

Monday, April 28, 2025  
Time of Issue: 0830 hours IST  
(MORNING)

All India Impact Based Weather Warning Bulletin

Weather Warnings for next 7 days is given below:

(Graphics for warnings & rainfall distribution (Table 1) are given below the text:

**28<sup>th</sup> April (Day 1)**

- ❖ **Heavy Rainfall** very likely at isolated places over Assam & Meghalaya, Arunachal Pradesh, Nagaland, Manipur, Meghalaya & Tripura, Gangetic West Bengal and Kerala.
- ❖ **Thundersquall with wind speed reaching 50-60kmph** very likely at isolated places over Assam & Meghalaya, Gangetic West Bengal, Jharkhand, Bihar, East Madhya Pradesh, Chhattisgarh and Odisha.
- ❖ **Thunderstorms with gusty winds(40-50kmph)** very likely at isolated places over Nagaland, Manipur, Meghalaya & Tripura, Vidarbha, North Interior Karnataka, East Uttar Pradesh, Coastal Andhra Pradesh and South Interior Karnataka.
- ❖ **Thunderstorms with gusty winds(30-40kmph)** very likely at isolated places over South Himalayan West Bengal & Sikkim, Kerala, Rayalaseema.
- ❖ **Thunderstorm & Lightning** very likely at isolated places over Arunachal Pradesh, Costal Karnataka, Lakshadweep, Tamilnadu & Puducherry.
- ❖ **Hailstorm** very likely at isolated places over Odisha and Chhattisgarh.
- ❖ **Hot and Humid conditions** very likely at isolated places over Gujarat Region, Saurashtra & Kutch, Marathwada, Coastal Andhra Pradesh, Rayalaseema, Tamilnadu & Puducherry, Costal Karnataka and Kerala.
- ❖ **Heat Wave conditions** very likely at isolated places over Himachal Pradesh, West Rajasthan, Jammu division and West Madhya Pradesh.
- ❖ **Squally wind with speed reaching 45 kmph to 50 kmph gusting to 55 kmph** likely to prevail along and off north Odisha and West Bengal coasts.

**29<sup>th</sup> April (Day 2)**

- ❖ **Thundersquall with wind speed reaching 50-60kmph** very likely at isolated places over Assam & Meghalaya, Odisha and North Interior Karnataka.
- ❖ **Thunderstorms with gusty winds(40-50kmph)** very likely at isolated places over Nagaland, Manipur, Meghalaya & Tripura, Gangetic West Bengal, Jharkhand, East Madhya Pradesh, East Uttar Pradesh, Coastal Andhra Pradesh and South Interior Karnataka.
- ❖ **Thunderstorms with gusty winds(30-40kmph)** very likely at isolated places over South Himalayan West Bengal & Sikkim, Bihar, Chhattisgarh, Kerala and Rayalaseema.
- ❖ **Thunderstorm & Lightning** very likely at isolated places over Arunachal Pradesh and Costal Karnataka and very likely at isolated places over West Uttar Pradesh.
- ❖ **Hot and Humid conditions** very likely at isolated places over Gujarat Region, Saurashtra & Kutch, Marathwada and Tamilnadu & Puducherry.
- ❖ **Heat Wave conditions** very likely at isolated places over Haryana, Chandigarh & Delhi, Punjab, Himachal Pradesh, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Rajasthan and West Madhya Pradesh.
- ❖ **Hailstorm** very likely at isolated places over Odisha.
- ❖ **Heavy Rain** very likely at isolated places over Odisha and very likely at isolated places over Kerala.
- ❖ **Squally wind with speed reaching 45 kmph to 50 kmph gusting to 55 kmph** likely to prevail along and off north Odisha and West Bengal coasts.

### 30<sup>th</sup> April (Day 3)

- ❖ **Heavy Rain** likely at isolated places over Odisha, Jharkhand and Kerala.
- ❖ **Thundersquall with wind speed reaching 50-60kmph** likely at isolated places over Vidarbha, Chhattisgarh and North Interior Karnataka.
- ❖ **Thunderstorms with gusty winds(40-50kmph)** likely at isolated places over Assam & Meghalaya, Odisha, Jharkhand, Uttarakhand, East Madhya Pradesh, East Uttar Pradesh, Coastal Andhra Pradesh and South Interior Karnataka.
- ❖ **Thunderstorms with gusty winds(30-40kmph)** likely at isolated places over Nagaland, Manipur, Meghalaya & Tripura, Gangetic West Bengal, Bihar, Haryana, Chandigarh & Delhi and Rayalaseema.
- ❖ **Thunderstorm & Lightning** likely at isolated places over Arunachal Pradesh, Coastal Karnataka, West Uttar Pradesh.
- ❖ **Hot and Humid** likely at isolated places over Gujarat Region, Saurashtra & Kutch, Marathwada and Tamilnadu & Puducherry.
- ❖ **Heat Wave** likely at isolated places over Haryana, Chandigarh & Delhi, Punjab, Himachal Pradesh, West Rajasthan and East Rajasthan.
- ❖ **Hailstorm** likely at isolated places over North Interior Karnataka.

### 01<sup>st</sup> May (Day 4)

- ❖ **Thundersquall with wind speed reaching 50-60kmph** likely at isolated places over Jharkhand and North Interior Karnataka.
- ❖ **Thunderstorms with gusty winds(40-50kmph)** likely at isolated places over Odisha, East Uttar Pradesh, Uttarakhand, Himachal Pradesh, East Madhya Pradesh and South Interior Karnataka.
- ❖ **Thunderstorms with gusty winds(30-40kmph)** likely at isolated places over Gangetic West Bengal, Bihar, Punjab, Rayalaseema and Haryana, Chandigarh & Delhi.
- ❖ **Thunderstorm & Lightning** likely at isolated places over Assam & Meghalaya, Nagaland, Manipur, Meghalaya & Tripura, West Uttar Pradesh, West Rajasthan, East Rajasthan, Coastal Karnataka and Kerala.
- ❖ **Hot and Humid conditions** likely at isolated places over Gujarat Region, Saurashtra & Kutch, Marathwada and Tamilnadu & Puducherry.
- ❖ **Heat Wave conditions** likely at isolated places over Punjab and West Rajasthan.
- ❖ **Hailstorm** likely at isolated places over North Interior Karnataka.
- ❖ **Heavy Rain** likely at isolated places over Odisha and Jharkhand.

### 02<sup>nd</sup> May (Day 5)

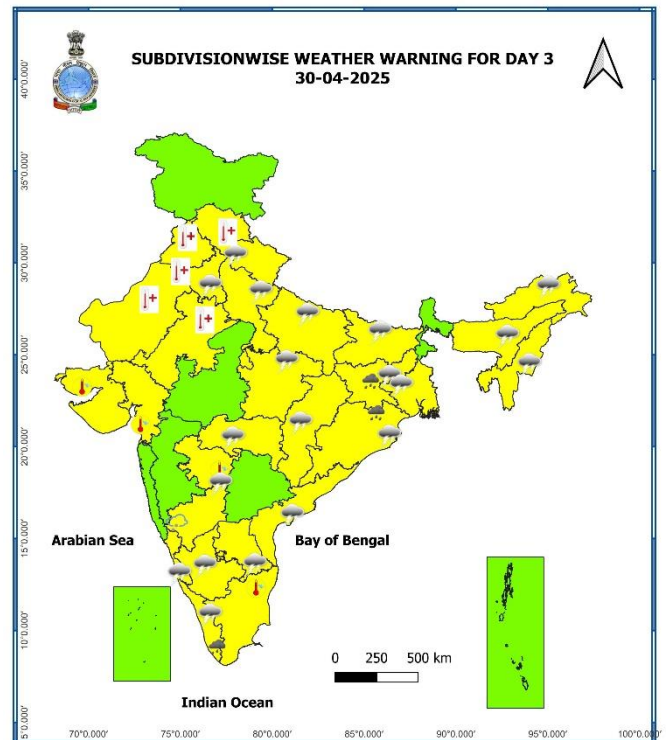
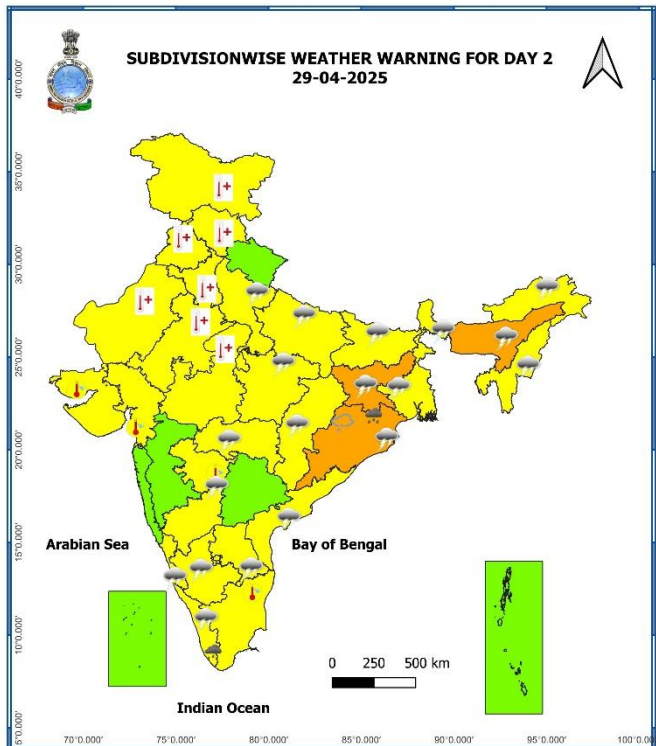
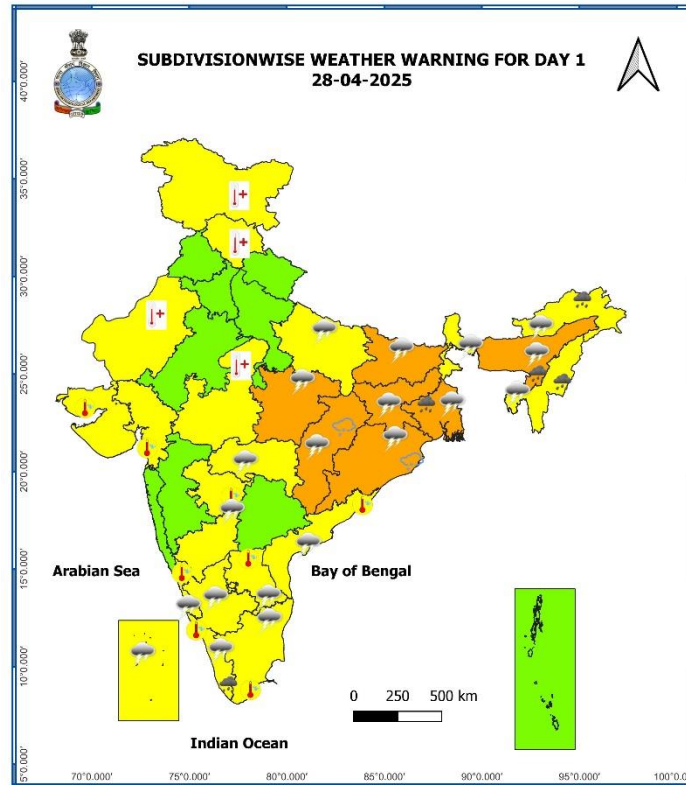
- ❖ **Thunderstorms with gusty winds(40-50kmph)** likely at isolated places over Himachal Pradesh, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad.
- ❖ **Thunderstorms with gusty winds(30-40kmph)** likely at isolated places over Haryana, Chandigarh & Delhi and Punjab.
- ❖ **Thunderstorm & Lightning** likely at isolated places over Jharkhand.

### 03<sup>rd</sup> May (Day 6)

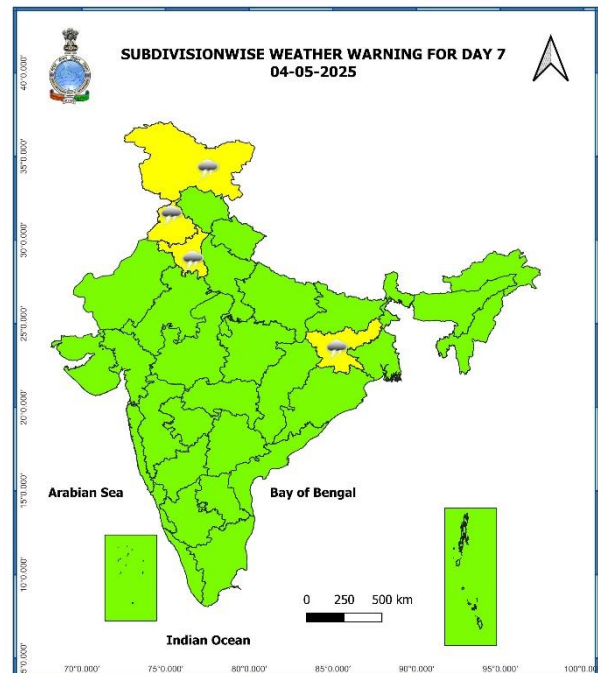
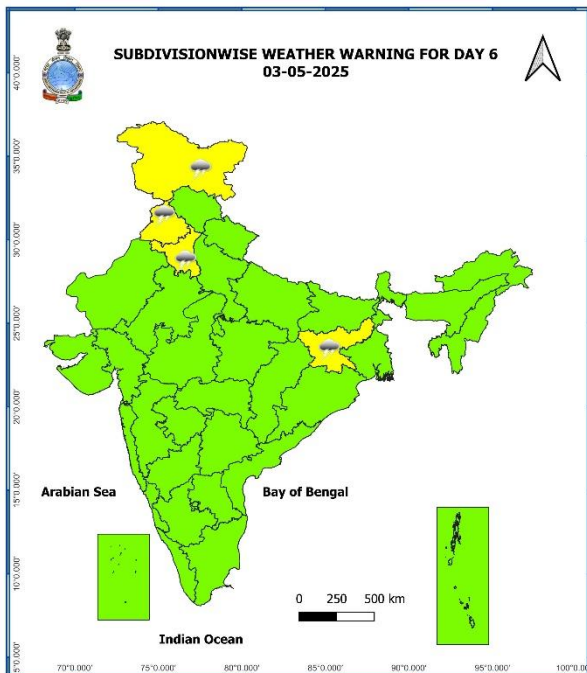
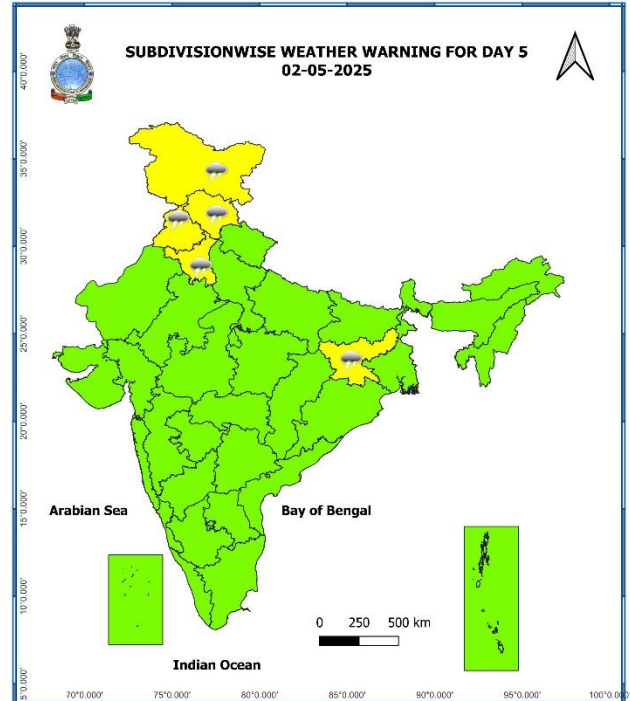
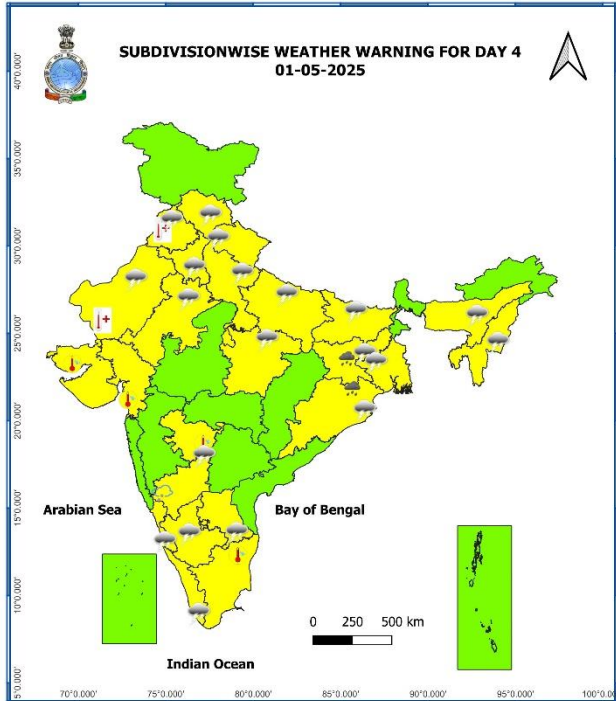
- ❖ **Thunderstorms with gusty winds(40-50kmph)** likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad.
- ❖ **Thunderstorms with gusty winds(30-40kmph)** likely at isolated places over Haryana, Chandigarh & Delhi and Punjab.
- ❖ **Thunderstorm & Lightning** likely at isolated places over Jharkhand.

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

- ❖ **Thunderstorms with gusty winds(40-50kmph)** likely at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad.
- ❖ **Thunderstorms with gusty winds(30-40kmph)** likely at isolated places over Haryana, Chandigarh & Delhi and Punjab.
- ❖ **Thunderstorm & Lightning** likely at isolated places over Jharkhand.







- 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.

Table-1

7 Days Rainfall Forecast								
S. No.	Subdivision	28-Apr	29-Apr	30-Apr	01-May	02-May	03-May	04-May
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	FWS	WS	FWS	SCT	ISOL	ISOL	ISOL
2	ARUNACHAL PRADESH	WS	FWS	SCT	SCT	SCT	SCT	FWS
3	ASSAM & MEGHALAYA	WS	FWS	SCT	SCT	FWS	SCT	FWS
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	FWS	FWS	SCT	SCT	SCT	SCT	FWS
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	WS	FWS	SCT	SCT	SCT	SCT	FWS
6	GANGETIC WEST BENGAL	WS	FWS	FWS	FWS	SCT	SCT	FWS
7	ODISHA	FWS	FWS	FWS	FWS	FWS	FWS	FWS
8	JHARKHAND	FWS	FWS	FWS	SCT	SCT	SCT	SCT
9	BIHAR	FWS	SCT	SCT	ISOL	ISOL	ISOL	ISOL
10	EAST UTTAR PRADESH	ISOL	ISOL	SCT	SCT	SCT	ISOL	ISOL
11	WEST UTTAR PRADESH	DRY	ISOL	ISOL	SCT	SCT	ISOL	ISOL
12	UTTARAKHAND	ISOL	DRY	ISOL	SCT	SCT	FWS	FWS
13	HARYANA CHANDIGARH & DELHI	DRY	DRY	ISOL	ISOL	ISOL	ISOL	ISOL
14	PUNJAB	DRY	DRY	DRY	ISOL	ISOL	ISOL	ISOL
15	HIMACHAL PRADESH	DRY	DRY	DRY	SCT	SCT	SCT	FWS
16	JAMMU & KASHMIR AND LADAKH	DRY	DRY	DRY	ISOL	SCT	SCT	SCT
17	WEST RAJASTHAN	DRY	DRY	DRY	DRY	ISOL	ISOL	ISOL
18	EAST RAJASTHAN	DRY	DRY	DRY	ISOL	ISOL	ISOL	ISOL
19	WEST MADHYA PRADESH	DRY	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
20	EAST MADHYA PRADESH	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
21	GUJARAT REGION	DRY	DRY	DRY	DRY	DRY	DRY	DRY
22	SAURASHTRA & KUTCH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
23	KONKAN & GOA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
24	MADHYA MAHARASHTRA	DRY	DRY	DRY	DRY	ISOL	ISOL	ISOL
25	MARATHAWADA	ISOL	DRY	DRY	ISOL	ISOL	ISOL	ISOL
26	VIDARBHA	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
27	CHHATTISGARH	ISOL	ISOL	ISOL	SCT	SCT	SCT	FWS
28	COASTAL ANDHRA PRADESH & YANAM	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
29	TELANGANA	ISOL	DRY	ISOL	ISOL	ISOL	ISOL	ISOL
30	RAYALASEEMA	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
31	TAMILNADU PUDUCHERRY & KARAIKAL	ISOL	ISOL	ISOL	ISOL	ISOL	SCT	SCT
32	COASTAL KARNATAKA	SCT	ISOL	ISOL	SCT	ISOL	ISOL	ISOL
33	NORTH INTERIOR KARNATAKA	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
34	SOUTH INTERIOR KARNATAKA	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	FWS
35	KERALA & MAHE	SCT	SCT	SCT	SCT	SCT	SCT	FWS
36	LAKSHADWEEP	SCT	SCT	DRY	DRY	DRY	DRY	DRY

• As the lead period increases forecast accuracy decreases.

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

- ✓ **Isolated hailstorm** activity likely over North Interior Karnataka on 30<sup>th</sup> April & 01<sup>st</sup> May; Chhattisgarh on 28<sup>th</sup> April; Odisha on 28<sup>th</sup>-29<sup>th</sup> April.
- ✓ **Thundersquall (wind speed reaching 50-60 kmph)** likely over North Interior Karnataka during 28<sup>th</sup> April-01<sup>st</sup> May; East Madhya Pradesh, Gangetic West Bengal, Bihar on 28<sup>th</sup> April; Vidarbha, Chhattisgarh on 28<sup>th</sup> & 30<sup>th</sup> April; Jharkhand on 28<sup>th</sup> April & 01<sup>st</sup> May; Odisha on 28<sup>th</sup>-29<sup>th</sup> April.

### 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 kutcha 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 expected and action suggested due to Heat wave conditions over some parts of Northwest India during 28<sup>th</sup> April to 01<sup>st</sup> May and over West Madhya Pradesh during 29<sup>th</sup> April to 1<sup>st</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.

**Impact & Action Suggested due to heavy rainfall** Nagaland, Manipur, Mizoram & Tripura on 28<sup>th</sup> April; Arunachal Pradesh, Gangetic West Bengal on 28<sup>th</sup> April. Kerala & Mahe during 28<sup>th</sup>-30<sup>th</sup> April; Jharkhand on 29<sup>th</sup> April & 01<sup>st</sup> may; Odisha during 29<sup>th</sup> April-01<sup>st</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 kutcha 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 isolated thunderstorm with lightning/gusty & Squally winds & Hailstorm over

- ✓ **Isolated hailstorm** activity likely over North Interior Karnataka on 30<sup>th</sup> April & 01<sup>st</sup> May; Chhattisgarh on 28<sup>th</sup> April; Odisha on 28<sup>th</sup>-29<sup>th</sup> April.
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- Partial damage to vulnerable structures due to strong winds.
- Minor damage to kutcha 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 expected and action suggested due to Heat wave conditions over some parts of Northwest India during 28<sup>th</sup> April to 01<sup>st</sup> May and over West Madhya Pradesh during 29<sup>th</sup> April to 1<sup>st</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.

### Impact & Action Suggested due to heavy rainfall Nagaland, Manipur, Mizoram & Tripura on 28<sup>th</sup> April; Arunachal Pradesh, Gangetic West Bengal on 28<sup>th</sup> April. Kerala & Mahe during 28<sup>th</sup>-30<sup>th</sup> April; Jharkhand on 29<sup>th</sup> April & 01<sup>st</sup> may; Odisha during 29<sup>th</sup> April-01<sup>st</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 kutcha 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.

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

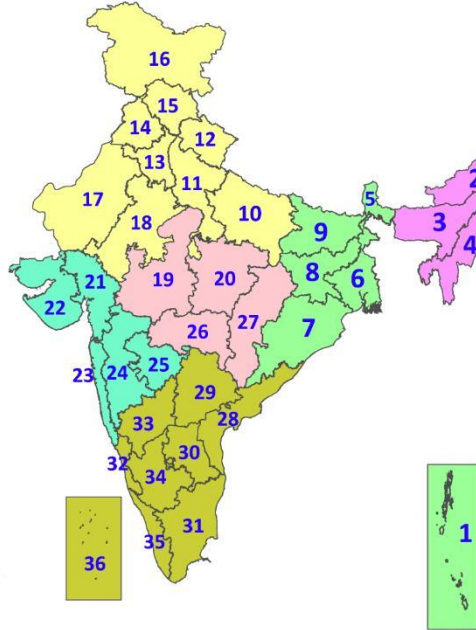
- In **North Eastern States, West Bengal & Sikkim, Odisha and Bihar**, make provision to drain out excess water from standing crop and vegetable fields.
- In **Assam, Meghalaya, West Bengal, Odisha, Bihar, Jharkhand, East Uttar Pradesh, East Madhya Pradesh, Vidarbha, Chhattisgarh and Interior Karnataka**, use hail net and hail caps to prevent mechanical damage in vegetables and orchards due to the possibility of hailstorms.
- To protect standing crops, vegetables and orchards from adverse effects of heat waves and high temperatures, apply light and frequent irrigation in the evening.
- 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 / hailstorm and provide them balanced feed.
- Store feed and fodder in a safe place to prevent spoilage.
- To reduce the effect of heat wave/high temperature, cover the roof of poultry sheds with grass. Also, provide clean, hygienic and plenty of drinking water to animals.
- 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 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

(Service to the Nation since 1875)

**Hot and Humid:** When maximum temperatures remains  $3^{\circ}\text{C}$  above normal along with the above normal relative humidity.