

Monday, May 20, 2024  
Time of Issue: 0800 hours IST  
(MORNING)

## All India Impact Based Weather Warning Bulletin

### 20 May (Day 1):

- ❖ **Heavy to very Heavy rainfall with extremely heavy falls** very likely at isolated places over Tamil Nadu, Kerala & Mahe; **Heavy to very heavy rainfall** at isolated places over Coastal & South Interior Karnataka Lakshadweep, and Assam & Meghalaya; **Heavy rainfall** at isolated places over Nicobar Islands and Sub-Himalayan West Bengal & Sikkim.
- ❖ **Heat Wave to severe heat wave Conditions** very likely to prevail in many parts over Punjab, Haryana-Chandigarh-Delhi; in some parts of Uttar Pradesh and **heat wave conditions** in many parts over West Rajasthan; in some parts of East Rajasthan; in isolated pockets over Himachal Pradesh, Uttarakhand, Madhya Pradesh, Gangetic West Bengal, Bihar, Jharkhand and Gujarat state.
- ❖ **Thunderstorm accompanied with lightning & squally winds (speed reaching 50-60 kmph)** very likely at isolated places over Gangetic West Bengal; **with lightning & gusty winds (speed reaching 40-50 kmph)** at isolated places over East Madhya Pradesh, Sub-Himalayan West Bengal & Sikkim, Bihar, Konkan & Goa; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Vidarbha, Chhattisgarh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Marathwada, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema, Interior Karnataka; **with lightning** at isolated places over Jharkhand, Odisha, Arunachal Pradesh, Lakshadweep and Coastal Karnataka.
- ❖ **Hot and humid weather** very likely to prevail over Sub-Himalayan West Bengal, Odisha and Konkan & Goa.
- ❖ **Warm night conditions** very likely to prevail in isolated pockets over East Rajasthan.
- ❖ **Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph** very likely to prevail along and off Kerala, Lakshadweep, Maldives areas, Comorin area, Gulf of Mannar & along and off Sri Lanka coast; **with wind speed 40 kmph to 45 kmph gusting to 55 kmph** prevailing over Karnataka coasts, Tamil Nadu adjoining south west Bay of Bengal and Andaman Sea. Fishermen are advised not to venture into these areas.

### 21 May (Day 2):

- ❖ **Heavy to very Heavy rainfall with extremely heavy falls** very likely at isolated places over Tamil Nadu, Kerala & Mahe; **Heavy to very heavy rainfall** at isolated places over Coastal & South Interior Karnataka; **Heavy rainfall** at isolated places over Lakshadweep, Nicobar Islands, Sub-Himalayan West Bengal & Sikkim.
- ❖ **Heat Wave to severe heat wave Conditions** very likely to prevail in most parts over West Rajasthan; in many parts over Punjab, Haryana-Chandigarh-Delhi; in isolated pockets over West Uttar Pradesh; **heat wave conditions** in some parts of East Rajasthan; in isolated pockets over East Uttar Pradesh, Himachal Pradesh, Uttarakhand, Madhya Pradesh, Jharkhand, Odisha, Gujarat state.
- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed reaching 40-50 kmph)** very likely at isolated places over West Bengal & Sikkim, Bihar, Konkan & Goa; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Vidarbha, Jharkhand, Chhattisgarh, Odisha, Madhya Maharashtra, Marathwada, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema and Interior Karnataka; **with lightning** at isolated places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Lakshadweep and Coastal Karnataka.
- ❖ **Hot and humid weather** very likely to prevail over Konkan & Goa.
- ❖ **Warm night conditions** very likely to prevail in isolated pockets over East Rajasthan.
- ❖ **Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph** very likely to prevail over along and off Kerala, Lakshadweep, Maldives areas, Comorin Area, Gulf of Mannar & along and off Sri Lanka coast adjoining southwest Bay of Bengal, Somalia coast; **with wind speed 40 kmph to 45 kmph gusting to 55 kmph** prevailing over Karnataka coasts, Tamil Nadu, south west adjoining southeast Bay of Bengal and Andaman Sea. Fishermen are advised not to venture into these areas.

### 22 May (Day 3):

- ❖ **Heavy to very Heavy rainfall with extremely heavy falls** likely at isolated places over Tamil Nadu, Kerala & Mahe; **Heavy to very heavy rainfall** at isolated places over Coastal Karnataka; **Heavy rainfall** at isolated places over Lakshadweep, South Interior Karnataka, Nicobar Islands.
- ❖ **Heat Wave to severe heat wave Conditions** likely to prevail in most parts of West Rajasthan; in many parts of East Rajasthan, Punjab, Haryana-Chandigarh-Delhi; **heat wave conditions** in isolated pockets over Himachal Pradesh, Uttarakhand, Uttar Pradesh, north Madhya Pradesh, Odisha and Gujarat state.
- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed reaching 40-50 kmph)** likely at isolated places over Bihar, Konkan & Goa, Madhya Maharashtra; **with lightning & gusty winds (speed reaching 30-40 kmph)** at some places over Vidarbha, Chhattisgarh, Gangetic West Bengal, Jharkhand, Odisha, Marathwada, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana and Interior Karnataka; **with lightning** at isolated places over Sub-Himalayan West Bengal & Sikkim, Lakshadweep and Coastal Karnataka.
- ❖ **Warm night conditions** very likely to prevail in isolated pockets over East Rajasthan.
- ❖ **Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over along and off Kerala, Lakshadweep, Maldives areas, Comorin area, Gulf of Mannar & along and off Sri Lanka coast adjoining south west Bay of Bengal and Somalia coast; **with wind speed 40 kmph to 45 kmph gusting to 55 kmph** prevailing over along over Karnataka coasts, Tamil Nadu, southwest adjoining southeast Bay of Bengal and Andaman Sea. Fishermen are advised not to venture into these areas.

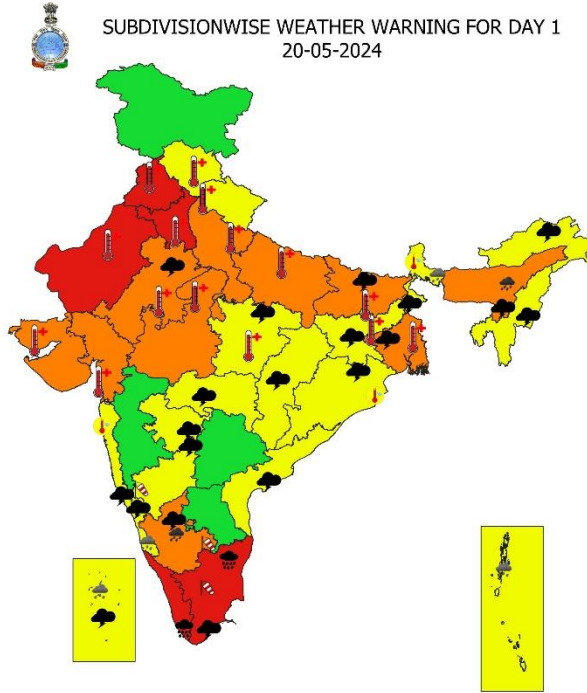
### 23 May (Day 4):

- ❖ **Heavy to very heavy rainfall** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe and **Heavy rainfall** at isolated places over Nicobar Islands, Coastal & South Interior Karnataka.
- ❖ **Heat Wave to severe heat wave Conditions** likely to prevail in most parts of West Rajasthan; in many parts of East Rajasthan, Punjab, Haryana-Chandigarh-Delhi; **heat wave conditions** in isolated pockets over Himachal Pradesh, Uttar Pradesh, north Madhya Pradesh, Odisha and Gujarat state.
- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed reaching 40-50 kmph)** likely at isolated places over Odisha; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Vidarbha, Chhattisgarh, Bihar, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana, South Interior Karnataka; **with lightning** at isolated places over Lakshadweep and Coastal Karnataka.
- ❖ **Warm night conditions** very likely to prevail in isolated pockets over East Rajasthan.
- ❖ **Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over along and off Kerala, Lakshadweep, Maldives areas, Comorin area, Gulf of Mannar & along and off Sri Lanka coast adjoining south west Bay of Bengal and Somalia coast; **with wind speed 40 kmph to 45 kmph gusting to 55 kmph** prevailing over along over Karnataka coasts, Tamil Nadu, southwest adjoining southeast Bay of Bengal and Andaman Sea. Fishermen are advised not to venture into these areas.

### 24 May (Day 5):

- ❖ **Heavy to very heavy rainfall** likely at isolated places over Tamil Nadu, Puducherry & Karaikal, South Interior Karnataka, Kerala & Mahe and **Heavy rainfall** at isolated places over Nicobar Islands, Coastal Karnataka.
- ❖ **Heat Wave to severe heat wave Conditions** likely to prevail in most parts of West Rajasthan; in many parts of East Rajasthan, Punjab, Haryana-Chandigarh-Delhi; **heat wave conditions** in isolated pockets over Himachal Pradesh, Uttar Pradesh, north Madhya Pradesh, Odisha and Gujarat state.
- ❖ **Thunderstorm accompanied with lightning & gusty winds (speed reaching 40-50 kmph)** likely at isolated places over Odisha; **with lightning & gusty winds (speed reaching 30-40 kmph)** at isolated places over Vidarbha, Chhattisgarh, Bihar, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Rayalaseema, Telangana, South Interior Karnataka; **with lightning** at isolated places over Rayalaseema, Lakshadweep and Coastal Karnataka.
- ❖ **Warm night conditions** very likely to prevail in isolated pockets over East Rajasthan.
- ❖ **Squally weather with wind speed 45 kmph to 55 kmph gusting to 65 kmph** likely to prevail over along and off Kerala, Lakshadweep, Maldives areas, Comorin area, Gulf of Mannar & along and off Sri Lanka coast adjoining south west Bay of Bengal and Somalia coast; **with wind speed 40 kmph to 45 kmph gusting to 55 kmph** prevailing over along over Karnataka coasts, Tamil Nadu, southwest adjoining southeast Bay of Bengal and Andaman Sea. Fishermen are advised not to venture into these areas.

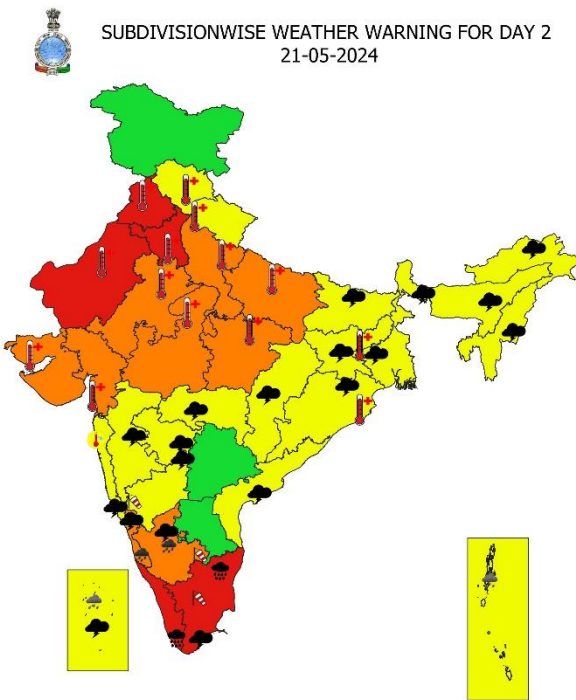
SUBDIVISIONWISE WEATHER WARNING FOR DAY 1  
20-05-2024



Subdivision Warning

- |                      |            |                      |                           |
|----------------------|------------|----------------------|---------------------------|
| Fog                  | Heavy Snow | Cold Day             | <b>Subdivision Colour</b> |
| Heavy Rain           | Hailstorm  | Ground Frost         | NO WARNING                |
| Very Heavy Rain      | Dust Storm | Strong Surface Winds | WATCH (BE UPDATED)        |
| Extremely Heavy Rain | Heat Wave  | Thunder & Lightning  | ALERT (BE PREPARED)       |
|                      | Cold Wave  | Hot and Humid        | WARNING (TAKE ACTION)     |

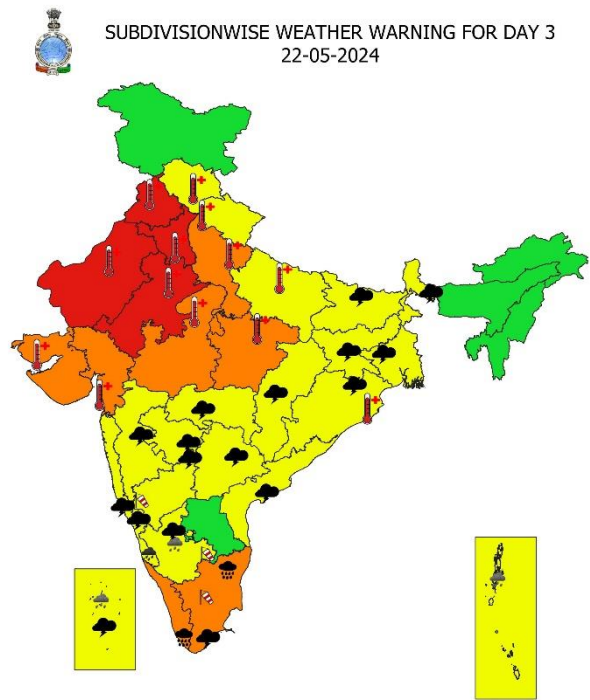
SUBDIVISIONWISE WEATHER WARNING FOR DAY 2  
21-05-2024



Subdivision Warning

- |                      |            |                      |                           |
|----------------------|------------|----------------------|---------------------------|
| Fog                  | Heavy Snow | Cold Day             | <b>Subdivision Colour</b> |
| Heavy Rain           | Hailstorm  | Ground Frost         | NO WARNING                |
| Very Heavy Rain      | Dust Storm | Strong Surface Winds | WATCH (BE UPDATED)        |
| Extremely Heavy Rain | Heat Wave  | Thunder & Lightning  | ALERT (BE PREPARED)       |
|                      | Cold Wave  | Hot and Humid        | WARNING (TAKE ACTION)     |

SUBDIVISIONWISE WEATHER WARNING FOR DAY 3  
22-05-2024

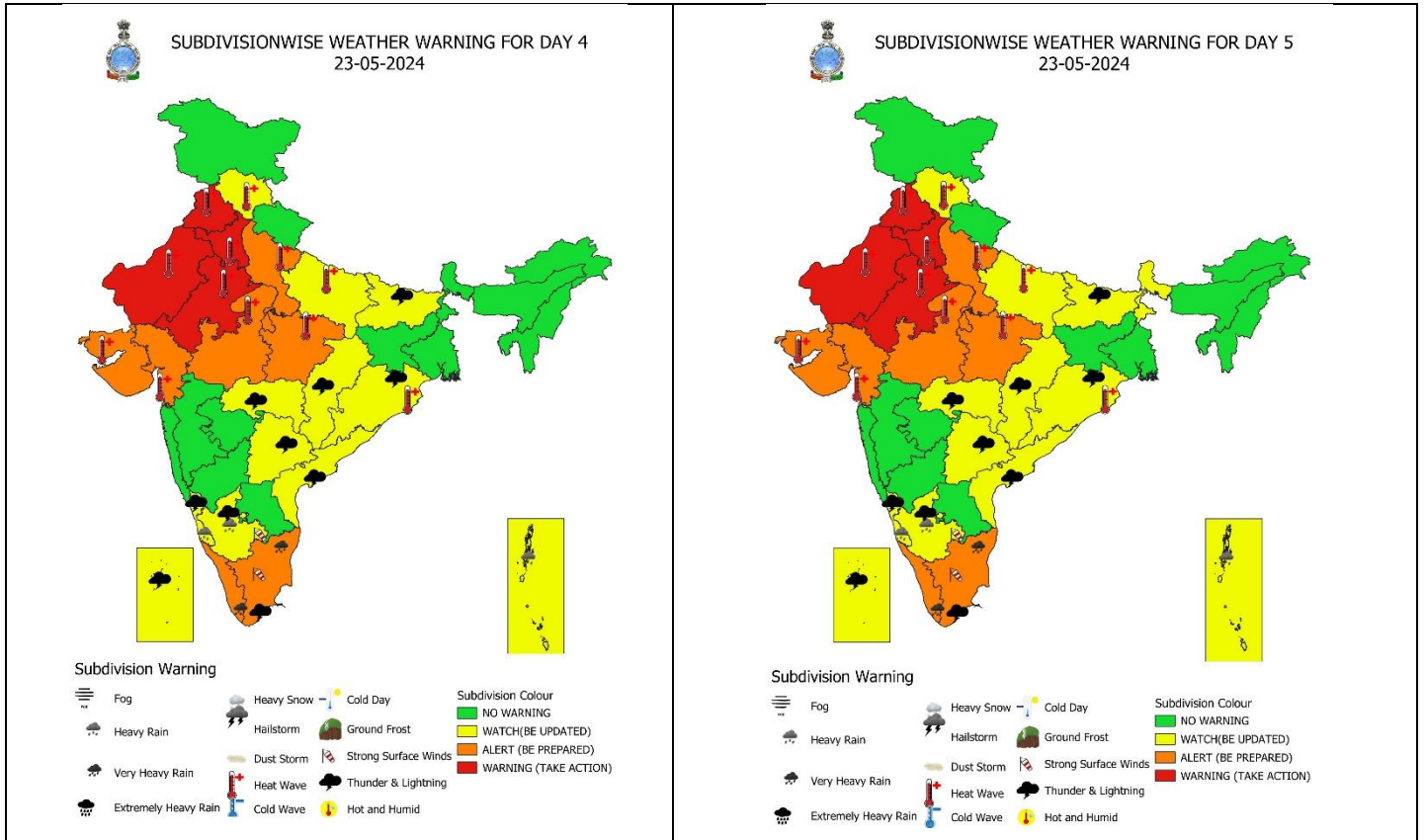


Subdivision Warning

- |                      |            |                      |                           |
|----------------------|------------|----------------------|---------------------------|
| Fog                  | Heavy Snow | Cold Day             | <b>Subdivision Colour</b> |
| Heavy Rain           | Hailstorm  | Ground Frost         | NO WARNING                |
| Very Heavy Rain      | Dust Storm | Strong Surface Winds | WATCH (BE UPDATED)        |
| Extremely Heavy Rain | Heat Wave  | Thunder & Lightning  | ALERT (BE PREPARED)       |
|                      | Cold Wave  | Hot and Humid        | WARNING (TAKE ACTION)     |

**\* 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 & ACTION SUGGESTED due to very heavy rainfall/extremely falls over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe during 20<sup>th</sup>-24<sup>rd</sup>; Coastal Karnataka on 21<sup>st</sup> & 22<sup>nd</sup>; South Interior Karnataka on 20<sup>th</sup>-21<sup>st</sup>; Meghalaya on 20<sup>th</sup> May 2024.**

**A. 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)

**B. 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.

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## IMPACT & ACTION SUGGESTED due to Heat Wave Conditions:

### Red alert Areas: (Rajasthan, Punjab, Haryana, Chandigarh, Delhi)

- ✓ Very high likelihood of developing heat illness and heat stroke in all ages.
- ✓ Extreme care needed for vulnerable people.

### Orange alert Areas (Uttar Pradesh, Bihar, Gujarat State)

- ✓ High temperature & increased likelihood of heat illness symptoms in people who are either exposed to sun for a prolonged period or doing heavy work.
- ✓ High health concern for vulnerable people e.g. infants, elderly, people with chronic diseases.
- ✓ Avoid heat exposure- keep cool. Avoid dehydration.
- ✓ Drink sufficient water- even if not thirsty.
- ✓ Use ORS, homemade drinks like lassi, torani (rice water), lemon water, buttermilk, etc. to keep yourself hydrated.

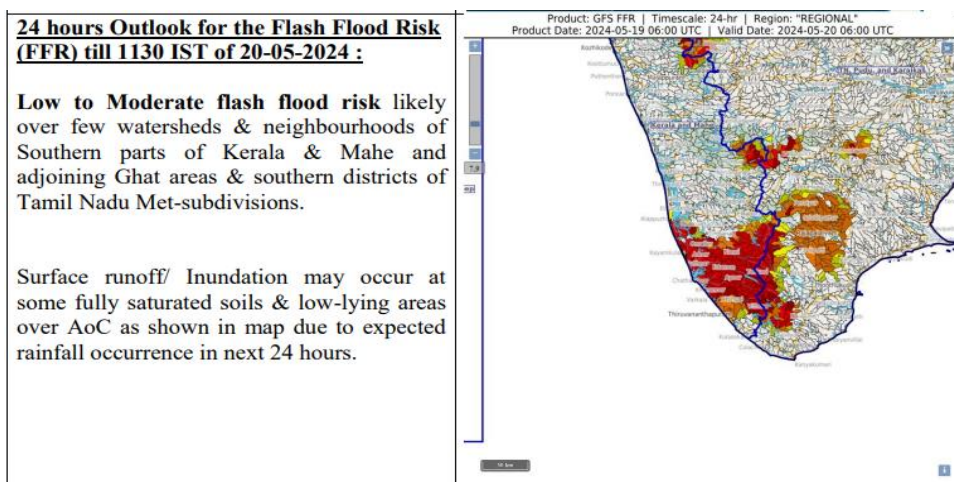
### Yellow alert Areas (Madhya Pradesh, Jharkhand, Gangetic West Bengal, Odisha, Uttarakhand, Himachal Pradesh)

- ✓ 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 Heavy Rainfall, Gusty winds and Heat Wave likely over various parts of the country:

- Make provision for draining out excess water from crop fields to avoid water stagnation in Tamil Nadu, Kerala, Lakshadweep, Coastal Karnataka, South Interior Karnataka, Andhra Pradesh, Arunachal Pradesh, Assam & Meghalaya, Sub Himalayan West Bengal & Sikkim and Andaman & Nicobar Islands.
- Apply light and frequent irrigation to standing crops to avoid heat stress; provide mulching to conserve soil moisture and minimise evaporation in Himachal Pradesh, Uttarakhand, Punjab, Haryana, Uttar Pradesh, Rajasthan, Gangetic West Bengal, Jharkhand, Bihar, Gujarat and North Madhya Pradesh.
- Provide mechanical support to horticultural crops & staking to vegetables to prevent damage from gusty winds.

## Flash Flood Guidance



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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)

Kindly download MAUSAM APP for location specific forecast & warning, MEGHDOOT APP for Agromet advisory and DAMINI APP for Lightning Warning & visit state MC/RMC websites for district wise warning.