

Friday, May 9, 2025  
Time of Issue: 0800 hours IST  
(MORNING)

## ALL INDIA WEATHER SUMMARY AND FORECAST BULLETIN

### Significant Weather Features:

#### Northwest India:

- ✓ **Scattered to fairly widespread** light to moderate rainfall with **thunderstorm, lightning & gusty winds speed reaching 40-60 kmph** likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand; **Isolated to Scattered** light/moderate rainfall with **thunderstorm, lightning & gusty winds speed reaching 30-40 kmph** over Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh and Rajasthan during 09<sup>th</sup>-11<sup>th</sup> May.
- ✓ **Duststorm** very likely at isolated places over West Rajasthan on 09<sup>th</sup> & 10<sup>th</sup> May.

#### West India:

- ❖ **Isolated to Scattered** light/moderate rainfall accompanied with **thunderstorm, lightning & gusty winds speed reaching 40-50 kmph gusting to 60 kmph** likely over West India during 09<sup>th</sup>-12<sup>th</sup> May.

#### East & Central India:

- ❖ **Isolated to Scattered** light/moderate rainfall accompanied with **thunderstorm, lightning & gusty winds speed reaching 40-50 kmph gusting to 60 kmph** likely over Madhya Pradesh, Vidarbha & Chhattisgarh during 09<sup>th</sup>-12<sup>th</sup> May; with winds speed reaching **30-40 kmph gusting to 50 kmph** over West Bengal & Sikkim during 10<sup>th</sup>-12<sup>th</sup> May.
- ❖ **Thundersquall wind speed reaching 50-60 kmph gusting to 70 kmph** likely over Chhattisgarh during 09<sup>th</sup>-11<sup>th</sup> May.
- ❖ **Isolated heavy rainfall** likely over Sub-Himalayan West Bengal & Sikkim on 11<sup>th</sup> & 12<sup>th</sup> May.

#### South peninsular India:

- ❖ **Isolated to Scattered** light/moderate rainfall accompanied with **thunderstorm, lightning & strong winds speed reaching 30-40 kmph gusting to 50 kmph** likely over Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana, Karnataka during 09<sup>th</sup>-12<sup>th</sup> and over Tamilnadu Puducherry & Karaikal, Kerala & Mahe on 09<sup>th</sup> May.

#### Northeast India:

- ❖ **Fairly widespread to widespread** light/moderate rainfall accompanied with **thunderstorm, lightning & gusty winds speed reaching 30-40 kmph gusting to 50 kmph** likely over Northeast India during next 5 days.
- ❖ **Isolated heavy rainfall** over Arunachal Pradesh, Assam & Meghalaya during 09<sup>th</sup>-14<sup>th</sup> and over Mizoram on 12<sup>th</sup> with **very heavy rainfall** over Assam & Meghalaya on 11<sup>th</sup> & 12<sup>th</sup> May.

#### Maximum Temperature Forecast:

- ❖ Gradual rise in maximum temperatures by 3-4°C likely over East India during next 3 days and no significant change thereafter for subsequent 4 days.
- ❖ Gradual rise in maximum temperatures by 3-5°C likely over Northwest India during next 7 days.
- ❖ No significant change in maximum temperatures likely over Central India during next 24 hours and rise by 3-5°C thereafter for subsequent 5 days.
- ❖ No significant change in maximum temperatures likely over West India during next 24 hours and rise by 2-°C thereafter for subsequent 5 days.
- ❖ No significant change in maximum temperatures likely over rest parts of the country.

#### Heat wave and Hot & Humid weather warning:

- ❖ **Heat wave conditions** very likely in isolated pockets of Gangetic West Bengal during 10<sup>th</sup>-13<sup>th</sup>; Odisha during 10<sup>th</sup>-14<sup>th</sup>, Bihar during 11<sup>th</sup>-13<sup>th</sup> and Jharkhand during 11<sup>th</sup>-14<sup>th</sup>; May.
- ❖ **Hot & humid weather** is likely to prevail over Gangetic West Bengal, Odisha, Tamil Nadu, Puducherry & Karaikal on 09<sup>th</sup> May.

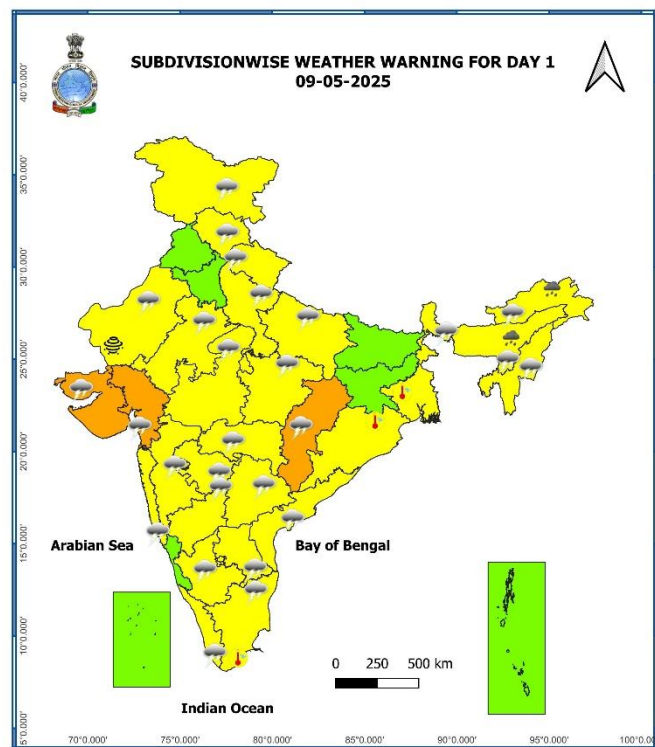
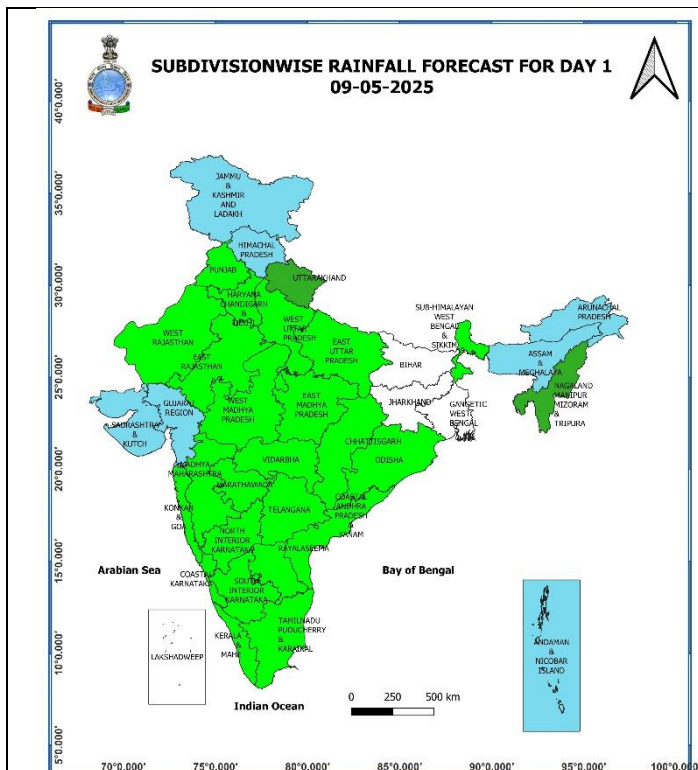
### Main Weather Observations:

- ❖ **Rainfall observed** (from 0830 hours IST of to 1730 hours IST of yesterday): at most places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Andaman & Nicobar Islands; at many places over Konkan & Goa; at a few places over Himachal Pradesh, West Madhya Pradesh, Rayalaseema; at isolated places over Uttarakhand, Punjab, East Madhya Pradesh, Gujarat state, Assam & Meghalaya, Coastal Andhra Pradesh & Yanam, Tamil Nadu, Puducherry & Karaikal, South Interior Karnataka, Madhya Maharashtra.
- ❖ **Significant amount of rainfall recorded** (from 0830 hours IST to 1730 hours IST of yesterday): (in cm): **Andaman & Nicobar Islands:** Hut Bay 6, Port Blair 4, Nancowry 3, Long Island 2; **Tamil Nadu:** Vellore 4; **Jammu-Kashmir:** Gulmarg 2; **West Madhya Pradesh:** Dhar 2; **Konkan & Goa:** T.B.I.A 2, Matheran 2.
- ❖ **Minimum Temperature Departures (as on 08-05-2025):** Minimum temperatures were **appreciably above normal (3.1°C to 5.0°C)** at many places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; **above normal (1.6°C to 3.0°C)** at isolated places over West Rajasthan, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Sub-Himalayan West Bengal & Sikkim and Odisha. These were **markedly below normal (-5.1 or below)** at a few places over West Madhya Pradesh; at isolated places over Konkan & Goa; **appreciably below normal (-3.1°C to -5.0°C)** at a few places over Gujarat state, Vidarbha; at isolated places over East Rajasthan, Telangana; **below normal (-1.6°C to -3.0°C)** at many places over Tamil Nadu, Puducherry & Karaikal; at a few places over Kerala & Mahe, Gangetic West Bengal; at isolated places over East Uttar Pradesh, Delhi, East Madhya Pradesh, Jharkhand, Madhya Maharashtra, Marathwada, Rayalaseema, Coastal Andhra Pradesh & Yanam, North Interior Karnataka and normal over rest parts of the country (**Fig. 4**). Yesterday, the **lowest minimum temperature of 19.0°C** was reported at **Jeur (Madhya Maharashtra)** over the plains of the country.
- ❖ **Maximum Temperature Departures (as on 08-05-2025):** Maximum Temperatures were **appreciably above normal (3.1°C to 5.0°C)** at a few places over Sub-Himalayan West Bengal & Sikkim; at isolated places over Nagaland, Manipur, Mizoram & Tripura; **above normal (1.6°C to 3.0°C)** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Assam & Meghalaya, Odisha, Tamil Nadu, Puducherry & Karaikal, Gangetic West Bengal. These were **markedly below normal (-5.1 or below)** at a few places over West Madhya Pradesh, Madhya Maharashtra, East Rajasthan; at isolated places over many places over East Madhya Pradesh; **appreciably below normal (-3.1°C to -5.0°C)** at a few places over Punjab, West Uttar Pradesh, Vidarbha, Andaman & Nicobar Islands, Marathwada; at isolated places over Haryana-Chandigarh-Delhi, Telangana, East Uttar Pradesh; **below normal (-1.6°C to -3.0°C)** at a few places over Uttarakhand, Himachal Pradesh, Chhattisgarh, Rayalaseema, Konkan & Goa; at isolated places over North Interior Karnataka and normal over rest parts of the country. (**Fig. 2**). Yesterday, the highest **maximum temperature of 41.0°C** was reported at **Jaisalmer (West Rajasthan)** over the country.

## Meteorological Analysis (Based on 0530 hours IST)

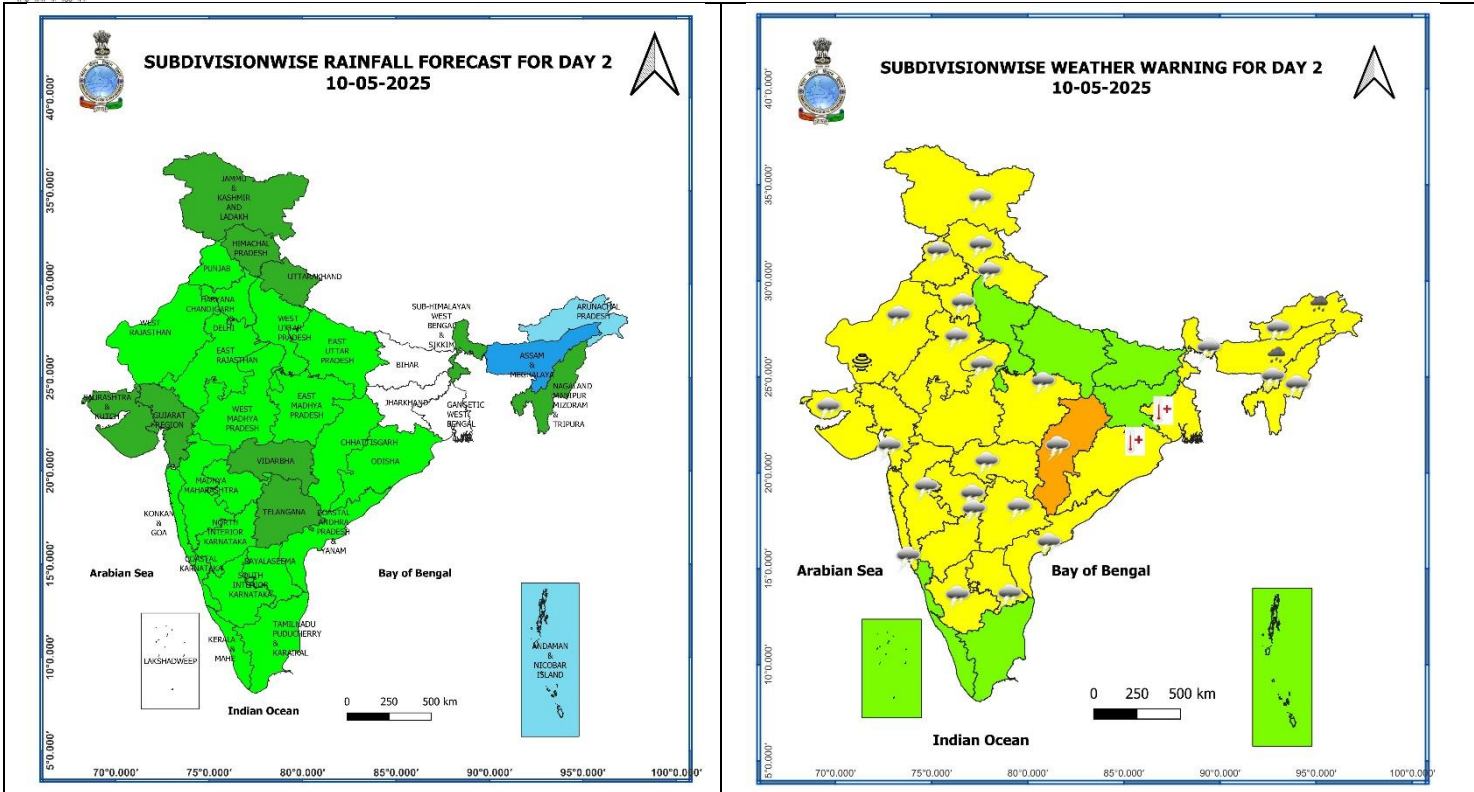
- ❖ The **Western Disturbance** as a cyclonic circulation over Iran at 3.1 km above mean sea level with a trough aloft in middle & upper tropospheric westerlies with its axis at 5.8 km above mean sea level roughly along long. 59°E to the north of lat. 27°N persists.
- ❖ The upper air **cyclonic circulation** over southwest Madhya Pradesh & neighbourhood between 1.5 & 7.6 km above mean sea level persists.
- ❖ The upper air **cyclonic circulation** over northwest Madhya Pradesh & neighbourhood now lies over northeast Rajasthan & neighbourhood and extends upto 1.5 km above mean sea level.
- ❖ The **trough** from eastcentral Arabian Sea to cyclonic circulation over southwest Madhya Pradesh & neighbourhood across Konkan & north Madhya Maharashtra between 1.5 & 5.8 km above mean sea level persists.
- ❖ The **north- south trough** from south Telangana to Gulf of Mannar across Rayalaseema and Tamil Nadu at 0.9 km above mean sea level persists.
- ❖ The upper air **cyclonic circulation** over Northeast Assam & neighbourhood at 1.5 km above mean sea level persists.
- ❖ The upper air **cyclonic circulation** over southeast Bay of Bengal and adjoining south Andaman Sea at 4.5 km above mean sea level persists.
- ❖ **Southwest Monsoon** is very likely to advance into South Andaman Sea, some parts of Southeast Bay of Bengal and Nicobar Islands around 13<sup>th</sup> May, 2025.
- ❖ The east-west **trough** from cyclonic circulation over northwest Madhya Pradesh & neighbourhood to north Chhattisgarh across East Madhya Pradesh at 0.9 km above mean sea level has become less marked.

Weather Forecast & Warnings for next 7 days (Upto 0830 hours IST of 14<sup>th</sup> May, 2025)



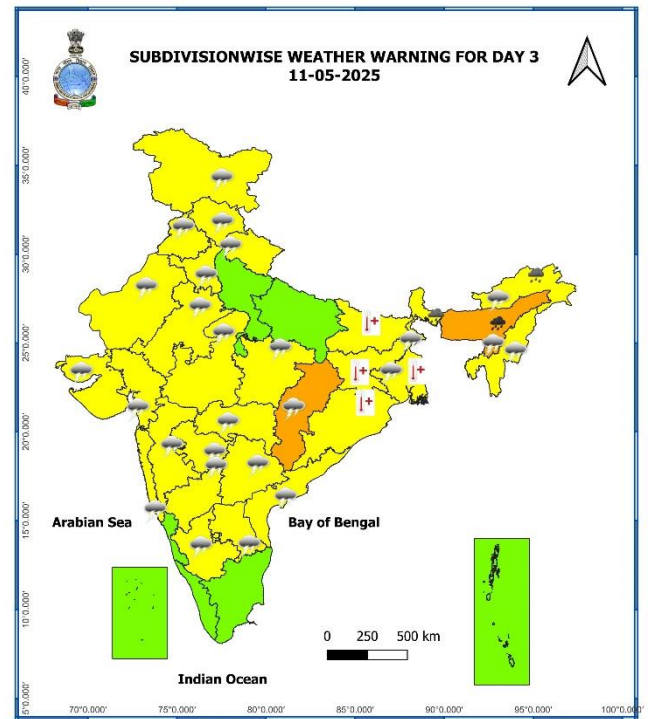
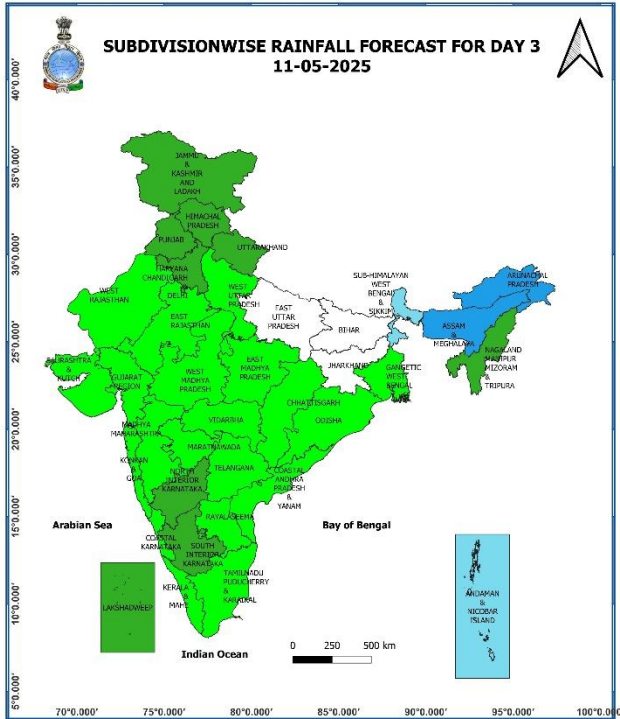
### 09<sup>th</sup> May (Day 1)

- ❖ **Heavy Rainfall** very likely at isolated places over Arunachal Pradesh and Assam & Meghalaya.
- ❖ **Thundersquall with wind speed reaching(50-60kmph)** very likely at isolated places over Chhattisgarh and Gujarat state.
- ❖ **Thunderstorm accompanied with lightning & gusty winds(40-50kmph)** very likely at isolated places over Andhra Pradesh, Gujarat, Himachal Pradesh, Jammu and Kashmir and Ladakh, Konkan & Goa, Maharashtra, North Interior Karnataka, Rajasthan, Uttar Pradesh and West Madhya Pradesh.
- ❖ **Thunderstorm accompanied with lightning & gusty winds(30-40kmph)** very likely at isolated places over Assam & Meghalaya, East Madhya Pradesh, South Interior Karnataka, Tamilnadu & Puducherry, Telangana and Uttarakhand.
- ❖ **Thunderstorm accompanied with Lightning** very likely at isolated places over Arunachal Pradesh, Himachal Pradesh, Kerala and Mahe, Nagaland, Manipur, Mizoram and Tripura, Sub Himalayan West Bengal & Sikkim and West Uttar Pradesh.
- ❖ **Dust Storm** very likely at isolated places over West Rajasthan.
- ❖ **Hot and Humid weather** very likely at isolated places over Gangetic West Bengal, Odisha and Tamilnadu & Puducherry.



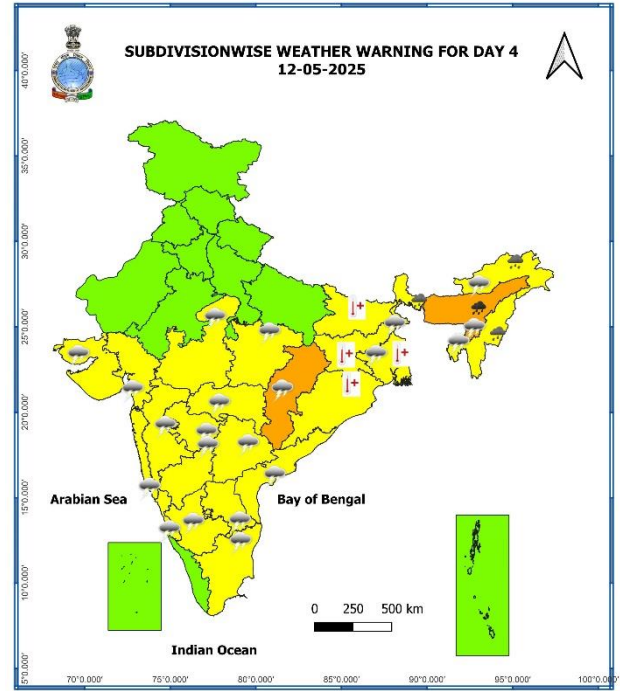
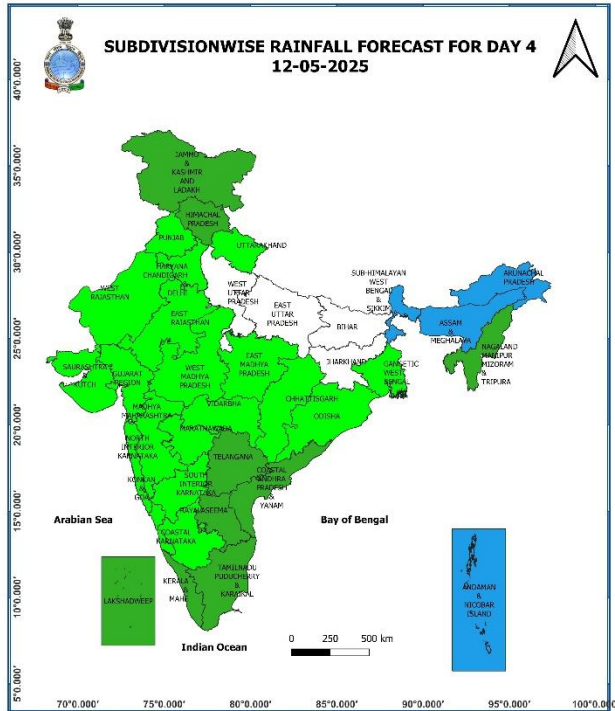
### 10<sup>th</sup> May (Day 2)

- ❖ **Heavy Rainfall** very likely at isolated places over Arunachal Pradesh and Assam & Meghalaya.
- ❖ **Thundersquall with wind speed reaching(50-60kmph)** very likely at isolated places over Chhattisgarh.
- ❖ **Thunderstorm accompanied with lightning & gusty winds(40-50kmph)** very likely at isolated places over Gujarat, Himachal Pradesh, Jammu and Kashmir and Ladakh, Konkan & Goa, Maharashtra, North Interior Karnataka and Rajasthan.
- ❖ **Thunderstorm accompanied with lightning & gusty winds(30-40kmph)** very likely at isolated places over Andhra Pradesh, Assam & Meghalaya, Haryana, Chandigarh & Delhi, Madhya Pradesh, Punjab, South Interior Karnataka, Sub Himalayan West Bengal & Sikkim, Telangana and Uttarakhand.
- ❖ **Thunderstorm accompanied with Lightning** very likely at isolated places over Arunachal Pradesh, Himachal Pradesh and Nagaland, Manipur, Mizoram and Tripura.
- ❖ **Dust Storm** very likely at isolated places over West Rajasthan.
- ❖ **Heat Wave** very likely at isolated places over Gangetic West Bengal and Odisha.



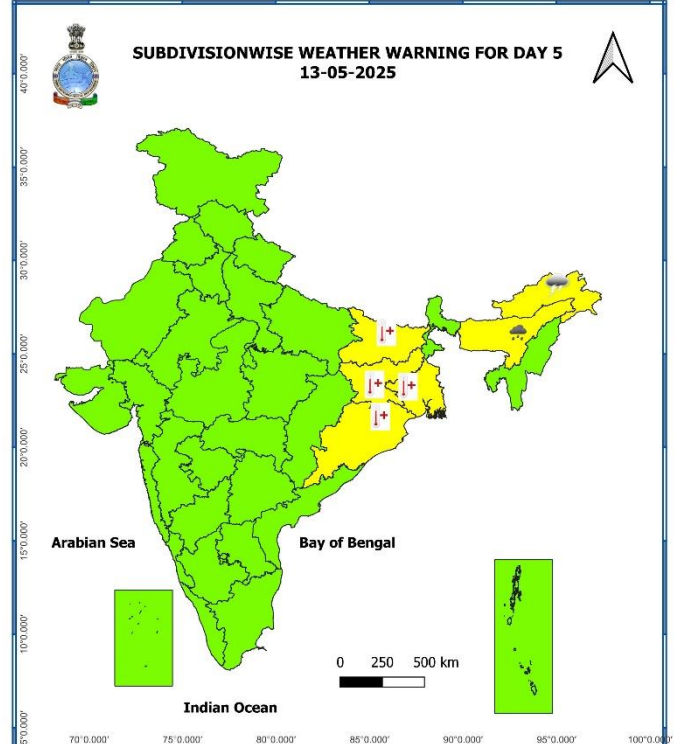
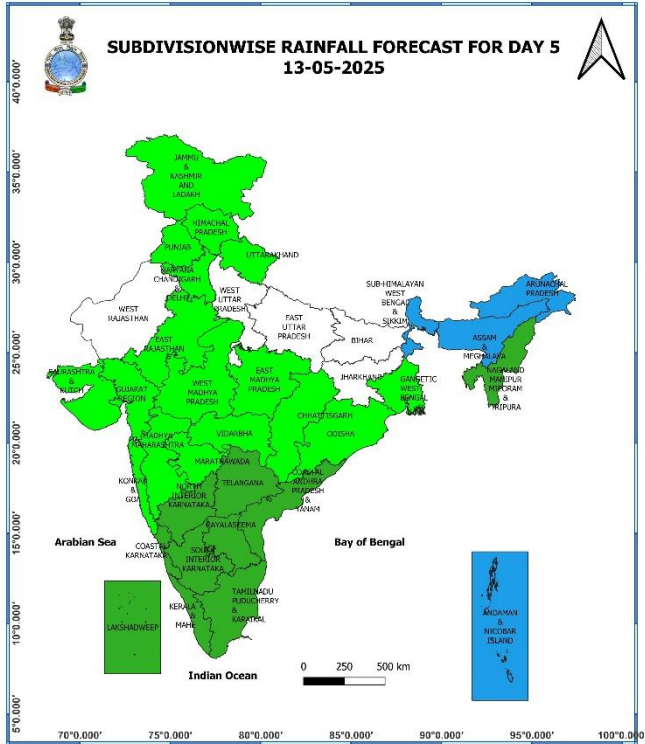
### 11<sup>th</sup> May (Day 3)

- ❖ **Heavy to Very Heavy Rainfall** likely at isolated places over Meghalaya.
- ❖ **Heavy Rainfall** likely at isolated places over Arunachal Pradesh and Sub Himalayan West Bengal & Sikkim.
- ❖ **Thundersquall with wind speed reaching(50-60kmph)** likely at isolated places over Chhattisgarh.
- ❖ **Thunderstorm accompanied with lightning & gusty winds(40-50kmph)** likely at isolated places over East Rajasthan, Jammu and Kashmir and Ladakh, Konkan & Goa, Maharashtra and North Interior Karnataka.
- ❖ **Thunderstorm accompanied with lightning & gusty winds(30-40kmph)** likely at isolated places over Andhra Pradesh, Assam & Meghalaya, Gujarat, Haryana, Chandigarh & Delhi, Madhya Pradesh, Nagaland, Manipur, Mizoram and Tripura, Punjab, South Interior Karnataka, Telangana, Uttarakhand, West Bengal & Sikkim and West Rajasthan.
- ❖ **Thunderstorm accompanied with Lightning** likely at isolated places over Arunachal Pradesh and Himachal Pradesh.
- ❖ **Heat Wave** likely at isolated places over Bihar, Gangetic West Bengal, Jharkhand and Odisha.



## 12<sup>th</sup> May (Day 4)

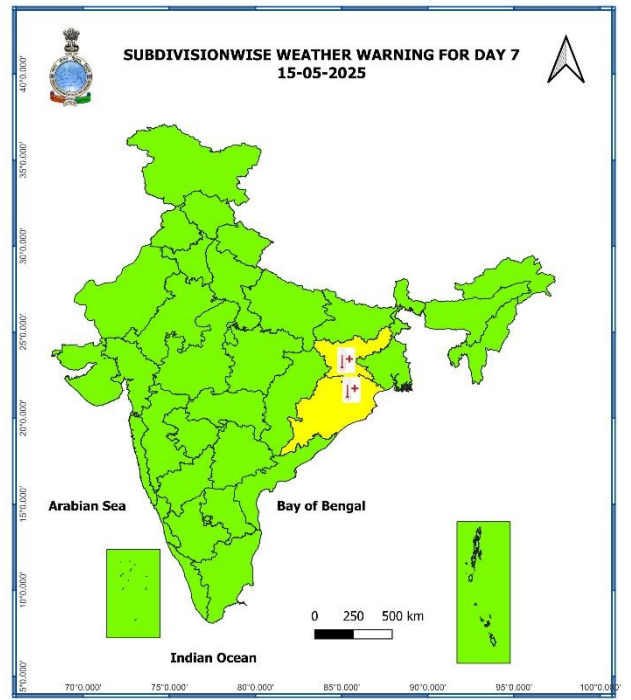
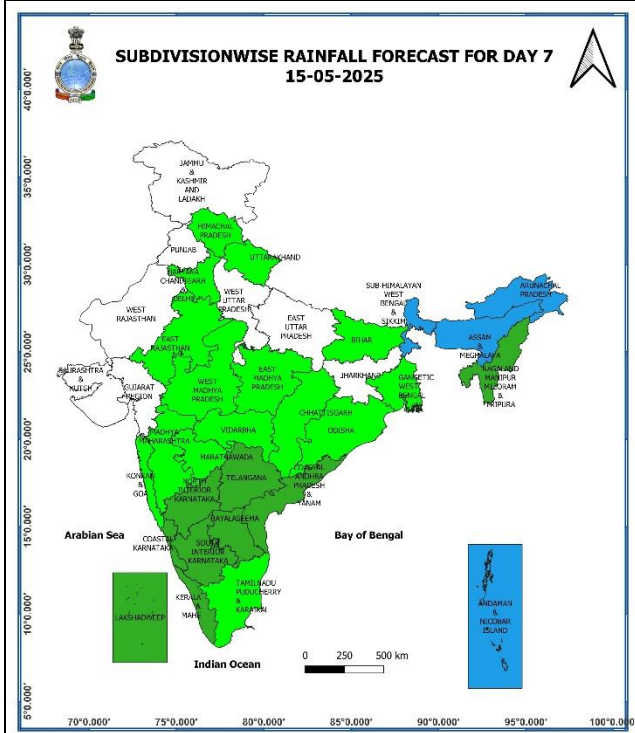
- ❖ **Heavy to Very Heavy Rainfall** likely at isolated places over Meghalaya.
- ❖ **Heavy Rainfall** likely at isolated places over Arunachal Pradesh, Mizoram and Sub Himalayan West Bengal & Sikkim.
- ❖ **Thundersquall with wind speed reaching(50-60kmph)** likely at isolated places over Chhattisgarh.
- ❖ **Thunderstorm accompanied with lightning & gusty winds(40-50kmph)** likely at isolated places over Gangetic West Bengal, Konkan & Goa, Maharashtra and North Interior Karnataka.
- ❖ **Thunderstorm accompanied with lightning & gusty winds(30-40kmph)** likely at isolated places over Andhra Pradesh, Assam & Meghalaya, Costal Karnataka, Gujarat, Madhya Pradesh, Nagaland, Manipur, Mizoram and Tripura, South Interior Karnataka, Sub Himalayan West Bengal & Sikkim and Telangana.
- ❖ **Thunderstorm accompanied with Lightning** likely at isolated places over Arunachal Pradesh and Tamilnadu & Puducherry.
- ❖ **Heat Wave** likely at isolated places over Bihar, Gangetic West Bengal, Jharkhand and Odisha.
- ❖ **Squally wind with speed 45 kmph to 50 kmph gusting to 55 kmph** very likely to prevail over Gulf of Mannar. Fishermen are advised not to venture into these areas.



### 13<sup>th</sup> May (Day 5)

- ❖ **Heavy Rainfall** likely at isolated places over Assam & Meghalaya.
- ❖ **Thunderstorm accompanied with Lightning** likely at isolated places over Arunachal Pradesh.
- ❖ **Heat Wave** likely at isolated places over Bihar, Gangetic West Bengal, Jharkhand and Odisha.





### 15<sup>th</sup> May (Day 7)

❖ Heat Wave likely at isolated places over Jharkhand and Odisha.

### Weather Outlook for subsequent 3 days (During 16<sup>th</sup> May- 18<sup>th</sup> May, 2025)

- ❖ Fairly widespread to widespread rainfall activity likely over northeast India.
- ❖ Scattered to fairly widespread rainfall activity likely over northwest and south peninsular India.
- ❖ Isolated to scattered rainfall likely over East India, Chhattisgarh, Vidarbha, Madhya Pradesh and Maharashtra.

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.

Fig. 1: Maximum Temperatures

Fig. 2: Departure of Maximum Temperatures

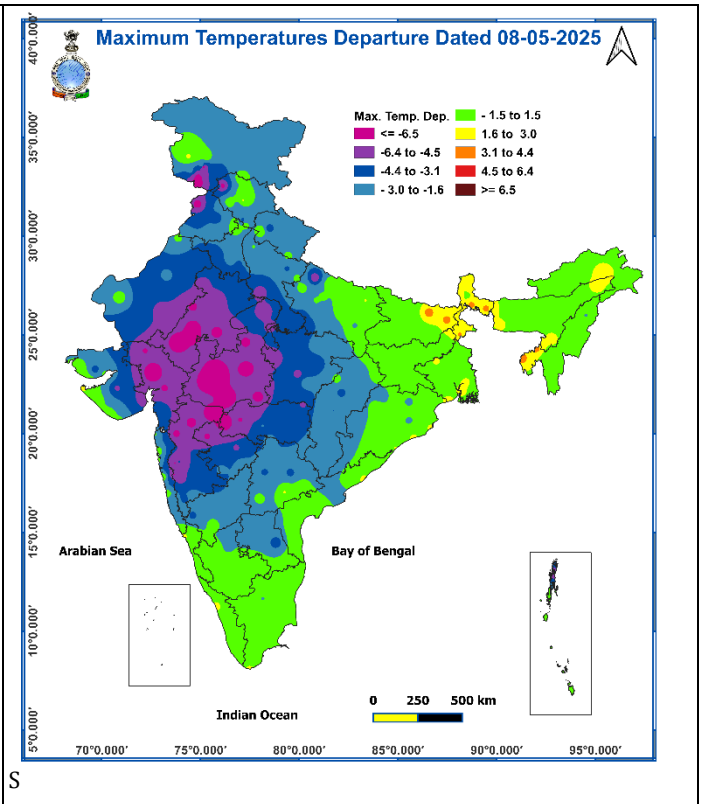
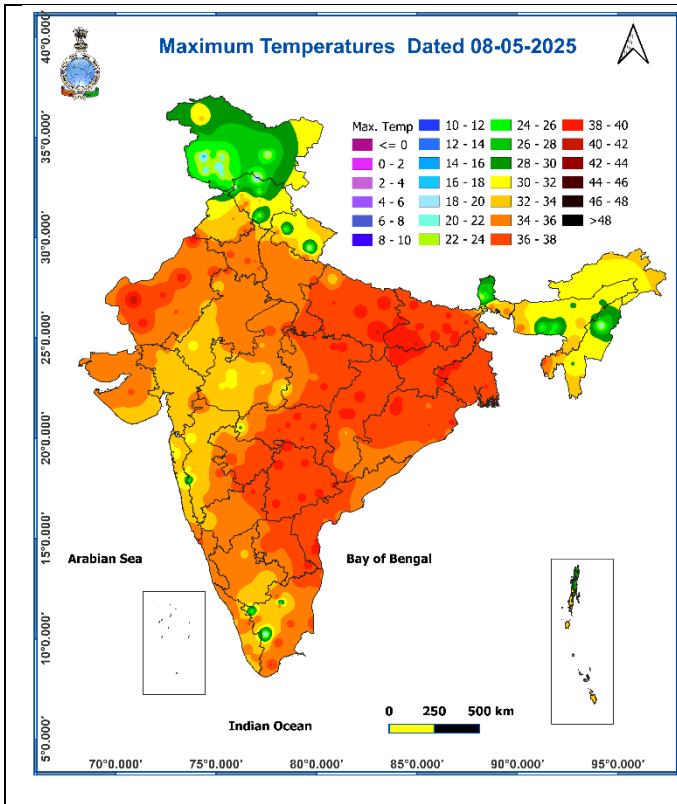


Fig. 3: Minimum Temperatures

Fig. 4: Departure of Minimum Temperatures

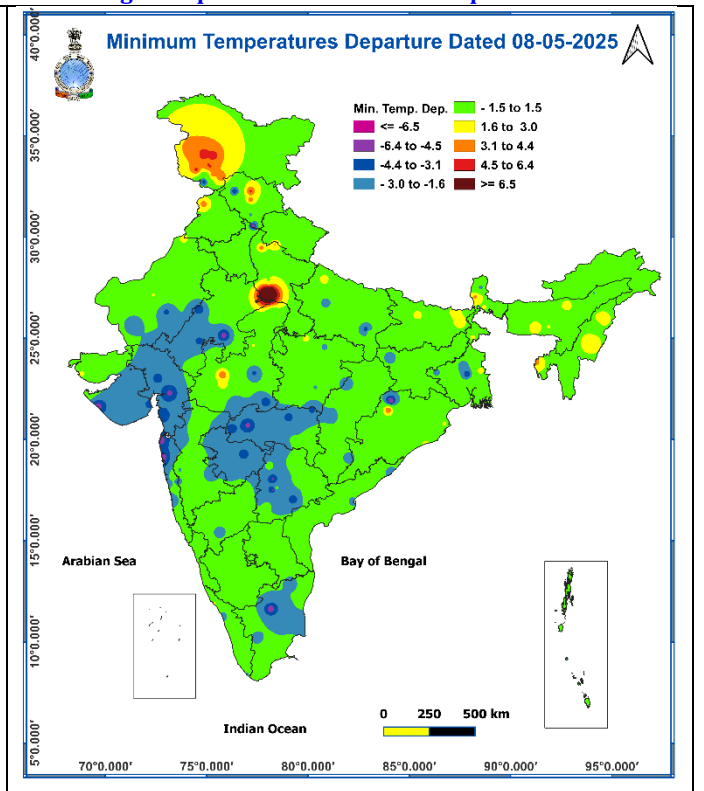
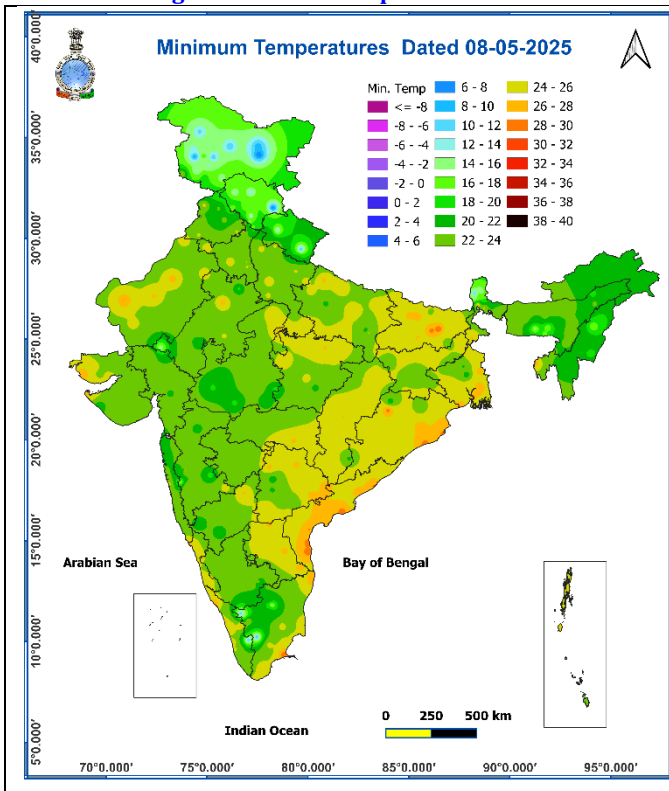
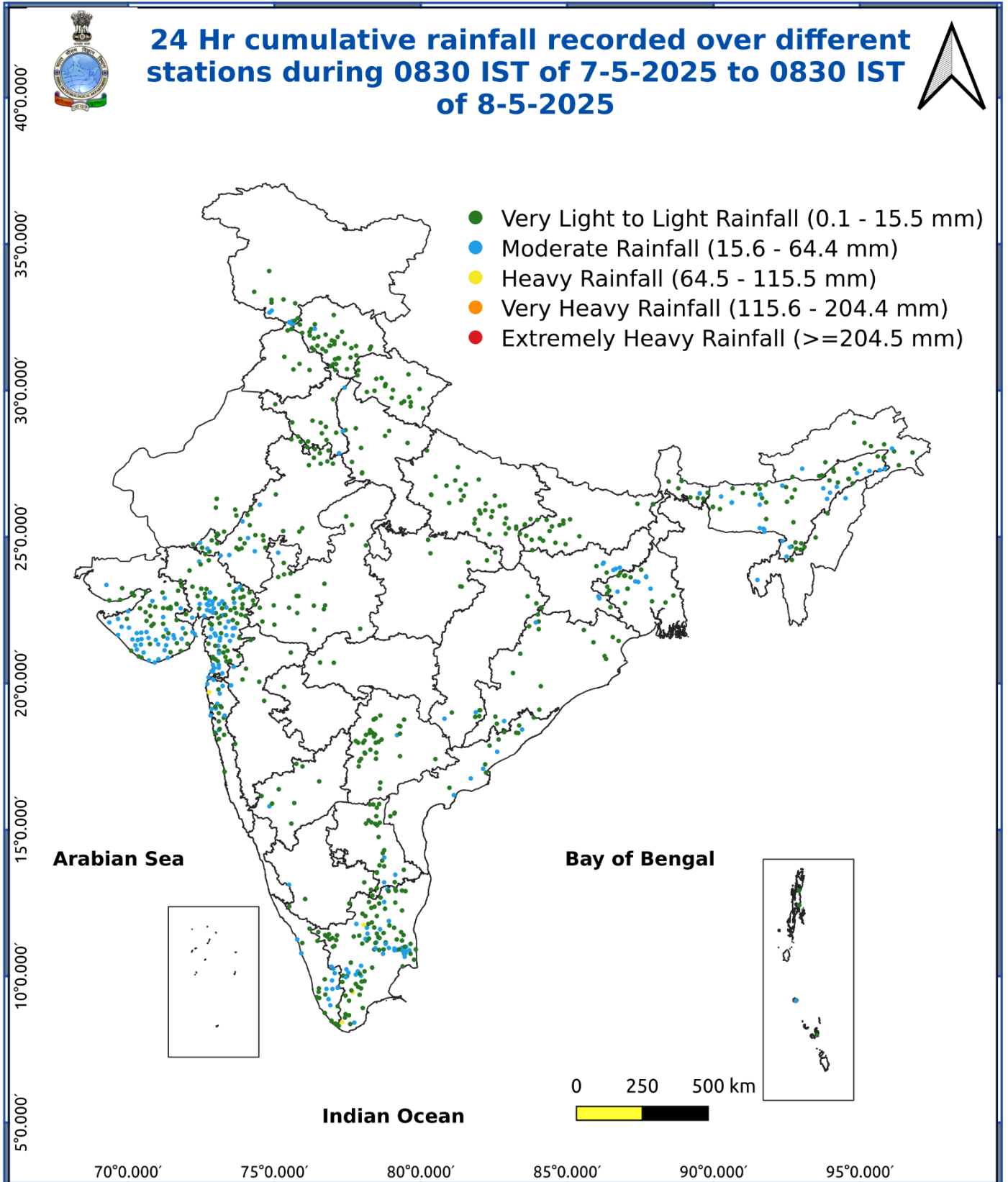


Fig. 5: Accumulated Rainfall (mm) during past 24 hours

\* 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)



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### Impact expected and action suggested due to isolated thunderstorm with lightning/gusty & Squally winds over

- ✓ **Thundersquall wind speed reaching 50-60 kmph gusting to 70 kmph** over Chhattisgarh during 09<sup>th</sup>-11<sup>th</sup> May.

#### Impact expected:

- Breaking of tree branches, uprooting of large avenue trees. Large dead limbs blown from trees. Damage to Standing crops.
- Minor to Major damage to banana and papaya trees.
- Minor to major damage to power and communication lines due to breaking of branches.
- Strong wind/hail may damage plantation, horticulture and standing crops.
- Hail may injure people and cattle at open places.
- Partial damage to vulnerable structures due to strong winds.
- Minor damage to kutchha houses/walls and huts.
- Loose objects may fly.

#### Action suggested:

- People are advised to keep a watch on the weather for worsening conditions and be ready to move to safer places accordingly.
- Stay indoors, close windows & doors and avoid travel if possible.
- Take safe shelters; do not take shelter under trees.
- Do not lie on concrete floors and do not lean against concrete walls.
- Unplug electrical/ electronic appliances.
- Immediately get out of water bodies.
- Keep away from all the objects that conduct electricity.

### Impact & Action Suggested due to heavy to very heavy rainfall over Meghalaya on 11<sup>th</sup> & 12<sup>th</sup> May.

#### 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 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
- ❖ 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.

**Impact expected and action suggested due to Heat wave conditions over** Gangetic West Bengal during 10<sup>th</sup>-13<sup>th</sup>; Odisha during 10<sup>th</sup>-14<sup>th</sup>, Bihar during 11<sup>th</sup>-13<sup>th</sup> and Jharkhand during 11<sup>th</sup>-14<sup>th</sup>; May.

#### Yellow alert Areas

- Moderate temperature & heat is tolerable for general public but moderate health concern likely for vulnerable people e.g. infants, elderly, people with chronic diseases.
- Avoid heat exposure.
- Wear lightweight, light colour, loose, cotton clothes.
- Cover your head, use a cloth, hat or umbrella.

#### Agromet advisories for likely impact of Heavy Rainfall / Gusty Winds

- In **Arunachal Pradesh, Assam & Meghalaya, Gujarat and Tamil Nadu**, make provision to drain out excess water from standing crop and vegetable fields.
- Shift the harvested produce in safer places or cover the produce with tarpaulin sheets in the fields. Tie the harvested crops properly and cover them to minimise the risk of displacement due to strong surface winds.
- Provide mechanical support to horticultural crops and staking to vegetables to avoid lodging.

#### Livestock / Poultry / Fishery

- Keep the animals inside the shed during heavy rainfall and provide them balanced feed.
- Store feed and fodder in a safe place to prevent spoilage.
- Construct an outlet with proper netting around the ponds to drain out excess water, thereby preventing fish from escaping in case of overflow.

## 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)