3.1 & 4.5 km above mean sea level persists.
- ❖ The **trough** from cyclonic circulation over northwest Madhya Pradesh to Bangladesh across Uttar Pradesh, Bihar and Sub-Himalayan West Bengal extending upto 1.5 km above mean sea level persists.
- ❖ The **cyclonic circulation** over southeast Pakistan & adjoining Rajasthan at 1.5 km above mean sea level persists.
- ❖ The **cyclonic circulation** over northeast Assam at 1.5 km above mean sea level persists.
- ❖ The **cyclonic circulation** over east Bangladesh & neighbourhood between 3.1 & 4.5 km above mean sea level persists.
- ❖ The **cyclonic circulation** over Jharkhand & neighbourhood at 5.8 km above mean sea level persists.
- ❖ The **trough** from Rayalaseema to Comorin area at 0.9 km above mean sea level persists.

Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 20th August, 2024)



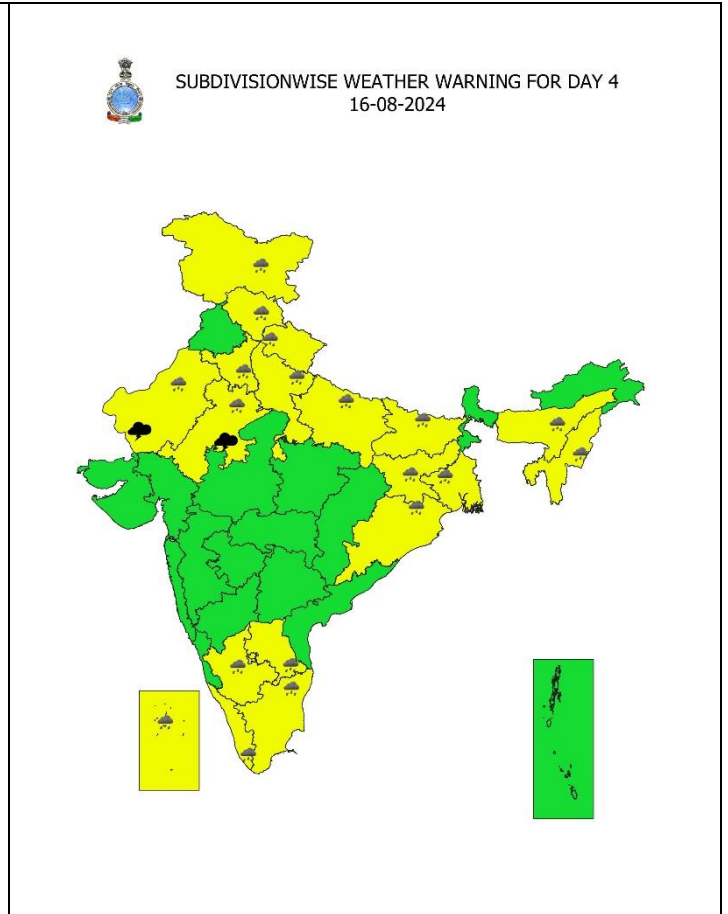
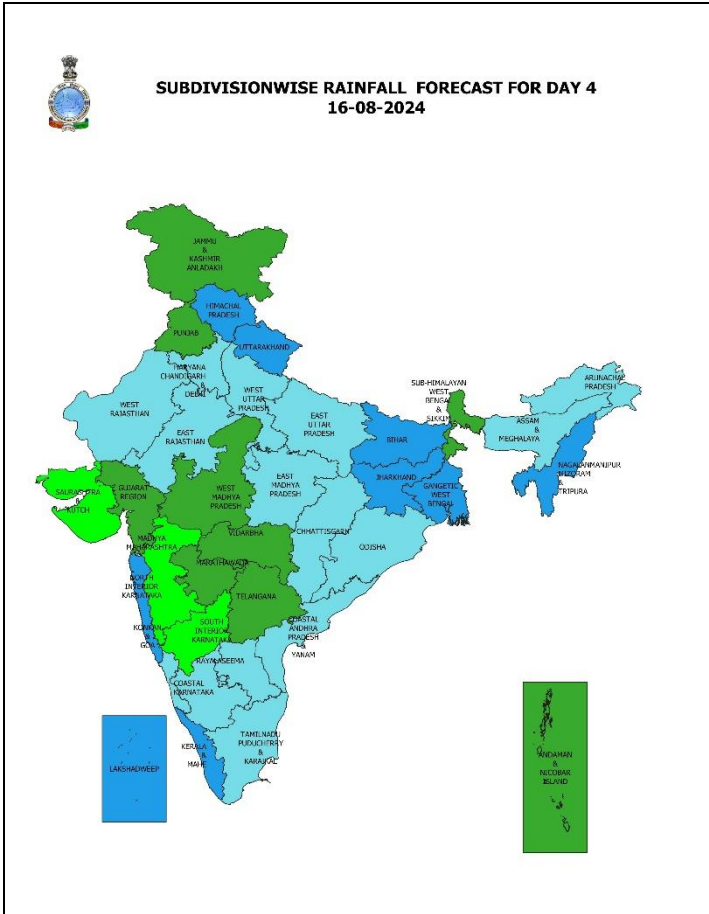
13 August (Day 1):

- ❖ **Heavy to very heavy rainfall (≥ 12 cm)** very likely at isolated places over Uttarakhand, East Rajasthan, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe; **Heavy rainfall (≥ 7 cm)** at isolated places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Sub-Himalayan West Bengal & Sikkim, Odisha, Jharkhand, Bihar, Uttar Pradesh, Haryana-Chandigarh, Himachal Pradesh, West Rajasthan, Madhya Pradesh, Chhattisgarh, Rayalaseema, South Interior Karnataka and Lakshadweep.
- ❖ **Thunderstorm accompanied with lighting** very likely at isolated places over Rajasthan.
- ❖ Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph is very likely to prevail over northeast and adjoining northwest Arabian sea, parts of eastcentral Arabian sea & westcentral Arabian sea, along and off north Gujarat & south Kerala coasts and adjoining Lakshadweep area, gulf of Mannar, Comorin area, central parts of Bay of Bengal. squally winds with speed reaching 45 kmph to 55 kmph gusting to 65 kmph likely to prevail over westcentral & adjoining areas of southwest Arabian sea, along & off Somalia, Yemen & Oman coasts. Fishermen are advised not to venture into these areas.



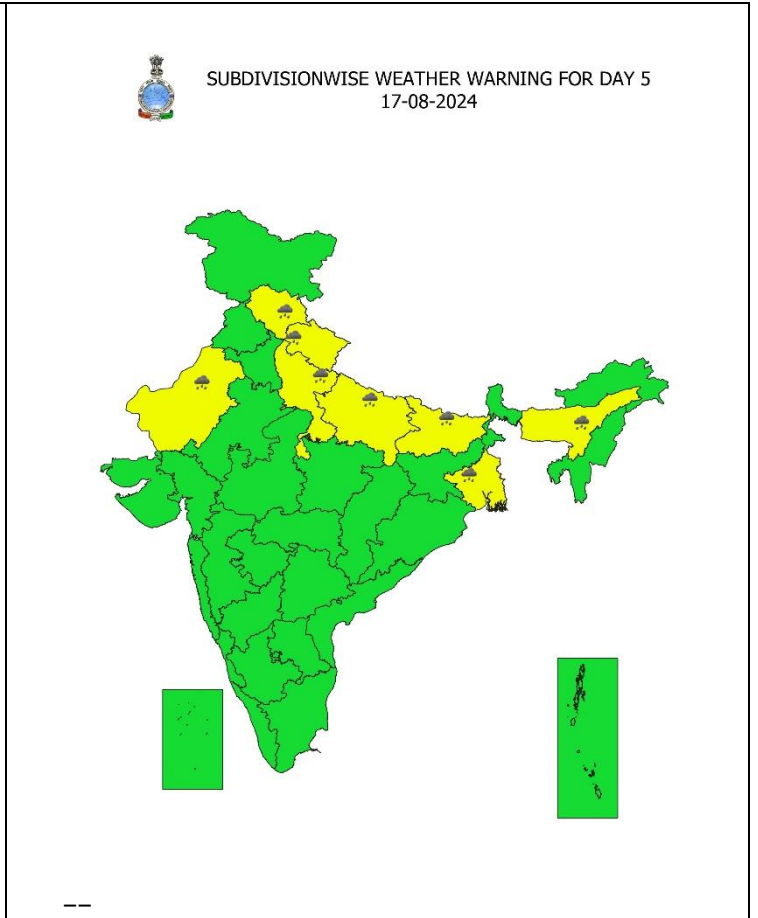
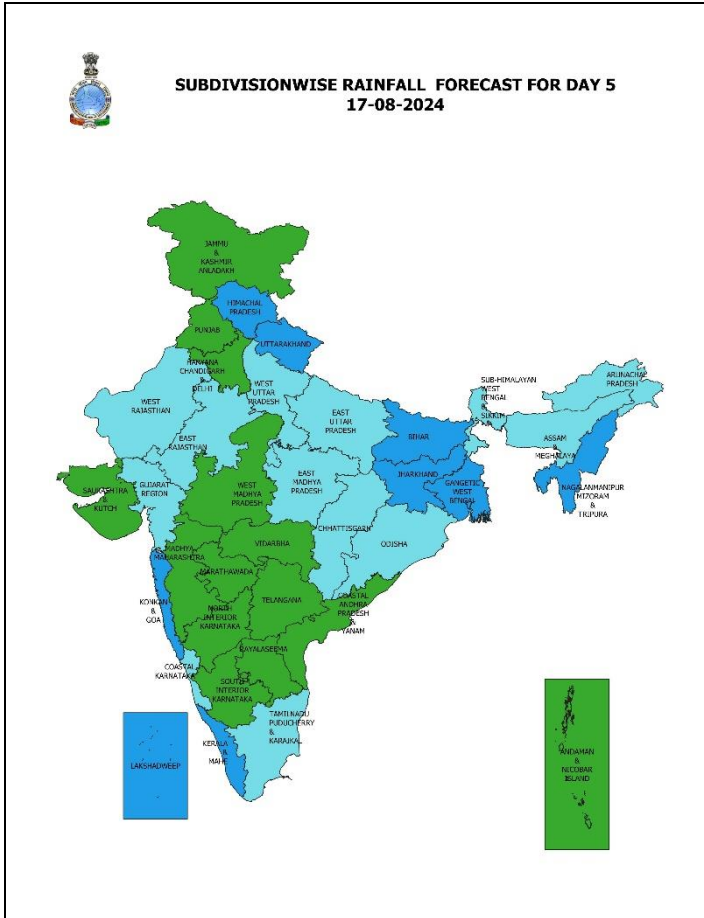
15 August (Day 3):

- ❖ **Heavy rainfall (≥ 7 cm)** likely at isolated places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gangetic West Bengal, Odisha, Bihar, Jharkhand, Uttar Pradesh, Uttarakhand, Haryana-Chandigarh-Delhi, Himachal Pradesh, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Rajasthan, Rayalaseema, Tamil Nadu, Puducherry & Karaikal, South Interior Karnataka, Kerala & Mahe and Lakshadweep.
- ❖ **Thunderstorm accompanied with lighting** likely at isolated places over Rajasthan.
- ❖ **Squally weather with wind speed reaching 35 kmph to 45 kmph gusting to 55 kmph** is likely to prevail over parts of westcentral Arabian sea and adjoining northwest and eastcentral Arabian sea, along and off south Kerala coast adjoining Lakshadweep area, coumarin area, gulf of Mannar, off Sri Lanka coast, southwest and adjoining southeast Bay of Bengal, many parts of central Bay of Bengal, 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 westcentral & adjoining areas of southwest Arabian sea, along & off Somalia, Yemen & Oman coasts. Fishermen are advised not to venture into these areas.



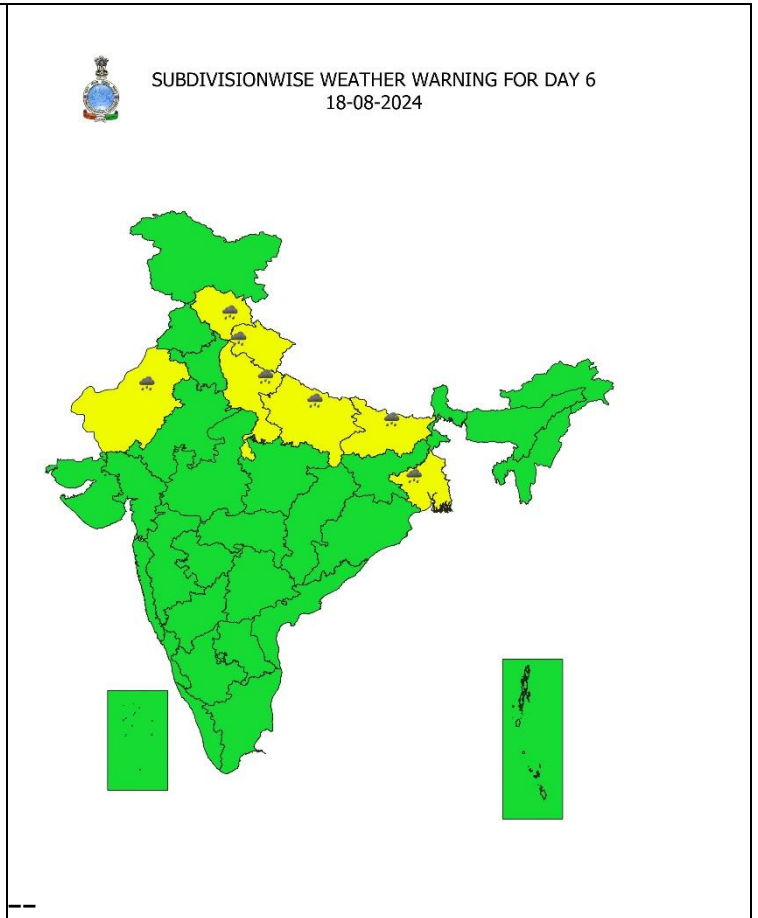
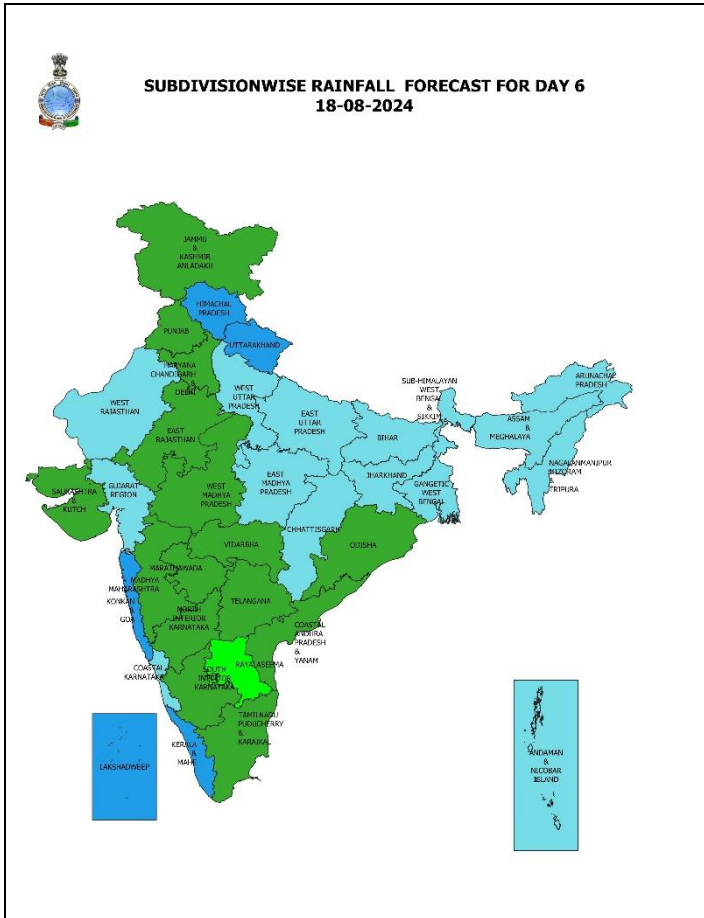
16 August (Day 4):

- ❖ **Heavy rainfall (≥ 7 cm)** likely at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gangetic West Bengal, Odisha, Jharkhand, Bihar, Uttar Pradesh, Uttarakhand, Haryana-Chandigarh-Delhi, Himachal Pradesh, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Rajasthan, Tamil Nadu, Puducherry & Karaikal, Rayalaseema, South Interior Karnataka, Kerala & Mahe and Lakshadweep.
- ❖ **Thunderstorm accompanied with lightning** likely at isolated places over Rajasthan.



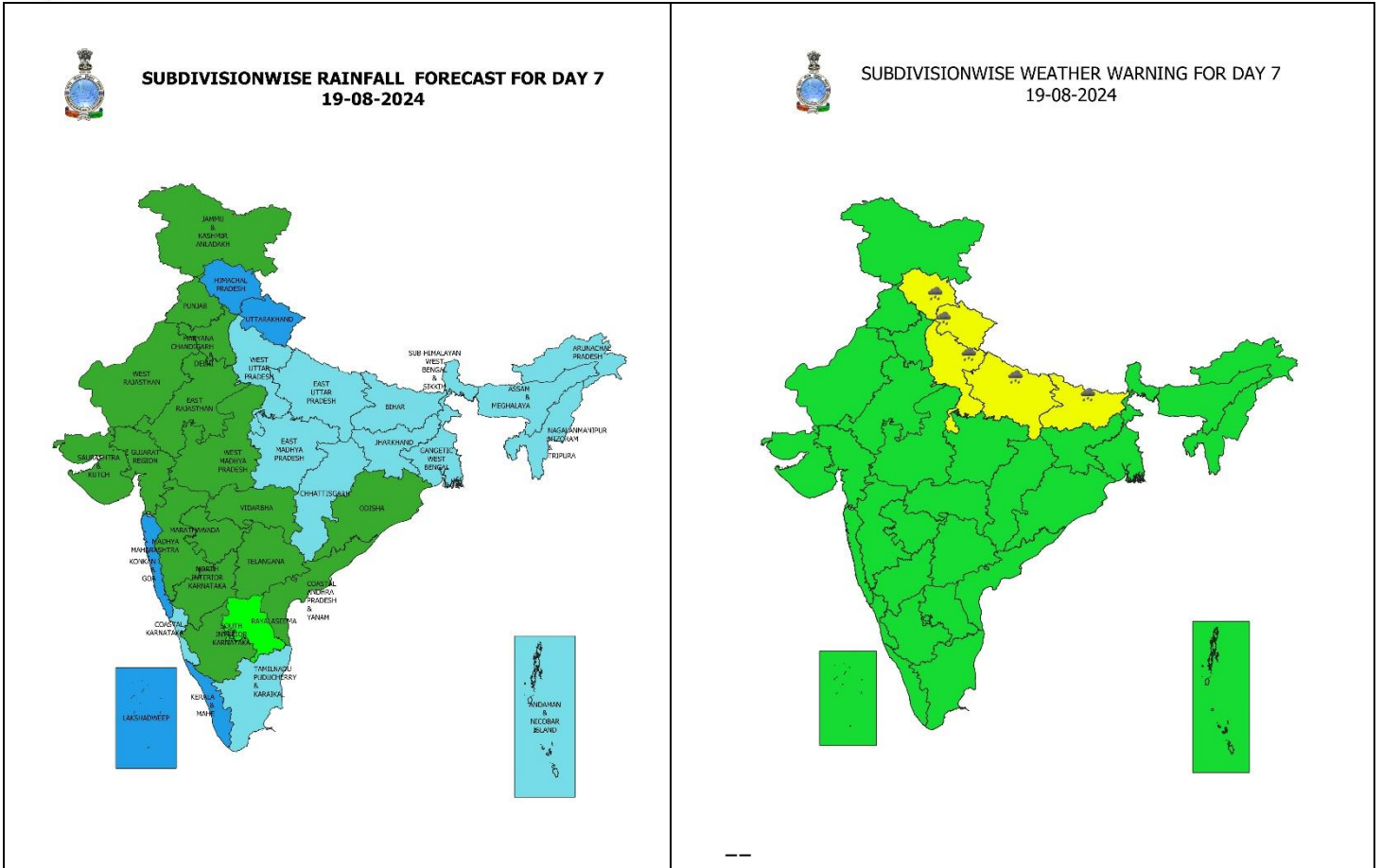
17 August (Day 5):

❖ **Heavy rainfall (≥ 7 cm) likely** at isolated places over Assam & Meghalaya, Gangetic West Bengal, Jharkhand, Bihar, Uttar Pradesh, Himachal Pradesh, Uttarakhand and West Rajasthan.



18 August (Day 6):

- ❖ **Heavy rainfall (≥ 7 cm) likely** at isolated places over Gangetic West Bengal, Bihar, Uttar Pradesh, Uttarakhand, Himachal Pradesh and West Rajasthan.



19 August (Day 7):

❖ **Heavy rainfall (≥ 7 cm)** likely at isolated places over Bihar, Uttar Pradesh, Uttarakhand, Himachal Pradesh.

Weather Outlook for subsequent 3 days (During 20th August – 22nd August, 2024)

❖ Fairly widespread to widespread rainfall likely over most parts of the country except southwest Rajasthan, interior Maharashtra, Coastal & North Interior Karnataka 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.
For more details, kindly visit <https://mausam.imd.gov.in> or contact: 011-2434-4599
(Service to the Nation since 1875)

Impact due to

- **Very heavy rainfall** at isolated places over Uttarakhand, East Rajasthan on 13th; Arunachal Pradesh on 14th; Tamil Nadu, Puducherry & Karaikal, South Interior Karnataka, Kerala & Mahe during 13th – 14th August.
 - **Low to Moderate flash flood risk likely over few watersheds & neighbourhoods of Himachal Pradesh, Uttarakhand, East Rajasthan, West Madhya Pradesh, Coastal Karnataka, Kerala & Mahe Met Sub-divisions on 13th August. (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

- ✓ Drain out excess water from field crops and horticultural crops in Arunachal Pradesh, Assam & Meghalaya, Bihar, Himachal Pradesh, Uttarakhand, Punjab, Haryana, East Rajasthan, Madhya Pradesh, Tamil Nadu, Rayalaseema and South Interior Karnataka.
- ✓ Make provision for draining out excess water from standing crop fields and fruit orchards to avoid water stagnation in Uttar Pradesh, Chhattisgarh and Kerala.
- ✓ Provide mechanical support to horticultural crops & staking to vegetables.
- ✓ In Arunachal Pradesh, make proper arrangements for runoff management in Jhum rice fields by putting obstacles across the slopes.
- ✓ In Assam, postpone sowing of sesame, green gram and black gram.

FLASH FLOOD GUIDANCE:

Annexure-I

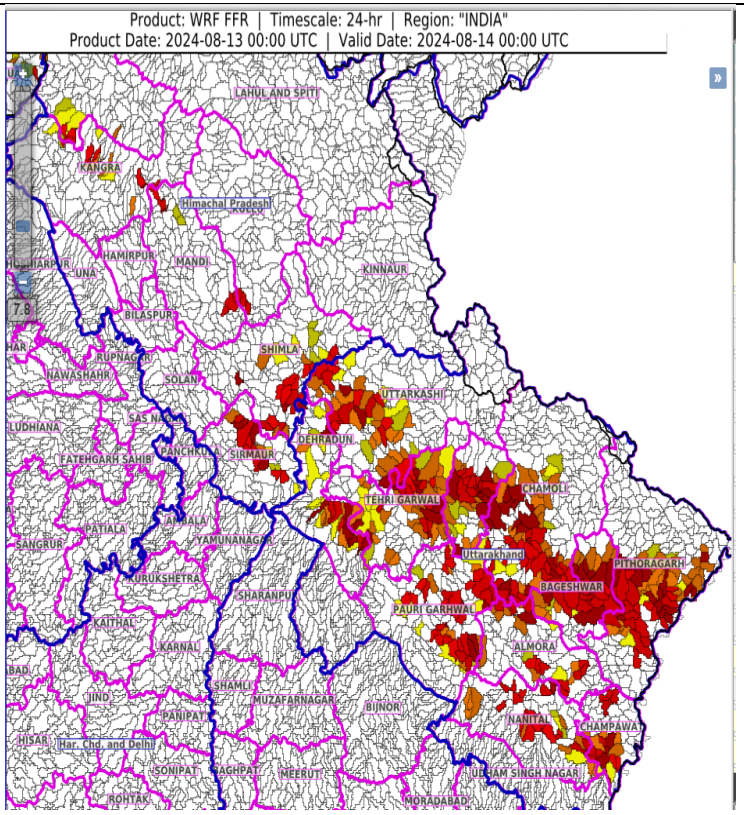
24 hours Outlook for the Flash Flood Risk (FFR) till 0530 IST of 14-08-2024 :

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

Himachal Pradesh - Chamba, Kangra, Mandi, Shimla and Sirmaur districts.

Uttarakhand - Almora, Bageshwar, Chamoli, Champawat, Dehradun, Nainital, Pauri Garhwal, Pithoragarh, Rudraprayag, Tehri Garhwal 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.



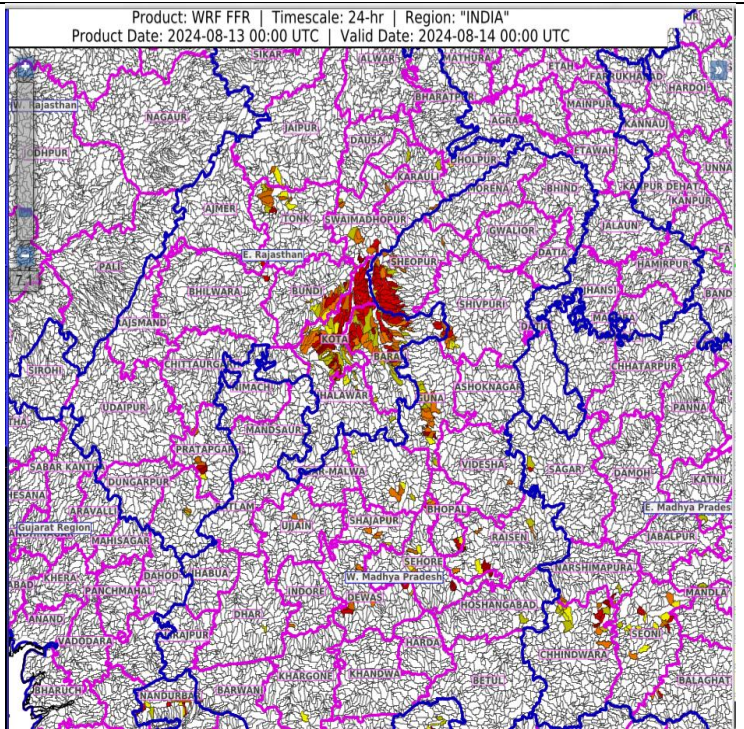
24 hours Outlook for the Flash Flood Risk (FFR) till 0530 IST of 14-08-2024 :

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

East Rajasthan - Baran, Bundi, Kota, Pratapgarh, Swaimadhampur and Tonk districts.

West Madhya Pradesh - Guna, Sheopur and Shivpuri 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.



24 hours Outlook for the Flash Flood Risk (FFR) till 0530 IST of 14-08-2024 :

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

Coastal Karnataka - Dakshin Kannada district.

Kerala & Mahe - Alappuzha, Ernakulam, Idukki, Kannur, Kasargod, Kollam, Kottayam, Kozikod, Mahe, Malappuram, Palakkad, Pattanamittia, Thiruvananthpuram, Trishur and Wayanad 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.

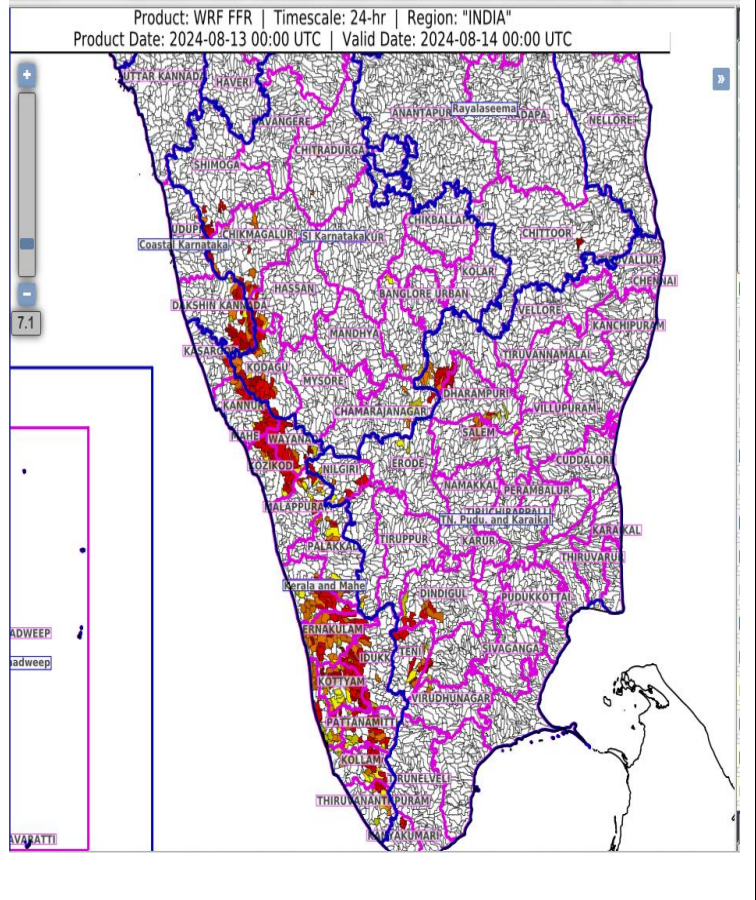


Fig. 1: Maximum Temperatures

Fig. 2: Departure of Maximum Temperatures

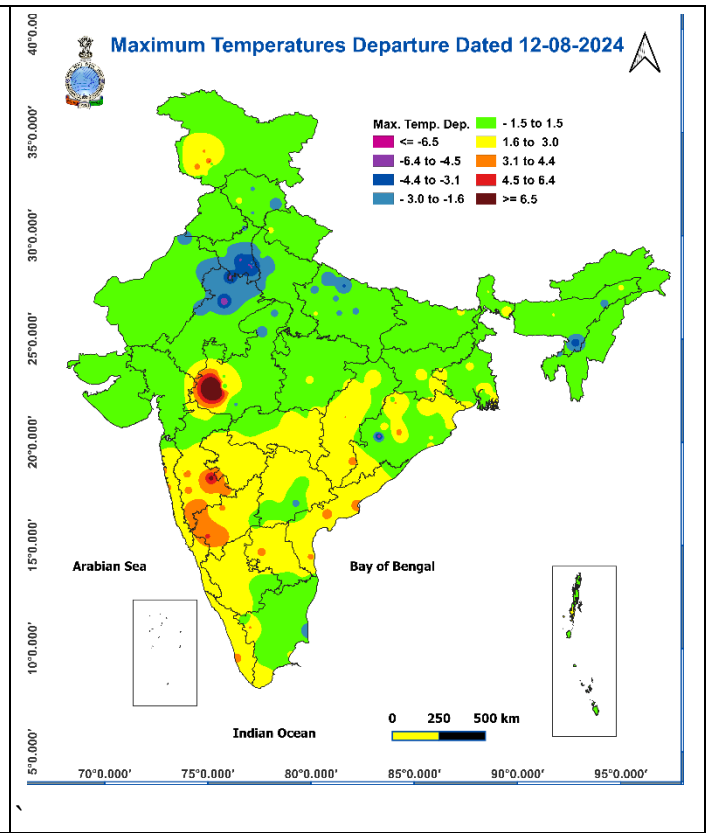
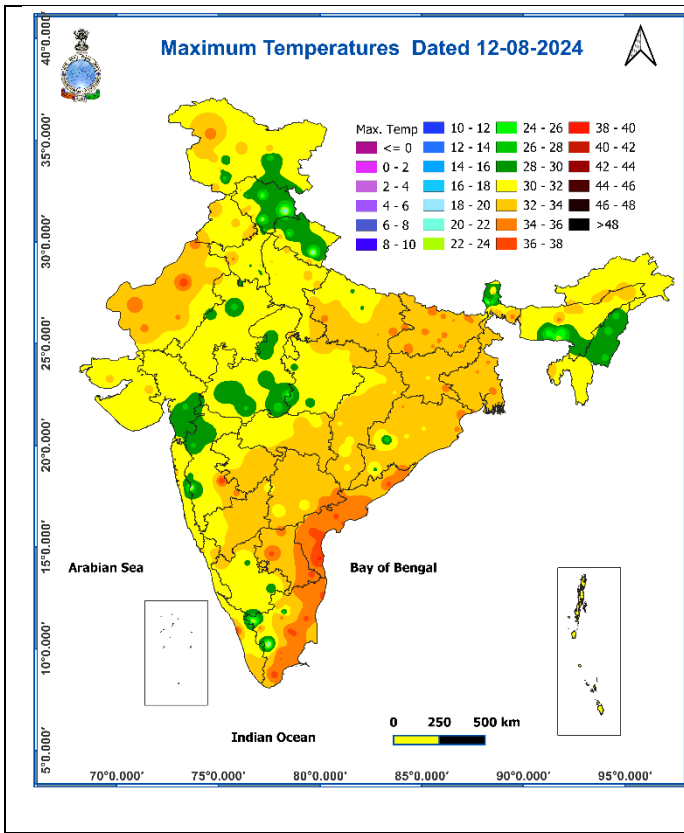


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures

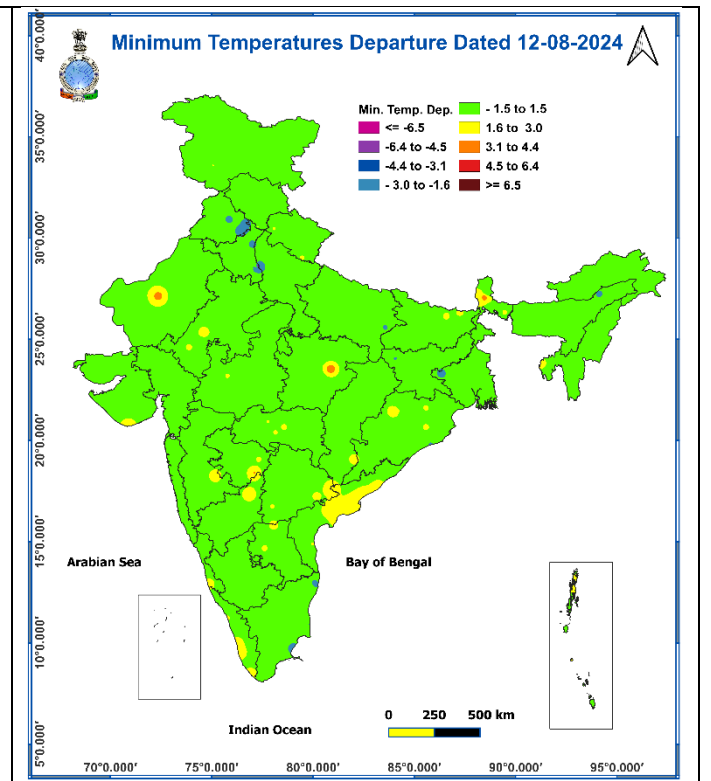
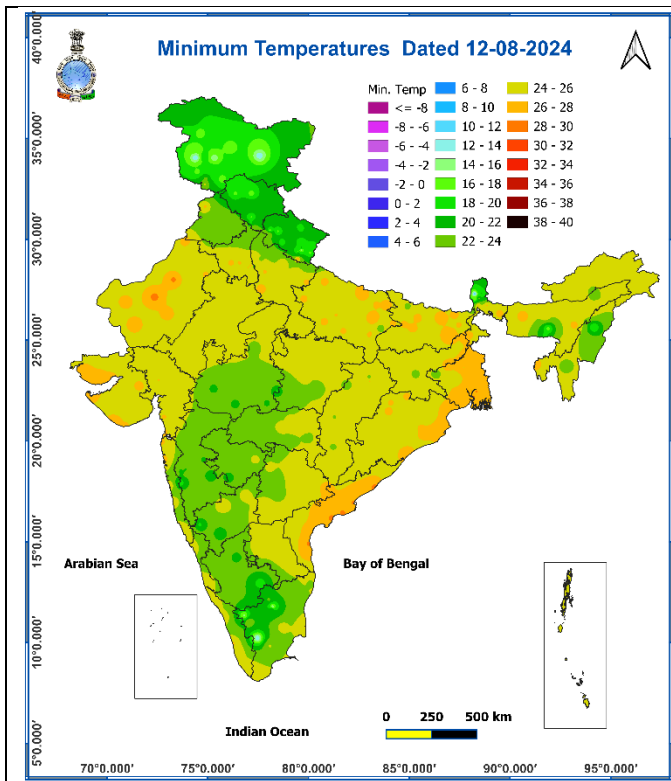
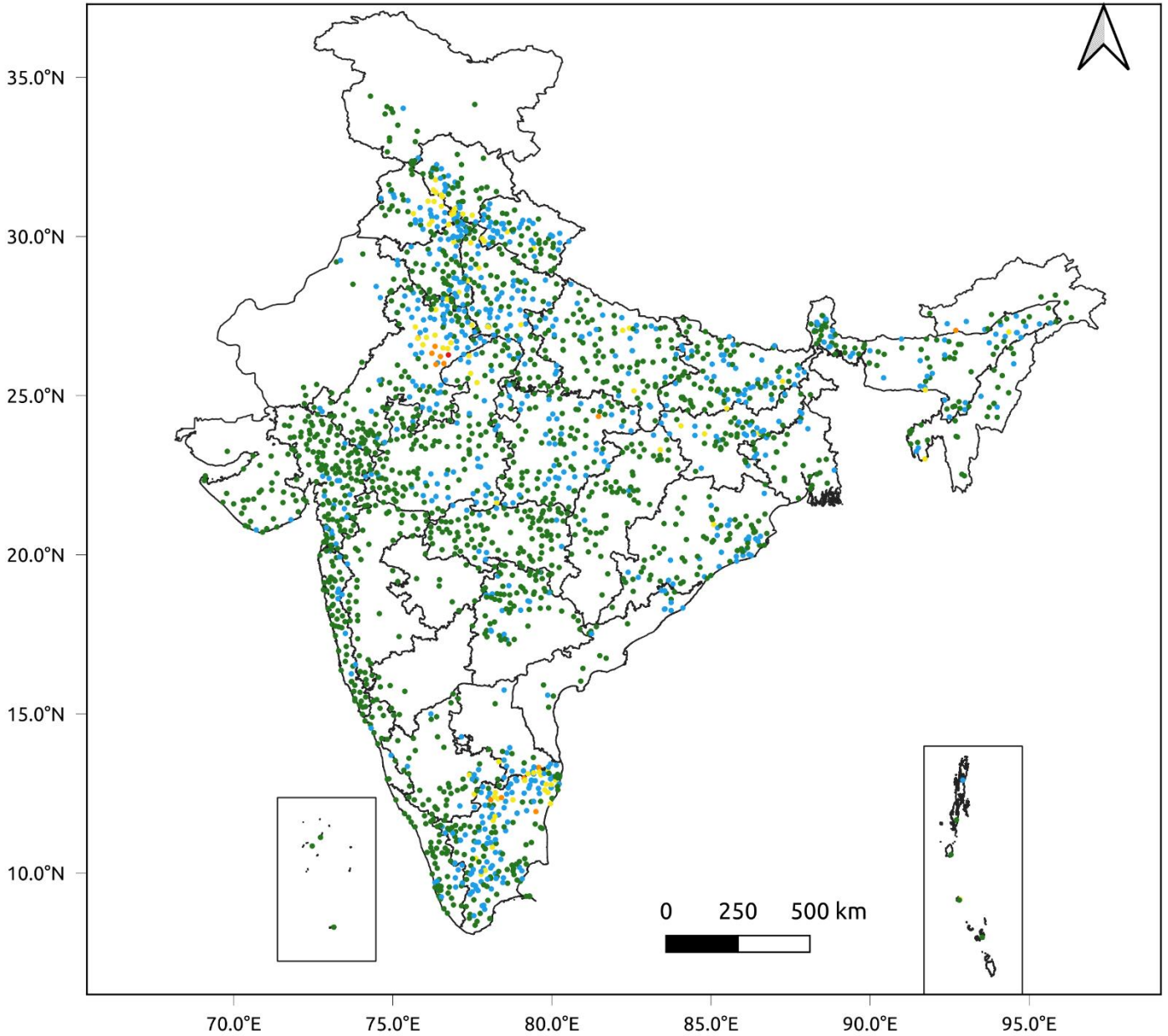


Fig. 5: Accumulated Rainfall (mm) during past 24 hours



24 Hr cumulative rainfall recorded over different stations during 0830 IST of 11-8-2024 to 0830 IST of 12-8-2024

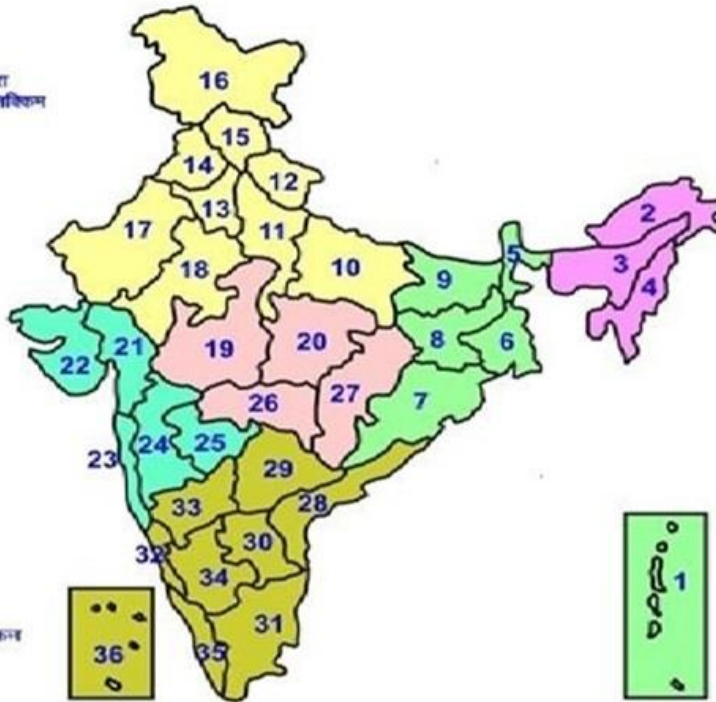


Legends

- 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 (≥ 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 काराईकल
- 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

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



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

Rain/ Snow *



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 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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